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A World of Science and Technology

PACRIM 12

CONFERENCE PROGRAM

The 12th Pacific Rim Conference on Ceramic and Glass Technology

including – Glass & Optical Materials Division Annual Meeting (GOMD 2017)

May 21 – 26, 2017

PACRIM Partner Societies:

The American Ceramic Society

The Australian Ceramic Society

The Ceramic Society of Japan

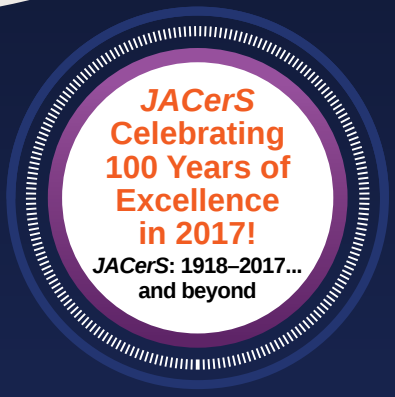
The Chinese Ceramic Society

The Korean Ceramic Society

ceramics.org/pacrim12

The American Ceramic Society
www.ceramics.org

Join Wiley and The American Ceramic Society at the 12th Pacific Rim Conference Including the Glass & Optical Materials Division Meeting



Throughout 2017, we are celebrating the 100th anniversary of the **Journal of the American Ceramic Society**. The most highly-respected global source for scholarly articles on ceramic materials research is enjoying its Centennial year and you can learn all about it at **wileyonlinelibrary.com/jacers100**.

This year at **PACRIM/GOMD**, take advantage of all these great offerings, plus more:

- "So You Want to Get Published: A workshop for graduate students and young professionals"
  - led by Bill Fahrenholtz, Editor-in-Chief, Journal of the American Ceramic Society.
  - Monday, May 22, 2017, noon to 1:15 pm
- Special Centennial Issue of JACerS available with unique articles and features picked by the editors
- FREE sample copies of all 3 journals of the American Ceramic Society
- Enjoy a 35% discount on all purchases at the Wiley booth
- Meet with Wiley and ACerS journal editors to discuss the benefits of publishing with us
- Sign up for special alerts on all that is new in Materials Science and Ceramics

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WELCOME

It is my honor to welcome you to the 12th Pacific Rim Conference on Ceramic and Glass Technology (PACRIM 12)! The Pacific Rim Conference on Ceramic and Glass Technology is a bi-annual conference held in collaboration with the ceramic societies of the Pacific Rim countries - The American Ceramic Society, The Ceramic Society of Japan, The Chinese Ceramic Society, The Korean Ceramic Society, and the Australian Ceramic Society. The 1st PACRIM conference was hosted by The American Ceramic Society (ACerS) at Honululu, Hawaii, in 1993. After almost 25 years, it is befitting to return to another Hawaian Island for the 12th PacRim conference.

The comprehensive PACRIM 12 technical program covers a variety of topics that identify global challenges and opportunities for various ceramic technologies and is sure to foster discussions on the future of specific areas of ceramics science and engineering. The conference will also provide an excellent forum for interactions and friendships with participants from various continents.

I highly encourage you to join your colleagues for the Plenary Session on Monday morning. The key note talks feature Mike Murray, Morgan Advanced Materials, Donald Hillebrand, Argonne National Laboratory, Gisele Maxwell, Shasta Crystals Inc., and Zhengyi Fu, Wuhan University of Technology. The talks will center around the theme of materials and manufacturing technologies for sustainable development.

PACRIM 12 also includes the important topics covered in the Glass and Optical Materials Division (GOMD) Annual Meeting, including five award lectures and a student poster competition. Please refer to the GOMD section of this program for all the details.

Finally, we appreciate the support of our sponsors for their generosity. Please refer to this program for the full list of sponsors.

We sincerely hope you take advantage of all the opportunities PACRIM12 offers and that you enjoy your time on the beautiful Big Island of Hawaii.

Organizing Chair:

Dileep Singh, Argonne National Laboratory

P.S. Please be reminded that **no** photography, audio recording, or videotaping of presenters in oral sessions is permitted. See policy on pg iv.

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PACRIM

GOMD Annual Meeting

Combined Final Program by Day

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Ceramic Society of Japan

The Korean Ceramic Society

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No photography/recording

Cell phones silent

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Note: The Society may engage photographers to photograph sessions for marketing and promotional purposes.

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The American Ceramic Society is a nonprofit scientific organization that facilitates the exchange of knowledge meetings and publication of papers for future reference. The Society owns and retains full right to control its publications and its meetings. The Society has an obligation to protect its members and meetings from intrusion by others who may wish to use the meetings for their own private promotion purpose. Literature found not to be in agreement with the Society's goals, in competition with Society services or of an offensive nature will not be displayed anywhere in the vicinity of the meeting. Promotional literature of any kind may not be displayed without the Society's permission and unless the Society provides tables for this purpose. Literature not conforming to this policy or displayed in other than designated areas will be disposed. The Society will not permit unauthorized scheduling of activities during its meeting by any person or group when those activities are conducted at its meeting place in interference with its programs and scheduled activities. The Society does not object to appropriate activities by others during its meetings if it is consulted with regard to time, place, and suitability. Any person or group wishing to conduct any activity at the time and location of the Society meeting must obtain permission from the Executive Director or Director of Meetings, giving full details regarding desired time, place and nature of activity.

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Registration Requirements: Attendance at any meeting of the Society shall be limited to duly registered persons.

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SPECIAL EVENTS

Welcome Reception

Sunday, May 21 | 5:00 – 7:00 p.m.
Location: **Grand Promenade and Lagoon Lanai**

So You Want to Get Published: A workshop for graduate students and young professionals

Sponsored by SAINT-GOBAIN

Monday, May 22 | Noon to 1:15 pm
Location: **Kona 4**

Speaker and Panelist: **Bill Fahrenholtz**, editor-in-chief, *Journal of the American Ceramic Society*

Panelist: **Hua-Tay Lin**, editor-in-chief, *International Journal of Applied Ceramic Technology*
Mario Affatigato, editor-in-chief, *International Journal of Applied Glass Science*

ABOUT THE PANELISTS

Bill Fahrenholtz is Curators' Distinguished Professor of Ceramic Engineering at Missouri University of Science and Technology, Rolla, Mo., USA

H.T. Lin is Distinguished Professor at Guangdong University of Technology in Guangzhou, Guangdong, China.

Mario Affatigato holds the Fran Allison and Francis Halpin Professorship in Physics at Coe College, Cedar Rapids, Iowa, USA.

This event is sponsored by **Saint-Gobain** and brought to you by **ACerS Global Graduate Researcher Network** (GGRN) and **ACerS Young Professionals Network** (YPN).

Poster Session and GOMD Student Poster Competition

Tuesday, May 23 | 5:30 – 8:00 pm

Location: **Grand Promenade**

Poster competition winners will be announced at the Stookey Lecture, Wednesday, May 24 | 8:30 a.m. | Kona 5

Conference Dinner

Thursday, May 25 | 7:00 – 9:30 pm

Location: **Grand Promenade and Lagoon Lanai**

Visit Tabletop Exhibits

Location: **Grand Promenade**

– Monofrax
– Journal of Non-Crystalline Solids
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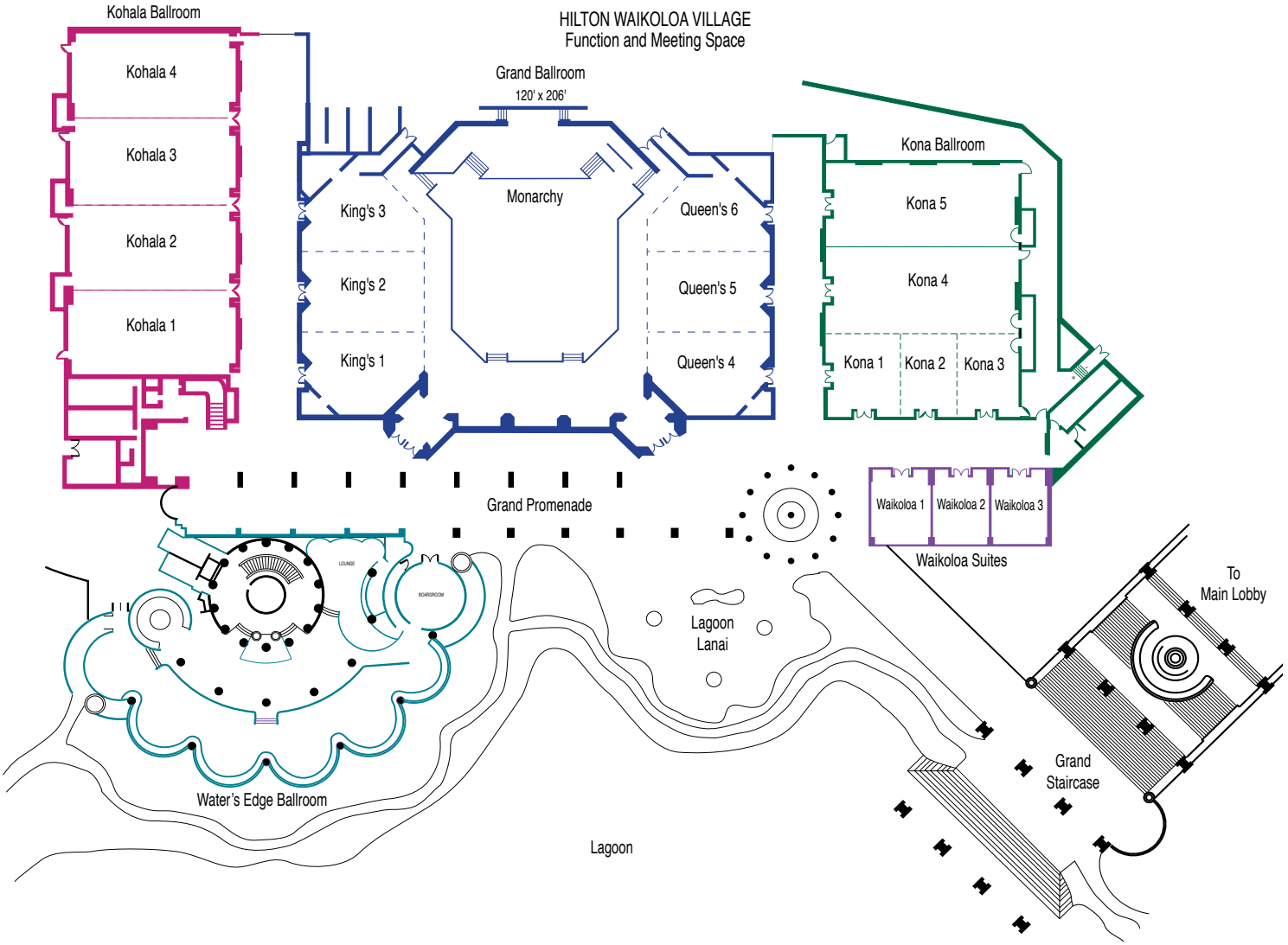
HILTON WAIKOLOA VILLAGE
Function and Meeting Space
Kohala Ballroom
Kohala 4
Kohala 3
Kohala 2
Kohala 1
Grand Ballroom
120' x 206'
King's 3
King's 2
King's 1
Monarchy
Queen's 6
Queen's 5
Queen's 4
Kona Ballroom
Kona 5
Kona 4
Kona 1
Kona 2
Kona 3
Grand Promenade
Waikoloa 1
Waikoloa 2
Waikoloa 3
Waikoloa Suites
To
Main Lobby
Lagoon
Lanai
Grand
Staircase
Water's Edge Ballroom
Lagoon

SCHEDULE at a GLANCE

SUNDAY, MAY 21, 2017

Registration	3 – 7 p.m.	Grand Promenade
Welcome Reception	5 – 7 p.m.	Grand Promenade

MONDAY, MAY 22, 2017

Registration	7:30 a.m. – 6 p.m.	Grand Promenade
Opening Remarks & Plenary session	8:30 a.m. – 11:45 p.m.	Monarchy
PacRim Publishing Workshop – sponsored by SAINT-GOBAIN and ACerS Global Graduate Researcher Network and ACerS Young Professionals Network	12 – 1:15 p.m.	Kona 4
Lunch	11:45 a.m. – 1:15 p.m.	Grand Promenade and Lanai
Concurrent Technical Sessions	1:15 – 6 p.m.	
GOMD General Business Meeting	5:45 – 6:30 p.m.	Kona 5
The National Academies Town Hall Meeting on the Future of Materials Research	6 – 7 p.m.	Kohala 1

TUESDAY, MAY 23, 2017

Registration	7:30 a.m. – 6 p.m.	Grand Promenade
George W. Morey Award Lecture	8:30 – 9:30 a.m.	Kona 5
Concurrent Technical Sessions	8:30 a.m. – 12 p.m.	
Poster Session set-up	12 – 5 p.m.	Grand Promenade
Lunch on own	12 – 1:15 p.m.	
Concurrent Technical Sessions	1:15 – 6 p.m.	
PACRIM Poster Session & GOMD Student Poster Competition	5:30 – 8 p.m.	Grand Promenade

WEDNESDAY, MAY 24, 2017

Registration	8 a.m. – 6 p.m.	Grand Promenade
Stookey Lecture of Discovery	8:30 – 9:30 a.m.	Kona 5
Concurrent Technical Sessions	8:30 a.m. – 12 p.m.	
Lunch on own	12 – 1:15 p.m.	
Concurrent Technical Sessions	1:15 – 6 p.m.	
Norbert J. Kreidl Award Lecture	5:30 – 6:30 p.m.	Kona 5

THURSDAY, MAY 25, 2017

Registration	8 a.m. – 6 p.m.	Grand Promenade
Varshneya Frontiers of Glass Science Lecture	8:30 – 9:30 .a.m.	Kona 5
Concurrent Technical Sessions	8:30 a.m. – 12 p.m.	
Lunch on own	12 – 1:15 p.m.	
Concurrent Technical Sessions	1:15 – 6 p.m.	
Conference Dinner	7 – 9:30 p.m.	Grand Promenade and Lanai

FRIDAY, MAY 26, 2017

Registration	8 a.m. – 12 p.m.	Grand Promenade
Varshneya Frontiers of Glass Technology Lecture	8:30 – 9:30 a.m.	Kona 5
Concurrent Technical Sessions	8:30 a.m. – 12 p.m.	

PLENARY SESSION

Monday, May 22, 2017 | Monarchy

8:50 – 9:30 a.m.

Mike Murray, Chief Technology Officer, Morgan Advanced Materials

Title: ***Materiomics and emerging manufacturing technologies for sustainable development***

9:30 – 10:10 a.m.

Don Hillebrand, Director, Energy Systems Division, Argonne National Laboratory

Title: ***The convergence of discovery science, process engineering, and manufacturing***

10:25 – 11:05 a.m.

Gisele Maxwell, Chief Executive Officer, Shasta Crystals Inc.

Title: ***Advances in Single Crystal Fibers and Thin Rods Grown by Laser Heated Pedestal Growth***

11:05 – 11:45 a.m.

Zhengyi Fu, Chief Professor of Materials Science and Engineering, Wuhan University of Technology

Title: ***Bio-process inspired synthesis and processing for new structures and functions***

The Samuel Geijsbeek PACRIM International Award

Honors Samuel Geijsbeek, one of the founders of The American Ceramic Society.

The award recognizes individuals who are members of the Pacific Rim Conference (PACRIM) societies, for their contributions in the field of ceramics and glass technology that have resulted in significant industrial and/or academic impact, international advocacy, and visibility of the field.

Two Geijsbeek Awards will be presented during the plenary session honoring **Tatsuki Ohji** and **Hai-Doo Kim.**

Tatsuki Ohji
National Institute od Advanced Industrial Science and Technology (AIST), Japan

Hai-Doo Kim
Korea Institute of Materials Science (KIMS), Korea

SESSIONS by SYMPOSIA

Sessions	Date	Time	Location
PLENARY SESSION	May 22	8:30 AM – 12:00 PM	Monarchy
PACRIM			
3rd International Richard M. Fulrath Symposium on Discontinuous Progress for Ceramic Innovations			
Fulrath Session I	May 23	8:30 AM – 12:00 PM	Queen's 6
Fulrath Session II	May 23	1:15 PM – 5:20 PM	Queen's 6
Symposium 1: Characterization and Modeling of Ceramic Interfaces: Structure, Bonding, and Grain Growth			
Interface Thermodynamics	May 25	8:30 AM – 12:00 PM	Kohala 3
Interface Structure and Composition	May 25	1:15 PM – 5:00 PM	Kohala 3
Microstructure Evolution	May 26	9:00 AM – 11:00 AM	Kohala 3
Symposium 2: Virtual Materials Design and Ceramic Genome			
Modeling of Amorphous Ceramics	May 22	1:15 PM – 3:45 PM	Kohala 4
Novel Modeling Concept and Method	May 22	3:45 PM – 5:30 PM	Kohala 4
Modeling of Performances I	May 23	8:30 AM – 10:15 AM	Kohala 4
Modeling of Performances II	May 23	10:15 AM –12:00 PM	Kohala 4
Modeling of Functional Materials I	May 23	1:15 PM – 3:45 PM	Kohala 4
Modeling of Functional Materials II	May 23	3:45 PM – 5:30 PM	Kohala 4
Symposium 3: Novel, Green, and Strategic Processing and Manufacturing Technologies			
Novel, Green, and Strategic Processing I	May 22	1:15 PM – 5:10 PM	King's 3
Novel, Green, and Strategic Processing II	May 23	8:30 AM – 11:45 AM	King's 3
Novel, Green, and Strategic Processing III	May 23	1:15 PM – 5:10 PM	King's 3
Symposium 4: Polymer Derived Ceramics (PDCs) and Composites			
Chemistry and Synthesis of PDCs	May 25	8:30 AM – 10:15 AM	King's 3
Processing of PDCs	May 25	10:15 AM – 12:00 PM	King's 3
Structure and Properties of PDCs	May 25	1:15 PM – 3:45 PM	King's 3
PDCs Composites	May 25	3:45 PM – 5:30 PM	King's 3
Applications of PDCs I	May 26	8:30 AM– 10:15 AM	King's 3
Applications of PDCs II	May 26	10:15 AM – 11:45 AM	King's 3
Symposium 5: Advanced Powder Processing and Manufacturing Technologies			
Nanoparticle and Powder Design and Synthesis	May 25	10:15 AM – 12:00 PM	King's 2
Particle Dispersion Control in Liquid or Polymer	May 25	1:15 PM – 2:15 PM	King's 2
Novel Forming and Sintering Technology	May 25	2:15 PM – 3:45 PM	King's 2
Nano/Microstructure Control	May 25	3:45 PM – 5:15 PM	King's 2
Symposium 6: Synthesis and Processing of Materials using Electric Currents and Pressures			
Electric Currents I	May 25	1:15 PM – 5:00 PM	King's 1
Electric Currents II	May 26	8:30 AM – 11:45 AM	King's 1
Symposium 7: Porous Ceramics: Innovative Processing and Advanced Applications			
Innovations in Processing Methods & Synthesis of Porous Ceramics I	May 22	1:15 PM – 3:40 PM	King's 2
Innovations in Processing Methods & Synthesis of Porous Ceramics II	May 22	3:40 PM – 5:30 PM	King's 2
Ceramic Membranes	May 23	8:30 AM – 10:15 AM	King's 2
High SSA Ceramics I	May 23	10:15 AM – 11:55 AM	King's 2
High SSA Ceramics II	May 23	1:15 PM – 3:40 PM	King's 2
Novel Engineering Applications of Porous Ceramics I	May 23	3:45 PM – 5:25 PM	King's 2
Mechanical Properties of Porous Ceramics	May 24	8:30 AM – 9:55 AM	King's 2
Novel Engineering Applications of Porous Ceramics II	May 24	10:15 AM – 11:15 AM	King's 2

SESSIONS by SYMPOSIA

Sessions	Date	Time	Location
PACRIM			
Symposium 8: Additive Manufacturing and 3D Printing Technologies			
Direct Writing Technologies	May 24	1:15 PM – 2:45 PM	King's 2
Fused Deposition and Ink Jet Printing Technologies	May 24	2:45 PM – 3:30 PM	King's 2
Emerging Technologies	May 24	3:45 PM – 5:15 PM	King's 2
Stereolithography	May 24	5:15 PM – 6:00 PM	King's 2
Symposium 9: Ceramic Integration and Joining Technologies			
Joining and Integration Issues	May 24	1:15 PM – 2:45 PM	Queen's 6
Symposium 10: Multifunctional Nanomaterials and Their Heterostructures for Energy and Sensing Devices			
Nano- and Heterostructures for Solar Energy Capture and Conversion (PV, Solar Fuels, Catalysis) I	May 24	8:30 AM – 9:35 AM	Queen's 5
Nano- and Heterostructures for Solar Energy Capture and Conversion (PV, Solar Fuels, Catalysis) II	May 24	10:00 AM – 11:30 AM	Queen's 5
Nanostructures and Devices for Energy Generation, Storage and Catalysis	May 24	1:15 PM – 3:45 PM	Queen's 5
Processing of Functional Nanomaterials and Interface-driven Functional Multi-material Heterostructures and Nanocomposites	May 24	3:45 PM – 6:15 PM	Queen's 5
Multifunctional Integration for Chemical and Biosensors I	May 25	8:30 AM – 10:15 AM	Queen's 5
Multifunctional Integration for Chemical and Biosensors II	May 25	10:15 AM – 12:00 PM	Queen's 5
Symposium 11: Engineering Ceramics: Processing and Characterizations			
Innovative Processing	May 22	1:15 PM – 3:30 PM	King's 1
Sintering and Microstructure Control	May 22	3:45 PM – 5:45 PM	King's 1
Mechanical Properties I	May 23	8:30 AM – 10:15 AM	King's 1
Mechanical Properties II	May 23	10:15 AM – 12:00 PM	King's 1
Thermal Properties	May 23	1:15 PM – 3:45 PM	King's 1
Applications and Nanotechnology	May 23	3:45 PM – 6:00 PM	King's 1
Mechanical Properties III	May 24	8:30 AM – 10:15 AM	King's 1
Mechanical Properties IV	May 24	10:15 AM – 12:00 PM	King's 1
Symposium 12: Design, Development and Applications of Ceramic Matrix Composites			
CMC I	May 24	8:30 AM – 11:30 AM	Kohala 3
CMC II	May 24	1:15 PM – 5:00 PM	Kohala 3
Symposium 13: Advanced Structural Ceramics for Extreme Environments			
Materials Design, New Compositions, and Composites	May 25	8:30 AM – 10:15 AM	Kohala 4
Novel Processing and Characterization Methods	May 25	10:15 AM – 12:00 PM	Kohala 4
Structural Stability in Extreme Environments	May 25	1:15 PM – 3:15 PM	Kohala 4
Joining, Machining and Properties	May 25	3:30 PM – 5:30 PM	Kohala 4
New Materials and Properties	May 26	8:30 AM – 9:15 AM	Kohala 4
Symposium 14: Novel Spray Coatings			
Fine Particle Spray Technology	May 24	8:30 AM – 10:15 AM	King's 3
Process Improvement of Aerosol Deposition	May 24	10:15 AM – 12:00 PM	King's 3
Advanced Spray Coatings	May 24	1:15 PM – 3:45 PM	King's 3
Environmental Barrier Coatings	May 24	3:45 PM – 6:00 PM	King's 3
Energy and Environmental Applications of Aerosol Deposition	May 25	8:30 AM – 10:15 AM	Waikoloa 2
Novel Coating Deposition	May 25	10:15 AM – 11:00 AM	Waikoloa 2

Sessions	Date	Time	Location
PACRIM			
Symposium 15 : Advanced Wear Resistant Materials: Tribology and Reliability			
Wear Resistant Materials: Tribology and Reliability	May 25	8:30 AM – 11:30 AM	Queen's 4
Symposium 16 : Geopolymers: Low Energy and Environmentally Friendly Ceramics			
Geopolymers I	May 24	8:30 AM – 10:15 AM	Queen's 6
Geopolymers II	May 24	10:15 AM – 11:15 AM	Queen's 6
Symposium 17 : Advanced in Functional Ceramics and Critical Materials Perspective			
Advanced Functional Ceramics and Critical Materials Perspective I	May 22	1:15 PM – 4:45 PM	Kohala 2
Advanced Functional Ceramics and Critical Materials Perspective II	May 23	9:00 AM – 12:00 PM	Kohala 2
Advanced Functional Ceramics and Critical Materials Perspective III	May 23	1:15 PM – 4:45 PM	Kohala 2
Advanced Functional Ceramics and Critical Materials Perspective IV	May 24	9:45 AM – 11:35 AM	Kohala 2
Advanced Functional Ceramics and Critical Materials Perspective V	May 24	1:30 PM – 4:30 PM	Kohala 2
Symposium 18: Microwave Dielectric Materials and Their Applications			
Microwave Dielectric Materials and Their Applications I	May 25	8:30 AM – 12:00 PM	Kohala 2
Microwave Dielectric Materials and Their Applications II	May 25	1:15 PM – 5:00 PM	Kohala 2
Microwave Dielectric Materials and Their Applications III	May 26	8:30 AM – 12:00 PM	Kohala 2
Symposium 19 : Transparent Ceramic Materials and Devices			
Transparent Ceramic Materials and Devices I	May 22	1:15 PM – 5:30 PM	Kohala 3
Transparent Ceramic Materials and Devices II	May 23	8:30 AM – 11:15 AM	Kohala 3
Transparent Ceramic Materials and Devices III	May 23	1:15 PM – 3:15 PM	Kohala 3
Symposium 20: Crystalline Materials for Electrical, Optical and Medical Applications			
Semiconductor	May 22	1:15 PM – 3:45 PM	Kohala 1
New Direction I	May 22	3:45 PM – 5:00 PM	Kohala 1
New Direction II	May 23	9:00 AM – 12:00 PM	Kohala 1
Piezo/Ferro	May 23	1:45 PM – 3:45 PM	Kohala 1
Optical Material I	May 23	3:45 PM – 5:30 PM	Kohala 1
Optical Material II	May 24	8:30 AM – 11:30 AM	Kohala 1
Phosphor	May 24	1:15 PM – 3:30 PM	Kohala 1
Scintillator I	May 25	8:30 AM – 11:45 AM	Kohala 1
Scintillator II	May 25	1:15 PM – 3:00 PM	Kohala 1
Symposium 21: Solid Oxide Fuel Cells and Hydrogen Technologies			
SOFC Technologies	May 25	1:30 PM – 3:30 PM	Queen's 4
SOFC Electrolytes and Electrodes	May 25	3:30 PM – 5:15 PM	Queen's 4
SOFC Interconnect	May 26	9:00 AM – 10:15 AM	Queen's 4
Current Collection, Sealing, Hydrogen Generation	May 26	10:15 AM – 11:15 AM	Queen's 4
Symposium 22: Direct Thermal to Electrical Energy Conversion Materials and Applications			
Theories and New Concepts	May 25	8:30 AM – 10:15 AM	Queen's 6
Tellurides and Silicides	May 25	10:15 AM – 12:00 PM	Queen's 6
Oxides and Sulfides	May 25	1:15 PM – 3:45 PM	Queen's 6
New Materials and Modules	May 25	3:45 PM – 6:00 PM	Queen's 6
Novel Aspects of Thermal-to-Electrical Direct Energy Conversion	May 26	8:30 AM – 10:00 AM	Queen's 6
Carbon/Organic Materials	May 26	10:15 AM – 12:00 PM	Queen's 6

SESSIONS by SYMPOSIA

Sessions	Date	Time	Location
PACRIM			
Symposium 23: Materials for Solar Thermal Energy Conversion and Storage			
CSP Absorbers and Reactors / Thermal Storage Materials	May 24	1:15 PM – 3:45 PM	Queen's 4
Materials for Solar Fuel Production	May 24	3:45 PM – 5:00 PM	Queen's 4
Symposium 24: Photovoltaic and Related Materials and Technologies			
Photovoltaic Materials and Technologies I	May 25	1:15 PM – 5:05 PM	Queen's 5
Photovoltaic Materials and Technologies II	May 26	8:30 AM – 11:50 AM	Queen's 5
Symposium 25: Ceramics for Next Generation Nuclear Energy			
Hierarchical and Porous Materials for Waste Form Applications	May 22	1:15 PM – 3:15 PM	Kona 1
Aging and Degradation Mechanisms and Behavior of Nuclear Waste Form Materials	May 22	3:30 PM – 5:15 PM	Kona 1
Properties and Performance of Nuclear Materials Under Extreme Conditions (i.e. High Radiation Dose, Elevated Temperature, Stress, Corrosive Environment, etc.)	May 23	8:30 AM – 11:30 AM	Kona 1
Accident Tolerant Cladding and Fuel Materials for Nuclear Energy	May 23	1:15 PM – 3:15 PM	Kona 1
Advancements in Modelling Materials for Nuclear Applications	May 23	3:30 PM – 5:00 PM	Kona 1
Advancements in Nuclear Reactor and Fuel Development	May 24	8:30 AM – 10:15 AM	Kona 1
Development and Production of Critical Isotopes and Targets	May 24	10:15 AM – 12:00 PM	Kona 1
Symposium 26: Advances in Materials and Technology for Perovskite and Next Generation Solar Cells			
Synthesis and Functionalization of Nanomaterials for Photovoltaic Applications	May 24	1:15 PM – 3:45 PM	King's 1
Advances in Materials and Technologies for Perovskite-based Solar Cells I	May 24	3:45 PM – 5:05 PM	King's 1
Advances in Materials and Technologies for Perovskite-based Solar Cells II	May 25	8:30 AM – 11:15 AM	King's 1
Symposium 27: Ceramics for Enabling Environmental Protection: Clean Air and Water			
Gas Filtration and Liquid Purification	May 22	1:15 PM – 3:45 PM	Queen's 6
Novel Materials	May 22	3:45 PM – 5:45 PM	Queen's 6
Symposium 28: Advanced Materials and Technologies for Electrochemical Energy Storage Systems			
Solid State Batteries	May 22	1:15 PM – 3:45 PM	Queen's 5
Solid Electrolytes + Supercapacitors	May 22	3:45 PM – 5:45 PM	Queen's 5
Beyond Li-ion	May 23	8:30 AM – 10:00 AM	Queen's 5
Positive	May 23	10:15 AM – 12:00 PM	Queen's 5
Characterization I	May 23	1:15 PM – 3:45 PM	Queen's 5
Characterization II	May 23	3:45 PM – 5:30 PM	Queen's 5
Cell + Theory	May 24	8:30 AM – 10:15 AM	Waikoloa 2
Negative	May 24	10:15 AM – 12:00 PM	Waikoloa 2
Symposium 29: Advances in Polar, Magnetic and Semiconductor Materials: Extending Temperature Limits			
High Temperature Applications and Materials	May 22	1:15 PM – 5:30 PM	Queen's 4
High Temperature Piezoelectrics	May 23	8:30 AM – 11:15 AM	Queen's 4
High Temperature Dielectrics	May 23	1:15 PM – 5:15 PM	Queen's 4
High Frequency and High Temperature Materials	May 24	8:30 AM – 12:00 PM	Queen's 4

Sessions	Date	Time	Location
PACRIM			
Symposium 30: Glasses and Ceramics for Nuclear and Hazardous Waste Treatment			
Waste Vitrification Technologies: Development and Implementation	May 24	1:15 PM – 5:30 PM	Kona 1
Waste Glass Structure	May 25	8:30 AM – 10:15 AM	Kona 1
Geopolymer, Glass-Ceramic, and Composite Waste Forms I	May 25	10:15 AM – 12:00 PM	Kona 1
Waste Form Simulations	May 25	1:15 PM – 1:45 PM	Kona 1
Immobilization of Challenging Species	May 25	1:45 PM – 3:15 PM	Kona 1
Geopolymer, Glass-Ceramic, and Composite Waste Forms II	May 26	8:30 AM – 12:00 PM	Kona 1
Symposium 31: Advances in Bioceramics: Biomineralization and Bioinspired Materials			
Towards Smart Bioceramics	May 22	1:15 PM – 3:45 PM	Monarchy
Fundamental Aspects of Biomineralization - General Session	May 22	3:45 PM – 5:45 PM	Monarchy
On Bone: Structural Aspects	May 23	8:30 AM – 10:15 AM	Monarchy
Fundamental Apects of Biominerals II - Calcarous Systems	May 23	10:15 AM – 12:00 PM	Monarchy
On Bone: Formation of a Complex Bioceramic	May 23	1:15 PM – 3:45 PM	Monarchy
Engineering of Hard Tissues I	May 23	3:45 PM – 5:30 PM	Monarchy
Engineering of Hard Tissues II	May 24	8:30 AM – 10:15 AM	Monarchy
Bio-Inspiration for Mechanical Design	May 24	10:15 AM – 12:15 PM	Monarchy
Symposium 32: Nanostructured Bioceramics and Ceramics for Biomedical Applications			
Nanostructured Bioceramics I	May 24	1:15 PM – 5:30 PM	Monarchy
Nanostructured Bioceramics II	May 25	8:30 AM – 12:00 PM	Monarchy
Nanostructured Bioceramics III	May 25	1:15 PM – 5:00 PM	Monarchy
Young Investigator Forum: Design and Application of Next Generation Multifunctional Materials: Addressing the New Millennium's Societal Challenges			
Academics, Research, Industry, and Funding	May 24	8:30 AM – 10:15 AM	Kohala 4
Next Generation High Temperature Ceramics based Materials	May 24	10:15 AM – 12:10 PM	Kohala 4
Frontiers in Nanotechnology	May 24	1:15 PM – 3:45 PM	Kohala 4
Innovative Materials Manufacturing	May 24	3:45 PM – 5:35 PM	Kohala 4
PACRIM Posters			
PACRIM Undergraduate Student Posters	May 23	5:30 PM – 8:00 PM	Grand Promenade
PACRIM Graduate Student Posters	May 23	5:30 PM – 8:00 PM	Grand Promenade
PACRIM Poster Session (non-student)	May 23	5:30 PM – 8:00 PM	Grand Promenade

PACRIM SYMPOSIA

Program Chair:

Dileep Singh, Argonne National Laboratory, USA

MULTISCALE MODELING AND SIMULATION

S1: Characterization and Modeling of Ceramic Interfaces: Structure, Bonding, and Grain Growth

Klaus van Benthem, University of California, Davis, USA; **Wolfgang Rheinheimer**, Karlsruhe Institute of Technology, Germany; **Sung-Yoon Chung**, KAIST, Korea; **Jian Luo**, University of California, San Diego, USA; **Masato Yoshiya**, Osaka University, Japan

S2: Virtual Materials Design and Ceramic Genome

Jingyang Wang, Institute of Metal Research, Chinese Academy of Sciences, China; **Wai-Yim Ching**, University of Missouri-Kansas City, USA; **Isao Tanaka**, Kyoto University, Japan; **William J. Weber**, University of Tennessee, USA; **Gerard L. Vignoles**, University of Bordeaux, France; **Liping Huang**, Rensselaer Polytechnic Institute, USA; **Kwang-Ryeol Lee**, Korea Institute of Science and Technology, Korea; **Ting Liao**, University of Wollongong, Australia

INNOVATIVE PROCESSING AND MANUFACTURING

S3: Novel, Green, and Strategic Processing and Manufacturing Technologies

T**atsuki Ohji**, National Institute of Advanced Industrial Science and Technology (AIST), Japan; **Mrityunjay Singh**, Ohio Aerospace Institute, USA; **Zhengyi Fu**, Wuhan University of Technology, China; **Yoshihiro Hirata**, Kagoshima University, Japan; **Young-Wook Kim**, University of Seoul, Korea; **Wataru Sakamoto**, Nagoya University, Japan; **Richard D. Sisson, Jr.**, Worcester Polytechnic Institute, USA; **Hisayuki Suematsu**, Nagaoka University of Technology, Japan; **Guo-Jun Zhang**, Donghua University, China

S4: Polymer Derived Ceramics (PDCs) and Composites

Paolo Colombo, University of Padova, Italy; **Rishi Raj**, University of Colorado, USA; **Ralf Riedel**, Technical University Darmstadt, Germany; **Yuji Iwamoto**, Nagoya Institute of Technology, Japan; **Dong-Pyo Kim**, Pohang University of Science and Technology, Korea; **Isabel Kinski**, Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Germany; **Peter Kroll**, The University of Texas Arlington, USA; **Philippe Miele**, University of Montpellier 2, France; **Gurpreet Singh**, Kansas State University, USA; **Gian Domenico Sorarù**, University of Trento, Italy; **Yoshiyuki Sugahara**, Waseda University, Japan; **Yiguang Wang**, Northwestern Polytechnical University, China; **Yingde Wang**, National University of Defence Technology, China

S5: Symposium: Advanced Powder Processing and Manufacturing Technologies

Makio Naito, Joining and Welding Research Institute (JWRI), Osaka University, Japan; **Junichi Tatami**, Yokohama National University, Japan; **Kevin G. Ewsuk**, Sandia National Laboratories, USA; **Nasayoshi Fuji**, Nagoya Institute of Technology, Japan; **Yasufumi Fukui**, Kaneka Corporation, Japan; **Yuji Hotta**, National Institute of Advanced Industrial Science and Technology (AIST), Japan; **Hai-Doo Kim**, Korea Institute of Machinery & Materials (KIMM), Korea; **Makio Naito**, Joining and Welding Research Institute (JWRI), Osaka University, Japan; **Yoshio Sakka**, National Institute of Materials Science (NIMS), Japan; **Junichi Tatami**, Yokohama National University, Japan; **Satoshi Tanaka**, Nagaoka University of Technology., Japan; **Wei-Hsing Tuan**, National Taiwan University, Taiwan; **Yiquan Wu**, Alfred University, USA; **Di Zhang**, Shanghai Jiao Tong University, China

S6: Synthesis and Processing of Materials using Electric Currents and Pressures

Javier E. Garay, University of California, San Diego, USA; **Takashi Goto**, Institute for Materials Research, Tohoku University, Japan; **Olivier Guillon**, Forschungszentrum Jülich GmbH, Germany; **Manshi Ohyanagi**, Ryukoku University, Japan; **Yasuhiro Kodera**, University of California, Riverside, USA; **Claude Estournès**, CNRS and Université Paul Sabatier, France

S7: Porous Ceramics: Innovative Processing and Advanced Applications

Manabu Fukushima, National Institute of Advanced Industrial Science and Technology (AIST), Japan; **Paolo Colombo**, Università di Padova, Italy; **Yu-ping Zeng**, Shanghai Institute of Ceramics, Chinese Academy of Sciences, China; **Samuel Bernard**, European Institute of Membranes, France; **Xinwei Chen**, Institute of Materials Research and Engineering, Agency of Science, Technology and Research, Singapore; **Sunho Choi**, Northeastern University, USA; **Tobias Fey**, Universität Erlangen-Nürnberg, Germany; **Young-Wook Kim**, University of Seoul, Korea; **Yasuo Kogo**, Tokyo University of Science, Japan; **Alberto Ortona**, University of Applied Sciences and Arts of Southern Switzerland, Switzerland; **Yoshikazu Suzuki**, University of Tsukuba; **Jingyang Wang**, Institute of Metal Research, Chinese Academy of Sciences, China; **James Zimmerman**, Corning Incorporated, USA

S8: Additive Manufacturing and 3D Printing Technologies

Soshu Kirihara, Osaka University, Japan; **Mrityunjay Singh**, Ohio Aerospace Institute, USA; **Martin Schwentenwein**, Lithos, Germany; **Surojit Gupta**, University of North Dakota, USA; **Michael Halbig**, NASA Glenn Research Center, USA; **Cesar R. Foschini**, Universidae Estadual Paulista, Bauru, Brazil; **Miranda Fateri**, FH Aachen, Germany; **Cynthia Gomes**, BAM, Germany; **Nahum Travizky**, University of Erlangen-Nürnberg, Germany

S9: Ceramic Integration and Joining Technologies

Monica Ferraris, Politecnico di Torino, Italy; **Michael Halbig**, NASA Glenn Research Center, USA; **Soshu Kirihara**, Osaka University, Japan; **Rajiv Asthana**, University of Wisconsin-Stout, USA; **Tatsuya Hinoki**, Kyoto University, Japan; **Charles Henager**, Pacific Northwest National Laboratory, USA; **Charles Lewinsohn**, Ceramatec, Inc., USA; **Diletta Sciti**, Institute of Science and Technology for Ceramics, Italy; **Gérard Vignoles**, University of Bordeaux, France; **Thomas Weißgärber**, Fraunhofer Institute, Germany

NANOTECHNOLOGY AND STRUCTURAL CERAMICS

S10: Multifunctional Nanomaterials and Their Heterostructures for Energy and Sensing Devices

Sanjay Mathur, University of Cologne, Germany; **Heon-jin Choi**, Yonsei University, Korea; **Yoon Bong Hahn**, Chonbuk National University, Korea; **Olivia D. Graeve**, University of California, San Diego, USA; **Hidehiro Kamiya**, Tokyo University of Agriculture & Technology, Japan; **Liejin Guo**, Xian Jiao Tong University, China; **Ausrine Bartasyte**, Université Franche-Comté, Besancon, France; **Nick Wu**, West Virginia University, USA; **Tsutomu Miyasaka**, Toin University of Yokohama, Japan; **Mohammad Nazeeruddin**, EPFL, Switzerland; **Fabio Di Fonzo**, Istituto Italiano di Tecnologia, Milan, Italy; **Danie Chua**, National Singapore University, Singapore; **Anand S. Khanna**, IIT Bombay, India

S11: Engineering Ceramics: Processing and Characterizations

Young-Wook Kim, University of Seoul, Korea; **Hagen Klemm**, Fraunhofer Institute for Ceramic Technologies and Systems, IKTS, Germany; **Junichi Tatami**, Yokohama National University, Japan; **Michael Halbig**, NASA Glenn Research Center, USA; **Pavol Šaigalík**, Slovak Academy of Sciences, Slovakia; **Hua-Tay Lin**, Guangdong University of Technology, China; **Kiyoshi Hirao**, National Institute of Advanced Industrial Science and Technology (AIST), Japan; **Laifei Cheng**, Northwestern Polytechnical University, China; **Katsumi Yoshida**, Tokyo Institute of Technology, Japan

S12: Design, Development and Applications of Ceramic Matrix Composites

Shaoming Dong, Shanghai Institute of Ceramics, China; **JiYeon Park**, Korea Atomic Energy Research Institute, Korea; **Dietmar Koch**, German Aerospace Centre, Institute of Structures and Design, Germany; **Walter Krenkel**, University of Bayreuth, Germany; **Hai-Doo Kim**, Korea Institute of Materials Science, Korea; **Jacques Lamon**, CNRS/University of Bordeaux, France; **Andrea Lazzeri**, University of Piza, Italy; **Yiguang Wang**, Northwestern Polytechnical University, China; **Katsumi Yoshida**, Tokyo Institute of Technology, Japan; **Sergei T. Mileiko**, Russian Academy of Sciences, Inst. Solid State Phys., Russia; **Christian Wilhelmi**, EADS Innovation Works/Airbus Group Innovations, Germany; **Guojun Zhang**, Donghua University, China

S13: Advanced Structural Ceramics for Extreme Environments

Yanchun Zhou, Aerospace Research Institute of Material & Processing Technology, China; **Sea-Hoon Lee**, Korea Institute of Materials Science, Korea; **William G. Fahrenholtz**, Missouri University of Science and Technology, USA; **Jon Binner**, University of Birmingham, UK; **Per Eklund**, Linköping University, Sweden; **Greg Hilmas**, Missouri University of Science and Technology, USA; **Frederic Monteverde**, Institute of Science and Technology of Ceramics-CNR, Italy; **Miladin Radovic**, Texas A&M University, USA; **Jochen Schneider**, Materials Chemistry, RWTH Aachen, Germany; **Luc J Vandeperre**, Imperial College London, UK; **Guo-Jun Zhang**, Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

S14: Novel Spray Coatings

Jun Akedo, National Advanced Institute of Science and Technology, Japan; **Dong-Soo Park**, Korea Institute of Materials Science, Korea; **Dongming Zhu**, NASA Glenn Research Center, USA; **Javad Mostaghimi**, University of Toronto, Canada; **Kazuhiro Ogawa**, Tohoku University, Japan; **Kentaro Shinoda**, National Advanced Institute of Science and Technology, Japan; **Edward Gorzkowski**, Naval Research Laboratory, USA; **Chang-Hee Lee**, Hanyang University, Korea; **Chang-Jiu Li**, Xi'an Jiatong University, China; **Ralf Moos**, University of Bayreuth, Germany; **Minoru Osada**, National Institute for Materials Science, Japan

S15 : Advanced Wear Resistant Materials: Tribology and Reliability

Kyoung Il Moon, Siheung Center for Industrial Root Technology, KITECH, Korea; **Taejin Hwang**, Korea Institute of Industrial Technology, Korea; **Kouichi Yasuda**, Tokyo Institute of Technology, Japan; **Jindrich Musil**, University of West Bohemia, Czech Republic; **Mustafa Urgen**, Istanbul Teknik Universites, Turkey; **Robert Vassen**, Forschungszentrum Jülich Gmbh, Germany; **In Woong Yeo**, Hyundai Motor Company, Korea; **Doan Dinh Phuong**, Vietnam Academy of Science and Technology, Vietnam; **Se-Hun Kwon**, Pusan National University, Korea; **Byung-Koog Jang**, National Institute for Materials Science, Japan; **Zhengyi Fu**, Wuhan University of Technology, Wuhan, China

S16 : Geopolymers: Low Energy and Environmentally Friendly Ceramics

Waltraud M. Kriven, University of Illinois at Urbana-Champaign, USA; **Kwesi Sagoe-Crentsil**, CSIRO Melbourne, Australia; **Kiyoshi Okada**, Tokyo Institute of Technology, Japan; **Wanchai Yodsudjai**, Kasetsart University, Thailand

MULTIFUNCTIONAL MATERIALS AND SYSTEMS

S17 : Advanced in Functional Ceramics and Critical Materials Perspective

Nobuhito Imanaka, Osaka University, Japan; **Taek-Soo Kim**, Korea Institute of Industrial Technology, Korea; **Kazuyoshi Ogasawara**, Kwansei Gakuin University, Japan; **Satoshi Wada**, University of Yamanashi, Japan; **Hiroshi Masumoto**, Tohoku University, Japan

S18: Microwave Dielectric Materials and Their Applications

Xiang Ming Chen, Zhejiang University, China; **Heli Jantunen**, University of Oulu, Finland; **Eung Soo Kim**, Kyonggi University, Korea; **Hitoshi Ohsato**, Nagoya Industrial Science Research Institute, Japan; **Danilo Suvorov**, Jozef Stefan Institute, Slovenia; **Rick Ubic**, Boise State University, USA.

S19 : Transparent Ceramic Materials and Devices

Yiquan Wu, Alfred University, USA; **Jasbinder Sanghera**, Naval Research Lab, USA; **Do Kyung Kim**, Korea Advanced Institute of Science and Technology, Korea; **Akio Ikesue**, World-Lab Corp, Japan; **Ying Shi**, Shanghai University, China; **Takunori Taira**, Institute for Molecular Science, Japan; **Shiwei Wang**, Shanghai Institute of Ceramics, China.

S20: Crystalline Materials for Electrical, Optical and Medical Applications

Kiyoshi Shimamura, National Institute for Materials Science (NIMS), Japan; **Noboru Ichinose**, Waseda University, Japan; **Xutang Tao**, Shandong University, China; **Nerine J. Cherepy**, Lawrence Livermore National Laboratory (LLNL), USA; **Didier Chaussende**, Grenoble Institute of Technology (INP), France; **Luisa E. Bausá**, Autonomous University of Madrid, Spain; **Valérie Demange**, Rennes Institute of Chemical Sciences (ISCR), France; **Alain Largeteau**, Institute for Solid State Chemistry Bordeaux (ICMCB), France; **Kenji Toda**, Niigata University, Japan; **Mikio Higuchi**, Hokkaido University, Japan.

CERAMICS FOR ENERGY AND ENVIRONMENT

S21: Solid Oxide Fuel Cells and Hydrogen Technologies

Fatih Dogan, Missouri University of Science and Technology, USA; **Masanobu Awano**, National Institute of Advanced Industrial Science and Technology, Japan; **Nguyen Minh**, University of California, San Diego, USA; **Kuan-Zong Fung**, National Cheng Kung University, Taiwan; **Thomas Pfeifer**, Fraunhofer Institute for Ceramic Technologies and Systems, Germany; **Guntae Kim** , Ulsan National Institute of Science and Technology, Korea.

S22: Direct Thermal to Electrical Energy Conversion Materials and Applications

Hua-Tay Lin, Guangdong University of Technology, China; **Michitaka Ohtaki**, Kyushu University, Japan; **Jin-Sang Kim**, Korea Institute of Science & Technology (KIST), Korea; **Terry Tritt**, Clemson University, USA; **Lidong Chen**, Shanghai Institute of Ceramics, China; **Anke Weidenkaff**, University of Stuttgart, Germany; **Kunihito Koumoto**, Nagoya University, Japan; **Hsin Wang**, Oak Ridge National Laboratory, USA.

S23: Materials for Solar Thermal Energy Conversion and Storage

Martin Schmücker, German Aerospace Center, Germany; **Weihuan Zhao**, University of North Texas, USA; **Martin Roeb**, German Aerospace Center, Germany; **Anthony McDaniel**, Sandia National Labs, USA.

S24: Photovoltaic and Related Materials and Technologies

Tohru Sekino, Osaka University, Japan; **Yoshikazu Suzuki**, Tsukuba University, Japan; **Federico Rosei**, NRS-EMT, University du Quebec, Canada; **Jin-Hyo Boo**, Sungkyunkwan University Korea; **Yanfeng Gao**, Shanghai Institute of Ceramics, China; **Jyh-Ming Ting**, National Cheng Kung University, Taiwan; **Udo Bach**, Monash University, Australia; **Yi-Bing Cheng**, Monash University, Australia.

S25: Ceramics for Next Generation Nuclear Energy

Jake Amoroso, Savannah River National Laboratory, USA; **Josef Matyas**, Pacific Northwest National Laboratory, USA; **Weon-Ju Kim**, Korea Atomic Energy Research Institute, Korea; **Yutai Katoh**, Oak Ridge National Laboratory, USA; **Andrew Nelson**, Los Alamos National Laboratory, USA; **Alexander Gottberg**, TRIUMF, Canada; **Travis Knight**, University of South Carolina, USA; **Takashi Nozawa**, National Institutes for Quantum and Radiological Science and Technology, Japan; **Ming Tang**, Los Alamos National Laboratory, USA; **Qing Huang**, Ningbo Institute of Materials Technology & Engineering, China; **Harlan Brown-Shaklee**, Sandia National Laboratory, USA.

S26: Advances in Materials and Technology for Perovskite and Next Generation Solar Cells

Yoon-Bong Hahn, Chonbuk National University, Korea; **S.R.P. Silva**, Surrey University, UK; **Hyun Suk Jung**, Sungkyunkwan University, Korea; **Hua Zhang**, Nanyang Technological University, Singapore; **Silke Christiansen**, Helmholtz Zentrum Berlin, Germany; **Dongling Ma**, INRS, Canada

S27: Ceramics for Enabling Environmental Protection: Clean Air and Water

Michael J. Lance, Oak Ridge National Laboratory, USA; **Daniel Grohol**, The Dow Chemical Company, USA ; **Nahum Travitzky**, University of Erlangen-Nuremberg, Germany ; **Hua-Tay Lin**, Guangdong University of Technology, China ; **Xiaowei Yin**, Northwestern Polytechnical University, China ; **Paolo Colombo**, Università di Padova, Italy ; **Eugene Medvedovski**, Endurance Technologies Inc., Canada ; **In-Hyuck Song**, Korea Institute of Materials Science, Korea ; **Toshihiro Ishikawa**, Tokyo University of Science, Japan ; **Valeriy M. Pogrebenkov**, Tomsk Polytechnic University, Russia

S28: Advanced Materials and Technologies for Electrochemical Energy Storage Systems

Palani Balaya, National University of Singapore, Singapore; **Kisuk Kang**, Seoul National University, Korea; **Mickael Dolle**, Université de Montréal, Canada; **Ilias Belharouak**, Qatar Environment & Energy Research Institute, Qatar; **Shirley Meng**, University of California, San Diego, USA; **Dany Carlier-Larregaray**, ICMCB-CNRS, France; **Naoaki Yabuuchi**, Tokyo Denki University, Japan; **Robert Dominko**, National Institute of Chemistry, Slovenia; **Neeraj Sharma**, University of New South Wales, Australia

S29: Advances in Polar, Magnetic and Semiconductor Materials: Extending Temperature Limits

Michael Lanagan, Pennsylvania State University, USA; **Behai Ma**, Argonne National Laboratory, USA; **Steven Milne**, University of Leeds, UK; **Paul Ohodnicki**, National Energy Technology Laboratory, USA; **Shujun Zhang**, University of Wollongong, Australia

S30: Glasses and Ceramics for Nuclear and Hazardous Waste Treatment

Kevin M. Fox, Savannah River National Laboratory, USA; **Russell J. Hand**, University of Sheffield, United Kingdom; **Joseph V. Ryan**, Pacific Northwest National Laboratory, USA; **Nicolas Clavier**, Marcoule Institute for Separative Chemistry, France; **Yaohiro Inagaki**, Kyushu University, Japan; **Cheon-Woo Kim**, Korea Hydro & Nuclear Power Company, Ltd., Korea

CERAMICS IN BIOLOGY, MEDICINE, AND HUMAN HEALTH

S31: Advances in Bioceramics: Biomineralization and Bioinspired Materials

Joanna McKittrick, University of California, San Diego, USA; **Laurie Gower**, University of Florida, USA; **Hui-Suk Yun**, Korea Institute of Materials Science, Korea; **Po-Yu Chen**, National Tsing Hua University, Taiwan; **David Kisailus**, University of California, Riverside, USA; **Andre Studart**, ETH-Zürich, Switzerland; **Stephan E. Wolf**, University of Erlangen-Nürnberg, Germany

S32: Nanostructured Bioceramics and Ceramics for Biomedical Applications

Roger J Narayan, University of North Carolina and North Carolina State University, USA; **Akiyoshi Osaka**, Okayama University, Japan; **Min Wang**, The University of Hong Kong; **Markus Reiterer**, Medtronic, USA; **Mohan Edirisinghe**, University College London, United Kingdom; **Chikara Ohtsuki**, Nagoya University, Japan; **Hui-suk Yun**, Korea Institute of Materials Science, Korea; **Rizhi Wang**, University of British Columbia, Canada

SPECIAL TOPICS

3rd International Richard M. Fulrath Symposium on Discontinuous Progress for Ceramic Innovations

Mrityunjay Singh, Ohio Aerospace Institute, NASA Glenn Research Center, USA; **Takaaki Tsurumi**, Tokyo Institute of Technology, Japan; **Elizabeth Dickey**, North Carolina State University, USA; **Yuji Akimoto**, Shoei Chemical Inc., Japan; **Greg Morscher**, The University of Akron, USA; **Ken-ichi Kakimoto**, Nagoya Institute of Technology, Japan; **Roger J. Narayan**, North Carolina State University, USA

Young Investigator Forum: Design and Application of Next Generation Multifunctional Materials: Addressing the New Millennium's Societal Challenges

Surojit Gupta, University of North Dakota, USA; **Eva Hemmer**, University of Ottawa, Canada; **Jun-ichi Tatami**, Yokohama National University, Japan; **G. Costa**, NASA Glenn Research Center, USA; **Aiguo Zhou**, Henan Polytechnic University, China; **Dongsheng Wen**, University of Leeds, UK; **Peter R. Wich**, Germany; **Tomas Fisher**, University of Cologne, Germany

ACerS Glass and Optical Materials Division Annual Meeting

WELCOME

Welcome to the 2017 Glass & Optical Materials Division (GOMD) Annual Meeting! We are excited to be part of PACRIM 12. We are glad to report a record number of scientific talks and posters by leading researchers from academia, governmental laboratories, and industries, and undergraduate and graduate students from around the world. Six broad symposia with a total of over 30 sessions cover a wide range of topics and interests: Fundamental of the Glassy State, Glasses in Healthcare: Fundamentals and Application, Optical and Electronic Materials and Devices: Fundamentals and Applications, Glass Technology and Crosscutting Topics, Professor Jacques Lucas Honorary Symposium, and Professor Komatsu Kinen Honorary Symposium. As an audience, you will find presentations and lectures covering the latest advances and discoveries in all aspects of glass science and engineering with a central theme of glass – an intriguing state of matter. You will also find several specific activities that have been planned for you:

- Welcome Reception on May 21st Sunday, 5-7 p.m. – This is a great opportunity to renew your acquaintances and meet new people joining the ever widening GOMD community
- Special Award Lectures – George W. Morey Award (May 23rd Tuesday, 8:30 – 9:30 a.m.), Stookey Lecture of Discovery (May 24th Wednesday 8:30 – 9:30 a.m.), Norbert J. Kreidl Award (May 24th Wednesday 5:30 – 6:30 p.m.), Varshneya Glass Science (May 25th Thursday, 8:30 – 9:30 a.m.), and Varshneya Glass Technology (May 26th Friday, 8:30 – 9:30 a.m.) – These lectures feature outstanding honorees.
- Poster Session and Student Poster Competition on May 23rd Tuesday 5:30 – 8:00 p.m. – You can chat with the presenters and continue your learning adventure.
- Conference Dinner on May 25th, Thursday, 7 p.m. (included in your conference registration) – This is an excellent opportunity to enjoy a meal, relax, and continue your networking.

We are grateful to the generous support from our sponsors: Journal of Non-Crystalline Solids, Corning Incorporated, Coe College, and International Journal of Applied Glass Science. The American Ceramic Society and the GOMD thank you for your active participation and contribution to GOMD 2017 Annual Meeting.

2017 GOMD Program Chair

S. K. Sundaram
Inamori School of Engineering
The New York State College of Ceramics
Alfred University

Tuesday, May 23, 2017 | Grand Promenade | 5:30 – 8:00 p.m.

GOMD Poster Session

Sponsored by *Journal of Non-crystalline Solids*

JOURNAL OF NON-CRYSTALLINE SOLIDS

Meet the Editors at their table display

Student Poster competition

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JOURNAL OF NON-CRYSTALLINE SOLIDS

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MEET THE EDITORS:

B. G. Potter, *University of Arizona, Arizona Materials Laboratory, Tucson, AZ, USA*

E. D. Zanotto, *Universidade Federal de São Carlos, Vitreous Materials Lab, São Carlos, SP, Brazil*

J.W. Zwanziger, *Dept. of Chemistry, Dalhousie University, Halifax, Canada*

TIME & DATE:

Date: Tuesday, May 23

Time: 5.30 – 8.00 pm

Announcing the 2017 W.H. Zachariasen Award

The Young Scientist Award for Outstanding Research on Non-Crystalline Solids

FOR MORE INFORMATION

www.elsevier.com/locate/jnoncrysol

AWARD LECTURES

George W. Morey Lecture

Tuesday, May 23 | 8:30 a.m.

Kathleen Richardson, professor of optics and materials science and engineering, Center for Research and Education in Optics and Lasers, College of Optics and Photonics, University of Central Florida

Title: *The evolution of chalcogenide glasses in infrared photonics—beyond invisible*

Stookey Lecture of Discovery

Wednesday, May 24 | 8:30 a.m.

Peter C. Schultz, senior advisor and board member, OFS Fitel, director, secretary, advisor, viNGN, president, BioSensor Inc.

Title: *In pursuit of perfect glass: Fifty years and still at it*

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The Norbert J. Kreidl Award for Young Scholars Lecture

Wednesday, May 24 | 5:30 p.m.

Yingtian Yu

Title: *Stretched exponential relaxation of glasses: Origin of the mixed alkali effect*

Darshana and Arun Varshneya Frontiers of Glass Science Lecture

Thursday, May 25 | 8:30 a.m.

Himanshu Jain, professor, materials science and engineering, Lehigh University

Title: *Pathways of glass-crystal transformation*

Darshana and Arun Varshneya Frontiers of Glass Technology Lecture

Friday, May 26 | 8:30 a.m

Leonid Glebov, research professor of optics, Center for Research and Education in Optics and Lasers, College of Optics and Photonics, University of Central Florida; OptiGrate Corporation

Title: *Volume holographic elements in photo-thermo-refractive glass: Features and applications*

GOMD SESSIONS by SYMPOSIA

Sessions	Date	Time	Location
GOMD AWARD LECTURES			
George W. Morey Award Lecture	May 23	8:30 AM – 9:45 AM	Kona 5
Norbert J. Kreidl Award Lecture	May 24	5:30 PM – 6:30 PM	Kona 5
Stookey Lecture of Discovery	May 24	8:30 AM – 9:40 AM	Kona 5
Varshneya Glass Science Lecture	May 25	8:30 AM – 9:45 AM	Kona 5
Varshneya Glass Technology Lecture	May 26	8:30 AM – 9:45 AM	Kona 5
GOMD SYMPOSIUM 1: Fundamentals of the Glassy State			
Session 1: Glass Formation and Relaxation I	May 24	9:45 AM – 12:05 PM	Kona 4
Session 1: Glass Formation and Relaxation II	May 24	1:15 PM – 5:15 PM	Kona 4
Session 2: Topology and Rigidity	May 25	1:15 PM– 5:45 PM	Kona 3
Session 3: Glass and Entropy	May 24	1:15 PM – 5:30 PM	Kona 3
Session 4: Mechanical Properties of Amorphous Solids I	May 22	1:15 PM – 4:45 PM	Kona 4
Session 4: Mechanical Properties of Amorphous Solids II	May 23	9:45 AM – 11:45 AM	Kona 4
Session 4: Mechanical Properties of Amorphous Solids III	May 23	1:15 PM – 5:15 PM	Kona 4
Session 5: Glass at High Temperature	May 25	9:45 AM – 12:00 PM	Kona 4
Session 5: Glass under Flux	May 25	1:15 PM – 3:30 PM	Kona 4
Session 5: Glass Processed under Extreme Conditions	May 25	3:45 PM – 5:30 PM	Kona 4
Session 5: Glass under Pressure	May 26	9:45 AM – 12:00 PM	Kona 4
Session 6: Novel Modeling of Amorphous Materials	May 23	1:15 PM – 5:15 PM	Kona 3
GOMD SYMPOSIUM 2: Glasses in Healthcare: Fundamentals and Application			
Larry L. Hench Memorial session on Bioactive Glasses	May 22	1:15 PM – 5:30 PM	Waikoloa 3
Structural Basis of Bioactive Glass Design	May 23	1:15 PM – 3:45 PM	Waikoloa 3
Glasses for Dental or Soft Tissue Applications	May 23	3:45 PM – 5:00 PM	Waikoloa 3
GOMD SYMPOSIUM 3: Optical and Electronic Materials and Devices: Fundamentals and Applications			
Session 1: Photon and Glass Interaction	May 24	9:45 AM – 11:45 AM	Kona 3
Session 2: Quantum Processes in Glasses I	May 24	1:15 PM – 3:30 PM	Kona 2
Session 2: Quantum Processes in Glasses II	May 24	3:30 PM – 4:15 PM	Kona 2
Session 3: Charge and Energy Transport in Disordered Materials	May 22	1:15 PM – 5:30 PM	Kona 2
Session 4: Sciences and Applications of Optical Ceramics and Glass-ceramics	May 25	9:30 AM – 11:45 AM	Waikoloa 3
Session 5: Glass-based Optical Devices	May 24	1:15 PM – 4:40 PM	Waikoloa 3
Session 6: Glasses in Detector Applications	May 25	9:45 AM – 11:30 AM	Kona 3
Session 7: Rare Earth Doped Fibers, Fiber Lasers, and Related Glass Systems	May 22	1:15 PM – 3:30 PM	Kona 3
Sessiom 7: Glass Compositions, Structure, and Properties	May 22	3:45 PM – 5:45 PM	Kona 3
Session 7: Rare Earth Doped Phosphors, Nanocrystals, and Glass-Ceramics	May 23	9:45 AM – 11:45 AM	Kona 3
Session 8: Optical Fibers	May 24	9:45 AM – 11:00 AM	Waikoloa 3
GOMD SYMPOSIUM 4: Glass Technology and Crosscutting Topics			
Session 1: Glass Surfaces and Treatments I	May 25	9:45 AM – 12:00 PM	Kona 2
Session 1: Glass Surfaces and Treatments II	May 25	1:15 PM – 3:30 PM	Kona 2
Session 2: Chalcogenide Materials for Memory Applications	May 23	9:45 AM – 11:55 AM	Waikoloa 3
Session 3: Challenges in Glass Manufacturing I	May 25	1:15 PM – 3:45 PM	Waikoloa 3
Session 3: Challenges in Glass Manufacturing II	May 25	3:45 PM – 5:00 PM	Waikoloa 3
Session 3: Challenges in Glass Manufacturing III	May 26	8:30 AM – 9:45 AM	Waikoloa 3
Session 3: Challenges in Glass Manufacturing IV	May 26	9:45 AM – 11:00 AM	Waikoloa 3
Session 4: Glass Corrosion I: Modeling	May 23	9:45 AM – 12:00 PM	Kona 2
Session 4: Glass Corrosion II: Testing and Characterization	May 23	1:15 PM – 5:00 PM	Kona 2
Session 4: Glass Corrosion III: Novel Interrogation Methods	May 24	9:45 AM – 11:45 AM	Kona 2

GOMD SESSION by SYMPOSIA

Sessions	Date	Time	Location
GOMD SYMPOSIUM 5: Professor Jacques Lucas Honorary Symposium			
Chalcogenide	May 22	1:15 PM – 3:15 PM	Kona 5
Materials for Photonics	May 22	3:15 PM – 5:15 PM	Kona 5
Fluoride?	May 23	9:40 AM – 10:35 AM	Kona 5
Morey Lecture (2015)	May 23	10:35 AM – 11:15 AM	Kona 5
"X" Glasses	May 23	11:15 AM – 11:55 AM	Kona 5
IR Materials I	May 23	1:15 PM – 3:15 PM	Kona 5
IR Materials II	May 23	3:15 PM – 5:05 PM	Kona 5
GOMD SYMPOSIUM 6: Professor Komatsu Kinen Honorary Symposium			
GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium I	May 24	9:45 AM – 11:45 AM	Kona 5
GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium II	May 24	1:15 PM – 3:30 PM	Kona 5
GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium III	May 24	3:30 PM – 5:30 PM	Kona 5
GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium IV	May 25	9:45 AM – 12:00 PM	Kona 5
GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium V	May 25	1:15 PM – 3:30 PM	Kona 5
GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium VI	May 25	3:30 PM – 4:45 PM	Kona 5
GOMD STUDENT POSTER CONTEST			
GOMD Undergraduate Student Posters	May 23	5:30 PM – 8:00 PM	Grand Promenade
GOMD Graduate Student Posters	May 23	5:30 PM – 8:00 PM	Grand Promenade
GOMD Poster Session (non-student)	May 23	5:30 PM – 8:00 PM	Grand Promenade

SYMPOSIA

Program Chair:

S. K. Sundaram, Alfred University, USA

S1: Fundamentals of the Glassy State

Session 1: Glass Formation and Relaxation
Ozgur Gulbiten, Corning, Incorporated, USA; **Xiaoju Guo**, Corning, Incorporated, USA

Session 2: Topology and Rigidity
Matthieu Bauchy, University of California Los Angeles, USA; **Morten Smedskjaer**, Aalborg University, Denmark

Session 3: Glass, Entropy and the Glass Transition
Lothar Wondraczek, Otto Schott Institute of Materials Research (OSIM), University of Jena, Germany

Session 4: Mechanical Properties of Amorphous Solids
Jian Luo, Corning Incorporated, USA; **Yunfeng Shi**, Rensselaer Polytechnic Institute, USA

Session 5: Glass under Extreme Conditions
Liping Huang, Rensselaer Polytechnic Institute, USA; **Benoit Rufflé**, Université Montpellier II, France; **Morten Smedskjær**, Aalborg University, Denmark; **Yann Vaills**, University of Orléans, France

Session 6: Novel Modeling of Amorphous Materials
David Drabold, Ohio University, USA; **Parthapratim Biswas**, University of Southern Mississippi, USA; **Jaakko Akola**; Tampere University, Finland; **R. O. Jones**, Forschungszentrum Jülich, Germany

S2: Glasses in Healthcare—Fundamentals and Application

Julian Jones, Imperial College London, UK; **Delia S. Brauer**, Friedrich Schiller University Jena, Germany; **Ashutosh Goel**, Rutgers, The State University of New Jersey, USA

S3: Optical and Electronic Materials and Devices— Fundamentals and Applications

Session 1: Photon and Glass Interaction
Xiaoju Guo, Corning, Incorporated, USA; **Matthew J. Dejneka**, Corning, Incorporated, USA; **S. K. Sundaram**, Alfred University, USA

Session 2: Quantum Processes in Glasses
S. K. Sundaram, Alfred University, USA; **D. A. Nolan**, Corning, Incorporated, USA; **N. F. Borelli**, Corning, Incorporated, USA

Session 3: Charge and Energy Transport in Disordered Materials
B. G. Potter, Jr., University of Arizona, USA; **Krishna Muralidharan**, University of Arizona, USA; **Gang Chen**, Ohio University, USA; **David Drabold**, Ohio University, USA; **Mario Affatigato**, Coe College, USA

Session 4: Sciences and Applications of Optical Ceramics and Glass-Ceramics
Yiquan Wu, Alfred University, USA; **Xiang-hua Zhang**, Université de Rennes I, France; **John S. McCloy**, Washington State University, USA

Session 5: Glass-based Optical Devices
Juejun Hu, Massachusetts Institute of Technology, USA; **Rongping Wang**, Australia National University, Australia; **Heike Ebendorff-Heidepriem**, The University of Adelaide, Australia

Session 6: Glasses in Detector Applications
S. K. Sundaram, Alfred University, USA; **Mario Affatigato**, Coe College, USA

Session 7: Rare-Earth Doped Glasses and Ceramics for Photonic Applications
Setsuhisa Tanabe, Kyoto University, Japan; **John Ballato**, Clemson University, USA; **Shibin Jiang**, Photonics Inc., USA

Session 8: Optical Fibers and Waveguides
Johann Troles, Université de Rennes I, France; **Daniel Milanese**, Politecnico di Torino, Italy

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SYMPOSIA

S4: Glass Technology and Crosscutting Topics

Session 1: Glass Surfaces and Treatments

Rob Schaut, Corning, Incorporated, USA

Session 2: Chalcogenide Materials for Memory Applications

David Drabold, Ohio University, USA; **Stephen Elliott**, University of Cambridge, United Kingdom; **Michael Kozicki**, Arizona State University; USA; **Gang Chen**, Ohio University, USA

Session 3: Challenges in Glass Manufacturing

Mathieu Hubert, Corning Incorporated, USA; **Irene Peterson**, Corning Incorporated, USA

Session 4: Waste Immobilization—Waste Form Development: Processing and Performance

Stephane Gin, CEA, France; **Joseph Ryan**, Pacific Northwest National Laboratory, USA; **S. K. Sundaram**, Alfred University, USA; **J. S. McCloy**, Washington State University, USA

S5: Professor Jacques Lucas Honorary Symposium

Shibin Jiang, Photonics Inc., USA; **Xiang-hua Zhang**, Université de Rennes, France; **Bruno Bureau**, Université de Rennes, France; **Jean-Luc Adam**, Université de Rennes, France; **Pierre Lucas**, University of Arizona, USA; **S. K. Sundaram**, Alfred University, USA

S6: Professor Komatsu Kinen Honorary Symposium

Tsuyoshi Honma, Nagaoka University of Technology, Japan; **Kenji Shinozaki**, National Institute of Advanced Industrial Science and Technology (AIST-Kansai), Japan; **Yoshihiro Takahashi**, Tohoku University, Japan; **Akihiko Sakamoto**, OLED Material Solutions Co., Japan; **Himanshu Jain**, Lehigh University, USA; **Mario Affatigato**, Coe College, USA

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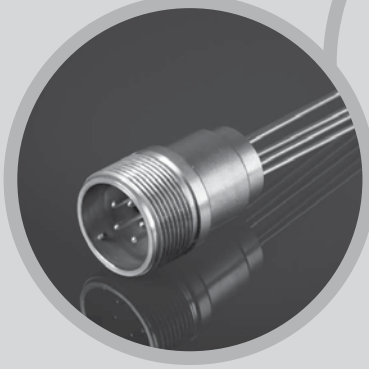
- > Pre-Sintered Preforms for Turbine Component Repair
- > Brazed Heat Exchangers
- > Pyrolytic Boron Nitride (PBN) Crucibles and Boats for Solar Energy Applications

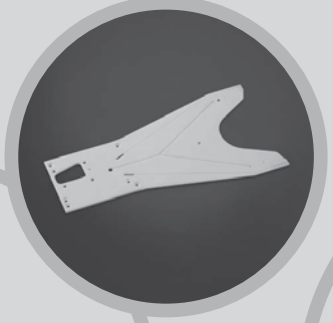
INDUSTRIAL

- > Analytical Instrumentation
- > Mass Spectrometry
- > Ceramic and Glass Manufacturing
- > Process Control and Monitoring
- > Kiln and Furnace Manufacturing



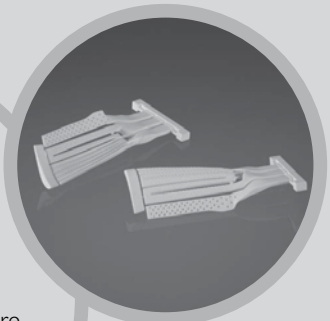
SEMICONDUCTOR

- > In Chamber Components
- > Low Particulate Coatings
- > CMP Pads Conditioner
- > Structural Ceramics



MEDICAL

- > Active Implant Feed Throughs
- > Components for Medical Imaging
- > Blood Shear V for Haematology
- > Molded Leachable Cores for Investment Casting



AEROSPACE & DEFENSE

- > Molded Leachable Cores for Investment Casting of Turbine Engine parts
- > Braze Alloys for High Temperature Ceramic-to-Metal Components
- > Pre-Sintered Preforms for Turbine Repair

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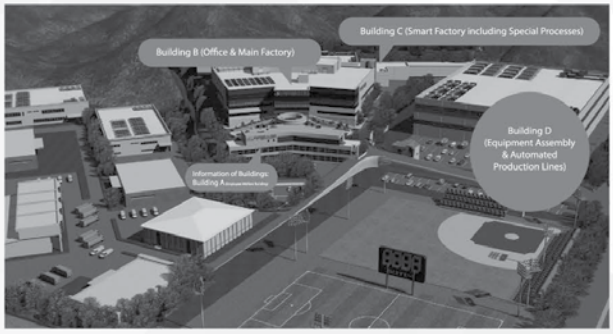
Headquarter & 1st Factory in Ansung IONES Main Factory



Located at 2061, Ansungdaero, Kosam-myun, Ansung-si, Kyunggi-do, Korea

Information of Buildings Building A (Employee Welfare Building), Building B (Office & Main Factory), Building C (Smart Factory including Special Processes), Building D (Equipment Assembly & Automated Production Lines)

Major Businesses Semiconductor and LCD parts processing, semiconductor and LCD equipment production and assembly, semiconductor cleaning & coating, LCD/OLED module equipment, precision processing, aerospace and defense components development and processing, pump parts processing, nano carbon filter business, atmospheric and environmental business, LED packaging and lighting

Front Image | Main Entrance | Main Building | Candy Building

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Information of Buildings
1F - Etch Parts Cleaning + Plasma Coating
2F - Metal Parts Cleaning + ARC Coating
3F - Cu Cleaning / Office
4F - DI System / Power Supply

Major Businesses
Special cleaning & coating of semiconductor components

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Presenting Author List

Oral Presenters

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Chung, W.	23-May	10:30AM	Kona 3	25
Churya, C.	24-May	4:45PM	Kona 4	63
Cicconi, M.	22-May	5:15PM	Kona 3	16
Claireaux, C.	25-May	4:15PM	Waikoloa 3	85
Clark, B.	26-May	11:45AM	Kona 1	99
Clarke, J.	26-May	9:45AM	Kona 1	98
Cloutier, S.G.	26-May	8:30AM	Queen's 5	98
Colombo, P.	22-May	1:15PM	King's 2	18
Colombo, P.	25-May	10:45AM	King's 3	77
Colorado, H.	24-May	4:45PM	King's 2	66
Conradt, R.	24-May	3:15PM	Kona 3	63
Conradt, R.	26-May	10:15AM	Waikoloa 3	94
Cook, A.W.	24-May	1:15PM	King's 2	65
Cooper, M.W.	23-May	4:15PM	Kona 1	41
Copping, R.	24-May	11:30AM	Kona 1	60
Corkhill, C.L.	23-May	3:00PM	Kona 2	35
Cormack, A.	24-May	1:15PM	Kona 2	64
Cormack, A.	25-May	9:00AM	Monarchy	83
Cormier, L.	24-May	3:15PM	Kona 4	63
Corradetti, S.	24-May	10:45AM	Kona 1	60
Corral, E.L.	25-May	4:40PM	King's 1	89
Costa, G.	24-May	5:45PM	King's 3	69
Coyle, T.	24-May	2:00PM	King's 3	68
Crawford, C.L.	25-May	10:30AM	Kona 1	82
Criscenti, L.	23-May	11:45AM	Kona 2	26
Criscenti, L.	25-May	3:45PM	King's 2	88
Croquesel, J.	23-May	2:50PM	King's 3	37
Cui, J.	25-May	3:00PM	Queen's 6	91
Curtis, B.	22-May	2:30PM	Kona 2	14
Cushman, C.V.	25-May	11:30AM	Kona 2	75
		D		
Dai, F.	25-May	9:45AM	Kohala 4	78
Dai, S.	24-May	2:00PM	Queen's 6	66
Dancini Goncalves, M.	26-May	11:15AM	Queen's 4	97
De Guire, M.R.	25-May	4:30PM	Queen's 4	91
de Ligny, D.	26-May	10:45AM	Kona 4	94
de Souza, F.L.	24-May	8:55AM	Queen's 5	56
Dehghani, F.	22-May	3:45PM	Waikoloa 3	14
Dejneka, M.	22-May	3:15PM	Kona 2	14
Delaizir, G.	22-May	5:15PM	Kohala 3	20
Deng, B.	22-May	2:30PM	Kona 4	13
Deshkar, A.A.	25-May	9:45AM	Kona 1	82
Deubener, J.	24-May	1:15PM	Kona 5	65
Devanathan, R.	23-May	4:35PM	Kohala 4	37
Devkota, J.	25-May	11:30AM	Queen's 5	78
Diegeler, A.	22-May	5:30PM	King's 1	19
Dierolf, V.	25-May	10:15AM	Kona 5	76
Dillon, S.J.	25-May	3:00PM	Kohala 3	86
Dixon, D.	24-May	4:45PM	Kona 1	72
Djurabekova, F.	23-May	1:55PM	Kohala 4	36
Dobesh, D.K.	24-May	10:15AM	Kona 3	54
Dobroslavskaia, E.	22-May	1:45PM	Kona 4	13
Doeff, M.	22-May	1:15PM	Queen's 5	22
Dogan, F.	26-May	10:15AM	Queen's 4	97
Dohmen, L.	24-May	10:00AM	Kona 2	55
Dolle, M.	22-May	3:15PM	Queen's 5	22
Dong, C.	24-May	2:30PM	Queen's 5	67
Dong, G.	24-May	3:30PM	Kona 2	64
Dong, S.	23-May	8:30AM	Queen's 4	31
Dongol, R.	25-May	11:00AM	Kona 3	75
Drabold, D.	23-May	2:00PM	Kona 3	33
Du, J.	22-May	2:10PM	Kohala 4	16
Du, P.	26-May	9:30AM	Kohala 2	96
Dubarry, M.	23-May	4:15PM	Queen's 5	42
Dubiel, M.	24-May	2:45PM	Waikoloa 3	64
Dubois, S.	25-May	11:00AM	Kohala 4	78
Dulski, M.	23-May	5:30PM	King's 1	39
Dupre, N.	23-May	1:45PM	Queen's 5	42
Durand, G.R.	25-May	11:00AM	Waikoloa 3	75
Dutta, I.	24-May	9:00AM	Kohala 4	62
Dylla-Spears, R.J.	24-May	2:00PM	King's 2	65
		E		
Ebendorff-Heidepriem, H.	22-May	2:45PM	Kona 3	15
Egoriti, L.	24-May	11:15AM	Kona 1	60
Elhadj, S.	23-May	2:15PM	Kohala 3	40
Elisberg, B.	23-May	1:45PM	Kona 3	33
Elissalde, C.	25-May	4:00PM	Kohala 2	90
Elliott, J.A.	23-May	9:30AM	Monarchy	32
Endo, J.	22-May	4:00PM	Kona 4	13
Engel-Herbert, R.	24-May	5:45PM	Queen's 5	67
Eom, S.	24-May	5:15PM	Queen's 5	67
Erauw, J.	25-May	2:15PM	King's 2	88
Espinosa, H.	24-May	11:00AM	Monarchy	61
Estournes, C.	22-May	5:00PM	King's 1	19
Estournes, C.	25-May	2:55PM	King's 1	88
Evans, A.	22-May	4:30PM	Kona 3	15
Evans, J.S.	23-May	11:15AM	Monarchy	32
Ewing, R.C.	22-May	3:30PM	Kona 1	21
		F		
Faber, K.	22-May	4:50PM	King's 2	18
Fahrenholtz, W.	25-May	10:45AM	Kohala 4	78
Falk, M.L.	22-May	1:15PM	Kona 4	13
Fan, Z.	23-May	2:35PM	King's 3	37
Fanchini, G.	25-May	2:05PM	Queen's 5	92
Feldhoff, A.	25-May	8:30AM	Queen's 6	81
Feng, B.	25-May	10:45AM	Kohala 3	76
Feng, W.	25-May	11:35AM	Kohala 2	80
Fernandez, J.	22-May	4:35PM	Kona 5	16
Ferrand, K.	25-May	11:30AM	Kona 1	82
Ferraro, P.	26-May	9:45AM	Queen's 5	98
Ferreira Muche, D.	22-May	4:45PM	King's 1	19
Feteira, A.	25-May	4:15PM	Monarchy	93
Fey, T.	24-May	8:30AM	King's 2	55
Fi, Z.	22-May	11:00AM	Monarchy	13
Ficheux, M.	25-May	11:45AM	Kona 4	74
Ficheux, M.	25-May	4:45PM	Waikoloa 3	85
Fischer, T.	24-May	4:55PM	Kohala 4	73
Fischer, T.	25-May	11:45AM	Queen's 5	78
Fisher, A.J.	23-May	3:45PM	Kona 2	35
Fisher, J.G.	23-May	2:30PM	Kohala 1	40
Florian, P.	25-May	10:15AM	Kona 4	74
Fonné, J.	25-May	1:45PM	Kona 2	84
Fortunato, E.	22-May	3:45PM	Kohala 3	20
Fortunato, E.	23-May	10:45AM	Kohala 1	30
Fortunato, E.	25-May	2:55PM	Queen's 5	92
Fox, K.M.	24-May	2:45PM	Kona 1	72
Frasnelli, M.	25-May	3:40PM	King's 1	88
Freer, R.	25-May	1:15PM	Queen's 6	91
Frolov, T.	25-May	9:00AM	Kohala 3	76
Fu, Q.	22-May	3:00PM	Waikoloa 3	14
Fu, X.	23-May	3:00PM	Kohala 1	40
Fuchigami, T.	24-May	1:40PM	Kohala 4	73
Fujihara, S.	24-May	2:30PM	Kohala 1	70

Presenting Author List

Oral Presenters

Name	Date	Time	Room	Page Number
Fujiwara, T.	24-May	10:45AM	Kona 5	55
Fukushima, M.	22-May	3:05PM	King's 2	18
Funakubo, H.	22-May	1:15PM	Kohala 2	19
Furlan, K.P.	22-May	3:45PM	King's 1	19
Furushima, Y.	25-May	11:00AM	Kohala 3	76
		G		
Gaberscek, M.	24-May	8:30AM	Waikoloa 2	60
Gadea, C.	24-May	3:00PM	King's 2	66
Galoisy, L.	23-May	4:30PM	Kona 5	35
Galusek, D.	26-May	9:15AM	King's 3	95
Galuskova, D.	25-May	11:15AM	Monarchy	83
Galvin, C.	23-May	4:45PM	Kona 1	41
Gao, K.	24-May	9:25AM	Kohala 3	57
Gao, T.	23-May	9:00AM	Kohala 2	29
Garaga Nagendrachar, M.	22-May	4:00PM	Kona 2	15
Garay, J.E.	22-May	1:45PM	Kohala 3	20
Gardner, L.J.	25-May	11:15AM	Kona 1	82
Garofalini, S.H.	23-May	11:30AM	Kona 2	26
Garofalini, S.H.	25-May	9:45AM	Kona 2	75
Ge, L.	25-May	5:00PM	Queen's 4	91
George, J.	25-May	2:30PM	Kona 1	93
Gerhardt, R.A.	25-May	11:15AM	King's 2	77
Ghoshal, A.	24-May	5:15PM	King's 3	69
Gibson, D.	24-May	4:00PM	Waikoloa 3	64
Gilbert, P.	23-May	10:45AM	Monarchy	32
Gill, S.K.	22-May	1:45PM	Kona 1	21
Gin, S.	23-May	2:00PM	Kona 2	34
Glebov, L.	22-May	2:30PM	Kona 3	15
Glebov, L.	22-May	5:00PM	Kona 3	16
Glebov, L.	26-May	8:35AM	Kona 5	93
Glymond, D.	24-May	2:30PM	King's 2	65
Goel, A.	24-May	4:00PM	Kona 1	72
Gogia, B.	24-May	3:45PM	King's 3	69
Goller, R.	25-May	4:30PM	Kohala 4	89
Gombault, F.	25-May	3:15PM	King's 3	87
Gönüllü, Y.	24-May	11:00AM	Queen's 5	56
Gonzalez-Julian, J.	24-May	1:55PM	Kohala 3	68
Gonzalez-Julian, J.	26-May	11:25AM	King's 1	96
Gorzkowski, E.	24-May	4:15PM	Kohala 2	69
Goto, T.	22-May	1:15PM	King's 1	18
Goto, T.	22-May	5:00PM	Queen's 6	22
Goto, T.	23-May	2:30PM	Queen's 6	36
Gottberg, A.	24-May	11:00AM	Kona 1	60
Gouma, P.	23-May	4:00PM	Queen's 6	36
Gouma, P.	25-May	9:30AM	Queen's 5	78
Govorov, A.	24-May	1:15PM	Queen's 5	67
Govorov, A.	25-May	1:40PM	Queen's 5	92
Gower, L.	24-May	4:15PM	Monarchy	73
Goyal, S.	23-May	4:45PM	Kona 4	33
Goyal, S.	26-May	11:15AM	Kona 4	94
Grandjean, A.	22-May	2:45PM	Kona 1	21
Gross, T.M.	23-May	9:45AM	Kona 4	24
Guan, P.	22-May	2:15PM	Kona 4	13
Guguschev, C.	23-May	10:15AM	Kohala 1	30
Guillen, D.P.	24-May	5:00PM	Kona 1	72
Guilmeau, E.	25-May	2:00PM	Queen's 6	91
Gulbiten, O.	24-May	10:35AM	Kona 4	53
Gupta, S.	23-May	9:20AM	King's 3	27
Gurlo, A.	26-May	10:45AM	King's 3	95
		H		
Haarberg, G.	26-May	9:10AM	Queen's 6	97
Haastrup, S.	23-May	3:00PM	King's 1	39
Habelitz, S.	22-May	2:15PM	Waikoloa 3	14
Habelitz, S.	23-May	1:45PM	Monarchy	43
Hagiwara, R.	23-May	8:30AM	Queen's 5	31
Hahn, M.	25-May	1:15PM	Waikoloa 3	85
Hahn, Y.	24-May	3:00PM	King's 1	71
Halbig, M.C.	24-May	1:45PM	King's 2	65
Han, H.	25-May	9:45AM	Queen's 4	79
Han, K.	25-May	10:45AM	Waikoloa 3	74
Han, S.	24-May	3:00PM	Queen's 5	67
Hand, R.J.	24-May	3:45PM	Kona 1	72
Hanft, D.	25-May	9:00AM	Waikoloa 2	79
Hankel, M.	23-May	3:45PM	Kohala 4	37
Hansford, D.	25-May	1:45PM	Monarchy	93
Hao, H.	24-May	3:00PM	Kohala 2	69
Harris, V.G.	24-May	9:00AM	Queen's 4	61
Harrison, M.T.	23-May	1:45PM	Kona 2	34
Hart, J.	24-May	9:30AM	Waikoloa 2	60
Hart, J.	26-May	11:20AM	Queen's 5	98
Haruhiko, U.	22-May	2:15PM	Kohala 1	20
Hasegawa, T.	23-May	11:45AM	Kohala 2	29
Hattar, K.	23-May	9:00AM	Kona 1	30
Hatton, P.	22-May	1:15PM	Waikoloa 3	14
Hawrami, R.	22-May	4:00PM	Kohala 3	20
Hawrami, R.	25-May	9:00AM	Kohala 1	80
Hayashi, A.	22-May	3:45PM	Queen's 5	22
Hayashi, Y.	23-May	1:35PM	Kohala 2	39
He, D.	22-May	2:00PM	Kona 3	15
He, H.	23-May	2:45PM	Kona 4	32
He, J.	25-May	3:15PM	Queen's 6	91
He, Y.	25-May	8:30AM	Queen's 5	77
Hedlund, M.	25-May	10:45AM	Kona 3	75
Hehlen, B.	23-May	2:30PM	Kona 3	33
Hehlen, B.	24-May	9:30AM	Kohala 1	59
Heinze, S.	24-May	9:45AM	King's 1	56
Helmy, A.	24-May	3:45PM	Queen's 5	67
Hemmer, E.	24-May	2:45PM	Kohala 4	73
Hemmer, E.	25-May	8:30AM	Monarchy	82
Henderson, G.	25-May	10:45AM	Kona 4	74
Heo, J.	22-May	2:40PM	Kona 5	16
Heo, J.	24-May	3:30PM	Kona 5	65
Hermansson, K.	22-May	4:15PM	Kohala 4	17
Hilario, M.	24-May	10:15AM	Queen's 4	61
Hillebrand, D.	22-May	9:30AM	Monarchy	13
Hinoki, T.	24-May	4:45PM	Kohala 3	68
Hinzer, K.	26-May	10:15AM	Queen's 5	98
Hirata, Y.	23-May	8:55AM	King's 3	27
Hodaj, F.	24-May	1:15PM	Queen's 6	66
Hoff, B.W.	24-May	9:30AM	Queen's 4	61
Hofmann, S.	24-May	4:30PM	Kohala 3	68
Hojo, J.	23-May	2:40PM	Kohala 2	39
Hong, J.	23-May	9:15AM	Kohala 2	29
Honma, T.	24-May	2:15PM	Kona 5	65
Hoshina, T.	23-May	4:20PM	Queen's 6	36
Hotta, Y.	25-May	2:00PM	King's 2	87
Hoyt, M.R.	22-May	2:15PM	Kona 2	14
Hrma, P.	26-May	9:45AM	Waikoloa 3	94
Hsu, J.	24-May	11:15AM	Kona 2	55
Hu, S.	25-May	1:15PM	Kona 1	92
Hu, Z.	23-May	3:45PM	Queen's 4	42
Huang, L.	22-May	3:00PM	Kona 4	13
Huang, L.	24-May	9:45AM	Kona 4	53
Huang, S.	24-May	10:45AM	Kohala 1	59
Huang, X.	23-May	2:30PM	Monarchy	43
Huang, X.	24-May	11:00AM	Kohala 2	59
Huang, Y.	23-May	3:15PM	Kohala 4	37
Huang, Y.	24-May	2:45PM	King's 2	66
Hughes, L.A.	25-May	11:15AM	Kohala 3	76
Hui, K.	22-May	5:00PM	Queen's 5	23
Hui, K.	22-May	5:15PM	Queen's 5	23
Hupa, L.	22-May	2:45PM	Waikoloa 3	14
Hupa, L.	25-May	4:30PM	Monarchy	93
Hyatt, N.C.	25-May	10:15AM	Kona 1	82
Hyatt, N.C.	25-May	11:00AM	Kona 1	82
		I		
Ianculescu, A.	23-May	5:15PM	King's 1	39
Icenhower, J.P.	23-May	4:30PM	Kona 2	35
Idesaki, A.	26-May	9:45AM	King's 3	95

Oral Presenters

Name	Date	Time	Room	Page Number
Iijima, M.	24-May	2:25PM	Kohala 4	73
Iijima, M.	25-May	1:45PM	King's 2	87
Ikeda, J.	22-May	2:15PM	Queen's 4	23
Ikuhara, Y.	23-May	5:00PM	Queen's 6	36
Ikuhara, Y.	25-May	1:15PM	Kohala 3	86
Ikuhara, Y.H.	23-May	3:15PM	Queen's 5	42
Imanaka, N.	23-May	3:50PM	Kohala 2	40
Imanaka, Y.	22-May	1:45PM	Kohala 1	20
Inada, M.	23-May	1:45PM	King's 2	38
Inagaki, Y.	26-May	9:30AM	Kona 1	98
Inoue, H.	23-May	2:15PM	Kona 3	33
Inoue, R.	24-May	9:00AM	King's 2	55
Irie, H.	26-May	8:50AM	Queen's 6	97
Ishihara, S.	25-May	11:30AM	King's 2	77
Ishihara, S.	25-May	1:45PM	Kohala 3	86
Ishikawa, K.	23-May	3:45PM	Monarchy	43
Ishikawa, R.	22-May	4:45PM	Queen's 5	23
Ishikawa, T.	23-May	3:35PM	King's 3	37
Ishiwata, S.	22-May	4:15PM	Kohala 1	20
Iwamoto, Y.	25-May	9:45AM	King's 3	77
Iwase, Y.	25-May	8:30AM	King's 3	76
		J		
Jaccani, S.	25-May	11:00AM	Kona 4	74
Jackson, S.	22-May	1:15PM	Kona 3	15
Jacobsen, G.	24-May	9:30AM	Kona 1	59
Jacobsen, G.	25-May	11:45AM	Kohala 4	79
Jacobsohn, L.G.	25-May	9:45AM	Kona 3	75
Jain, H.	25-May	8:35AM	Kona 5	74
Jamison, R.	22-May	2:45PM	Kona 4	13
Jang, B.	24-May	4:30PM	King's 3	69
Jantunen, H.M.	25-May	1:15PM	Kohala 2	90
Jenkins, M.G.	23-May	10:45AM	Kona 1	31
Jenkins, M.G.	24-May	10:30AM	Kohala 3	57
Jeon, J.	22-May	3:50PM	Kohala 2	19
Jeong, H.	25-May	9:45AM	Queen's 5	78
Ji, W.	22-May	4:25PM	King's 3	17
Jia, D.	25-May	1:30PM	Kohala 4	89
Jiang, S.	22-May	4:55PM	Kona 5	16
Jlang, X.	23-May	10:15AM	Queen's 4	32
Jin, T.	25-May	2:45PM	Kona 1	93
Jin, Y.	25-May	10:45AM	Kona 2	75
Jiraborvornpongsa, N.	22-May	4:15PM	Queen's 6	22
Jo, W.	22-May	3:15PM	Kohala 2	19
Johnson, M.T.	24-May	11:00AM	King's 1	57
Johnson, S.D.	24-May	10:15AM	King's 3	58
Johnstone, E.V.	25-May	1:45PM	Kona 1	92
Jones, J.L.	23-May	10:45AM	Kohala 2	29
Jordan, E.H.	24-May	1:15PM	King's 3	68
Jung, H.	25-May	9:30AM	King's 1	81
		K		
Kadono, K.	23-May	2:10PM	Kona 5	35
Kakimoto, K.	23-May	1:35PM	Queen's 6	36
Kallontzi, S.	24-May	2:05PM	Waikoloa 3	64
Kamimura, M.	25-May	2:15PM	Monarchy	93
Kamiya, H.	24-May	4:30PM	Queen's 5	67
Kanamura, K.	22-May	1:45PM	Queen's 5	22
Kanno, T.	25-May	4:30PM	Queen's 6	91
Karagiannakis, G.	24-May	3:15PM	Queen's 4	70
Kardoulaki, E.	23-May	1:45PM	Kona 1	41
Karppinen, M.	26-May	11:15AM	Queen's 6	97
Kaspar, T.	23-May	4:15PM	Kona 2	35
Kasuga, T.	23-May	1:15PM	Waikoloa 3	34
Kata, D.	25-May	3:15PM	King's 2	88
Kataoka, K.	25-May	8:30AM	Waikoloa 2	79
Katayama, Y.	24-May	3:00PM	Kohala 1	70
Kato, M.	24-May	8:30AM	Kona 1	59
Kelton, K.F.	24-May	10:10AM	Kona 4	53
Khader, B.A.	22-May	5:00PM	Waikoloa 3	14
Khanna, A.	23-May	10:45AM	King's 3	27
Kherani, N.P.	25-May	3:50PM	Queen's 5	92
Kiat, J.	25-May	3:45PM	Kohala 3	86
Kikuchi, M.	23-May	4:15PM	Monarchy	43
Kim, B.	23-May	1:45PM	Kohala 3	40
Kim, B.	25-May	11:00AM	Queen's 5	78
Kim, D.	22-May	2:15PM	Kohala 3	20
Kim, D.	23-May	2:30PM	Kona 1	41
Kim, D.	25-May	2:15PM	Kona 1	93
Kim, H.	24-May	11:00AM	Queen's 4	61
Kim, J.	24-May	11:30AM	Waikoloa 2	60
Kim, J.	24-May	3:45PM	King's 1	71
Kim, K.	25-May	8:30AM	King's 1	81
Kim, K.	25-May	11:00AM	Queen's 4	80
Kim, M.	23-May	2:30PM	Kona 2	34
Kim, S.	25-May	4:15PM	Queen's 6	91
Kim, S.H.	25-May	11:00AM	Kona 2	75
Kim, T.	25-May	10:45AM	Queen's 5	78
Kim, W.	22-May	4:30PM	Kohala 3	20
Kim, Y.	23-May	9:20AM	King's 2	28
Kim, Y.	23-May	1:45PM	King's 1	38
King, E.A.	25-May	2:30PM	Kona 2	85
Kirihara, S.	24-May	5:45PM	King's 2	66
Kirihara, S.	25-May	2:45PM	Kohala 2	90
Kisailus, D.	22-May	5:15PM	Monarchy	24
Kisailus, D.	24-May	10:15AM	Monarchy	61
Kisailus, D.	24-May	12:00PM	Monarchy	62
Kishi, H.	23-May	9:30AM	Queen's 6	26
Kishi, H.	23-May	2:15PM	Kohala 1	40
Kishi, T.	25-May	10:45AM	Kona 5	76
Klemm, H.	24-May	1:15PM	Kohala 3	67
Klimov, V.	24-May	1:45PM	Kona 2	64
Kmiec, S.	22-May	2:45PM	Kona 2	14
Knoblauch, N.	24-May	4:00PM	Queen's 4	70
Ko, J.	23-May	2:15PM	King's 1	38
Ko, M.	24-May	1:45PM	King's 1	71
Kocjan, A.	23-May	10:45AM	King's 2	28
Kocjan, A.	24-May	11:00AM	Kohala 1	59
Kodera, Y.	26-May	11:05AM	King's 1	96
Kolosov, V.Y.	24-May	4:15PM	Kona 4	63
Komatsu, T.	24-May	10:00AM	Kona 5	55
Kong, F.	23-May	11:35AM	Kohala 4	27
Koshimizu, M.	25-May	11:15AM	Kohala 1	81
Kostecki, R.	23-May	1:15PM	Queen's 5	42
Kovalskiy, A.	24-May	11:00AM	Kona 3	54
Kramer, D.	24-May	9:45AM	Kona 1	59
Krause, M.	24-May	1:15PM	Queen's 4	70
Krenkel, W.	24-May	3:35PM	Kohala 3	68
Krishnamurthy, S.	22-May	1:15PM	Queen's 4	23
Krishnan, N.	25-May	2:45PM	Kona 4	84
Krishnan, N.	25-May	4:45PM	Kona 3	83
Kroeger, R.	23-May	9:00AM	Monarchy	32
Krohns, S.	24-May	11:05AM	Kona 4	54
Krohns, S.	24-May	4:00PM	Kohala 2	69
Krol, D.	24-May	9:45AM	Kona 3	54
Kroll, P.	22-May	1:45PM	Kohala 4	16
Kroll, P.	25-May	1:15PM	King's 3	86
Kroll, P.	25-May	2:45PM	King's 3	87
Kruger, A.A.	25-May	2:45PM	Waikoloa 3	85
Ku, N.	23-May	11:15AM	Kohala 1	30
Kubicki, J.D.	23-May	11:15AM	Kona 2	26
Kubota, Y.	23-May	4:15PM	King's 2	38
Kuetemeyer, M.	25-May	11:30AM	Kohala 4	79
Kuhn, M.	23-May	9:40AM	King's 2	28
Kuhn, M.	24-May	1:45PM	Queen's 6	66
Kumar, B.	23-May	10:15AM	King's 1	29
Kumar, B.	25-May	10:15AM	Queen's 4	80
Kuroiwa, Y.	22-May	2:35PM	Kohala 2	19
Kwang-Young, L.	23-May	10:30AM	Kona 1	31
Kwon, D.	23-May	4:45PM	Queen's 4	43

Presenting Author List

Oral Presenters

Name	Date	Time	Room	Page Number
		L		
Lai, W.	22-May	4:30PM	Queen's 5	22
Lamberson, L.	23-May	10:30AM	Kona 4	24
Lanagan, M.	26-May	10:15AM	Kohala 2	96
Lancry, M.	23-May	11:15AM	Kona 3	25
Laniesse, P.M.	26-May	9:15AM	Kona 1	98
Larrimbe, L.	25-May	1:45PM	Kohala 4	89
Lavin, J.M.	24-May	5:00PM	King's 2	66
Lawson, S.M.	22-May	4:30PM	Kona 1	21
Le Coq, D.	22-May	1:15PM	Kona 2	14
Le Coq, D.	24-May	1:45PM	Waikoloa 3	64
Le Ferrand, H.	22-May	3:15PM	Monarchy	24
Le Paven, C.	23-May	1:45PM	Kohala 1	40
Le Paven, C.	25-May	10:15AM	Kohala 2	80
LE, P.G.	23-May	2:45PM	Kohala 1	40
Lee, C.	25-May	2:00PM	Kona 1	93
Lee, J.	23-May	3:55PM	Kona 5	35
Lee, J.	24-May	2:15PM	King's 1	71
Lee, K.	23-May	1:15PM	Kohala 4	36
Lee, S.	23-May	2:30PM	Kohala 3	40
Lei, L.	23-May	11:15AM	King's 3	28
Lelong, G.	26-May	11:00AM	Kona 4	94
Lences, Z.	24-May	3:30PM	Queen's 5	67
Lenting, C.	24-May	10:30AM	Kona 2	55
Leriche, A.L.	22-May	2:45PM	Kohala 3	20
Leriche, A.L.	22-May	4:30PM	King's 2	18
Li, A.	22-May	2:35PM	Kohala 4	17
Li, C.	22-May	5:15PM	Queen's 6	22
Li, D.	25-May	5:15PM	Kohala 4	89
Li, H.	22-May	5:15PM	King's 1	19
Li, L.	25-May	4:30PM	Kohala 2	90
Li, M.	25-May	10:45AM	King's 1	81
Li, Q.	22-May	4:30PM	Queen's 6	22
Li, Q.	24-May	2:30PM	King's 1	71
Li, Q.	25-May	9:30AM	Queen's 6	81
Li, R.	23-May	11:30AM	Kona 3	25
Li, X.	23-May	11:30AM	King's 1	29
Li, Y.	22-May	4:45PM	Waikoloa 3	14
Li, Y.	25-May	11:15AM	Waikoloa 3	75
Lian, J.	23-May	1:15PM	Kona 1	41
Liang, B.	22-May	3:00PM	King's 1	18
Liang, H.	26-May	8:30AM	Kohala 4	96
Liao, T.	23-May	1:35PM	Kohala 4	36
Liao, X.	25-May	11:00AM	King's 2	77
Liaw, B.	22-May	3:00PM	Monarchy	24
Liebig, C.M.	25-May	11:15AM	Kona 5	76
Lim, Y.	26-May	10:15AM	Queen's 6	97
Lin, D.	23-May	2:45PM	Kohala 3	40
Linford, M.R.	25-May	11:45AM	Kona 2	75
Lis, J.	23-May	1:15PM	King's 3	37
Liu, B.	23-May	2:55PM	Kohala 4	36
Liu, B.	23-May	3:35PM	Kohala 2	40
Liu, C.	24-May	2:45PM	Kona 2	64
Liu, C.	24-May	5:30PM	King's 2	66
Liu, H.	23-May	4:15PM	Queen's 4	43
Liu, J.	23-May	4:55PM	Kohala 4	37
Liu, J.	25-May	9:15AM	Queen's 4	79
Liu, Q.	23-May	11:45AM	Queen's 5	31
Liu, Q.	25-May	10:15AM	King's 2	77
Liu, X.	24-May	10:45AM	Kohala 3	57
Liu, Y.	23-May	8:30AM	Kohala 3	29
Liu, Y.	26-May	9:45AM	Queen's 4	97
Locker, S.T.	24-May	10:30AM	Kona 3	54
Lonnroth, N.	24-May	2:45PM	Kona 4	63
Lorentzou, S.	24-May	1:45PM	Queen's 4	70
Lorentzou, S.	24-May	4:30PM	Queen's 4	71
Lu, G.	24-May	10:45AM	Queen's 5	56
Lu, K.	25-May	3:45PM	King's 3	87
Lu, K.	26-May	9:00AM	Queen's 4	97
Lu, W.	25-May	10:45AM	Kohala 2	80
Lucas, P.	23-May	4:45PM	Kona 5	36
Lucas, P.	25-May	3:45PM	Kona 3	83
Lumpkin, G.R.	22-May	2:45PM	Queen's 4	23
Luo, H.	24-May	11:15AM	Waikoloa 2	60
Luo, H.	24-May	4:15PM	Queen's 5	67
Luo, H.	25-May	10:15AM	Waikoloa 2	79
Luo, J.	23-May	11:00AM	Kona 4	24
Luo, J.	25-May	8:30AM	Kohala 3	76
Luo, J.	25-May	3:00PM	Kona 2	85
		M		
Ma, B.	23-May	3:15PM	Queen's 4	42
Ma, P.	22-May	2:50PM	King's 3	17
Maca, K.	23-May	3:00PM	Kohala 3	40
Machida, M.	24-May	4:45PM	Queen's 4	71
Macon, A.L.	23-May	1:45PM	Waikoloa 3	34
Madsen, L.D.	24-May	8:30AM	Kohala 4	62
Maeda, K.	23-May	11:25AM	Kohala 2	29
Mainzer, B.	24-May	3:05PM	Kohala 3	68
Mann, C.	25-May	11:45AM	Kona 1	82
Mao, M.	22-May	4:10PM	Kohala 2	19
Marcial, J.	25-May	9:30AM	Kona 1	82
Marcinek, M.	23-May	9:00AM	Queen's 5	31
Maria, J.	23-May	1:55PM	Queen's 6	36
Markocsan, N.	24-May	1:45PM	King's 3	68
Marple, M.A.	22-May	1:45PM	Kona 2	14
Martin, S.W.	23-May	1:15PM	Kona 5	35
Martins Rodrigues, A.	22-May	4:15PM	Kona 2	15
Martins Rodrigues, A.	24-May	10:15AM	Kohala 1	59
Marzec, A.M.	25-May	11:15AM	Queen's 5	78
Masai, H.	25-May	1:45PM	Kona 5	86
Mascaraque Alvarez, N.	25-May	3:00PM	Kona 3	83
Masuno, A.	25-May	3:45PM	Kona 4	84
Matinmanesh, A.	23-May	3:00PM	Waikoloa 3	34
Matsunaga, C.	22-May	1:45PM	King's 2	18
Matsunaga, K.	23-May	10:45AM	Kohala 4	27
Matsunaga, T.	22-May	4:45PM	Monarchy	24
Matyas, J.	24-May	2:30PM	Kona 1	72
Maurício de Macedo, G.N.	25-May	5:15PM	Kona 3	83
Maxwell, G.	22-May	10:25AM	Monarchy	13
McAnany, S.	25-May	11:45AM	Kona 5	76
McCarthy, B.	24-May	4:30PM	Kona 1	72
McDaniel, A.	24-May	4:15PM	Queen's 4	71
McKenzie, M.E.	22-May	3:15PM	Kohala 4	17
McLaren, C.	22-May	4:30PM	Kona 2	15
McLaren, C.	22-May	4:45PM	Kona 2	15
Mear, F.O.	22-May	4:10PM	King's 3	17
Mear, F.O.	25-May	2:00PM	Kona 2	84
Medri, V.	23-May	1:15PM	King's 2	38
Menkara, H.	22-May	5:00PM	Kohala 3	20
Miao, L.	26-May	10:45AM	Queen's 6	97
Michaelis, A.	24-May	4:15PM	King's 2	66
Micoulaut, M.	23-May	1:50PM	Kona 5	35
Micoulaut, M.	25-May	1:45PM	Kona 3	83
Mikami, M.	26-May	10:15AM	King's 1	96
Miller, D.	23-May	5:15PM	Queen's 5	42
Mir, A.	22-May	5:00PM	Kona 1	21
Mir, A.	24-May	10:45AM	Kona 2	55
Miranda, P.	25-May	1:30PM	Queen's 4	90
Miranzo, P.	25-May	3:45PM	Kohala 4	89
Mishima, K.	24-May	6:00PM	Queen's 5	67
Misra, S.K.	25-May	2:15PM	King's 3	87
Misture, S.T.	23-May	3:05PM	King's 2	38
Misture, S.T.	26-May	11:30AM	Kona 1	99
Miura, A.	23-May	9:00AM	Kohala 1	30
Miura, A.	24-May	3:45PM	Kohala 4	73
Miyazaki, Y.	25-May	11:15AM	Queen's 6	81
Mizuno, S.	24-May	4:00PM	Kona 5	65
Moos, R.	24-May	10:45AM	King's 3	58
Mori, M.	25-May	10:45AM	Waikoloa 2	79
Mori, S.	24-May	10:05AM	Kohala 2	59
Mori, T.	25-May	3:45PM	Queen's 6	91

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Name	Date	Time	Room	Page Number
Morita, K.	23-May	2:20PM	King's 3	37
Morita, S.	25-May	4:45PM	King's 2	88
Morito, K.	22-May	1:35PM	Kohala 2	19
Moritz, T.	23-May	9:35AM	King's 3	27
Mostaghimi, J.	24-May	2:15PM	King's 3	68
Motz, G.	23-May	2:15PM	King's 2	38
Mugoni, C.	22-May	3:45PM	Kona 2	15
Mukasyan, A.	22-May	3:05PM	King's 3	17
Mukhopadhyay, A.	23-May	2:45PM	Queen's 5	42
Mukhopadhyay, A.	23-May	5:45PM	King's 1	39
Müller, R.	24-May	1:45PM	Kona 5	65
Muralidharan, K.	23-May	1:45PM	Kona 4	32
Muralidharan, K.	24-May	9:30AM	Queen's 6	58
Muramatsu, A.	25-May	4:40PM	Queen's 5	92
Murray, M.	22-May	8:50AM	Monarchy	13
		N		
Nagai, H.	25-May	11:45AM	Queen's 6	81
Nakajima, A.	22-May	1:15PM	Queen's 6	21
Nakamura, A.	25-May	2:45PM	Kohala 3	86
Nakane, S.	25-May	1:15PM	Kona 5	85
Nakanishi, T.	23-May	9:30AM	Kohala 1	30
Nakanishi, T.	24-May	4:30PM	Kona 5	65
Nakano, T.	22-May	3:45PM	Monarchy	24
Nakayama, T.	23-May	10:25AM	Queen's 6	26
Nakayama, T.	25-May	8:45AM	Queen's 4	79
Nakazawa, K.	24-May	3:45PM	Kona 4	63
Naleway, S.E.	22-May	2:30PM	Monarchy	23
Nalin, M.	23-May	1:35PM	Kona 5	35
Naoe, K.	24-May	11:00AM	King's 3	58
Narayan, R.	23-May	10:05AM	Queen's 6	26
Narisawa, M.	25-May	2:30PM	King's 3	87
Naruphontjirakul, P.	23-May	3:15PM	Waikoloa 3	34
Nayak, B.	24-May	10:45AM	Kona 3	54
Nechache, R.	25-May	4:15PM	Queen's 5	92
Neeway, J.	23-May	2:45PM	Kona 2	35
Nelson, A.T.	23-May	2:00PM	Kona 1	41
Nelson, J.	24-May	11:50AM	Kohala 4	62
Neuville, D.R.	24-May	2:15PM	Kona 3	63
Neuville, D.R.	24-May	4:00PM	Kona 4	63
Nielsen, M.	23-May	10:15AM	Monarchy	32
Nilsson, E.	23-May	3:15PM	Kona 3	33
Nishiyama, N.	23-May	10:30AM	Kohala 3	30
Noda, H.	24-May	11:30AM	King's 3	58
Noguchi, Y.	22-May	3:45PM	Kohala 1	20
Noguchi, Y.	24-May	10:40AM	Kohala 2	59
Nomura, T.	23-May	9:10AM	Queen's 6	26
Nordlund, K.	23-May	5:15PM	Kohala 4	37
Nozawa, T.	23-May	9:30AM	Kona 1	30
Nudelman, F.	23-May	2:00PM	Monarchy	43
Nussinov, Z.	24-May	2:15PM	Kona 2	64
		O		
O'Neal, C.	22-May	1:45PM	Queen's 4	23
Obata, A.	23-May	4:45PM	Waikoloa 3	34
Ogasawara, K.	24-May	9:45AM	Kohala 2	58
Ogawa, K.	24-May	3:00PM	King's 3	68
Ogawa, T.	23-May	4:45PM	Kohala 1	41
Ohishi, Y.	22-May	3:35PM	Kona 5	16
Ohji, T.	22-May	4:10PM	King's 2	18
Ohji, T.	24-May	3:45PM	King's 2	66
Ohkubo, T.	23-May	10:45AM	Kona 2	25
Ohodnicki, P.	22-May	3:15PM	Queen's 4	23
Ohodnicki, P.	24-May	11:30AM	Queen's 4	61
Ohsato, H.	25-May	3:30PM	Kohala 2	90
Ohtaki, M.	25-May	1:45PM	Queen's 6	91
Ohtani, N.	22-May	1:15PM	Kohala 1	20
Ohyanagi, M.	26-May	9:00AM	King's 1	96
Okada, K.	24-May	4:10PM	Kohala 4	73
Olevsky, E.A.	25-May	1:15PM	King's 1	88
Ollier, N.	25-May	3:00PM	Kona 4	84
Ono, M.	25-May	4:30PM	Kona 4	84
Onofrio, N.	23-May	9:45AM	Waikoloa 3	25
Osada, M.	25-May	10:30AM	Waikoloa 2	79
Osendi, M.I.	22-May	2:45PM	King's 1	18
Østergaard, M.B.	24-May	10:55AM	King's 2	56
Oztekin, A.	24-May	2:15PM	Queen's 4	70
Ozturk, C.	25-May	11:10AM	Kohala 2	80
		P		
Pabst, W.	24-May	9:20AM	King's 2	55
Pabst, W.	24-May	10:35AM	King's 2	55
Pan, X.	24-May	11:30AM	Kona 3	54
Park, D.	24-May	9:00AM	King's 3	57
Park, J.	24-May	8:30AM	King's 3	57
Park, J.	24-May	10:05AM	Kohala 3	57
Park, J.	24-May	1:15PM	King's 1	71
Parruzot, B.	24-May	10:15AM	Kona 2	55
Pascual-González, C.	24-May	4:45PM	King's 1	71
Paterson, A.L.	25-May	9:45AM	Waikoloa 3	74
Patil, D.S.	24-May	4:15PM	Kona 1	72
Peng, B.	25-May	3:00PM	King's 2	88
Pernechele, M.	24-May	9:00AM	Queen's 6	58
Peterson, I.	25-May	3:15PM	Waikoloa 3	85
Peterson, V.K.	23-May	2:15PM	Queen's 5	42
Peuget, S.	25-May	2:30PM	Kona 4	84
Pfeifer, T.	25-May	2:45PM	Queen's 4	91
Pföss, B.S.	22-May	1:45PM	Waikoloa 3	14
Philipps, K.	23-May	4:30PM	Kona 4	33
Pinches, S.	22-May	2:35PM	King's 3	17
Piro, M.H.	23-May	3:30PM	Kona 1	41
Plucknett, K.P.	22-May	3:45PM	Queen's 6	22
Plucknett, K.P.	25-May	9:30AM	Queen's 4	79
Poerschke, D.L.	25-May	5:00PM	King's 3	87
Pokorny, R.	26-May	10:30AM	Waikoloa 3	94
Poletto Rodrigues, B.	23-May	2:00PM	Kona 4	32
Porter, M.	24-May	11:30AM	Monarchy	61
Pradhan, S.	22-May	3:00PM	Kohala 3	20
Pradhan, S.	22-May	4:55PM	King's 3	17
Pradhan, S.	24-May	1:40PM	Kohala 3	67
Pralong, V.	23-May	10:45AM	Queen's 5	31
Prasai, K.	23-May	11:30AM	Waikoloa 3	25
Prasai, K.	23-May	4:45PM	Kona 3	33
Prikhna, T.	24-May	11:45AM	King's 1	57
Prikhna, T.	26-May	9:30AM	Queen's 4	97
Priven, A.	23-May	3:00PM	Kona 3	33
Prokhorenko, O.	24-May	2:15PM	Kona 4	62
Prokhorenko, O.	24-May	4:20PM	Waikoloa 3	65
Prokhorenko, O.	26-May	10:45AM	Waikoloa 3	94
Provis, J.	26-May	8:30AM	Kona 1	98
		Q		
Qiao, Q.	25-May	9:00AM	King's 1	81
Qiu, J.	23-May	10:35AM	Kona 5	26
Qiu, J.	25-May	9:45AM	Kona 5	76
		R		
Rai, R.C.	23-May	3:15PM	Kohala 1	41
Raja, N.	23-May	4:45PM	Monarchy	43
Ramirez, M.	24-May	9:00AM	Kohala 1	59
Ramond, L.	24-May	9:00AM	Kona 1	59
Ramos, J.	24-May	10:15AM	Kona 1	60
Ranasinghe, K.S.	22-May	5:15PM	Waikoloa 3	14
Ranasinghe, K.S.	24-May	5:00PM	Kona 4	63
Randall, C.	23-May	8:50AM	Queen's 6	26
Randall, C.	23-May	1:15PM	Queen's 4	42
Reaney, I.M.	22-May	3:45PM	Queen's 4	23
Reaney, I.M.	25-May	9:00AM	Kohala 2	80
Reimanis, I.	25-May	11:30AM	Kohala 3	76
Reiser, J.	23-May	4:45PM	Kona 2	35
Reitz, R.B.	24-May	4:00PM	Kohala 3	68
Ren, J.	23-May	4:00PM	Kona 3	33

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Name	Date	Time	Room	Page Number
Ren, Y.	22-May	4:45PM	Kohala 1	20
Ren, Y.	23-May	4:45PM	Queen's 5	42
Rheinheimer, W.	26-May	9:45AM	Kohala 3	95
Rhyee, J.	25-May	10:15AM	Queen's 6	81
Richardson, K.	23-May	8:35AM	Kona 5	24
Richardson, K.	23-May	11:15AM	Kona 5	26
Riedel, R.	22-May	1:45PM	King's 1	18
Rimsza, J.M.	23-May	2:15PM	Kona 4	32
Rocherullé, J.	23-May	10:15AM	Kona 3	25
Rodriguez, C.	24-May	5:15PM	Kona 1	72
Roeb, M.	24-May	3:00PM	Queen's 4	70
Roeb, M.	24-May	3:45PM	Queen's 4	70
Rogers, D.J.	22-May	2:45PM	Kohala 1	20
Rohrer, G.	23-May	4:40PM	Queen's 6	36
Roma, G.	23-May	9:00AM	Kohala 4	27
Roma, G.	23-May	9:45AM	Kona 1	30
Roos, C.	25-May	3:45PM	Waikoloa 3	85
Rosei, F.	24-May	2:15PM	Monarchy	72
Rösemann, N.	24-May	10:15AM	King's 2	55
Rost, A.	26-May	10:45AM	Queen's 4	97
Roth, J.	25-May	11:30AM	Kona 4	74
Rothe, S.	24-May	11:45AM	Kona 1	60
Ruffle, B.	26-May	10:15AM	Kona 4	94
Rushton, M.J.	25-May	1:30PM	Kona 1	92
Ryan, J.	23-May	9:45AM	Kona 2	25
Ryan, J.	24-May	9:45AM	Kona 2	54
Rygel, J.	25-May	2:30PM	Waikoloa 3	85
Ryu, H.	24-May	9:15AM	Kona 1	59
		S		
Saad, M.	24-May	9:45AM	Waikoloa 3	54
Sabet, F.A.	23-May	3:15PM	Monarchy	43
Saeki, T.	24-May	9:15AM	King's 3	58
Saito, M.	25-May	2:00PM	Kohala 3	86
Saito, N.	25-May	3:30PM	Kohala 4	89
Saitoh, A.	24-May	2:25PM	Waikoloa 3	64
Sajgalik, P.	22-May	1:40PM	King's 3	17
Sajgalik, P.	23-May	8:30AM	King's 1	28
Sakamoto, A.	24-May	5:00PM	Kona 5	65
Sakamoto, W.	22-May	2:05PM	King's 3	17
Sakamoto, W.	23-May	9:30AM	Kohala 2	29
Sakka, Y.	25-May	2:45PM	King's 2	88
Sakka, Y.	26-May	9:30AM	King's 1	96
Salinga, M.	23-May	10:35AM	Waikoloa 3	25
Sameshima, S.	23-May	2:45PM	King's 1	39
Sampath, S.	24-May	2:45PM	King's 3	68
Sánchez-Vázquez, A.I.	24-May	9:30AM	King's 1	56
Sanghera, J.	22-May	3:55PM	Kona 5	16
Sano, K.	22-May	3:15PM	Kohala 1	20
Sant, G.	23-May	4:00PM	Kona 2	35
Sant, G.	25-May	2:45PM	Kona 3	83
Santato, C.	26-May	9:20AM	Queen's 5	98
Sarikaya, M.	24-May	1:15PM	Monarchy	72
Saruhan-Brings, B.	25-May	9:00AM	Queen's 5	78
Sarwar, W.A.	24-May	5:15PM	King's 2	66
Sato, K.	24-May	9:45AM	King's 3	58
Sato, Y.	23-May	10:25AM	Kohala 2	29
Schaut, R.	25-May	11:15AM	Kona 2	75
Schmidt-Wimmer, S.	25-May	10:15AM	Kohala 4	78
Schmucker, M.	24-May	2:00PM	Queen's 4	70
Schuller, S.	24-May	1:15PM	Kona 1	71
Schultz-Falk, V.	25-May	1:45PM	Waikoloa 3	85
Schultz, P.C.	23-May	8:35AM	Kona 5	53
Schwieger, W.	22-May	1:45PM	Queen's 6	21
Sciti, D.	25-May	9:00AM	Kohala 4	78
Seaman, J.H.	23-May	3:15PM	Kona 4	33
Seddon, A.B.	22-May	1:45PM	Kona 3	15
Seeley, Z.M.	23-May	11:30AM	Kohala 1	30
Segawa, H.	25-May	9:30AM	Waikoloa 3	74
Selkregg, K.R.	25-May	4:30PM	Waikoloa 3	85
Sen, S.	24-May	1:45PM	Kona 4	62
Sesigur, H.	26-May	8:30AM	Waikoloa 3	94
Sesso, M.L.	24-May	11:15AM	King's 1	57
Sesso, M.L.	24-May	2:15PM	King's 2	65
Sglavo, V.M.	25-May	2:45PM	Kona 2	85
Sglavo, V.M.	25-May	3:15PM	Kona 2	85
Shahien, M.	24-May	9:30AM	King's 3	58
Shao, G.	24-May	10:15AM	Kohala 4	62
Shi, X.	23-May	2:45PM	Waikoloa 3	34
Shi, Y.	22-May	2:00PM	Kona 4	13
Shi, Y.	23-May	9:00AM	Kohala 3	29
Shi, Y.	24-May	8:55AM	Kohala 3	57
Shibata, N.	25-May	4:00PM	Kohala 3	86
Shigeno, K.	24-May	8:30AM	Queen's 4	61
Shih, C.P.	24-May	2:15PM	Queen's 6	66
Shimada, H.	25-May	4:00PM	Queen's 4	91
Shimamura, K.	24-May	1:45PM	Kohala 1	70
Shimizu, T.	23-May	2:00PM	Kohala 1	40
Shimonosono, T.	26-May	11:00AM	Queen's 4	97
Shin, H.	24-May	9:30AM	Monarchy	61
Shin, H.	25-May	10:15AM	King's 1	81
Shinozaki, K.	25-May	2:45PM	Kona 5	86
Shirakawa, A.	22-May	1:15PM	Kohala 3	19
Shirpour, M.	22-May	4:15PM	Queen's 5	22
Shirpour, M.	23-May	9:30AM	Queen's 5	31
Shiryaev, V.	22-May	3:15PM	Kona 5	16
Shokuhfar, T.	25-May	10:45AM	Monarchy	83
Shrout, T.	24-May	1:30PM	Kohala 2	69
Sidebottom, D.	25-May	5:30PM	Kona 3	83
Siligardi, C.	25-May	10:15AM	Kona 3	75
Sinclair, D.C.	23-May	2:15PM	Queen's 4	42
Singh, G.	26-May	11:15AM	King's 3	95
Singh, R.N.	25-May	8:30AM	Kohala 4	78
Sisken, L.	25-May	10:30AM	Waikoloa 3	74
Smedskjaer, M.M.	23-May	3:45PM	Kona 4	33
Smedskjaer, M.M.	24-May	4:15PM	Kona 3	63
Smedskjaer, M.M.	26-May	11:45AM	Kona 4	94
Smith, C.	25-May	1:15PM	Kohala 4	89
Smith, N.J.	23-May	3:15PM	Kona 2	35
Sodeyama, K.	24-May	10:15AM	Waikoloa 2	60
Son, J.	25-May	10:55AM	Queen's 6	81
Sone, E.	23-May	1:15PM	Monarchy	43
Song, I.	22-May	3:15PM	Queen's 6	22
Sooby Wood, E.	23-May	2:15PM	Kona 1	41
Soydan, G.	25-May	4:45PM	Queen's 4	91
Sprio, S.	22-May	2:15PM	Monarchy	23
Stabler, C.	25-May	2:00PM	King's 3	87
Stange, K.	26-May	9:15AM	Kohala 3	95
Stone-Weiss, N.	23-May	2:15PM	Waikoloa 3	34
Strong, K.T.	24-May	9:15AM	King's 1	56
Su, F.Y.	23-May	5:15PM	Monarchy	43
Suematsu, H.	23-May	1:40PM	King's 3	37
Sugahara, T.	25-May	1:15PM	Queen's 5	92
Sun, S.	26-May	11:15AM	Kona 1	99
Sun, Y.	22-May	2:05PM	King's 2	18
Sundararaman, R.	23-May	10:15AM	Kohala 4	27
Surappa, M.K.	25-May	4:45PM	King's 3	87
Suratwala, T.I.	25-May	1:15PM	Kona 2	84
Suvorov, D.	25-May	8:30AM	Kohala 2	80
Suyama, S.	23-May	3:45PM	King's 1	39
Suzuki, M.	22-May	4:15PM	Monarchy	24
Suzuki, M.	24-May	2:30PM	King's 3	68
Suzuki, T.S.	24-May	9:00AM	King's 1	56
		T		
Takada, A.	24-May	1:45PM	Kona 3	63
Takahashi, M.	22-May	3:45PM	King's 3	17
Takahashi, T.	23-May	9:30AM	King's 1	28
Takahashi, T.	24-May	11:30AM	Kohala 4	62
Takahashi, T.	25-May	5:00PM	King's 2	88
Takahashi, Y.	25-May	4:00PM	Kona 5	86
Takai, C.	25-May	10:45AM	King's 2	77

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Name	Date	Time	Room	Page Number
Tamerler, C.	24-May	2:45PM	Monarchy	72
Tampieri, A.	25-May	2:45PM	Monarchy	93
Tamura, S.	23-May	4:25PM	Kohala 2	40
Tan, S.	26-May	10:45AM	Kona 1	99
Tanabe, S.	22-May	4:15PM	Kona 5	16
Tanabe, S.	23-May	10:45AM	Kona 3	25
Tanaka, I.	22-May	3:45PM	Kohala 4	17
Tanaka, K.	24-May	2:45PM	Kona 3	63
Tanaka, M.	24-May	11:45AM	King's 3	58
Tanaka, S.	25-May	1:30PM	King's 2	87
Tandia, A.	22-May	3:45PM	Kona 4	13
Tandia, A.	23-May	2:45PM	Kona 3	33
Tandon, R.	24-May	10:15AM	King's 1	56
Tang, M.	22-May	4:15PM	Kona 1	21
Tao, X.	23-May	3:45PM	Kohala 1	41
Taro, H.	22-May	2:45PM	Queen's 5	22
Tatami, J.	23-May	9:00AM	King's 1	28
Tatami, J.	23-May	3:10PM	Queen's 6	36
Tatami, J.	25-May	11:45AM	King's 2	77
Taveri, G.	24-May	8:30AM	Queen's 6	58
Tay, F.	23-May	2:45PM	Monarchy	43
Taylor, C.A.	22-May	4:45PM	Kona 1	21
Tchoe, Y.	24-May	5:00PM	Queen's 5	67
Teague, M.	24-May	10:45AM	King's 1	57
Terakado, N.	22-May	5:00PM	Kona 2	15
Tesfamariam, B.B.	24-May	4:00PM	Kona 2	64
Tian, R.	26-May	11:45AM	Queen's 6	98
Tittmann, B.R.	23-May	9:45AM	Queen's 4	31
Tocino, F.Y.	26-May	10:30AM	Kona 1	99
Toda, K.	23-May	2:10PM	Kohala 2	39
Toda, K.	24-May	1:15PM	Kohala 1	70
Tokita, M.	26-May	8:30AM	King's 1	95
Tokunaga, H.	25-May	11:15AM	Kona 4	74
Tominaga, Y.	25-May	1:15PM	King's 2	87
Tomozawa, M.	23-May	1:15PM	Kona 4	32
Tonks, M.R.	23-May	4:00PM	Kona 1	41
Topfer, J.	25-May	1:45PM	Kohala 2	90
Toury, B.	25-May	10:15AM	King's 3	77
Trachenko, K.	24-May	3:45PM	Kona 3	63
Travitzky, N.	22-May	4:45PM	Queen's 6	22
Tremper, A.L.	23-May	11:15AM	Kona 4	24
Troles, J.	23-May	2:25PM	Kona 5	35
Troles, J.	24-May	10:15AM	Waikoloa 3	54
Trolier-McKinstry, S.	22-May	2:55PM	Kohala 2	19
Trolier-McKinstry, S.	23-May	11:40AM	Queen's 6	27
Tsurumi, T.	23-May	9:50AM	Kohala 2	29
U				
Ubic, R.	25-May	2:15PM	Kohala 2	90
Ueno, S.	23-May	3:00PM	Kohala 2	40
Ullah, B.	26-May	11:35AM	Kohala 2	96
Urata, S.	22-May	3:00PM	Kohala 4	17
Usukawa, R.	23-May	4:00PM	King's 3	37
Utlak, S.A.	25-May	8:45AM	Kona 1	82
V				
van Benthem, K.	26-May	10:15AM	Kohala 3	95
Van der Biest, O.	24-May	10:50AM	Kona 4	54
Van Nong, N.	25-May	5:20PM	Queen's 6	92
Vargheese, K.	23-May	4:15PM	Kona 4	33
Varghese, O.K.	26-May	8:55AM	Queen's 5	98
Vasiliev, O.	26-May	8:45AM	Kohala 4	96
Vayssieres, L.	24-May	8:30AM	Queen's 5	56
Veber, A.	24-May	5:00PM	Kona 3	63
Verheijen, O.	25-May	2:00PM	Waikoloa 3	85
Verney-Carron, A.	23-May	2:15PM	Kona 2	34
Vetrone, F.	24-May	4:45PM	Monarchy	73
Vienna, J.	24-May	2:15PM	Kona 1	71
Villa Vidaller, M.	24-May	3:15PM	King's 3	68
Vlcek, M.	24-May	11:15AM	Kona 3	54
Vogt, U.F.	23-May	3:45PM	King's 2	38
Vomiero, A.	24-May	3:45PM	Monarchy	73
Vomiero, A.	25-May	2:30PM	Queen's 5	92
W				
Wada, S.	23-May	1:15PM	Queen's 6	36
Wada, S.	24-May	2:20PM	Kohala 2	69
Wakihara, T.	23-May	10:15AM	King's 2	28
Walker, L.S.	25-May	2:05PM	King's 1	88
Walker, L.S.	25-May	4:20PM	King's 1	88
Walock, M.J.	24-May	10:40AM	Kohala 4	62
Wang, B.	24-May	11:00AM	Kona 2	55
Wang, B.	24-May	2:15PM	Kohala 1	70
Wang, B.	25-May	11:45AM	King's 3	77
Wang, B.	26-May	9:00AM	Kona 1	98
Wang, D.	24-May	11:00AM	Kohala 3	57
Wang, F.	23-May	5:00PM	King's 1	39
Wang, H.	22-May	2:45PM	Queen's 6	21
Wang, H.	22-May	4:45PM	Queen's 4	23
Wang, H.	23-May	1:15PM	Kohala 3	40
Wang, H.	24-May	4:15PM	Kohala 3	68
Wang, H.	26-May	9:00AM	Kohala 4	96
Wang, J.	22-May	4:00PM	Kona 1	21
Wang, J.	22-May	5:10PM	Kohala 4	17
Wang, J.	23-May	4:45PM	King's 2	38
Wang, J.	24-May	8:30AM	King's 1	56
Wang, K.	26-May	9:00AM	King's 3	95
Wang, L.	23-May	2:05PM	King's 3	37
Wang, L.	25-May	10:30AM	Kona 2	75
Wang, M.	25-May	10:15AM	Monarchy	83
Wang, M.	25-May	1:15PM	Monarchy	93
Wang, N.	26-May	8:30AM	Queen's 6	97
Wang, R.	22-May	3:00PM	Queen's 6	22
Wang, R.	24-May	9:00AM	Monarchy	61
Wang, R.	25-May	9:30AM	Monarchy	83
Wang, W.	22-May	3:00PM	Kona 2	14
Wang, W.	23-May	4:40PM	King's 3	37
Wang, X.	24-May	10:30AM	Queen's 4	61
Wang, Y.	23-May	8:30AM	Kona 1	30
Wang, Y.	23-May	10:15AM	Kona 2	25
Wang, Y.	25-May	1:45PM	King's 3	87
Wang, Y.	25-May	2:30PM	Queen's 6	91
Wang, Y.	25-May	3:00PM	King's 3	87
Wang, Y.	25-May	5:00PM	Kohala 4	89
Watson, D.	22-May	2:00PM	Kona 2	14
Weber, W.J.	23-May	9:30AM	Kohala 4	27
Webster, T.	25-May	3:45PM	Monarchy	93
Wei, Y.	25-May	10:00AM	Waikoloa 3	74
White, C.	23-May	3:45PM	Kona 3	33
White, C.	24-May	10:45AM	Queen's 6	58
Wiederhorn, S.	26-May	11:30AM	Kona 4	94
Wiesner, V.L.	24-May	11:05AM	Kohala 4	62
Wiles, N.	23-May	10:45AM	Kona 4	24
Wilke, R.H.	23-May	1:45PM	Queen's 4	42
Wilson, M.	23-May	2:30PM	Kona 4	32
Wingender, B.	22-May	5:30PM	Monarchy	24
Winnubst, L.	23-May	8:30AM	King's 2	28
Wolf, S.E.	23-May	11:45AM	Monarchy	32
Wolverton, C.	25-May	9:00AM	Queen's 6	81
Wondraczek, L.	24-May	1:15PM	Waikoloa 3	64
Wondraczek, L.	25-May	3:30PM	Kona 5	86
Wondraczek, L.	25-May	5:00PM	Kona 4	84
Wright, A.	22-May	4:30PM	Kona 4	13
Wu, A.	23-May	5:15PM	Kohala 1	41
Wu, C.	22-May	4:15PM	Waikoloa 3	14
Wu, J.	23-May	9:00AM	Queen's 4	31
Wu, J.	25-May	4:45PM	Kona 4	84
Wu, Y.	23-May	4:15PM	King's 3	37
X				
Xiang, H.	25-May	2:45PM	Kohala 4	89
Xie, H.	23-May	11:00AM	King's 3	28

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Name	Date	Time	Room	Page Number
Xie, J.j.	23-May	11:30AM	King's 3	28
Xiong, H.	24-May	11:45AM	Waikoloa 2	60
Xiong, J.	24-May	3:15PM	Monarchy	73
Xiong, Y.	25-May	8:30AM	Kona 1	82
Xu, C.	22-May	4:15PM	Kona 4	13
Xu, H.	23-May	2:15PM	Kohala 4	36
Xu, J.	22-May	3:15PM	Kohala 3	20
Xu, J.	23-May	11:00AM	Kona 3	25
Xu, K.	24-May	1:45PM	Kona 1	71
Xu, Y.	26-May	11:10AM	Kohala 2	96
		Y		
Yabuuchi, N.	23-May	10:15AM	Queen's 5	31
Yahiro, H.	23-May	11:05AM	Kohala 2	29
Yamada, H.	23-May	11:15AM	King's 2	28
Yamaguchi, Y.	25-May	3:30PM	Queen's 4	91
Yamakawa, Y.	23-May	4:10PM	Kohala 2	40
Yanagitani, T.	24-May	10:20AM	Kohala 2	59
Yang, H.	24-May	10:45AM	Waikoloa 2	60
Yang, J.	23-May	10:45AM	King's 1	29
Yang, J.	23-May	4:10PM	Kohala 4	37
Yang, K.	23-May	2:35PM	Kohala 4	36
Yang, K.	25-May	8:30AM	Kohala 1	80
Yang, W.	22-May	1:45PM	Monarchy	23
Yang, Y.	25-May	10:15AM	Queen's 5	78
Yang, Z.	23-May	2:45PM	Kona 5	35
Yano, T.	24-May	3:15PM	Kona 1	72
Yano, T.	26-May	9:00AM	Waikoloa 3	94
Yao, D.	22-May	2:25PM	King's 2	18
Yao, L.	24-May	5:30PM	Queen's 5	67
Yassar, R.S.	23-May	3:45PM	Queen's 5	42
Yasuda, K.	25-May	8:30AM	Queen's 4	79
Yen, S.	25-May	3:15PM	Monarchy	93
Yeom, H.	23-May	2:30PM	King's 1	39
Yim, H.	24-May	2:05PM	Kohala 2	69
Yin, X.	23-May	9:50AM	King's 3	27
Yodh, A.	24-May	4:45PM	Kona 3	63
Yokoi, T.	24-May	5:00PM	King's 3	69
Yokoi, T.	25-May	9:45AM	Kohala 3	76
Yokota, Y.	25-May	10:45AM	Kohala 1	81
Yoon, D.	23-May	3:15PM	King's 1	39
Yoshida, K.	23-May	11:15AM	King's 1	29
Yoshida, K.	24-May	2:10PM	Kohala 3	68
Yoshikawa, A.	25-May	2:45PM	Kohala 1	90
Yoshiya, M.	23-May	11:10AM	Kohala 4	27
Yoshiya, M.	25-May	4:30PM	Kohala 3	86
Youngman, R.	24-May	2:30PM	Kona 4	63
Yu, F.	23-May	10:45AM	Queen's 4	32
Yu, J.	23-May	5:00PM	Kona 4	33
Yu, Y.	23-May	5:00PM	Kona 3	34
Yu, Y.	24-May	12:05PM	Kona 5	62
Yu, Y.	25-May	3:15PM	Kona 3	83
Yu, Z.	22-May	2:15PM	King's 1	18
Yuan, J.	22-May	4:40PM	King's 3	17
Yue, Y.	24-May	1:15PM	Kona 4	62
Yue, Y.	25-May	9:45AM	Kona 4	74
Yuk, S.F.	22-May	4:45PM	Kohala 4	17

Name	Date	Time	Room	Page Number
		Z		
Zanotto, E.D.	24-May	11:15AM	Kona 5	55
Zapata-Solvas, E.	23-May	2:45PM	Kona 1	41
Zapata-Solvas, E.	25-May	2:30PM	Kohala 4	89
Zavattieri, P.	24-May	10:30AM	Monarchy	61
Zeidler, A.	26-May	9:45AM	Kona 4	94
Zeng, Y.	22-May	2:45PM	King's 2	18
Zenz, I.	26-May	8:30AM	King's 3	95
Zeydanli, D.	25-May	11:30AM	King's 3	77
Zhai, J.	26-May	10:45AM	Kohala 2	96
Zhang, D.	23-May	10:20AM	King's 3	27
Zhang, D.	24-May	3:45PM	Kohala 2	69
Zhang, J.	22-May	4:15PM	Kona 3	15
Zhang, J.	23-May	4:55PM	King's 3	38
Zhang, J.	24-May	2:30PM	Queen's 6	66
Zhang, L.	23-May	3:15PM	Kona 5	35
Zhang, Q.	25-May	11:15AM	King's 3	77
Zhang, R.	22-May	4:45PM	Kona 3	15
Zhang, R.	23-May	3:05PM	King's 3	37
Zhang, S.	22-May	1:55PM	Kohala 2	19
Zhang, W.	24-May	10:30AM	Queen's 5	56
Zhang, W.	25-May	4:15PM	King's 2	88
Zhang, X.	23-May	11:35AM	Kona 5	26
Zhang, X.	25-May	11:15AM	Kona 3	75
Zhang, X.	26-May	11:35AM	Queen's 5	98
Zhang, Y.	23-May	8:30AM	Kohala 4	27
Zhang, Y.	23-May	1:15PM	Kohala 2	39
Zhang, Y.	24-May	11:35AM	Kona 4	54
Zhao, H.	25-May	3:25PM	Queen's 5	92
Zhao, L.	25-May	2:00PM	Kohala 4	89
Zhao, T.	25-May	9:15AM	King's 3	77
Zhao, W.	24-May	2:45PM	Queen's 4	70
Zhao, Z.	22-May	3:00PM	Kona 3	15
Zheng, Z.	23-May	11:30AM	Kona 4	24
Zheng, Z.	24-May	11:20AM	Kona 4	54
Zhongbin, P.	22-May	5:30PM	Queen's 5	23
Zhou, A.	24-May	1:15PM	Kohala 4	73
Zhou, H.	24-May	11:20AM	Kohala 2	59
Zhou, K.	23-May	5:05PM	King's 2	38
Zhou, S.	25-May	2:15PM	Kona 3	83
Zhou, X.	25-May	5:15PM	King's 3	87
Zhou, Y.	22-May	4:15PM	King's 1	19
Zhou, Y.	23-May	1:15PM	King's 1	38
Zhou, Y.	23-May	5:00PM	Monarchy	43
Zhou, Y.	24-May	5:15PM	Monarchy	73
Zhu, D.	24-May	4:15PM	King's 3	69
Zhu, G.	24-May	11:15AM	Kohala 3	57
Zhu, W.	24-May	4:30PM	Kona 4	63
Zhu, Y.	24-May	9:10AM	Kohala 3	57
Zhuang, Y.	23-May	9:45AM	Kona 3	25
Zhuravleva, M.	25-May	1:45PM	Kohala 1	90
Zollfrank, C.	22-May	1:15PM	Monarchy	23
zur Loye, H.	22-May	2:30PM	Kona 1	21

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Name	Date	Time	Room	Page Number
A				
Agersted, K.	23-May	5:30PM	Grand Promenade	51
Akane, S.	23-May	5:30PM	Grand Promenade	47
Akedo, J.	23-May	5:30PM	Grand Promenade	50
Ard, J.	23-May	5:30PM	Grand Promenade	44
B				
Balzer, R.	23-May	5:30PM	Grand Promenade	44
Bartolomé, J.F.	23-May	5:30PM	Grand Promenade	53
Bechgaard, T.K.	23-May	5:30PM	Grand Promenade	44
Benzerga, R.	23-May	5:30PM	Grand Promenade	49
Biesuz, M.	23-May	5:30PM	Grand Promenade	46
Boloré, D.	23-May	5:30PM	Grand Promenade	44
Bosna, S.	23-May	5:30PM	Grand Promenade	44
Burov, E.	23-May	5:30PM	Grand Promenade	51
Byun, M.	23-May	5:30PM	Grand Promenade	48
C				
Cai, K.	23-May	5:30PM	Grand Promenade	51
Caurant, D.	23-May	5:30PM	Grand Promenade	45
Chen, X.	23-May	5:30PM	Grand Promenade	51
Cheng, S.	23-May	5:30PM	Grand Promenade	45
Cho, Y.	23-May	5:30PM	Grand Promenade	50
Choi, J.	23-May	5:30PM	Grand Promenade	45, 47, 50
Choi, W.	23-May	5:30PM	Grand Promenade	52
Christopoulou, G.	23-May	5:30PM	Grand Promenade	46
Churya, C.	23-May	5:30PM	Grand Promenade	44, 45
Colombo, P.	23-May	5:30PM	Grand Promenade	51
D				
Dahlquist, C.T.	23-May	5:30PM	Grand Promenade	44
Darmawan, B.A.	23-May	5:30PM	Grand Promenade	47
Dayioglugil, S.	23-May	5:30PM	Grand Promenade	47
DeCeanne, A.	23-May	5:30PM	Grand Promenade	44
Demirkesen, A.	23-May	5:30PM	Grand Promenade	47
Duan, X.	23-May	5:30PM	Grand Promenade	50
Duprey, J.A.	23-May	5:30PM	Grand Promenade	45
E				
Eguchi, M.	23-May	5:30PM	Grand Promenade	51
Eom, J.	23-May	5:30PM	Grand Promenade	52
F				
Fan, B.	23-May	5:30PM	Grand Promenade	48
Fan, G.	23-May	5:30PM	Grand Promenade	46
Fan, J.	23-May	5:30PM	Grand Promenade	49
Fergerstrom, E.	23-May	5:30PM	Grand Promenade	44
Fey, T.	23-May	5:30PM	Grand Promenade	49
Fisher, A.J.	23-May	5:30PM	Grand Promenade	44
Fisher, J.G.	23-May	5:30PM	Grand Promenade	51
G				
Gao, H.	23-May	5:30PM	Grand Promenade	52
Gardner, L.J.	23-May	5:30PM	Grand Promenade	53
Ghazi Daryani, A.	23-May	5:30PM	Grand Promenade	46
Gigliotti, C.M.	23-May	5:30PM	Grand Promenade	48
Gim, J.	23-May	5:30PM	Grand Promenade	52
Gorzkowski, E.	23-May	5:30PM	Grand Promenade	50
Gregorova, E.	23-May	5:30PM	Grand Promenade	49
H				
Hall, K.	23-May	5:30PM	Grand Promenade	48
Han, K.	23-May	5:30PM	Grand Promenade	44
Han, S.	23-May	5:30PM	Grand Promenade	52
Hanft, D.	23-May	5:30PM	Grand Promenade	50
Hara, Y.	23-May	5:30PM	Grand Promenade	47
Hashizume, T.	23-May	5:30PM	Grand Promenade	50
Hassan, M.u.	23-May	5:30PM	Grand Promenade	47
Hattori, M.	23-May	5:30PM	Grand Promenade	48
He, W.	23-May	5:30PM	Grand Promenade	49
Hirai, K.	23-May	5:30PM	Grand Promenade	47
Horikawa, H.	23-May	5:30PM	Grand Promenade	46
Huang, Y.	23-May	5:30PM	Grand Promenade	46
Huang, Z.	23-May	5:30PM	Grand Promenade	52
Hui, K.	23-May	5:30PM	Grand Promenade	52
Hyakutake, D.	23-May	5:30PM	Grand Promenade	47
Hyatt, N.C.	23-May	5:30PM	Grand Promenade	53
I				
Iannaci, A.	23-May	5:30PM	Grand Promenade	51
Inoue, R.	23-May	5:30PM	Grand Promenade	49
Ito, M.	23-May	5:30PM	Grand Promenade	46
Iwasaki, R.	23-May	5:30PM	Grand Promenade	48
J				
Jang, G.	23-May	5:30PM	Grand Promenade	51
Jawdat, B.	23-May	5:30PM	Grand Promenade	52
Jenkins, M.G.	23-May	5:30PM	Grand Promenade	49
Jeon, M.	23-May	5:30PM	Grand Promenade	49
Jeong, Y.	23-May	5:30PM	Grand Promenade	50
Johnson, S.D.	23-May	5:30PM	Grand Promenade	48
Jun, B.	23-May	5:30PM	Grand Promenade	53
K				
Karsdorf, R.	23-May	5:30PM	Grand Promenade	44
Kartuzov, V.	23-May	5:30PM	Grand Promenade	50
Kaspar, T.	23-May	5:30PM	Grand Promenade	53
Khanal, G.P.	23-May	5:30PM	Grand Promenade	46
Kikuchi, N.	23-May	5:30PM	Grand Promenade	51
Kim, D.	23-May	5:30PM	Grand Promenade	52, 53
Kim, K.	23-May	5:30PM	Grand Promenade	50
Kim, M.	23-May	5:30PM	Grand Promenade	46
Kim, S.	23-May	5:30PM	Grand Promenade	44, 46, 51
Kim, Y.	23-May	5:30PM	Grand Promenade	48
Klement, R.	23-May	5:30PM	Grand Promenade	45
Kocjan, A.	23-May	5:30PM	Grand Promenade	49
Kosuga, A.	23-May	5:30PM	Grand Promenade	51
Kramer, E.	23-May	5:30PM	Grand Promenade	48
Krishnan, N.	23-May	5:30PM	Grand Promenade	45
Kumamoto, N.	23-May	5:30PM	Grand Promenade	47
Kumar, B.	23-May	5:30PM	Grand Promenade	50
Kunisada, R.	23-May	5:30PM	Grand Promenade	46
Kurosaki, K.	23-May	5:30PM	Grand Promenade	51
Kwon, J.	23-May	5:30PM	Grand Promenade	48
L				
Lanagan, M.	23-May	5:30PM	Grand Promenade	53
Lance, M.	23-May	5:30PM	Grand Promenade	52
Lancry, M.	23-May	5:30PM	Grand Promenade	45
Lawson, S.	23-May	5:30PM	Grand Promenade	47
Le Paven, C.	23-May	5:30PM	Grand Promenade	46
Lee, C.	23-May	5:30PM	Grand Promenade	52
Lee, H.	23-May	5:30PM	Grand Promenade	47, 48, 51
Lee, H.Y.	23-May	5:30PM	Grand Promenade	52
Lee, K.	23-May	5:30PM	Grand Promenade	49
Lee, M.	23-May	5:30PM	Grand Promenade	46
Lee, Y.	23-May	5:30PM	Grand Promenade	52
Leiming, C.	23-May	5:30PM	Grand Promenade	49
Lesniak, M.	23-May	5:30PM	Grand Promenade	46
Leylaz Mehrabadi, M.	23-May	5:30PM	Grand Promenade	49
Li, W.	23-May	5:30PM	Grand Promenade	44
Liu, Y.	23-May	5:30PM	Grand Promenade	45, 52
Lorentzou, S.	23-May	5:30PM	Grand Promenade	52
Lu, H.	23-May	5:30PM	Grand Promenade	49
M				
Makino, Y.	23-May	5:30PM	Grand Promenade	47
Manghnani, M.	23-May	5:30PM	Grand Promenade	50
Mann, C.	23-May	5:30PM	Grand Promenade	44
Maruyama, Y.	23-May	5:30PM	Grand Promenade	51
Matsunaga, C.	23-May	5:30PM	Grand Promenade	49
Matsushita, A.K.	23-May	5:30PM	Grand Promenade	48

Poster Presenters

Name	Date	Time	Room	Page Number
Medri, V.	23-May	5:30PM	Grand Promenade	49, 50
Mhin, S.	23-May	5:30PM	Grand Promenade	50
Miwa, S.	23-May	5:30PM	Grand Promenade	45, 48
Miyazaki, H.	23-May	5:30PM	Grand Promenade	49
Mollazadeh, S.	23-May	5:30PM	Grand Promenade	53
Mozgawa, W.	23-May	5:30PM	Grand Promenade	50
Musicó, B.	23-May	5:30PM	Grand Promenade	47
N				
Nakajima, M.	23-May	5:30PM	Grand Promenade	46
Naknikham, U.	23-May	5:30PM	Grand Promenade	47
Naylor, M.	23-May	5:30PM	Grand Promenade	52
Noor Azman, N.	23-May	5:30PM	Grand Promenade	47
O				
Oh, H.	23-May	5:30PM	Grand Promenade	46
Oh, Y.	23-May	5:30PM	Grand Promenade	49
Ollier, N.	23-May	5:30PM	Grand Promenade	45
Ono, S.	23-May	5:30PM	Grand Promenade	52
Ono, Y.	23-May	5:30PM	Grand Promenade	46
Østergaard, M.B.	23-May	5:30PM	Grand Promenade	44
P				
Pabst, W.	23-May	5:30PM	Grand Promenade	49
Pang, L.	23-May	5:30PM	Grand Promenade	52
Park, D.	23-May	5:30PM	Grand Promenade	48
Park, E.	23-May	5:30PM	Grand Promenade	46
Park, J.	23-May	5:30PM	Grand Promenade	47
Park, S.	23-May	5:30PM	Grand Promenade	46
Park, Y.	23-May	5:30PM	Grand Promenade	47
Parker, S.S.	23-May	5:30PM	Grand Promenade	44
Parruzot, B.	23-May	5:30PM	Grand Promenade	53
Pedzich, Z.	23-May	5:30PM	Grand Promenade	48
Peng, Y.	23-May	5:30PM	Grand Promenade	48
Prikhna, T.	23-May	5:30PM	Grand Promenade	50
R				
Rothe, S.	23-May	5:30PM	Grand Promenade	52
S				
Sade, H.	23-May	5:30PM	Grand Promenade	46
Saiki, A.	23-May	5:30PM	Grand Promenade	49
Saito, W.	23-May	5:30PM	Grand Promenade	47
Sato, M.	23-May	5:30PM	Grand Promenade	47
Schuller, S.	23-May	5:30PM	Grand Promenade	53
Sglavo, V.M.	23-May	5:30PM	Grand Promenade	45
Shahien, M.	23-May	5:30PM	Grand Promenade	50
Shao, C.	23-May	5:30PM	Grand Promenade	48
Shaver, C.B.	23-May	5:30PM	Grand Promenade	47
Shimizu, W.	23-May	5:30PM	Grand Promenade	48
Shin, S.	23-May	5:30PM	Grand Promenade	50
Shinoda, K.	23-May	5:30PM	Grand Promenade	50
Shiryaev, V.	23-May	5:30PM	Grand Promenade	45
Sitarz, M.T.	23-May	5:30PM	Grand Promenade	45
Sklyarova, A.	23-May	5:30PM	Grand Promenade	48
Song, X.	23-May	5:30PM	Grand Promenade	52
Stanciu, C.A.	23-May	5:30PM	Grand Promenade	51
Stranghoener, M.	23-May	5:30PM	Grand Promenade	44
Sung, S.	23-May	5:30PM	Grand Promenade	52
T				
Takahashi, N.	23-May	5:30PM	Grand Promenade	47
Tamura, T.	23-May	5:30PM	Grand Promenade	45
Tang, J.	23-May	5:30PM	Grand Promenade	46
Tietje, S.	23-May	5:30PM	Grand Promenade	45
Towler, M.	23-May	5:30PM	Grand Promenade	44
V				
Villarreal-Chiu, J.	23-May	5:30PM	Grand Promenade	52
W				
Wang, J.	23-May	5:30PM	Grand Promenade	45
Wang, M.	23-May	5:30PM	Grand Promenade	53
Wang, X.	23-May	5:30PM	Grand Promenade	49
Watanabe, M.	23-May	5:30PM	Grand Promenade	52
Weaver, J.L.	23-May	5:30PM	Grand Promenade	53
Wei, H.	23-May	5:30PM	Grand Promenade	46
Wei, Q.	23-May	5:30PM	Grand Promenade	47
Werr, F.	23-May	5:30PM	Grand Promenade	47
White, C.	23-May	5:30PM	Grand Promenade	48
White, M.	23-May	5:30PM	Grand Promenade	44
Wu, S.	23-May	5:30PM	Grand Promenade	48
Wu, Y.	23-May	5:30PM	Grand Promenade	51
X				
Xi, L.	23-May	5:30PM	Grand Promenade	48
Xie, J.	23-May	5:30PM	Grand Promenade	51
Y				
Yamada, A.	23-May	5:30PM	Grand Promenade	45
Yamagata, C.	23-May	5:30PM	Grand Promenade	51
Yang, Z.	23-May	5:30PM	Grand Promenade	45, 48
Yao, Y.	23-May	5:30PM	Grand Promenade	47
Ye, B.	23-May	5:30PM	Grand Promenade	46
Yeom, H.	23-May	5:30PM	Grand Promenade	45
Yi, E.	23-May	5:30PM	Grand Promenade	47
Yin, J.	23-May	5:30PM	Grand Promenade	49
Yoo, Y.	23-May	5:30PM	Grand Promenade	52
Yu, Y.	23-May	5:30PM	Grand Promenade	44
Z				
Zakarian, D.	23-May	5:30PM	Grand Promenade	48
Zamyatin, O.	23-May	5:30PM	Grand Promenade	45
Zhang, P.	23-May	5:30PM	Grand Promenade	52
Zhang, X.	23-May	5:30PM	Grand Promenade	45
Zhao, L.	23-May	5:30PM	Grand Promenade	50
Zhu, T.	23-May	5:30PM	Grand Promenade	51

Monday, May 22, 2017

PacRim Plenary Session

Room: Monarchy

Session Chair: Dileep Singh, Argonne National Lab

8:30 AM

Welcome and Awards Presentation

8:50 AM

(PACRIM-PL-001-2017) Materiomics and Emerging Manufacturing Technologies for Sustainable Development

M. Murray*[1]

1. Morgan Advanced Materials, USA

9:30 AM

(PACRIM-PL-002-2017) TBA

D. Hillebrand*[1]

1. Argonne National Laboratory, USA

10:10 AM

Break

10:25 AM

(PACRIM-PL-003-2017) Advances in Single Crystal Fibers and Thin Rod Growth Technologies for Laser Applications

G. Maxwell*[1]

1. Shasta Crystals, USA

11:05 AM

(PACRIM-PL-004-2017) Bio-process Inspired Synthesis and Processing for New Structures and Functions

Z. Fu*[1]

1. Wuhan University of Technology, State Key Lab of Advanced Technology for Materials Synthesis and Processing, China

11:45 AM

PacRim 2019 Preview Presentation

GOMD Symposium 1: Fundamentals of the Glassy State

Mechanical Properties of Amorphous Solids I

Room: Kona 4

Session Chair: Yunfeng Shi, Rensselaer Polytechnic Institute

1:15 PM

(GOMD-S1-001-2017) Bridging from Atoms to Continua in the Mechanics of Amorphous Solids (Invited)

A. Hinkle[1]; S. Patinet[4]; M. L. Falk*[1]; M. Shields[3]; C. Rycroft[2]

1. Johns Hopkins University, Materials Science & Engineering, USA
2. Harvard University, SEAS, USA
3. Johns Hopkins University, Civil Engineering, USA
4. ESPCI, France

1:45 PM

(GOMD-S1-002-2017) Development of micro-mechanical glass model in finite element method based on molecular dynamic simulation input

E. Dobroslavskaia*[1]; J. Luo[2]; P. Gorelchenko[2]; B. Zhang[2]; G. Hu[2]

1. Corning Scientific Center, Science & Technology, Russian Federation
2. Corning Incorporated, Science & Technology, USA

2:00 PM

(GOMD-S1-003-2017) Understanding glass fracture from its elasticity

Y. Shi*[1]

1. Rensselaer Polytechnic Institute, USA

2:15 PM

(GOMD-S1-004-2017) Unveiling the distinct features of inherent heterogeneity in metallic glass

P. Guan*[1]

1. Beijing Computational Science Research Center, China

2:30 PM

(GOMD-S1-005-2017) A double-edge sword: Nanocrystallite in toughening and embrittling metallic glasses

B. Deng*[1]; Y. Shi[1]

1. Rensselaer Polytechnic Institute, Materials Science & Engineering, USA

2:45 PM

(GOMD-S1-007-2017) Assessing sealing glass equivalency based on viscoelastic behavior

R. Jamison*[1]; B. Elisberg[1]; K. Troyer[1]; M. Stavig[3]; K. Ewsuk[2]

1. Sandia National Laboratories, Component Science & Mechanics, USA
2. Sandia National Laboratories, Electronic, Optical, and Nano, USA
3. Sandia National Laboratories, Organic Materials Science, USA

3:00 PM

(GOMD-S1-008-2017) Deformation and indentation cracking behavior of Na_2O-TiO_2-SiO_2 glasses (Invited)

L. Huang*[1]; G. Scannell[1]; T. Rouxel[2]

1. Rensselaer Polytechnic Institute, Materials Science and Engineering, USA
2. Université of Rennes 1, Glass and Mechanics Department, France

3:30 PM

Break

3:45 PM

(GOMD-S1-009-2017) Effects of network modifiers on pressure induced structural transformations and elastic properties variation in boroaluminosilicate glasses

A. Tandia*[1]; S. Goyal[1]; J. Luo[1]

1. Corning Incorporated, Modeling & Simulation, USA

4:00 PM

(GOMD-S1-010-2017) Large Elastic Recovery During Indentation of Alkali Metaphosphate Glass Above Glass Transition Temperature

J. Endo*[1]; S. Inaba[1]; H. Muto[2]; S. Ito[1]

1. Asahi Glass Co., Ltd., Japan
2. Toyohashi University of Technology, Japan

4:15 PM

(GOMD-S1-011-2017) Novel functional glass with high nitrogen content fabricated by containerless processing

C. Xu*[1]; X. Liu[1]; J. Qiu[2]

1. Zhejiang University, School of Material Science and Engineering, China
2. Zhejiang University, College of Optical Science and Engineering, China

4:30 PM

(GOMD-S1-012-2017) The Structural Chemistry of B_2O_3

A. Wright*[1]

1. University of Reading, United Kingdom

GOMD Symposium 2: Glasses in Healthcare: Fundamentals and Applications

Larry L. Hench Memorial session on Bioactive Glasses

Room: Waikoloa 3

Session Chairs: Ashutosh Goel, Rutgers University; Toshihiro Kasuga, Nagoya Institute of Technology

1:15 PM

(GOMD-S2-001-2017) Multi-Function Bioactive Glasses for Musculoskeletal Tissue Repair (Invited)

P. Hatton*[1]; M. Santocildes-Romero[1]; J. Fernandes[2]; C. Miller[1]; A. Crawford[1]; R. Pires[2]; I. M. Reaney[3]; R. Reis[2]

1. University of Sheffield, School of Clinical Dentistry, United Kingdom
2. University of Minho, 3Bs Research Group, Portugal
3. University of Sheffield, Department of Materials Science & Engineering, United Kingdom

1:45 PM

(GOMD-S2-002-2017) Thermodynamic evaluation and experimental validation of the crystallization behavior of bioglass 45S5

B. S. Pföss*[1]; R. Conradt[1]; C. Roos[1]

1. RWTH Aachen University, Insitute for Mineral Engineering, Germany

2:15 PM

(GOMD-S2-003-2017) PILP-releasing cements for dental repair (Invited)

S. Habelitz*[2]; H. Nurrohman[1]; J. Seto[2]; S. Girn[3]; K. Saeki[2]; S. Marshall[2]; T. Le[3]; G. Marshall[2]; L. Gower[4]

1. Missouri School of Dentistry & Oral Health, USA
2. University of California, PRDS, USA
3. University of California, OFS, USA
4. University of Florida, USA

2:45 PM

(GOMD-S2-004-2017) The Influence of Solution Composition on In Vitro Dissolution of Bioactive Glasses

L. Hupa*[1]; L. Aalto-Setälä[1]; L. Björkvik[1]; O. Karlström[1]; D. S. Brauer[2]; S. Fagerlund[3]

1. Åbo Akademi University, Johan Gadolin Process Chemistry Centre, Finland
2. Friedrich-Schiller-University Jena, Otto Schott Institute of Materials Research, Germany
3. Paroc Group Oy, Finland

3:00 PM

(GOMD-S2-005-2017) Glasses for Healthcare: Research, Development and Industrialization (Invited)

Q. Fu*[1]; J. C. Mauro[1]; M. N. Rahaman[2]

1. Corning Incorporated, USA
2. Missouri University of Science & Technology, Ceramic Engineering, USA

3:30 PM

Break

3:45 PM

(GOMD-S2-006-2017) Next Generation of Biodegradable Polymer-Ceramic Implants for Bone Regeneration (Invited)

I. Manavitehrani[1]; Y. Wang[2]; P. K. Maitz[3]; F. Mirmohseni[1]; T. L. Cheng[4]; A. Schindeler[5]; F. Dehghani*[1]

1. The University of Sydney, School of Chemical and Biomolecular Engineering, Australia
2. ANZAC Research Institute, University of Sydney, Burns Research Group, Australia
3. Concord Repatriation General Hospital, Burns and Reconstructive Surgery Unit, Australia
4. The Children's Hospital at Westmead, Orthopaedic Research & Biotechnology, Australia
5. University of Sydney, Pediatrics & Child Health, Australia

4:15 PM

(GOMD-S2-007-2017) Bioactive glasses with controlled ionic compositions and microstructures for bone and skin tissue regeneration (Invited)

C. Wu*[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, Biomaterials and Tissue Engineering Research Center, China

4:45 PM

(GOMD-S2-008-2017) Antibacterial and Osteo-stimulatory Effects of a Borate-based Glass Series Doped with Strontium Ions

Y. Li*[1]; W. Ston[2]; E. H. Schemitsch[3]; P. Zalzal[4]; M. Papini[1]; S. Waldman[5]; M. Towler[1]

1. Ryerson University, Mechanical and Industry Engineering, Canada
2. Ryerson University, Chemistry and Biology, Canada
3. St. Michael's Hospital, Keenan Research Centre, Canada
4. Oakville Memorial Hospital, Canada
5. Ryerson University, Chemical Engineering, Canada

5:00 PM

(GOMD-S2-009-2017) Glass Polyalkenoate Cements Designed for Cranioplasty Applications: An Evaluation of Their Physical and Mechanical Properties

B. A. Khader*[1]; D. J. Curran[1]; S. Peel[2]; M. Towler[1]

1. Ryerson University, Mechanical and Industrial Engineering, Canada
2. University of Toronto, Division of Oral & Maxillofacial Surgery & Anaesthesia, Faculty of Dentistry, Canada

5:15 PM

(GOMD-S2-010-2017) Bioactive Borosilicate Glass as a Carrier for Nanoceria

K. S. Ranasinghe*[1]; D. E. Day[2]; R. Singh[1]

1. Kennesaw State University, Physics, USA
2. Missouri University of Science & Technology, USA

GOMD Symposium 3: Optical and Electronic Materials and Devices: Fundamentals and Applications

Charge and Energy Transport in Disordered Materials

Room: Kona 2

Session Chair: Krishna Muralidharan, University of Arizona

1:15 PM

(GOMD-S3-001-2017) Relationships between ionic conductivity and structure in Li-based sulfide glasses (Invited)

D. Le Coq*[1]; S. Cozic[1]; T. Usuki[2]; L. Cormier[3]; E. Bychkov[4]

1. University of Rennes 1, ISCR - Glass and Ceramic Team, France
2. University of Yamagata, Japan
3. University Pierre and Marie Curie, France
4. University of Littoral Côte d'Opale, France

1:45 PM

(GOMD-S3-002-2017) Structural Characterization and Fast Li ion Conduction of Stoichiometric Li_2S-Ga_2Se_3-$GeSe_2$ Glasses

M. A. Marple*[1]; S. Sen[1]; B. Aitken[2]

1. University of California Davis, Chemical Engineering and Materials Science, USA
2. Corning Incorporated, USA

2:00 PM

(GOMD-S3-003-2017) The Mixed Glass Former Effect in Glassy Solid State Electrolytes: The Structure and Properties of the $0.67Na_2S + 0.33[xSiS_2 + (1-x) PS_{5/2}]$ glass system

D. Watson*[1]; S. Kmiec[1]; S. W. Martin[1]

1. Iowa State University, Materials Science and Engineering, USA

2:15 PM

(GOMD-S3-004-2017) Lithium Oxythioborate Glasses for Solid-State Electrolytes

M. R. Hoyt*[1]; S. W. Martin[1]

1. Iowa State University, Materials Science & Engineering, USA

2:30 PM

(GOMD-S3-005-2017) Structure of Sodium Thioborosilicate Glassy Solid State Electrolytes

B. Curtis*[1]; S. W. Martin[1]

1. Iowa State University, Materials Science and Engineering, USA

2:45 PM

(GOMD-S3-006-2017) Glass Formation and Structural Analysis of the Sodium Oxy-Thio Phosphate Glass System $67Na_2S + 33P_2S_xO_{(5-x)}$

S. Kmiec*[1]; S. W. Martin[1]

1. Iowa State University, USA

3:00 PM

(GOMD-S3-007-2017) Elastic Properties and Activation Energy for Modifier Cation Migration in Mixed-Network Former Glasses

W. Wang*[1]; R. Christensen[2]; B. Curtis[2]; S. W. Martin[2]; J. Kieffer[1]

1. University of Michigan, Materials Science and Engineering, USA
2. Iowa State University, USA

3:15 PM

(GOMD-S3-008-2017) Fractoluminescent Glasses and Interfaces

M. Dejneka*[1]; J. Walter[1]; J. Kohl[1]

1. Corning Incorporated, USA

3:30 PM

Break

3:45 PM

(GOMD-S3-009-2017) Transition metal oxides doped tellurite glasses

C. Mugoni*[1]; M. Lassinantti Gualtieri[1]; M. Affatigato[2]; C. Siligardi[1]

1. University of Modena and Reggio Emilia, Italy
2. Coe College, Department of Physics, USA

4:00 PM

(GOMD-S3-010-2017) A Solid-state NMR Study of Tellurite-based Glass Materials

M. Garaga Nagendrachar*[1]; U. Werner-Zwanziger[1]; S. Feller[2]; J. Zwanziger[1]

1. Dalhousie University, Chemistry, Canada
2. Coe College, Physics, USA

4:15 PM

(GOMD-S3-011-2017) Ionic to electronic conductivity in $0.50[xAg_2O(1-x)V_2O_5]0.50P_2O_5$ glasses

A. Martins Rodrigues*[1]; J. Díaz Marín[1]

1. Federal University of Sao Carlos, Materials Engineering, Brazil

4:30 PM

(GOMD-S3-012-2017) Heat Generation during Electric Field-induced Softening of Alkali Silicate Glasses

C. McLaren*[1]; C. Kopatz[2]; N. J. Smith[2]; H. Jain[1]

1. Lehigh University, Materials Science and Engineering, USA
2. Corning Incorporated, USA

4:45 PM

(GOMD-S3-013-2017) Mechanisms of electric field-induced softening of alkali silicate glasses

C. McLaren*[1]; M. Balabajew[2]; B. Roling[2]; R. Raj[3]; H. Jain[1]

1. Lehigh University, Materials Science and Engineering, USA
2. University of Marburg, Department of Chemistry, Germany
3. University of Colorado, Department of Mechanical Engineering, USA

5:00 PM

(GOMD-S3-014-2017) Heat flow control by spin thermal conductivity materials having ordered/disordered structures

N. Terakado*[1]; R. Takahashi[1]; Y. Yamazaki[2]; Y. Takahashi[1]; T. Fujiwara[1]

1. Tohoku University, Japan
2. IMRAM, Tohoku University, Japan

5:15 PM

(GOMD-S3-015-2017) The Contribution of Propagons and Diffusons in Heat Transport Through Calcium-Silicates

M. Abdolhosseini Qomi*[1]

1. University of California, Irvine, CEE, USA

Rare Earth Doped Fibers, Fiber Lasers, and Related Glass Systems

Room: Kona 3

Session Chair: Setsuhisa Tanabe, Kyoto University

1:15 PM

(GOMD-S3-016-2017) The optical materials requirements for high power mid-infrared fibre lasers (Invited)

S. Jackson*[1]; A. Fuerbach[2]; D. Hudson[2]

1. Macquarie University, Department of Engineering, Australia
2. Macquarie University, Physics and Astronomy, Australia

1:45 PM

(GOMD-S3-017-2017) Progress in mid-infrared fiber lasers

A. B. Seddon*[1]; Z. Tang[1]; D. Furniss[1]; L. Sojka[2]; S. Sujecki[1]; E. Barney[1]; T. Benson[1]

1. University of Nottingham, Mid-Infrared Photonics Group, George Green Institute for Electromagnetics Research, United Kingdom
2. Wroclaw University of Technology, Telecommunications and Teleinformatics Department, Poland

2:00 PM

(GOMD-S3-019-2017) Recent advances on Nd^{3+}-doped laser glass and filter glass for high power laser system in SIOM (Invited)

D. He*[1]; L. Hu[1]

1. Shanghai Institute of Optics and Fine Mechanics, China

2:30 PM

(GOMD-S3-020-2017) Photo-thermo-refractive glass with sensitivity to visible and near IR radiation

F. Kompan[1]; G. Venus[2]; L. Glebova[3]; H. Mingareev[1]; L. Glebov*[1]

1. University of Central Florida, CREOL, USA
2. IPG Photonics, USA
3. OptiGrate, USA

2:45 PM

(GOMD-S3-021-2017) Radiation dosimetry using Tb^{3+}-doped fluoride phosphate optical fibres

C. Kalnins[1]; H. Ebendorff-Heidepriem*[1]; N. Spooner[2]; T. Monro[3]

1. University of Adelaide, Institute for Photonics and Advanced Sensing and School of Chemistry and Physics, Australia
2. Defence Science and Technology Group, Australia
3. University of South Australia, Australia

3:00 PM

(GOMD-S3-022-2017) Enhanced Infrared Emission from Rare-Earth Ions in YF_3 Co-Doped Oxyfluoride Glass-Ceramics

Z. Zhao*[1]; C. Liu[1]; J. Han[1]; X. Zhao[1]

1. Wuhan University of Technology, State Key Laboratory of Silicate Materials for Architectures, China

3:15 PM

Break

Glass Compositions, Structure, and Properties

Room: Kona 3

Session Chair: Maxime Cavillon, Clemson University

3:45 PM

(GOMD-S3-023-2017) Rare-earth–doped chalcogenide glasses for infrared photonics (Invited)

J. Adam*[1]; F. Starecki[2]; A. Braud[2]; R. Chahal[1]; C. Boussard-Pledel[1]; V. Nazabal[1]

1. University Rennes - CNRS, France
2. ENSI Caen - CNRS, France

4:15 PM

(GOMD-S3-024-2017) Local Environment Dependence on the Luminescence of Rare Earth Doped Chalcohalide Glasses and Glass Ceramics

J. Zhang*[1]; L. Meng[1]; C. Liu[1]; X. Zhao[1]

1. Wuhan University of Technology, State Key Laboratory of Silicate Materials for Architectures, China

4:30 PM

(GOMD-S3-025-2017) Energy transfer in Tb^{3+}/Eu^{3+} doped borate and fluorozirconate glasses

M. Mungra[1]; F. Steudel[2]; A. Evans*[3]; R. L. Leonard[3]; J. Johnson[3]; B. Ahrens[1]; S. Schweizer[1]

1. South Westphalia University of Applied Sciences, Department of Electrical Engineering, Germany
2. Branch Lab of Fraunhofer Institute for Microstructure of Materials and Systems IMWS, Fraunhofer Application Center for Inorganic Phosphors, Germany
3. University of Tennessee Space Institute, Department of Mechanical, Aerospace, and Biomedical Engineering, USA

4:45 PM

(GOMD-S3-026-2017) Structural Studies of Fluoroborate Laser Glasses by Solid State NMR and EPR Spectroscopies

R. Zhang*[1]; J. Ren[1]; L. Zhang[1]; H. Eckert[2]

1. Shanghai Institute of Optics and Fine Mechanics, Key Laboratory of Materials for High Power Laser, China
2. University of Muenster, Germany

5:00 PM

(GOMD-S3-027-2017) Mechanism of photoionization of photo-thermo-refractive glass

L. Glebov*[1]; C. Magon[2]; J. Gonzalez[2]; J. Lima[2]; H. Eckert[2]; E. Dutra Zanotto[3]; H. Mingareev[1]; L. Glebova[4]; F. Kompan[1]

1. University of Central Florida, CREOL, USA
2. Univesity of Sao Paulo, Institute of Physics, Brazil
3. Federal University of Sao Carlos, LAMAV, Brazil
4. OptiGrate, USA

5:15 PM

(GOMD-S3-028-2017) Cerium redox state in silicate glasses and melts: Implications for property changes and structural roles

M. Cicconi*[1]; D. de Ligny[1]; D. R. Neuville[2]; A. Veber[1]; W. Blanc[3]; F. Baudelet[4]

1. Friedrich-Alexander-Universityet Erlangen-Neurnberg, Materials Science and Engineering, Germany
2. IPGP, France
3. Université Nice Sophia Antipolis, CNRS LPMC, France
4. Synchrotron SOLEIL, France

5:30 PM

(GOMD-S3-029-2017) Expanding the range of action of water-dispersible lanthanide-based luminiscent nanothermometers: Towards NIR-II and NIR-III

A. Benayas*[1]; A. Skripka[1]; E. Hemmer[1]; F. Vetrone[1]

1. Institut National de la Recherche Scientifique, Energie Matériaux Télécommunications, Canada

GOMD Symposium 5: Professor Jacques Lucas Honorary Symposium

Chalcogenide

Room: Kona 5

Session Chair: Shibin Jiang, AdValue Photonics Inc

1:15 PM

Introduction and Prof. Lucas' Comments

1:30 PM

(GOMD-S5-001-2017) Chalcogenide liquids over the decades with Jacques: Simple glassformers and now supercrystallizers (Invited)

C. A. Angell*[1]; P. Lucas[2]; S. Wei[3]

1. Arizona State University, School of Molecular Sciences, USA
2. University of Arizona, Materials Science and Engineering, USA
3. Technische Universität München, Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II), Lichtenbergstr. 1, Germany

2:00 PM

(GOMD-S5-002-2017) Molecular Ge-doped As Sulfide Glasses (Invited)

B. Aitken*[1]; O. Gulbiten[1]; S. Sen[2]

1. Corning Incorporated, USA
2. University of California-Davis, USA

2:20 PM

(GOMD-S5-003-2017) Chalcogenide glass-ceramics transparent in the infrared: a review (Invited)

L. Calvez*[1]

1. University of Rennes 1, Institut des Sciences Chimiques de Rennes, France

2:40 PM

(GOMD-S5-004-2017) Chalcohalide Glasses (Invited)

J. Heo*[1]; W. Chung[2]; Y. Choi[3]

1. Pohang University of Science and Technology(POSTECH), Materials Science and Engineering, Republic of Korea
2. Kongju National University, MSE, Republic of Korea
3. Korea Aerospace University, MSE, Republic of Korea

3:00 PM

Break

Materials for Photonics

Room: Kona 5

Session Chair: Kathleen Richardson, University of Central Florida

3:15 PM

(GOMD-S5-005-2017) High-purity chalcogenide glasses for mid-IR photonics (Invited)

V. Shiryaev*[1]; M. Churbanov[1]

1. Institute of Chemistry of High-Purity Substances, Russian Academy of Sciences, Russian Federation

3:35 PM

(GOMD-S5-007-2017) Highly nonlinear soft glass optical fibers and their applications (Invited)

Y. Ohishi*[1]

1. Toyota Technolological Institute, Japan

3:55 PM

(GOMD-S5-008-2017) Fiber Optics R&D at the NRL (Invited)

J. Sanghera*[1]; B. Shaw[1]; C. Baker[1]; J. Friebele[2]; S. Bayya[1]; V. Nguyen[1]; L. Busse[1]; C. McClain[3]; D. Gibson[1]; R. Gattass[1]; F. Kung[3]; R. Miklos[2]; D. Rhonehouse[3]; R. Thapa[2]; I. Aggarwal[2]

1. Naval Research Lab, USA
2. Sotera Defense Solutions, USA
3. University Research Foundation, USA

4:15 PM

(GOMD-S5-009-2017) S-band gain and blue upconversion characteristics in Tm-doped fiber amplifier by dual-wavelength pumping (Invited)

S. Tanabe*[1]

1. Kyoto University, Japan

4:35 PM

(GOMD-S5-010-2017) Advances in laser induced cooling in rare earth-doped low phonon glasses (Invited)

J. Fernandez*[1]; R. Balda[1]; J. Adam[2]

1. University of the Basque Country, Applied Physics, Spain
2. Institut des Sciences Chimiques de Rennes UMR CNRS 6226 - Université de Rennes 1, France

4:55 PM

(GOMD-S5-011-2017) Rare-Earth Doped Glass Fibers for Lasers (Invited)

S. Jiang*[1]

1. AdValue Photonics Inc, USA

PACRIM Symposium 02: Virtual Materials Design and Ceramic Genome

Modeling of Amorphous Ceramics

Room: Kohala 4

Session Chair: Isao Tanaka, Kyoto University

1:15 PM

(PACRIM-S2-001-2017) Mixed alkali effect and chemical strengthening in bulk silicate glass and its surface (Invited)

W. Ching*[1]

1. University of Missouri-Kansas City, USA, USA

1:45 PM

(PACRIM-S2-002-2017) Compressing Amorphous Boron Nitride at High-Pressure using Constant-Pressure Ab-initio Molecular Dynamic Simulations (Invited)

P. Kroll*[1]

1. UT Arlington, USA

2:10 PM

(PACRIM-S2-003-2017) Structural design of oxyfluoride glasses and glass-ceramics from atomistic simulations: From phase separation to nanocrystallization (Invited)

J. Du*[1]

1. University of North Texas, Materials Science and Engineering, USA

2:35 PM

(PACRIM-S2-004-2017) Glass Chemical Durability: From Laboratory to Industry (Invited)

A. Li*[1]

1. Corning Incorporated, Characterization Science, USA

3:00 PM

(PACRIM-S2-005-2017) Mechanical properties of ion-exchanged glasses based on moleular dynamics simulations

S. Urata*[1]

1. Aasahi Glass Co., Ltd., USA

3:15 PM

(PACRIM-S2-006-2017) Modeling and simulation approaches to elucidate nucleation in glass

M. E. McKenzie*[1]; I. Dutta[1]; J. C. Mauro[1]

1. Corning Incorporated, Science & Technology, USA

3:30 PM

Break

Novel modeling Concept and Method

Room: Kohala 4

Session Chair: Wai-Yim Ching, University of Missouri-Kansas City, USA

3:45 PM

(PACRIM-S2-007-2017) Real and virtual screening for materials discovery through first principles calculations (Invited)

I. Tanaka*[1]

1. Kyoto University, Materials Science and Engineering, Japan

4:15 PM

(PACRIM-S2-008-2017) Multiscale modelling of reactive metal oxide interfaces (Invited)

K. Hermansson*[1]

1. Uppsala University, Department of Chemistry-Angstrom, Sweden

4:45 PM

(PACRIM-S2-009-2017) Accurate functionals for the design of complex oxides: A high-throughput DFT study (Invited)

S. F. Yuk*[1]; J. T. Krogel[1]; V. R. Cooper[1]

1. Oak Ridge National Laboratory, Materials Science and Technology Division, USA

5:10 PM

(PACRIM-S2-010-2017) High Throughput Screening for Rare Earth Silicates as Environmental/Thermal Barrier Coating Materials (Invited)

J. Wang*[1]

1. Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences, High-performance Ceramics Division, China

PACRIM Symposium 03: Novel, Green, and Strategic Processing and Manufacturing Technologies

Novel, Green, and Strategic Processing I

Room: King's 3

Session Chairs: Francis Cambier, Belgian Ceramic Resaerch Centre; Hisayuki Suematsu, Nagaoka University of Technology

1:15 PM

(PACRIM-S3-001-2017) Processing and Properties of Anisotropic Hierarchical Porous Ceramics Electrodes for High Performance Li-Ion Batteries (Invited)

R. Bordia*[1]; M. Azami-Ghadkolai[1]

1. Clemson University, Materials Science and Engineering, USA

1:40 PM

(PACRIM-S3-002-2017) Silicon Nitride-Hydroxyapatite Bioactive Composite (Invited)

P. Sajgalik*[1]

1. Institute of Inorganic Chemistry, Slovak Academy of Sciences, Ceramic Department, Slovakia

2:05 PM

(PACRIM-S3-003-2017) Aqueous Processing and Characterization of Lead-Based Piezoceramics for Multilayer Electronic Component Applications

W. Sakamoto*[1]

1. Nagoya University, Institute of Materials and Systems for Sustainability, Japan

2:20 PM

(PACRIM-S3-004-2017) Development of Lithium Ion Conducting Glasses Containing Boron, Silicon, and Sulfur

M. P. Aguilar*[1]

1. Iowa State University, Materials Science and Engineering, USA

2:35 PM

(PACRIM-S3-005-2017) Role of Freezing Rate on Templated Pore Structures in Dense Freeze Cast Ceramics

S. Pinches*[1]; G. Franks[1]; C. Tallon[2]

1. University of Melbourne, Chemical Engineering, Australia
2. Virginia Tech, Department of Materials Science and Engineering, USA

2:50 PM

(PACRIM-S3-006-2017) Pt Nano Particles Supported by Lingzhi Spores- Derived Microporous Carbon as the High -Performance Electrocatalyst for Oxygen Reduction Reaction

P. Ma*[1]; Y. Yu[1]; X. Zou[1]; X. Ma[1]; Z. Fu[1]

1. Wuhan University of Technology, China

3:05 PM

(PACRIM-S3-008-2017) Combustion Joining of Refractory and Dissimilar Materials (Invited)

A. Mukasyan*[1]

1. University of Notre Dame, USA

3:30 PM

Break

3:45 PM

(PACRIM-S3-009-2017) Metal hydroxides as platform for interfacial functionalities (Invited)

M. Takahashi*[1]

1. Osaka Prefecture University, Japan

4:10 PM

(PACRIM-S3-010-2017) From waste CRT glasses to foam glass for green applications

F. O. Mear*[1]; R. Lebullenger[2]

1. Lille 1 University, France
2. Rennes 1 University, France

4:25 PM

(PACRIM-S3-011-2017) Sintering of Boron Carbide Ceramics without Grain Growth by Plastic Deformation as Dominating Densification Mechanism

W. Ji*[1]; Z. Fu[1]; W. Wang[1]; H. Wang[1]; Y. Wang[1]; J. Zhang[1]; Z. Fan[1]

1. Wuhan University of Technology, China

4:40 PM

(PACRIM-S3-012-2017) Novel Route to Pollucite Ceramic through Geopolymer Precursor with Adjustable Thermal Expansion Behavior

J. Yuan*[1]; P. He[1]; D. Jia[1]

1. Harbin Institute of Technology, School of Materials Science and Engineering, China

4:55 PM

(PACRIM-S3-013-2017) Thin film deposition using rarefied gas jet

S. Pradhan*[1]

1. Indian Institute of Science, Department of Chemical Engineering, India

PACRIM Symposium 07: Porous Ceramics: Innovative Processing and Advanced Applications

Innovations in Processing Methods & Synthesis of Porous Ceramics I

Room: King's 2

Session Chairs: Manabu Fukushima, National Institute of Advanced Industrial Science and Technology (AIST); Enrico Bernardo, University of Padova

1:15 PM

(PACRIM-S7-001-2017) Highly Porous Geopolymer Components from Foaming and Additive Manufacturing (Invited)

P. Colombo*[1]; G. Franchin[1]; C. Bai[1]; P. Scanferla[1]

1. University of Padova, Industrial Engineering, Italy

1:45 PM

(PACRIM-S7-002-2017) Nitridation behavior of silicon powder compacts with various thicknesses (Invited)

C. Matsunaga*[1]; Y. Zhou[1]; D. Kusano[2]; H. Hyuga[1]; Y. Yoshizawa[1]; K. Hirao[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Structural Materials Research Institute, Japan
2. Japan Fine Ceramics Co., Ltd.,, Japan

2:05 PM

(PACRIM-S7-003-2017) Mechanical and thermal properties of porous boron nitride/silicon oxynitride ceramic composites prepared by pressureless sintering

Y. Sun*[1]; Z. Yang[1]; D. Cai[1]; D. Jia[1]; Y. Zhou[1]

1. Harbin Institute of Technology, China

2:25 PM

(PACRIM-S7-004-2017) Porous silicon nitride ceramics with designed porosity and pore structure

D. Yao*[1]; Y. Zeng[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

2:45 PM

(PACRIM-S7-005-2017) Porous SiC ceramics prepared with a modified gelcasting and solid state sintering

Y. Zeng*[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

3:05 PM

(PACRIM-S7-006-2017) Processing - Microstructure - Properties in Ceramic insulators prepared by gelation freezing process

M. Fukushima*[1]; H. Hyuga[1]; C. Matsunaga[1]; S. Tsuda[1]; T. Ohji[1]; Y. Yoshizawa[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan

3:25 PM

Break

Innovations in Processing Methods & Synthesis of Porous Ceramics II

Room: King's 2

Session Chairs: Paolo Colombo, University of Padova; Chika Matsunaga, National Institute of Advanced Industrial Science and Technology (AIST)

3:40 PM

(PACRIM-S7-007-2017) Silicate foams from engineered alkali activated suspensions (Invited)

E. Bernardo*[1]; A. Rincon Romero[1]; H. Elsayed[1]

1. University of Padova, Dept. of Industrial Engineering, Italy

4:10 PM

(PACRIM-S7-008-2017) Tailored surface porosities on ceramic foams

A. Shimamura[1]; M. Fukushima[1]; T. Ohji*[1]; N. Kondo[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan

4:30 PM

(PACRIM-S7-009-2017) Processing of ceramic bone mimic structures and their influence on mechanical resistance and cell invasion

A. L. Leriche*[1]; S. Chamary[1]; E. Meurice[1]; F. Bouchart[1]; J. Hornez[1]; D. Hautcoeur[2]; F. J. Cambier[2]; M. Fernandes[3]; F. Monteiro[4]

1. University of Valenciennes, France
2. Belgian Ceramic Research Centre, Belgium
3. University of Porto, Faculty of Dentistry, Portugal
4. University of Porto, INEB, Portugal

4:50 PM

(PACRIM-S7-010-2017) Connectivity and Flow through Freeze-Cast Microstructures

M. Naviroj[2]; T. Fey[3]; K. Faber*[1]

1. California Institute of Technology, USA
2. Northwestern University, USA
3. Friedrich-Alexander University Erlangen-Nürnberg, Germany

5:10 PM

(PACRIM-S7-011-2017) Mixed-Oxide Sorbents Produced by 3D-printing for the Removal of Hydrogen Sulfide from Bio-Syngas

K. Chen*[1]; Y. Chen[1]; W. Wei[1]

1. National Taiwan University, Materials Science and Engineering, Taiwan

PACRIM Symposium 11: Engineering Ceramics: Processing and Characterizations

Innovative Processing

Room: King's 1

Session Chairs: Takashi Goto, IMR Tohoku University; Ralf Riedel, TU Darmstadt

1:15 PM

(PACRIM-S11-001-2017) Melt-solidification of ultra-high-temperature ceramics (Invited)

T. Goto*[1]

1. IMR Tohoku University, Japan

1:45 PM

(PACRIM-S11-002-2017) SiBCN-Based Ceramics: Assessment of the Status Quo after 25 Years of Research (Invited)

R. Riedel*[1]

1. TU Darmstadt, Department of Materials, Germany

2:15 PM

(PACRIM-S11-003-2017) Single-Source-Precursor Approach towards Advanced Silicon-Based Ceramic Nanocomposites: Synthesis, Properties and Applications (Invited)

Z. Yu*[1]

1. Xiamen University, China

2:45 PM

(PACRIM-S11-004-2017) Creating 3D multifunctional polymer derived ceramic-graphene composites

B. Román-Manso[1]; D. Pérez-Coll[1]; M. Belmonte[1]; P. Miranzo[1]; M. I. Osendi*[1]

1. Institute of Ceramics and Glass, CSIC, Spain

3:00 PM

(PACRIM-S11-005-2017) In situ growth of lamellar BN(C) toughened Si-B-C-N monoliths by spark plasma sintering

B. Liang*[1]; Z. Yang[1]; D. Jia[1]; Y. Zhou[1]

1. Harbin Institute of Technology, Materials Science & Engineering, China

3:15 PM

Break

Sintering and Microstructure Control

Room: King's 1

Session Chairs: Yu Zhou; Kaline Furlan, Hamburg University of Technology

3:45 PM

(PACRIM-S11-006-2017) Structure Evolution During Sintering of Oxide-based Inverse Opals Produced by Atomic Layer Deposition (Invited)

K. P. Furlan*[1]; R. Pasquarelli[1]; R. Zierold[2]; K. Nielsch[2]; G. Schneider[1]; R. Janssen[1]

1. Hamburg University of Technology, Institute of Advanced Ceramics, Germany
2. Institute for Nanostructure and Solid State Physics, University of Hamburg, Germany

4:15 PM

(PACRIM-S11-007-2017) Textured ceramics and their anisotropy (Invited)

Y. Zhou*[1]; D. Jia[1]; X. Duan[1]; Z. Yang[1]

1. Harbin Institute of Technology, China

4:45 PM

(PACRIM-S11-008-2017) Ultra-hard and transparent spinel with grain sizes below 10nm produced by modified Spark Plasma Sintering

D. Ferreira Muche*[1]; J. W. Drazin[1]; J. Mardinly[2]; S. Dey[1]; R. Castro[1]

1. University of California, Davis, Materials Science and Engineering, USA
2. Arizona State University, LeRoy Eyring Center For Solid State Science, USA

5:00 PM

(PACRIM-S11-009-2017) Submicronic yttria-stabilized zirconia ceramics densified by SPS: Relation between microstructure and physical-chemical properties

F. Ahmad[1]; G. Chevallier[1]; A. Weibel[1]; C. Elissalde[2]; F. Mauvy[2]; C. Estournes*[1]

1. CIRIMAT, LCMIE, France
2. ICMCB-CNRS, France

5:15 PM

(PACRIM-S11-010-2017) The role of manganese in lowering densification temperatures of yttria-stabilized zirconia

H. Li*[1]

1. University of California, Davis, Materials Science and Engineering, USA

5:30 PM

(PACRIM-S11-011-2017) Using Thermo-Optical-Measurement technique TOM to characterize sintering and melting behavior of ceramic and glass parts under atmospheric control

A. Diegeler*[1]

1. Fraunhofer ISC, Center of Device Development, Germany

PACRIM Symposium 17: Advanced Functional Ceramics and Critical Materials Perspective

Advanced Functional Ceramics and Critical Materials Perspective I

Room: Kohala 2

Session Chairs: Nobuhito Imanaka, Osaka University; Takaaki Tsurumi, Tokyo Institute of Technology; Shinji Tamura, Osaka University

1:15 PM

(PACRIM-S17-001-2017) Domain Structure propagation of tensile-strained {100}-oriented epitaxial tetragonal Pb(Zr, Ti)O_3 films (Invited)

H. Funakubo*[1]; D. Ichinose[1]; T. Sato[1]; T. Shimizu[1]; O. Sakata[2]; T. Yamada[3]

1. Tokyo Institute of Technology, Japan
2. National Institute for Materials Science (NIMS), Japan
3. Nagoya University, Japan

1:35 PM

(PACRIM-S17-002-2017) Development of tunable device using Barium Strontium titanate thin films (Invited)

K. Morito*[1]; D. Ishii[1]; M. Natsume[1]; S. Sekiguchi[1]

1. Taiyo Yuden Co., Ltd., Research and Development Lab., Japan

1:55 PM

(PACRIM-S17-004-2017) The Energy Storage Behavior of Bi(M_I, M_{II})O_3-$BaTiO_3$ Dielectric Ceramics (Invited)

S. Zhang*[1]; H. Hao[2]; H. Liu[2]

1. University of Wollongong, ISEM, Australia
2. Wuhan University of Technology, China

2:15 PM

(PACRIM-S17-005-2017) Ferroelectric properties and Domain Structure of 0.77$Bi_{0.5}Na_{0.5}TiO_{3-0.23}SrTiO_3$ Based Ceramic-Ceramic Composite (Invited)

J. Cho*[1]

1. KICET, Republic of Korea

2:35 PM

(PACRIM-S17-006-2017) Visualization of Chemical Bonding in Functional Ferroelectrics and Their Solid Solutions by SXRD (Invited)

Y. Kuroiwa*[1]

1. Hiroshima University, Department of Physical Science, Graduate School of Science, Japan

2:55 PM

(PACRIM-S17-007-2017) Coupled Electromechanical and Thermal Breakdown in Piezoelectric Films (Invited)

S. Trolier-McKinstry*[1]; B. Akkopru Akgun[1]

1. Pennsylvania State University, Materials Science and Engineering, USA

3:15 PM

(PACRIM-S17-008-2017) Tunable Colossal Piezoelectric Properties induced in Bi-based lead-free piezoceramics via Polarization Engineering (Invited)

W. Jo*[1]

1. Ulsan National Institute of Science and Technology, School of Materials Science and Engineering, Republic of Korea

3:35 PM

Break

3:50 PM

(PACRIM-S17-009-2017) Texturing of BNKT piezoelectric ceramics by RTGG process using BNT and BNT15 templates (Invited)

J. Jeon*[1]; H. Cha[1]

1. Korea Institute of Materials Science, Nano-Functional Materials, Republic of Korea

4:10 PM

(PACRIM-S17-010-2017) Nanoscale Origins of Small Hysteresis and Remnant Strain in BNT-Based Lead-Free Ceramics

M. Mao*[1]; H. Qian[1]; Z. Yu[1]; Y. Liu[1]; Y. Lyu[1]

1. Nanjing Tech University, China

4:25 PM

(PACRIM-S17-011-2017) The potential impact of environmental protection legislation on the piezoelectric ceramics market (Invited)

A. J. Bell*[1]

1. University of Leeds, School of Chemical and Process Engineering, United Kingdom

PACRIM Symposium 19: Transparent Ceramic Materials and Devices

Transparent Ceramic Materials and Devices I

Room: Kohala 3

Session Chair: Byung-Nam Kim, National Institute for Materials Science

1:15 PM

(PACRIM-S19-001-2017) Yb^{3+}-doped CaF_2-LaF_3 ceramics for high power ultrashort pulse lasers (Invited)

A. Shirakawa*[1]; S. Kitajima[1]; K. Yamakado[1]; K. Ueda[1]; H. Ishizawa[2]

1. University of Electro-Communications, Institute for Laser Science, Japan
2. NIKON Corporation, Japan

1:45 PM

(PACRIM-S19-002-2017) Mico-/nano-structural design approaches for anisotropic transparent ceramics (Invited)

J. E. Garay*[1]

1. University of California, San Diego, Dept. of Mechanical and Aerospace Engrg., USA

2:15 PM

(PACRIM-S19-003-2017) Synthesis and characterization of yttria-based powders for the fabrication of highly transparent ceramics (Invited)

D. Kim*[1]

1. Korea Advanced Institute of Science and Engineering (KAIST), Dept. of Mater Sci & Eng, Republic of Korea

2:45 PM

(PACRIM-S19-004-2017) Processing of transparent ceramics for LASER and ballistic protection applications

A. L. Leriche*[1]; C. Gajdowski[2]; M. Lagny[2]; J. Boehmler[2]; Y. Lorgouilloux[1]; S. Lemonnier[2]; E. Barraud[2]

1. University of Valenciennes, LMCPA, France
2. ISL, France

3:00 PM

(PACRIM-S19-005-2017) DSMC Simulations of Leading Edge Flat-plate Boundary Layer Flows at High Mach Number

S. Pradhan*[1]

1. Indian Institute of Science, Department of Chemical Engineering, India

3:15 PM

(PACRIM-S19-006-2017) NIR luminescence of Bi_2O_3-GeO_2 and Bi_2O_3-SiO_2 binary system: Glass and glass-ceramics

J. Xu*[1]; J. Liu[2]; N. Li[1]

1. Tongji University, Department of Physics, China
2. Tongji University, School of Materials Science and Engineering, China

3:30 PM

Break

3:45 PM

(PACRIM-S19-007-2017) Transparent electronics: A dream that becomes reality

E. Fortunato*[1]; R. Martins[1]; P. Barquinha[1]

1. FCT-UNL, Materials Science, Portugal

4:00 PM

(PACRIM-S19-008-2017) Recent Progress in Ceramic Scintillators for Nuclear Detection, Medical Imaging and Radiography (Invited)

M. R. Squillante[1]; C. Brecher[1]; M. Breen[1]; D. Chartier[1]; J. Glodo[1]; R. Shawgo[1]; Y. Wang[1]; K. S. Shah[1]; R. Hawrami*[1]

1. RMD, Inc, USA

4:30 PM

(PACRIM-S19-009-2017) Advanced IR Materials and Devices (Invited)

W. Kim*[1]; G. Villalobos[1]; C. Baker[1]; B. Shaw[1]; S. Bayya[1]; J. Frantz[1]; M. Hunt[1]; V. Nguyen[1]; L. Busse[1]; D. Boyd[1]; D. Gibson[1]; R. Gattass[1]; J. Myers[1]; I. Aggarwal[2]; J. Sanghera[1]

1. Naval Research Laboratory, Optical Science Division, USA
2. Sotera Defense Solutions, USA

5:00 PM

(PACRIM-S19-010-2017) Hybrid Ceramic/Polymer Phosphor Films for Solid State Lighting

H. Menkara*[1]

1. PhosphorTech, USA

5:15 PM

(PACRIM-S19-011-2017) Scalable and formable tellurite-based transparent ceramics for near infrared applications

G. Delaizir*[1]; A. Bertrand[1]; M. Allix[2]; S. Chenu[1]; J. Carreaud[1]; P. Thomas[1]; J. Duclere[1]

1. SPCTS, UMR 7315 CNRS, France
2. CEMHTI, France

PACRIM Symposium 20: Crystalline Materials for Electrical, Optical, and Medical Applications

Semiconductor

Room: Kohala 1

Session Chair: Elvira Fortunato, FCT-UNL

1:15 PM

(PACRIM-S20-001-2017) Development of low resistivity 4H-SiC crystals for power device application (Invited)

N. Ohtani*[1]

1. Kwansei Gakuin University, School of Science and Technology, Japan

1:45 PM

(PACRIM-S20-002-2017) Artificial photosynthesis anode electrode composed of nano particulate photocatalyst film in visible light responsive GaN-ZnO solid solution system (Invited)

Y. Imanaka*[1]; T. Anazawa[1]; T. Manabe[1]; H. Amada[1]; R. Ishikawa[2]; Y. Ikuhara[2]

1. Fujitsu Laboratories Ltd., Japan
2. University of Tokyo, Japan

2:15 PM

(PACRIM-S20-003-2017) Vertical Bridgman Growth of High Purity Mg_2Si and Fabrication of IR Detector (Invited)

U. Haruhiko*[1]

1. Ibaraki University, Electrical & Electronic Eng., Japan

2:45 PM

(PACRIM-S20-004-2017) Zinc Oxide Thin Films and Nanostructures for Biomedical Sensing Applications (Invited)

D. J. Rogers*[1]; F. Teherani[1]; P. Bove[1]; E. Sandana[1]

1. Nanovation, France

3:15 PM

(PACRIM-S20-005-2017) High electromechanical coupling thick ScAlN piezoelectric films for ultrasonic generation in low frequency of 80MHz

K. Sano*[2]; R. Karasawa[2]; T. Yanagitani[1]

1. Waseda University, JST PRESTO, Japan
2. Waseda University, Advanced Science and Engineering, Japan

3:30 PM

Break

New Direction I

Room: Kohala 1

Session Chair: Yoshihiko Imanaka, Fujitsu Laboratories Ltd.

3:45 PM

(PACRIM-S20-006-2017) Giant Photovoltaic Effect of Ferroelectric Domain Walls in $BiFeO_3$ and $BaTiO_3$ (Invited)

Y. Noguchi*[1]; R. Inoue[2]; Y. Kitanaka[1]; M. Miyayama[1]

1. The University of Tokyo, Department of Applied Chemistry, Japan
2. Nihon University, School of Medicine, Japan

4:15 PM

(PACRIM-S20-007-2017) High pressure synthesis of a cubic perovskite $Sr_{1-x}Ba_xCoO_3$ showing giant magnetovolume effect (Invited)

S. Ishiwata*[1]

1. University of Tokyo and JST PRESTO, Japan

4:45 PM

(PACRIM-S20-009-2017) Synchrotron high-energy x-ray study of formation and transformation of crystalline materials in complex sample environments

Y. Ren*[1]

1. Argonne National Lab, X-ray Science Division, USA

PACRIM Symposium 25: Ceramics for Next Generation Nuclear Energy

Hierarchical and Porous Materials for Waste Form Applications

Room: Kona 1

Session Chairs: Krista Carlson, University of Utah; Jake Amoroso, Savannah River National Laboratory

1:15 PM

(PACRIM-S25-001-2017) Multi-Scale Modeling for Hierarchical Waste Form Materials (Invited)

T. M. Besmann*[1]; M. Noordhoek[1]; C. Henager[2]; S. Hu[2]; Y. Li[2]; S. R. Phillpot[3]

1. University of South Carolina, Nuclear Engineering, USA
2. Pacific Northwest National Lab, USA
3. University of Florida, USA

1:45 PM

(PACRIM-S25-002-2017) Real Time Evaluation for Nuclear Waste Forms Using In Situ Synchrotron Methods at National Synchrotron Light Source (NSLS) II (Invited)

S. K. Gill*[1]

1. Brookhaven National Laboratory, Nuclear Science and Technology, USA

2:15 PM

(PACRIM-S25-003-2017) Hierarchical Waste Forms for the Immobilization of High-Level Waste Salt

K. Carlson*[1]; M. Simpson[1]; M. Wasnik[1]

1. University of Utah, Metallurgical Engineering, USA

2:30 PM

(PACRIM-S25-004-2017) Salt-Inclusion Materials: A Potential Novel Hierarchical Wasteform

H. zur Loye*[1]; G. Morrison[1]

1. University of South Carolina, Chemistry and Biochemistry, USA

2:45 PM

(PACRIM-S25-005-2017) The effect of pore diameter in the arrangement of organic species grafted onto silica surfaces : application to solid phase extraction process

A. Grandjean*[1]; A. Charlot[1]; A. Leydier[1]; F. Cuer[2]

1. CEA, DTCD, France
2. CEA, DRCP, France

3:00 PM

Break

Aging and Degradation Mechanisms and Behavior of Nuclear Waste Form Materials

Room: Kona 1

Session Chairs: Ming Tang, Los Alamos National Lab; Jake Amoroso, Savannah River National Laboratory

3:30 PM

(PACRIM-S25-006-2017) Long-Term Performance of Nuclear Waste Forms: Current Status and Future Perspective (Invited)

R. C. Ewing*[1]

1. Stanford University, Geological Sciences, USA

4:00 PM

(PACRIM-S25-007-2017) Radionuclide Incorporation and Long Term Performance of Apatite Waste Form

J. Wang*[1]

1. Louisiana State University, USA

4:15 PM

(PACRIM-S25-008-2017) Radiation Tolerance Study of Synthetic Hollandite-type Materials: $Ba_{1.0}Cs_{0.3}A_{2.3}Ti_{5.7}O_{16}$ (A = Cr, Fe, Al)

M. Tang*[1]; P. Tumurugoti[2]; B. Clark[2]; S. K. Sundaram[2]; J. Amoroso[3]; Y. Wang[1]; Y. Jiang[4]

1. Los Alamos National Lab, USA
2. Alfred University, USA
3. Savannah River National Lab, USA
4. University of New Mexico, USA

4:30 PM

(PACRIM-S25-009-2017) Vacancy enhanced recovery and phase segregation: The conflicting role of A-site deficiency in the radiation damage response of perovskite ceramics

S. M. Lawson*[1]; A. S. Gandy[1]; K. Whittle[2]; N. C. Hyatt[1]

1. University of Sheffield, Materials Science and Engineering, United Kingdom
2. University of Liverpool, School of Engineering, United Kingdom

4:45 PM

(PACRIM-S25-010-2017) Helium Behavior in Pyrochlore Type Nuclear Waste Form Materials

C. A. Taylor*[1]; M. K. Patel[2]; J. A. Aguiar[3]; X. Xu[4]; Y. Zhang[4]; M. L. Crespillo[2]; J. Wen[5]; H. Xue[2]; Y. Wang[6]; W. J. Weber[2]; K. Hattar[1]

1. Sandia National Laboratories, USA
2. University of Tennessee, USA
3. Idaho National Laboratory, USA
4. Oak Ridge National Laboratory, USA
5. Lanzhou University, China
6. Los Alamos National Laboratory, USA

5:00 PM

(PACRIM-S25-011-2017) The way forward in addressing the radiation damage in nuclear waste glass matrices

A. Mir*[1]; J. Hinks[1]; S. Donnelly[1]; S. Peuget[2]

1. University of Huddersfield, Electron Microscopy and materials Analysis, United Kingdom
2. CEA Marcoule, France

PACRIM Symposium 27: Ceramics for Enabling Environmental Protection: Clean Air and Water

Gas Filtration and Liquid Purification

Room: Queen's 6

Session Chair: Michael Lance, Oak Ridge National Lab

1:15 PM

(PACRIM-S27-001-2017) Decomposition of 2-naphthol in water by TiO_2 modified with MnO_x and CeO_y (Invited)

A. Nakajima*[1]; M. Shiohara[1]; D. Tanaka[1]; Y. Qi[1]; T. Isobe[1]; S. Matsushita[1]

1. Tokyo Institute of Technology, Materials Science and Engineering, Japan

1:45 PM

(PACRIM-S27-002-2017) Cellular Supports for Catalytic Reactors: Zeolite Containing Hierarchical Composites as Catalysts (Invited)

W. Schwieger*[1]; A. Machoke[1]; T. Weißenberger[1]; A. Inayat[1]; H. Freund[1]

1. Friedrich-Alexander-University Erlangen-Neurnberg, Chemical Reaction Engineering, Germany

2:15 PM

(PACRIM-S27-003-2017) Porous Silicon Carbide Ceramics as Material for Diesel Particulate Filters (Invited)

J. Adler*[1]; U. Petasch[1]; H. Heymer[1]

1. Fraunhofer IKTS, Nonoxide Ceramics, Germany

2:45 PM

(PACRIM-S27-004-2017) Synthesis of Hierarchically Porous Zeolite scaffolds by Freeze casting

H. Wang*[1]; H. Chang[1]; P. Chen[1]

1. National Tsing Hua University, Material Science and Engineering, Taiwan

3:00 PM

(PACRIM-S27-005-2017) Understanding the Interfacial Structure and Composition in Oxide-Supported Metal Catalysts for Low-Temperature CO Oxidation

R. Wang*[1]

1. The University of Alabama, Metallurgical and Materials Engineering, USA

3:15 PM

(PACRIM-S27-006-2017) Optimization of cost-effective SiC based membrane for microfiltration applications

I. Song*[1]; S. Bukhari[2]; J. Ha[1]; J. Lee[1]

1. Korea Institute of Materials Science, Republic of Korea
2. Korea University of Science & Technology, Republic of Korea

3:30 PM

Break

Novel Materials

Room: Queen's 6

Session Chair: Michael Lance, Oak Ridge National Lab

3:45 PM

(PACRIM-S27-007-2017) The Aqueous Corrosion Response of Ti(C,N)-Ni_3Al Cermets With Various Reaction-Formed Binder Contents (Invited)

Z. Memarrashidi[1]; K. P. Plucknett*[1]

1. Dalhousie University, Mechanical Engineering, Canada

4:15 PM

(PACRIM-S27-008-2017) Preparation and photocatalytic activity of Mo-doped Ti-HAp

N. Jiraborvornpongsa*[1]; T. Isobe[1]; S. Matsushita[1]; M. Wakamura[2]; A. Nakajima[1]

1. Tokyo Institute of Technology, Materials Science and Engineering, Japan
2. Fujitsu Laboratories Ltd., Environmental Technology Laboratory, Japan

4:30 PM

(PACRIM-S27-009-2017) Highly Efficient, Visible-Light-Activated Photocatalysts with Post-illumination "Memory" Effect

Q. Li*[1]

1. Institute of Metal Research, Chinese Academy of Sciences, Shenyang National Laboratory for Materials Science, China

4:45 PM

(PACRIM-S27-010-2017) 3D-macro-cellular SiC-based structures for ignition and combustion applications

N. Travitzky*[1]; P. Rambacher[2]; Z. Fu[1]; P. Greil[1]

1. University of Erlangen-Nuremberg, Materials Science, Germany
2. University of Applied Sciences Nuremberg, Department of Mechanical Engineering, Germany

5:00 PM

(PACRIM-S27-011-2017) Sorption of Cs^+ on Titania Nanotube Synthesized by Solution Method

T. Goto*[1]; S. Cho[1]; T. Sekino[1]

1. Osaka University, The Institute of Scientific and Industrial Research, Japan

5:15 PM

(PACRIM-S27-012-2017) Synthesis of CeO_2 hollow microspheres with oxidase-like activity and its application in catalytic degradation of p-nitrophenol

H. Zhou[1]; K. Li[1]; C. Li*[1]

1. Zhengzhou University of Aeronautics, China

5:30 PM

(PACRIM-S27-013-2017) Ion Conducting Solid Electrolytes for Energy Conversion, Synthesis and Grid Storage

S. Balagopal*[1]; F. Garzon[2]; C. Kreller[3]

1. Ceramatec, Inc., USA
2. University of New Mexico, USA
3. Los Alamos National Lab, USA

PACRIM Symposium 28: Advanced Materials and Technologies for Electrochemical Energy Storage Systems

Solid State Batteries

Room: Queen's 5

Session Chair: Palani Balaya, National University of Singapore

1:15 PM

(PACRIM-S28-001-2017) The Road to Solid State Batteries for Vehicular Applications (Invited)

M. Doeff*[1]

1. Lawrence Berkeley National Laboratory, Energy Storage and Distributed Resources, USA

1:45 PM

(PACRIM-S28-002-2017) Interfacial Control of All Solid State Battery with Li Metal Anode, LLZAl Electrolyte and $LiMO_2$ Cathode (Invited)

K. Kanamura*[1]

1. Tokyo Metropolitan University, Graduate School of Urban Environmental Sciences, Japan

2:15 PM

(PACRIM-S28-003-2017) High rate all-solid state sodium ion batteries (Invited)

S. Adams*[1]

1. National University of Singapore, Materials Science and Engineering, Singapore

2:45 PM

(PACRIM-S28-004-2017) Solid-state Lithium Batteries Rechargeable in "One" Second: Solid-electrolyte/Electrode Superionic Conducting Interfaces (Invited)

H. Taro*[1]

1. Tokyo Institute of Technology, Japan

3:15 PM

(PACRIM-S28-005-2017) Materials Challenges to Develop Reliable "All-Solid-State" Batteries

L. Groleau[1]; M. Lachal[1]; M. Dolle*[1]

1. Université de Montreal, Chemistry, Canada

3:30 PM

Break

Solid Electrolytes + Supercapacitors

Room: Queen's 5

Session Chair: Mickael Dolle, Université de Montreal

3:45 PM

(PACRIM-S28-006-2017) Amorphous sulfide positive electrodes with high capacity in all-solid-state lithium batteries (Invited)

A. Hayashi*[1]; M. Tatsumisago[1]

1. Osaka Prefecture University, Department of Applied Chemistry, Japan

4:15 PM

(PACRIM-S28-007-2017) Defect Chemistry and Electrical Properties of Garnet-type $Li_7La_3Zr_2O_7$

M. Shirpour*[1]; X. Zhan[1]

1. University of Kentucky, Chemical and Materials Engineering, USA

4:30 PM

(PACRIM-S28-008-2017) Lithium diffusion in lithium garnet oxide $Li_5La_3Ta_2O_{12}$: A combined quasi-elastic neutron scattering and molecular dynamics study

W. Lai*[1]; M. Klenk[1]; S. Boeberitz[1]; N. Jalarvo[2]

1. Michigan State University, Chemical Engineering and Materials Science, USA
2. Oak Ridge National Lab, USA

4:45 PM

(PACRIM-S28-009-2017) Grain boundary atomic structures and lithium ionic conductivity in (La,Li)TiO_3 solid electrolyte

R. Ishikawa*[1]; S. Sasano[1]; T. Higashi[1]; T. Kimura[2]; Y. H. Ikuhara[2]; N. Shibata[1]; Y. Ikuhara[1]

1. University of Tokyo, Japan
2. Japan Fine Ceramics Center, Japan

5:00 PM

(PACRIM-S28-010-2017) Ultrathin NiAl layered double hydroxide nanosheet arrays on carbon nanotube paper as advanced hybrid electrode for high performance hybrid capacitors

L. Zhang[2]; K. Hui[3]; K. Hui*[1]

1. University of Macau, Institute of Applied Physics and Materials Engineering, Macao
2. Pohang University of Science and Technology, Department of Chemistry, Republic of Korea
3. University of East Anglia, Faculty of Science, United Kingdom

5:15 PM

(PACRIM-S28-011-2017) Graphene-encapsulated Carbon@Nickel-Aluminum Layered Double Hydroxide Core–Shell Spheres Hybrid Structure for High Performance Supercapacitor

S. Wu[1]; K. Hui[2]; K. Hui*[3]

1. Pusan National University, School of Materials Science and Engineering, Republic of Korea
2. University of East Anglia, Faculty of Science, United Kingdom
3. Institute of Applied Physics and Materials Engineering, University of Macau, China

5:30 PM

(PACRIM-S28-012-2017) One-Dimensional Core/Shell $Ba_{0.9}Ca_{0.1}TiO_3$@TiO_2 Nanofibers for Enhancing the Energy Density of Polymer Nanocomposites

P. Zhongbin*[1]; J. Zhai[1]

1. Tongji University, School of Materials Science & Engineering, China

PACRIM Symposium 29: Advances in Polar, Magnetic and Semiconductor Materials: Extending Temperature Limits

High Temperature Applications and Materials

Room: Queen's 4

Session Chairs: Paul Ohodnicki, National Energy Technology Laboratory; Michael Lanagan, Penn State University

1:15 PM

(PACRIM-S29-001-2017) High Temperature Power Electronics: Opportunities and Challenges (Invited)

S. Krishnamurthy*[1]

1. UTRC, USA

1:45 PM

(PACRIM-S29-002-2017) Challenges of High Temperature Power Modules (Invited)

C. O'Neal*[1]

1. Wolfspeed, A Cree Company, Process Engineering, USA

2:15 PM

(PACRIM-S29-003-2017) Development of dielectric material of multilayer ceramic capacitors for high temperature applications (Invited)

J. Ikeda*[1]

1. Murata Manufacturing Co., Ltd, Japan

2:45 PM

(PACRIM-S29-004-2017) Experimental and Atomistic Modeling Studies of Advanced Materials for Radiation Environments (Invited)

G. R. Lumpkin*[1]

1. ANSTO, NFC Research, Australia

3:15 PM

(PACRIM-S29-005-2017) High Temperature Functional Oxide Enabled Sensors for Harsh Environment Applications

P. Ohodnicki*[1]

1. National Energy Technology Laboratory, USA

3:30 PM

Break

3:45 PM

(PACRIM-S29-006-2017) PbO-free piezoelectrics: Are we there yet? (Invited)

I. M. Reaney*[1]

1. University of Sheffield, Materials Science and Engineering, United Kingdom

4:15 PM

(PACRIM-S29-007-2017) Processing and Base-Metal Integration of Bi(M)O_3-$BaTiO_3$ Dielectrics (Invited)

G. L. Brennecka*[1]; M. A. Beuerlein[1]; P. Lichty[2]; D. Cann[3]

1. Colorado School of Mines, USA
2. Pneumaticoat, Inc., USA
3. Oregon State University, Mechanical, Industrial, and Manufacturing Engineering, USA

4:45 PM

(PACRIM-S29-008-2017) Dielectric Nanocomposites for Energy Storage Application (Invited)

H. Wang*[1]; Q. Wang[1]

1. Xi'an Jiaotong University, State Key Laboratory for Mechanical Behavior of Materials, China

5:15 PM

(PACRIM-S29-009-2017) Piezoelectric Composites Based on the Flexoelectric Effect of Ferroelectric Ceramics

B. Chu*[1]

1. University of Science and Technology of China, Materials Science and Engineering, China

PACRIM Symposium 31: Advances in Bioceramics: Biomineralization and Bioinspired Materials

Towards Smart Bioceramics

Room: Monarchy

Session Chair: Joanna McKittrick, UC San Diego

1:15 PM

(PACRIM-S31-001-2017) Bioinspired Functional Materials (Invited)

C. Zollfrank*[1]

1. Technical University Munich, TUM School of Life Sciences Weihenstephan, Germany

1:45 PM

(PACRIM-S31-002-2017) Shape memory effect of natural materials and their potential applications (Invited)

W. Yang*[1]; H. Quan[1]; M. Meyers[1]

1. University of California, San Diego, USA

2:15 PM

(PACRIM-S31-003-2017) Biomorphic transformation of natural structures: A new paradigm in bioceramics development

S. Sprio*[1]; A. Ruffini[1]; A. Ballardini[1]; M. Montesi[1]; S. Panseri[1]; A. Tampieri[1]

1. National Research Council of Italy, Institute of Science and Technology for Ceramics, Italy

2:30 PM

(PACRIM-S31-004-2017) Intrinsic and Extrinsic Control of Bioinspired Freeze Casting (Invited)

S. E. Naleway*[1]

1. University of Utah, Department of Mechanical Engineering, USA

3:00 PM

(PACRIM-S31-005-2017) Synthesis of fish scale extracted hydroxyapatite and chitosan composite scaffolds by freeze casting for biomedical and environmental applications

B. Liaw*[1]; P. Chen[1]; W. Liu[1]; H. Chang[1]

1. National Tsing Hua University, Material Science and Engineering, Taiwan

3:15 PM

(PACRIM-S31-006-2017) Bioinspired self-shaping ceramics

H. Le Ferrand*[1]; F. L. Bargardi[1]; R. Libanori[1]; A. R. Studart[1]

1. ETH Zürich, Switzerland

3:30 PM

Break

Fundamental Aspects of Biomineralization - General Session

Room: Monarchy

Session Chairs: Stephan Wolf, Friedrich-Alexander-University Erlangen-Neurnberg; David Kisailus, UC Riverside

3:45 PM

(PACRIM-S31-007-2017) Analysis and control of preferential alignment of apatite crystals related to collagen fibers in various bones and in vitro bone-like tissues (Invited)

T. Nakano*[1]; T. Ishimoto[1]; A. Matsugaki[1]

1. Osaka University, Division of Materials and Manufacturing Science, Graduate School of Engineering, Japan

4:15 PM

(PACRIM-S31-008-2017) Structural and functional analyses of matrix proteins related to the formation of fibrous microstructure in the shell of Pinctada fucata (Invited)

K. Kubota[1]; T. Kogure[1]; S. Sakuda[1]; H. Nagasawa[1]; M. Suzuki*[1]

1. The University of Tokyo, Japan

4:45 PM

(PACRIM-S31-009-2017) Analysis of magnetite biomineralization in magnetotactic bacteria toward designed synthesis of magnetic nanomaterials (Invited)

T. Matsunaga*[1]; A. Arakaki[1]

1. Tokyo University of Agriculture and Technology, Japan

5:15 PM

(PACRIM-S31-010-2017) Nucleation, Phase Transformations and Structural Developments in the Damage-tolerant Teeth of a Giant Chiton

S. Herrera[1]; D. Restrepo Arango[2]; D. Ren[1]; M. Nemoto[3]; P. Zavattieri[2]; D. Kisailus*[1]

1. UC Riverside, Chemical and Environmental Engineering, USA
2. Purdue University, USA
3. Okayama University, Japan

5:30 PM

(PACRIM-S31-011-2017) Hierarchical Bone-like Materials via Biomimetic Processing

B. Wingender*[1]; P. Bradley[2]; J. Ruberti[2]; L. Gower[1]

1. University of Florida, Materials Science and Engineering, USA
2. Northeastern University, Bioengineering, USA

Tuesday, May 23, 2017

GOMD Award Lectures

George W. Morey Award Lecture

Room: Kona 5

8:30 AM

Introduction

8:35 AM

(GOMD-PL-001-2017) The evolution of Chalcogenide glasses in Infrared Photonics – beyond invisible

K. Richardson*[1]

1. University of Central Florida, CREOL, USA

9:30 AM

Break

GOMD Symposium 1: Fundamentals of the Glassy State

Mechanical Properties of Amorphous Solids II

Room: Kona 4

Session Chair: Adama Tandia, Corning Incorporated

9:45 AM

(GOMD-S1-013-2017) Indentation Deformation and Cracking of Calcium Boroaluminosilicate Glasses (Invited)

T. M. Gross*[1]

1. Corning Incorporated, Physical Properties, USA

10:15 AM

(GOMD-S1-014-2017) Hardness and Plastic Deformation Mechanisms in Calcium-Galliosilicate Glasses

S. Baker*[1]; L. Lamberson[2]; R. Youngman[2]; N. Wiles[1]

1. Cornell University, Materias Science and Engineering, USA
2. Corning Incorporated, USA

10:30 AM

(GOMD-S1-015-2017) Effect of Mg Replacement for Ca on Hardness of Aluminosilicate Glasses

L. Lamberson*[1]; S. P. Baker[2]; R. Youngman[3]

1. Corning Incorporated, Glass Research, USA
2. Cornell University, Materials Engineering, USA
3. Corning Incorporated, USA

10:45 AM

(GOMD-S1-016-2017) Indentation Crack Threshold and Hardness in Calcium Aluminosilicate Glasses

N. Wiles*[1]; S. P. Baker[1]

1. Cornell University, Materials Science, USA

11:00 AM

(GOMD-S1-017-2017) Competing indentation deformation mechanisms in glass using different strengthening methods

J. Luo*[1]; P. J. Lezzi[1]; K. Vargheese[1]; A. Tandia[1]; J. Harris[1]; T. M. Gross[1]; J. C. Mauro[1]

1. Corning Incorporated, USA

11:15 AM

(GOMD-S1-018-2017) The surface strength of thin display glass

A. L. Tremper*[1]; G. S. Glaesemann[1]

1. Corning Incorporated, Characterization Sciences, USA

11:30 AM

(GOMD-S1-019-2017) Sheet Glass Surface Relaxation Effect Understanding with Modeling and Experiment

Z. Zheng*[1]; T. M. Gross[1]; J. T. Westbrook[1]; P. J. Lezzi[1]; I. A. Nikulin[1]; D. Joshi[1]; R. Zhang[1]

1. Corning Incorporated, USA

GOMD Symposium 3: Optical and Electronic Materials and Devices: Fundamentals and Applications

Rare Earth Doped Phosphors, Nanocrystals, and Glass-Ceramics

Room: Kona 3

Session Chair: Shibin Jiang, AdValue Photonics Inc

9:45 AM

(GOMD-S3-030-2017) Insight on moisture-induced degradation process of $Sr_xCa_{1-x}AlSiN_3:Eu^{2+}$ red phosphors (Invited)

F. Yao[1]; Y. Zhuang*[1]; R. Xie[1]

1. Xiamen University, China

10:15 AM

(GOMD-S3-031-2017) Europium doped oxynitride phosphate glasses as promising white phosphors

M. Cicconi[2]; A. Veber[2]; D. de Ligny[2]; J. Rocherullé*[1]; R. Lebullenger[1]; F. Tessier[1]; P. Bénard-Rocherullé[1]; X. Zhang[1]

1. University of Rennes, Chemical Sciences Institute, France
2. University Erlangen-Nürnberg, Materials Sciences and Engineering, Germany

10:30 AM

(GOMD-S3-032-2017) Oxyfluoride glass ceramic with LaF_3 nanocrystals doped with Eu^{2+} for white LED color conversion of 400 nm LED

H. Lee[1]; S. Lee[2]; Y. Choi[3]; W. Im[4]; W. Chung*[1]

1. Kongju National University, Division of Advanced Materials Engineering, Republic of Korea
2. Bass Ltd., Republic of Korea
3. Korea Aerospace University, Republic of Korea
4. Chonnam National University, Republic of Korea

10:45 AM

(GOMD-S3-033-2017) Trap depth and color variation of Ce_{3+}-Cr^{3+} co-doped $Gd_3(Al,Ga)_5O_{12}$ garnet persistent phosphors

S. Tanabe*[1]

1. Kyoto University, Japan

11:00 AM

(GOMD-S3-034-2017) Near-infrared long persistent luminescence of Er^{3+} in garnet for the third bio-imaging window

J. Xu*[1]; J. Ueda[1]; S. Tanabe[1]

1. Kyoto University, Graduate School of Human and Environmental Studies, Japan

11:15 AM

(GOMD-S3-035-2017) Oriented $LiNbO_3$ nanocrystals photo-precipitation in Li_2O-Nb_2O_5-SiO_2 silicate glass by femtosecond laser direct writing

J. Cao[1]; M. Lancry*[1]; L. Mazerolles[2]; F. Brisset[1]; B. Poumellec[1]

1. University Paris Sud, France
2. Université Paris Est, France

11:30 AM

(GOMD-S3-036-2017) A new class of nanocomposite glass for tunable optical functionality

R. Li*[1]

1. Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China

GOMD Symposium 4: Glass Technology and Crosscutting Topics

Chalcogenide Materials for Memory Applications

Room: Waikoloa 3

Session Chair: David Drabold, Ohio University

9:45 AM

(GOMD-S4-001-2017) Atomistic modeling of resistance switching materials (Invited)

N. Onofrio*[1]

1. The Hong Kong Polytechnic University, Applied Physics, Hong Kong

10:10 AM

(GOMD-S4-002-2017) Heterostructures of chalcogenides and graphene for nonvolatile memory (Invited)

J. Akola*[1]; S. Kulju[1]; D. Prendergast[3]; R. O. Jones[2]

1. Tampere University of Technology, Materials and Molecular Modelling, Department of Physics, Finland
2. PGI-1, Forschungszentrum Juelich, Germany
3. Molecular Foundry, Lawrence Berkeley National Laboratory, USA

10:35 AM

(GOMD-S4-003-2017) Novel computer memory based upon chalcogenide glasses (Invited)

M. Salinga*[1]

1. RWTH Aachen University, Germany

11:00 AM

(GOMD-S4-004-2017) Density functional study of Ag/Ge/S and Ag/As/S alloys used in resistive RAM

J. Akola*[1]; R. O. Jones[2]

1. Tampere University of Technology, Materials and Molecular Modelling, Department of Physics, Finland
2. Forschungszentrum Juelich, PGI-1, Germany

11:15 AM

(GOMD-S4-005-2017) Early-stage switching in chalcogenide-based Conductive-bridging Random Access Memory (CBRAM)

M. Sundararajan[1]; K. Prasai[1]; D. Drabold[1]; G. Chen*[1]

1. Ohio University, USA

11:30 AM

(GOMD-S4-006-2017) Conductivity in CBRAM materials (Invited)

K. Prasai*[1]; G. Chen[1]; D. Drabold[1]

1. Ohio University, Physics and Astronomy, USA

Glass Corrosion I: Modeling

Room: Kona 2

Session Chairs: Stephane Gin, CEA; Aurélie Verney-Carron, LISA

9:45 AM

(GOMD-S4-007-2017) Glass Corrosion Models: Questions and Answers (that lead to more questions) (Invited)

J. Ryan*[1]

1. Pacific Northwest National Lab, USA

10:15 AM

(GOMD-S4-008-2017) Nonlinear dynamics of aqueous dissolution of silicate glasses and its implications to glass waste form durability (Invited)

Y. Wang*[1]

1. Sandia National Laboratories, Nuclear Waste Disposal Research & Analysis, USA

10:45 AM

(GOMD-S4-009-2017) Molecular modeling of nuclear waste glass and altered layers (Invited)

T. Ohkubo*[1]

1. Chiba University, Faculty of Engineering, Japan

11:15 AM

(GOMD-S4-010-2017) Density Functional Theory Modeling of Silicate Glass Dissolution

J. D. Kubicki*[1]; F. Tielens[2]; J. Boettger[3]

1. University of Texas at El Paso, Geological Sciences, USA
2. Sorbonne Université, France
3. Pennsylvania State University, Geosciences, USA

11:30 AM

(GOMD-S4-011-2017) Structure of Multicomponent Glass Surfaces and Reactions with Water

S. H. Garofalini*[1]; M. Ha[1]; J. Urraca[1]

1. Rutgers Univ, USA

11:45 AM

(GOMD-S4-012-2017) Nanoscale stress-corrosion of silicate glass in aqueous solutions: Simulations and experiments

L. Criscenti*[1]; J. Rimsza[1]; R. Jones[2]; E. Matteo[3]

1. Sandia National Laboratories, Geochemistry, USA
2. Sandia National Laboratories, Mechanics of Materials, USA
3. Sandia National Laboratories, Nuclear Waste Disposal Research & Analysis, USA

GOMD Symposium 5: Professor Jacques Lucas Honorary Symposium

Fluoride?

Room: Kona 5

Session Chair: Xianghua Zhang, Université de Rennes 1

9:40 AM

(GOMD-S5-012-2017) Fluoride Glasses: History and prospects (Invited)

J. Adam*[1]

1. University Rennes - CNRS, France

10:00 AM

(GOMD-S5-013-2017) Nanoparticle Doping of Optical Fibers – Can Silica Behave like a Fluoride? (Invited)

J. Ballato*[1]; C. Kucera[1]; M. Vermillac[2]; W. Blanc[2]; H. Fneich[3]; A. Mehdi[3]; M. Cabié[4]; T. Neisius[4]; C. Baker[5]; J. Friebele[5]

1. Clemson University, USA
2. Université de Nice-Sophia Antipolis, France
3. Université de Montpellier, France
4. Aix-Marseille Université, France
5. US Naval Research Laboratory, USA

10:20 AM

(GOMD-S5-014-2017) Spectroscopic study of Er^{3+} ions in fluorotellurite glass-ceramics

R. Balda*[1]; R. Morea[2]; J. Gonzalo[2]; J. Fernandez[1]

1. University of the Basque Country, Applied Physics, Spain
2. Laser Processing Group, Instituto de Optica, CSIC, Spain

Morey Lecture (2015)

Room: Kona 5

Session Chair: Steve Martin, Iowa State University

10:35 AM

(GOMD-S5-015-2017) Control of the metastable state of glasses (Invited)

J. Qiu*[1]

1. South China University of Technology, China

"X" Glasses

Room: Kona 5

Session Chair: Steve Martin, Iowa State University

11:15 AM

(GOMD-S5-016-2017) From TeX to Flex: The impact of Jacques Lucas on the next generation (and beyond) of ChG researchers (Invited)

K. Richardson*[1]

1. University of Central Florida, CREOL, USA

11:35 AM

(GOMD-S5-017-2017) The invention and development of the TeX glasses (Invited)

X. Zhang*[1]; H. Ma[1]; J. Lucas[1]

1. Université de Rennes I, France

PACRIM Third International Richard M. Fulrath Symposium on Discontinuous Progress for Ceramic Innovations

Fulrath Session I

Room: Queen's 6

Session Chairs: Takaaki Tsurumi, Tokyo Institute of Technology; Jon-Paul Maria, North Carolina State University

8:30 AM

Opening Remarks - M. Singh

8:50 AM

(PACRIM-FUL-001-2017) Revising the Narrative of Ceramic and Ceramic –Polymer Composite Processing to a Fast, Sustainable Manufacturing Approach (Invited)

C. Randall*[1]; H. Guo[1]; J. Guo'[1]; S. Funahashi[1]; A. Baker[1]

1. Materials Research Institute, Penn State University, USA

9:10 AM

(PACRIM-FUL-002-2017) Recent Topics in the Field of Ferroelectric Materials for BME-MLCCs (Invited)

T. Nomura*[1]; Y. Sasaki[1]; A. Nemoto[1]; Y. Akimoto[1]

1. Shoei Chemical Inc., Japan

9:30 AM

(PACRIM-FUL-003-2017) Recent progress in multilayer ceramic devices (Invited)

H. Kishi*[1]

1. Taiyo Yuden Co., Ltd., R&D Laboratory, Japan

9:50 AM

Break

10:05 AM

(PACRIM-FUL-004-2017) Additive Manufacturing of In organic-Organic Hybrid Materials (Invited)

R. Narayan*[1]

1. NC State University, USA

10:25 AM

(PACRIM-FUL-005-2017) Development of ceramic structure control method with DC and pulsed electric field

T. Nakayama*[1]; N. Matsutani[1]; H. Triet[1]; N. Son[1]; H. Suematsu[1]; T. Suzuki[1]; K. Niihara[1]

1. Nagaoka Univ of Tech, Japan

10:45 AM

(PACRIM-FUL-006-2017) The Molten Core Fabrication of Novel Optical Fibers (Invited)

J. Ballato*[1]; P. Dragic[2]

1. Clemson University, USA
2. University of Illinois at Urbana-Champaign, Electrical and Computer Engineering, USA

11:05 AM

Break

11:20 AM

(PACRIM-FUL-007-2017) Structure derived novel functions for future electronics (Invited)

A. Ando*[1]

1. Murata Mfg. Co., Japan

11:40 AM

(PACRIM-FUL-008-2017) Piezoelectric Films for Microelectromechanical Systems (Invited)

S. Trolier-McKinstry*[1]

1. Pennsylvania State University, Materials Science and Engineering, USA

PACRIM Symposium 02: Virtual Materials Design and Ceramic Genome

Modeling of Performances I

Room: Kohala 4

Session Chair: Masato Yoshiya, Osaka University

8:30 AM

(PACRIM-S2-011-2017) Strain and Excitation Effects on Defect Dynamics in Oxides (Invited)

Y. Zhang*[1]; J. Xi[2]; B. Petersen[2]; D. S. Aidhy[3]; B. Liu[4]; W. J. Weber[2]

1. Oak Ridge National Laboratory, USA
2. The University of Tennessee, USA
3. University of Wyoming, USA
4. Shanghai University, China

9:00 AM

(PACRIM-S2-012-2017) From ab initio simulations of point defects to material properties: Applications to silicon carbide (Invited)

G. Roma*[1]; T. Jourdan[1]; J. Crocombette[1]; F. Bruneval[1]

1. CEA, Université Paris-Saclay, DEN-Service de Recherches de Métallurgie Physique, France

9:30 AM

(PACRIM-S2-013-2017) Modeling the Morphology of Ion Tracks in Complex Oxides (Invited)

W. J. Weber*[1]; E. Zarkadoula[2]; R. Sachan[2]; D. S. Aidhy[3]; Y. Zhang[2]; C. Trautmann[4]

1. University of Tennessee, Materials Science & Engineering, USA
2. Oak Ridge National Lab, Materials Science & Technology, USA
3. University of Wyoming, Mechanical Engineering, USA
4. GSI Helmholtzzentrum für Schwerionenforschung GmbH, Germany

10:00 AM

Break

Modeling of Performances II

Room: Kohala 4

Session Chair: Peter Kroll, UT Arlington

10:15 AM

(PACRIM-S2-014-2017) Material design for plasmonic and hot-carrier devices (Invited)

R. Sundararaman*[1]

1. Rensselaer Polytechnic Institute, Materials Science and Engineering, USA

10:45 AM

(PACRIM-S2-015-2017) Atomic Structures and Chemical Bonding States across Slip Planes in Ionic Crystals (Invited)

K. Matsunaga*[1]

1. Nagoya University, Materials Science & Engineering, Japan

11:10 AM

(PACRIM-S2-016-2017) Properties of $RE_2Si_2O_7$ and Related Materials for Environmental Barrier Coatings (Invited)

M. Yoshiya*[1]; A. Ioki[1]; Y. Sumi[1]; T. Yokoi[1]

1. Osaka University, Department of Adaptive Machine Systems, Japan

11:35 AM

(PACRIM-S2-017-2017) A new ternary layered and damage-tolerance boride MoAlB: DFT insights and predictions (Invited)

Y. Bai[1]; X. Qi[1]; A. Duff[2]; N. Li[1]; F. Kong*[1]; X. He[1]; R. Wang[1]; W. E. Lee[3]

1. Harbin Institute of Technology, Center for Composite Materials and Structures, China
2. STFC Daresbury Laboratory, Hartree Centre, United Kingdom
3. Imperial College London, Department of Materials, United Kingdom

PACRIM Symposium 03: Novel, Green, and Strategic Processing and Manufacturing Technologies

Novel, Green, and Strategic Processing II

Room: King's 3

Session Chairs: Young-Wook Kim, University of Seoul; Wataru Sakamoto, Nagoya University; Toshihiro Ishikawa, Tokyo University of Science, Yamaguchi

8:30 AM

(PACRIM-S3-014-2017) Processing of complex shape ceramics by a hybrid technology (Invited)

F. J. Cambier*[1]; G. Martic[1]; X. Buttol[1]; E. Juste[1]; F. Petit[1]

1. Belgian Ceramic Resaerch Centre, R&D, Belgium

8:55 AM

(PACRIM-S3-015-2017) Theoretical and Experimental Analyses of Relationship between Processing and Thermal Conductivity of SiC with Oxide Additives (Invited)

Y. Hirata*[1]; H. Shirai[1]; R. Ando[1]; Y. Matsumoto[1]; T. Shimonosono[1]

1. Kagoshima University, Department of Chemistry, Biotechnology, and Chemical Engineering, Japan

9:20 AM

(PACRIM-S3-016-2017) A Review of Next Generation Green and Smart Manufacturing Technologies

S. Gupta*[1]

1. University of North Dakota, Mechanical Engineering, USA

9:35 AM

(PACRIM-S3-017-2017) Ceramic Powder Processing: New Approaches for Glass Component Manufacturing

T. Moritz*[1]; J. Schilm[1]; A. Mueller-Koehn[1]; A. Mannschatz[1]; U. Scheithauer[1]; E. Schwarzer[1]

1. Fraunhofer IKTS, Processes/Components, Germany

9:50 AM

(PACRIM-S3-018-2017) Multi-functional Si-C-N ceramics fabricated by 3D printing (Invited)

X. Yin*[1]

1. Northwestern Polytechical University, School of Materials Science, China

10:05 AM

Break

10:20 AM

(PACRIM-S3-019-2017) Bioinspired materials templates by nature species (Invited)

D. Zhang*[1]

1. Shanghai Jiao Tong University, China

10:45 AM

(PACRIM-S3-020-2017) Eco-friendly synthesis of Graphene using high pressure airless spray system

A. Khanna*[1]; K. S. Aneja[1]

1. Indian Institute of Technology Bombay, Metallurgical Engineering and Materials Science, India

11:00 AM

(PACRIM-S3-021-2017) Bioprocess Inspired Synthesis of Electrode Materials on Genetically Modified Bacterial Surface for Lithium-ion Batteries

H. Xie*[1]; H. Ping[1]; J. j. Xie[1]; S. Xue[1]; M. Wang[1]; W. Wang[1]; H. Wang[1]; Z. Fu[1]

1. Wuhan University of Technology, China

11:15 AM

(PACRIM-S3-022-2017) Bioinspired facile synthesis of hierarchical Cu_2O nanoparticles as visible-light-driven photocatalysts

L. Lei*[1]; H. Xiao[1]; Z. Fu[1]

1. Wuhan University of Technology, China

11:30 AM

(PACRIM-S3-023-2017) Natural organisms directed synthesis of ceramic materials

J. j. Xie*[1]; Z. Fu[1]

1. Wuhan University of Technology, China

PACRIM Symposium 07: Porous Ceramics: Innovative Processing and Advanced Applications

Ceramic Membranes

Room: King's 2

Session Chairs: Toru Wakihara, The University of Tokyo; Andraz Kocjan, Jozef Stefan Institute

8:30 AM

(PACRIM-S7-012-2017) Tuning microporous ceramic membranes for gas separation or solvent nanofiltration (Invited)

L. Winnubst*[1]

1. University of Twente, Inorganic Membranes, Netherlands

9:00 AM

(PACRIM-S7-013-2017) Alternate Polymeric Precursor for Gas-selective Carbon Membrane (Invited)

X. Chen*[1]

1. Institute of Materials Research and Engineering, A*STAR, Polymer materials, Singapore

9:20 AM

(PACRIM-S7-014-2017) Properties of glass-bonded silicon carbide membrane supports

Y. Kim*[1]; H. Yeom[1]; S. Kim[1]; I. Song[2]

1. University of Seoul, Dept. of Materials Science & Engineering, Republic of Korea
2. Korea Institute of Materials Science, Republic of Korea

9:40 AM

(PACRIM-S7-015-2017) Porous recrystallized silicon carbide membranes for use in water filtration applications

A. Vincent[1]; L. Pierrot[1]; R. Neufert[2]; M. Moeller[2]; M. Faber[2]; M. Kuhn*[3]

1. Saint-Gobain, CREE, France
2. Saint-Gobain IndustrieKeramik Rödental GmbH, Germany
3. Northboro Research & Development Center, Saint-Gobain Innovative Materials, USA

10:00 AM

Break

High SSA Ceramics I

Room: King's 2

Session Chairs: Xinwei Chen, Institute of Materials Research and Engineering

10:15 AM

(PACRIM-S7-016-2017) Pioneering In Situ Recrystallization during Bead Milling: A Fastest Top-down Approach to Prepare Zeolite A Nanocrystals (Invited)

A. Chokkalingam[1]; T. Wakihara*[1]

1. The University of Tokyo, Japan

10:45 AM

(PACRIM-S7-017-2017) High-performance γ-alumina porous green bodies with hierarchical heterogeneities (Invited)

A. Kocjan*[1]; T. Konegger[2]; A. Dakskobler[3]

1. Jozef Stefan Institute, Slovenia
2. Vienna University of Technology, Austria
3. VALL-CER d.o.o., Slovenia

11:15 AM

(PACRIM-S7-018-2017) Structural analysis of sodium-aluminosilicate precursors for the synthesis of aluminosilicate zeolites

H. Yamada*[1]; S. Sukenaga[2]; K. Ohara[3]; H. Shibata[2]; T. Okubo[1]; T. Wakihara[1]

1. The University of Tokyo, Chemical System Engineering, Japan
2. Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan
3. Research & Utilization Division, Japan Synchrotron Radiation Research Institute (JASRI)/SPring-8, Japan

11:35 AM

(PACRIM-S7-019-2017) Controlling the Nanometer to Micrometer Scale Porosity of Metal Oxide Materials

R. Caruso*[1]

1. The University of Melbourne, Australia

PACRIM Symposium 11: Engineering Ceramics: Processing and Characterizations

Mechanical Properties I

Room: King's 1

Session Chairs: Junichi Tatami, Yokohama National University; Pavol Sajgalik, Institute of Inorganic Chemistry, Slovak Academy of Sciences

8:30 AM

(PACRIM-S11-012-2017) Thermal Shock Resistance, Wear Behavior and Oxidation Resistance of Silicon Nitride Based Nano-Composites (Invited)

P. Sajgalik*[1]; M. Hnatko[1]; Z. Lences[1]; J. Dusza[2]; P. Tatarko[2]; A. Kovalčíková[2]; M. Kasiarova[2]

1. Institute of Inorganic Chemistry, Slovak Academy of Sciences, Ceramics Department, Slovakia
2. Institute of Materials Research, Slovak Academy of Sciences, Slovakia

9:00 AM

(PACRIM-S11-013-2017) Bending strength and fracture toughness of Si_3N_4 ceramic surface in contact with molten aluminum measured using microcantilever beam specimens (Invited)

J. Tatami*[1]; S. Fujita[1]; T. Yahagi[2]; T. Takahashi[2]; M. Iijima[1]

1. Yokohama National University, Japan
2. Kanagawa Academy of Science and Technology, Japan

9:30 AM

(PACRIM-S11-014-2017) c-axis oriented Si_3N_4 ceramics fabricated by preparing multilayered-graphene coated β-Si_3N_4 seeds and its orientation in a very low magnetic field

T. Takahashi*[1]; M. Sado[2]; N. Sugimoto[2]; J. Tatami[2]; M. Iijima[2]

1. Kanagawa Academy of Science and Technology, Japan
2. Yokohama National University, Japan

9:45 AM

(PACRIM-S11-015-2017) Directional electrical transport in tough multifunctional layered ceramic/graphene composites

M. Belmonte*[1]; R. Cruz-Silva[2]; A. Morelos-Gómez[2]; M. Terrones[2]; P. Miranzo[1]; M. I. Osendi[1]

1. Institute of Ceramics and Glass, CSIC, Spain
2. Shinshu University, Faculty of Engineering, Japan

10:00 AM

Break

Mechanical Properties II

Room: King's 1

Session Chairs: B V Manoj Kumar, IIT Roorkee; Jianfeng Yang, Xi'an Jiaotong University

10:15 AM

(PACRIM-S11-016-2017) Understanding tribology of ceramics and cermets in sliding wear contacts (Invited)

B. Kumar*[3]; S. Sharma[3]; B. Zugelj[2]; Y. Kim[1]; M. Kalin[2]

1. University of Seoul, Republic of Korea
2. University of Ljubljana, Slovenia
3. IIT Roorkee, India

10:45 AM

(PACRIM-S11-017-2017) Fabrication and Properties of SiC ceramics with Low Content of Residual Si through Multi-Step Reaction Sintering Based on Compound Carbon Source (Invited)

J. Yang*[1]; N. Zhang[1]; P. Yin[1]; B. Wang[1]

1. Xi'an Jiaotong University, China

11:15 AM

(PACRIM-S11-018-2017) Fabrication of textured B_4C ceramics by slip casting in a strong magnetic field and their mechanical and thermal properties

K. Yoshida*[1]; M. Fajar[1]; T. Yano[1]; T. Uchikoshi[2]; T. S. Suzuki[2]

1. Tokyo Institute of Technology, Japan
2. National Institute for Materials Science (NIMS), Japan

11:30 AM

(PACRIM-S11-019-2017) Hot-Pressing B_4C Ceramics with Al as Sintering Aid

X. Li*[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

11:45 AM

(PACRIM-S11-020-2017) Mechanical Properties of Hot Pressed SHS Derived Ti_2AlN Active Precursor Powders

L. Chlubny*[1]; J. Lis[1]; P. Borowiak[1]; K. Chabior[1]; K. Zielenska[1]

1. AGH-University of Science and Technology, Poland

PACRIM Symposium 17: Advanced Functional Ceramics and Critical Materials Perspective

Advanced Functional Ceramics and Critical Materials Perspective II

Room: Kohala 2

Session Chairs: Takaaki Tsurumi, Tokyo Institute of Technology; Kazuhiko Maeda, Tokyo Institute of Technology

9:00 AM

(PACRIM-S17-012-2017) Dielectric and ferroelectric characteristics of $Ba_4Pr_2Fe_2Nb_8O_{30}$ tungsten bronze ceramics

T. Gao*[1]; X. Zhu[1]; X. Chen[1]

1. Zhejiang University, School of Materials Science and Engineering, China

9:15 AM

(PACRIM-S17-013-2017) Structure, dielectric, ferroelectric and magnetic properties of $Ba_4(Eu_xLa_{1-x})_2Fe_2Nb_8O_{30}$ ceramics

J. Hong*[1]; Y. Wu[1]; X. Chen[1]; X. Liu[1]

1. Zhejiang University, Laboratory of Dielectric Materials, School of Materials Science and Engineering, China

9:30 AM

(PACRIM-S17-014-2017) Processing of Reduction-Resistant Lead-Free $(Ba,Ca)(Ti,Zr)O_3$ Piezoceramics and their Grain Orientation Control (Invited)

W. Sakamoto*[1]

1. Nagoya University, Institute of Materials and Systems for Sustainability, Japan

9:50 AM

(PACRIM-S17-015-2017) Mechanism of electro-optic effect in oxide ferroelectrics and relaxors (Invited)

T. Tsurumi*[1]; H. Takeda[1]; T. Hoshina[1]

1. Tokyo Institute of Technology, Japan

10:10 AM

Break

10:25 AM

(PACRIM-S17-016-2017) Atomic scale and in-situ electron microscopic analysis of ferroelectrics (Invited)

Y. Sato*[1]

1. Kyushu University, Dep. Mater. Sci. Eng., Japan

10:45 AM

(PACRIM-S17-017-2017) Use of Bayesian Inference in Characterization of Ceramic Materials: An Introduction and Applications in Ferroelectrics (Invited)

J. L. Jones*[1]; T. Iamsasri[2]; J. Guerrier[1]; C. Fancher[3]; J. Daniels[4]; A. Larsen[5]; A. G. Wilson[5]; B. J. Reich[5]; R. C. Smith[6]

1. North Carolina State University, Dept. of Materials Science & Engineering, USA
2. King Monkut's University of Technology North Bangkok, Thailand
3. Oak Ridge National Lab, Chemical and Engineering Materials Division, USA
4. UNSW Australia, School of Materials Science and Engineering, Australia
5. North Carolina State University, Statistics, USA
6. North Carolina State University, Mathematics, USA

11:05 AM

(PACRIM-S17-018-2017) Catalysis of perovskite-type oxide prepared by the decomposition of heteronuclear cyano complex (Invited)

H. Yahiro*[1]; S. Yamaguchi[1]

1. Ehime University, Japan

11:25 AM

(PACRIM-S17-019-2017) Water splitting using metal oxide photocatalysts (Invited)

K. Maeda*[1]

1. Tokyo Institute of Technology, Japan

11:45 AM

(PACRIM-S17-020-2017) High mobility amorphous Zn-O-N thin films fabricated by pulsed laser deposition

T. Hasegawa*[1]; T. Yamazaki[1]; K. Shigematsu[2]; S. Nakao[2]; I. Harayama[4]; D. Sekiba[3]; Y. Hirose1[1]

1. University of Tokyo, Department of Chemistry, Japan
2. Kanagawa Academy of Science and Technology, Japan
3. University of Tsukuba, Tandem Accelerator Complex, Japan
4. University of Tsukuba, Graduate School of Pure and Applied Sciences, Japan

PACRIM Symposium 19: Transparent Ceramic Materials and Devices

Transparent Ceramic Materials and Devices II

Room: Kohala 3

Session Chair: Do Kyung Kim, Korea Advanced Institute of Science and Engineering (KAIST)

8:30 AM

(PACRIM-S19-013-2017) Anisotropic solid-state single crystal growth in $Sr_5(PO_4)_3F$ (Invited)

Y. Liu*[1]; Y. Wu[1]

1. Alfred University, Materials Science, USA

9:00 AM

(PACRIM-S19-014-2017) Transparent AlON Ceramics from Synthetic Submicron Powders by Pressureless Sintering (Invited)

Y. Shi*[1]; J. Lei[1]; J. Zhang[1]; J. Xie[1]; L. Zhang[1]

1. Shanghai University, Department of Electronics and Information Materials, China

9:30 AM

(PACRIM-S19-015-2017) SPS of transparent Nd^{3+}:MgO ceramic using co-precipitated powders (Invited)

X. Chen*[1]; Y. Liu[1]; Y. Wu[1]

1. Alfred University, Kazuo Inamori School of Engineering, USA

10:00 AM

Break

10:15 AM

(PACRIM-S19-016-2017) Recent progress in transparent ceramics synthesized by full crystallization from glass

M. Allix*[1]; E. Véron[1]; C. Genevois[1]; F. Fayon[1]; S. Chenu[1]; G. Matzen[1]

1. CNRS (CEMHTI), France

10:30 AM

(PACRIM-S19-017-2017) Transparent polycrystalline spinel-type silicon nitride

N. Nishiyama*[1]; R. Ishikawa[2]; H. Ohfuji[3]; H. Marquardt[4]; T. Taniguchi[5]; B. Kim[5]; A. Masuno[6]; Y. Ikuhara[2]; F. Wakai[7]; T. Irifune[3]

1. Deutsches Elektronen-Synchrotron, Germany
2. The University of Tokyo, Institute of Engineering Innovation, Japan
3. Ehime University, Geodynamics Research Center, Japan
4. Universität Bayreuth, Bayerisches Geoinstitut, Germany
5. National Institute for Materials Sciences, Japan
6. Hirosaki University, Japan
7. Tokyo Institute of Technology, Japan

10:45 AM

(PACRIM-S19-018-2017) Analysis on spinodal decomposition behavior and reflective spectra of Ca-Al-Si-O glass of Celadon glaze

Y. Chen*[1]; Y. Bai[1]; W. Wei[1]

1. National Taiwan University, Materials Science and Engineering, Taiwan

11:00 AM

(PACRIM-S19-019-2017) Microstructure, optical, and scintillation Properties of Ce:$Gd_2YAl_2Ga_3O_{12}$ Transparent Ceramics

B. Jiang[1]; L. Zhang[1]; S. Chen*[1]

1. Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Science, China

PACRIM Symposium 20: Crystalline Materials for Electrical, Optical, and Medical Applications

New Direction II

Room: Kohala 1

Session Chair: David Rogers, Nanovation

9:00 AM

(PACRIM-S20-010-2017) Crystal and electronic structures of $LaOBiS_2$ and $LaOInS_2$ (Invited)

A. Miura*[1]; Y. Mizuguchi[2]; C. Moriyoshi[3]; Y. Kuroiwa[3]; M. Higuchi[1]; K. Tadanaga[1]

1. Hokkaido University, Japan
2. Tokyo Metropolitan University, Japan
3. Hiroshima University, Japan

9:30 AM

(PACRIM-S20-011-2017) Luminescent Lanthanide Coordination Compounds with Inorganic Lattice (Invited)

T. Nakanishi*[1]

1. Hokkaido University, Japan

10:00 AM

Break

10:15 AM

(PACRIM-S20-012-2017) Perovskite substrate crystals for strain engeneering (Invited)

D. Klimm[1]; C. Guguschev*[1]; M. Brützam[1]

1. Leibniz Institute for Crystal Growth, Germany

10:45 AM

(PACRIM-S20-013-2017) The Revolution of Metal Oxide Nanoparticles: From optical to biosensors (Invited)

E. Fortunato*[1]; A. Pimentel[1]; L. Santos[1]; A. Marques[1]; A. Gonçalves[1]; R. Martins[1]

1. FCT-UNL, Materials Science, Portugal

11:15 AM

(PACRIM-S20-014-2017) Synthesis and processing of nanocomposite ceramics for improved functionality of transparent materials

N. Ku*[1]; V. L. Blair[1]; Z. D. Fleischman[1]

1. U.S. Army Research Laboratory, USA

11:30 AM

(PACRIM-S20-015-2017) Transparent Ceramics with Tailored Composition (Invited)

Z. M. Seeley*[1]; I. Jones[2]; N. Cherepy[1]; S. A. Payne[1]

1. Lawrence Livermore National Lab, Chemical Sciences Division, USA
2. Lawrence Livermore National Lab, Physics, USA

PACRIM Symposium 25: Ceramics for Next Generation Nuclear Energy

Properties and Performance of Nuclear Materials Under Extreme Conditions (i.e. High Radiation Dose, Elevated Temperature, Stress, Corrosive Environment, etc.)

Room: Kona 1

Session Chairs: Takashi Nozawa, National Institutes for Quantum and Radiological Science and Technology; Ming Tang, Los Alamos National Lab

8:30 AM

(PACRIM-S25-013-2017) Irradiation-tolerant Ceramics with Nanostructures: From Nanoporous ZrO_2, Multi-nanolayered W/ZrO_2 to Nano-laminated MAX Phase (Invited)

Y. Wang*[1]

1. Peking University, School of Physics, China

9:00 AM

(PACRIM-S25-014-2017) Exploring the Radiation Tolerance of Ceramic Nanoparticles via In-situ Ion Irradiation Transmission Electron Microscopy

K. Hattar*[1]; C. Barr[1]; B. Muntifering[1]; J. Kolar[1]; S. Pratt[1]; B. A. Hernandez-Sanchez[1]; T. J. Boyle[1]

1. Sandia National Laboratories, USA

9:15 AM

(PACRIM-S25-016-2017) Irradiation effects on metallic mitigation coatings for SiC cladding

C. Ang*[1]; C. Kemery[1]; J. Kiggans[1]; K. Terrani[1]; Y. Katoh[1]

1. Oak Ridge National Lab, Advanced Nuclear Materials, USA

9:30 AM

(PACRIM-S25-017-2017) Damage monitoring of silicon carbide and its composites by underwater acoustic emission waves

T. Nozawa*[1]; H. Tanigawa[1]

1. National Institutes for Quantum and Radiological Science and Technology, Japan

9:45 AM

(PACRIM-S25-018-2017) Behavior of interstitial helium in boron carbide: A first principles study

A. Schneider[1]; G. Roma*[1]; J. Crocombette[1]

1. CEA, Université Paris-Saclay, DEN-Service de Recherches de Métallurgie Physique, France

10:00 AM

Break

10:15 AM

(PACRIM-S25-019-2017) Nanoscale Mechanical Behavior of Nuclear Materials

U. Carvajal Nuñez*[1]; E. Sooby Wood[1]; J. T. White[1]; N. Mara[1]; A. T. Nelson[1]

1. Los Alamos National Lab, USA

10:30 AM

(PACRIM-S25-020-2017) Safety Performance Evaluation of Silicon Carbide Ceramics for Accident Tolerance Fuel in Hydrothermal Exposure Condition

L. Kwang-Young*[2]; S. Lee[2]; Y. Kim[1]; W. Kim[3]

1. University of Seoul, Department of Materials Science and Engineering, Republic of Korea
2. KEPCO Nuclear Fuel, Materials Development Section, Republic of Korea
3. 3Korea-Atomic Energy Research Institute, Nuclear Materials Development Division, Republic of Korea

10:45 AM

(PACRIM-S25-021-2017) SiC-SiC CMCs for Nuclear Applications: Update on Progress of WG for Graphite & Composites in ASME BPV Code Section III, Division 5 High Temp Reactors

M. G. Jenkins*[1]; S. T. Gonczy[2]; Y. Katoh[3]

1. Bothell Engineering and Science Technologies, USA
2. Gateway Materials Technology, USA
3. Oak Ridge National Lab, USA

PACRIM Symposium 28: Advanced Materials and Technologies for Electrochemical Energy Storage Systems

Beyond Li-ion

Room: Queen's 5

Session Chair: Naoaki Yabuuchi, Tokyo Denki University

8:30 AM

(PACRIM-S28-013-2017) Sodium secondary batteries using bis(fluorosulfonyl)amide ionic liquids as electrolytes (Invited)

R. Hagiwara*[1]; T. Nohira[1]; K. Matsumoto[1]; K. Numata[2]; S. Sakai[2]; K. Nitta[2]

1. Kyoto University, Japan
2. Sumitomo Electric Industries, Ltd., Japan

9:00 AM

(PACRIM-S28-014-2017) Chances of Hückel-type salts based electrolytes for application in modern batteries (Invited)

M. Marcinek*[1]; A. Bitner[1]; T. Trzeciak[1]; P. Wieczorek[1]; M. A. Muñoz-Márquez[2]; B. Hamankiewicz[3]; L. Niedzicki[1]; W. Wieczorek[1]

1. Warsaw University of Technology, Chemistry, Poland
2. CIC EnergiGUNE, Spain
3. Univeristy of Warsaw, Poland

9:30 AM

(PACRIM-S28-015-2017) Mechanisms of Surface Reactions in Aqueous Sodium-Ion Batteries

M. Shirpour*[1]; X. Zhan[1]

1. University of Kentucky, Chemical and Materials Engineering, USA

9:45 AM

Break

Positive

Room: Queen's 5

Session Chair: Marca Doeff, Lawrence Berkeley National Laboratory

10:15 AM

(PACRIM-S28-016-2017) Anion Redox Reaction for Rechargeable Li/Na Batteries (Invited)

N. Yabuuchi*[1]

1. Tokyo Denki University, Japan

10:45 AM

(PACRIM-S28-017-2017) Disordered Rock Salt type Structure as New Active Compound for High Energy Density Batteries (Invited)

V. Pralong*[1]; M. Freire[1]; E. Adamczyk[1]; E. Anger[1]

1. CNRS ENSICAEN, France

11:15 AM

(PACRIM-S28-018-2017) Voltage Variation of Lithium Transition Metal Oxides Caused by the Migration of Cations (Invited)

Z. Chen*[1]; Y. Li[1]; Y. Qin[1]; Y. Ren[1]; K. Amine[1]

1. Argonne National Lab, USA

11:45 AM

(PACRIM-S28-019-2017) In-depth investigation of process-structure-property relationship in the cathode materials of Li ion batteries

Q. Liu*[1]

1. Argonne National Lab, Advance Photon Source, USA

PACRIM Symposium 29: Advances in Polar, Magnetic and Semiconductor Materials: Extending Temperature Limits

High Temperature Piezoelectrics

Room: Queen's 4

Session Chairs: Andrew Bell, University of Leeds; Shujun Zhang, University of Wollongong

8:30 AM

(PACRIM-S29-010-2017) H-T Piezoelectric Devices Based on Modified $BiScO_3$-$PbTiO_3$ Ceramics (Invited)

J. Wu[1]; S. Dong*[1]

1. Peking University, Materials Science & Engineering, China

9:00 AM

(PACRIM-S29-011-2017) A barbell-shaped high-temperature piezoelectric vibration energy harvester based on $BiScO_3$-$PbTiO_3$ ceramic

J. Wu*[1]

1. Peking University, China

9:15 AM

(PACRIM-S29-012-2017) A high temperature piezoelectric platform for ultrasound transducers (Invited)

T. J. Stevenson[2]; A. J. Bell*[1]

1. University of Leeds, School of Chemical and Process Engineering, United Kingdom
2. Ionix Advanced Technologies Ltd, United Kingdom

9:45 AM

(PACRIM-S29-013-2017) Ultrasonic Transducers for Harsh Environments

B. R. Tittmann*[1]; J. Daw[2]; B. Reinhardt[3]

1. Pennsylvania State University, Eng.Sc. & Mechanics, USA
2. Idaho National Laboratory, USA
3. Applied Research Laboratory, USA

10:00 AM

Break

10:15 AM

(PACRIM-S29-015-2017) High temperature piezoelectric sensing: Materials, devices and applications (Invited)

X. Jiang*[1]

1. NC State, USA

10:45 AM

(PACRIM-S29-016-2017) High temperature piezoelectric crystals: Growth, properties and potential sensor applications (Invited)

F. Yu*[1]

1. Shandong University, State Key Laboratory of Crystal Materials, China

PACRIM Symposium 31: Advances in Bioceramics: Biomineralization and Bioinspired Materials

On Bone: Structural Aspects

Room: Monarchy

Session Chairs: Laurie Gower, University of Florida; Po-Yu Chen, National Tsing Hua University

8:30 AM

(PACRIM-S31-012-2017) Bone hierarchical structure and mechanics through 3D X-ray imaging techniques (Invited)

H. Birkedal*[1]

1. Aarhus University, Department of Chemistry & iNANO, Denmark

9:00 AM

(PACRIM-S31-013-2017) Comparing structure, composition and properties of bio-inspired collagen/apatite systems with natural bone (Invited)

R. Kroeger*[1]; N. Reznikov[2]; K. Chatzipanagis[1]; M. Bilton[3]

1. University of York, United Kingdom
2. Imperial College, United Kingdom
3. Simon Frazer University, Canada

9:30 AM

(PACRIM-S31-014-2017) Enhancing mechanical properties of collagen through mineralization (Invited)

J. A. Elliott*[1]; P. J. Kiley[1]; K. Chatzipanagis[2]; R. Kroeger[2]

1. University of Cambridge, Department of Materials Science and Metallurgy, United Kingdom
2. University of York, Department of Physics, United Kingdom

10:00 AM

Break

Fundamental Apects of Biominerals II - Calcarous Systems

Room: Monarchy

Session Chairs: Laurie Gower, University of Florida; Hui-suk Yun, Korea Institute of Materials Science

10:15 AM

(PACRIM-S31-015-2017) Calcium Carbonate Formation Pathways and the Influence of Organic Templates (Invited)

M. Nielsen*[1]; J. Lee[1]; J. De Yoreo[2]; S. Aloni[3]; T. Willey[1]; C. Freeman[4]

1. Lawrence Livermore National Laboratory, USA
2. Pacific Northwest National Lab, USA
3. Lawrence Berkeley National Laboratory, USA
4. University of Sheffield, United Kingdom

10:45 AM

(PACRIM-S31-016-2017) Biomineralization of corals, sea urchins, and shells (Invited)

P. Gilbert*[1]

1. UW-Madison, Physics, USA

11:15 AM

(PACRIM-S31-017-2017) Hydrogels in Nature: Invertebrates use "jelly" to craft biominerals (Invited)

M. Pendola[1]; G. Jain[1]; A. Davidyants[1]; Y. Jung[1]; J. S. Evans*[1]

1. New York University, USA

11:45 AM

(PACRIM-S31-018-2017) Of amorphous phases and tilting crystals: A lesson in nonclassical crystallization from nature

S. E. Wolf*[1]

1. Friedrich-Alexander-University Erlangen-Neurnberg, Department of Materials Science and Engineering, Chair of Glass and Ceramics, Germany

GOMD Symposium 1: Fundamentals of the Glassy State

Mechanical Properties of Amorphous Solids III

Room: Kona 4

Session Chairs: Peter Lezzi, Corning Incorporated; Timothy Gross, Corning Incorporated

1:15 PM

(GOMD-S1-021-2017) Effect of water on mechanical strength of glasses (Invited)

M. Tomozawa*[1]

1. Rensselaer Polytechnic Institute, Materials Science and Engineering, USA

1:45 PM

(GOMD-S1-022-2017) An atomistic window into the mechanical failure of amorphous silica and silicate based systems

K. Muralidharan*[1]; K. Runge[1]

1. University of Arizona, Materials Science and Engineering, USA

2:00 PM

(GOMD-S1-023-2017) A physical rationale for subcritical crack growth in glasses

B. Poletto Rodrigues*[1]; L. Wondraczek[1]; C. Hühn[1]; M. Sierka[1]

1. Friedrich-Schiller-University Jena, Germany

2:15 PM

(GOMD-S1-024-2017) Fracture toughness of amorphous silica in aqueous environments from atomistic scale molecular simulations

J. M. Rimsza*[1]; R. Jones[2]; L. Criscenti[1]

1. Sandia National Laboratories, Geochemistry, USA
2. Sandia National Laboratories, Mechanics of Materials, USA

2:30 PM

(GOMD-S1-025-2017) Environmentally assisted crack growth in quartz and amorphous silica

M. Wilson*[1]; K. T. Strong[2]; M. Chandross[1]

1. Sandia National Laboratories, Computational Materials and Data Science, USA
2. Sandia National Laboratories, Materials Mechanics and Tribology, USA

2:45 PM

(GOMD-S1-026-2017) Nanoscale mechanochemical wear of soda lime silica glass in humid air

H. He*[1]; J. Yu[1]; S. H. Kim[2]; L. Qian[3]; Y. Zhang[1]

1. Southwest University of Science and Technology, School of Manufacturing Science and Engineering, China
2. Pennsylvania State University, Materials Research Institute, USA
3. Southwest Jiaotong University, Tribology Research Institute, China

3:00 PM

(GOMD-S1-027-2017) Optimization of Strengthening by Surface Stress Relaxation

E. Aaldenberg*[1]; M. Tomozawa[1]

1. Rensselaer Polytechnic Institute, Materials Engineering, USA

3:15 PM

(GOMD-S1-028-2017) Fatigue of Mixed Alkali Glass (Invited)

J. H. Seaman*[1]; P. J. Lezzi[1]; T. M. Gross[1]

1. Corning Incorporated, USA

3:30 PM

Break

3:45 PM

(GOMD-S1-029-2017) Crack Resistant Alkali Aluminoborate Glasses (Invited)

M. M. Smedskjaer*[1]; K. Januchta[1]; R. Youngman[2]; A. Goel[3]; M. Bauchy[4]; S. Rzoska[5]; M. Bockowski[5]

1. Aalborg University, Department of Chemistry and Bioscience, Denmark
2. Corning Incorporated, USA
3. Rutgers University, USA
4. University of California - Los Angeles, USA
5. Institute of Physics Polish Academy of Sciences, Poland

4:15 PM

(GOMD-S1-030-2017) Structural origin of intrinsic ductility in binary aluminosilicate glasses

J. Luo[1]; K. Vargheese*[1]; A. Tandia[1]; J. Harris[1]; J. C. Mauro[1]

1. Corning Incorporated, USA

4:30 PM

(GOMD-S1-031-2017) Topological engineering of high-modulus glasses

K. Philipps*[1]; K. Kölker[1]; R. Conradt[1]; C. Roos[1]

1. RWTH Aachen University, Institute of Mineral Engineering, Department of Materials and Process Technology – Glass and Composites, Germany

4:45 PM

(GOMD-S1-032-2017) Effects of thermal poling on glass elastic properties: A Molecular Dynamics Study

A. Tandia[1]; M. Reveil[3]; P. Clancy[3]; J. C. Mauro[2]; K. Vargheese[1]; S. Goyal*[1]; J. Luo[1]

1. Corning Incorporated, Modeling & Simulation, USA
2. Corning Incorporated, Glass Research, USA
3. Cornell University, Robert Frederick Smith School of Chemical and Biomolecular Engineering, USA

5:00 PM

(GOMD-S1-033-2017) Effect of water on wear of phosphate laser glass and BK7 glass

J. Ye[1]; J. Yu*[1]; H. He[1]

1. Southwest University of Science and Technology, China

Novel Modeling of Amorphous Materials

Room: Kona 3

Session Chair: Partha Biswas, The University of Southern Mississippi

1:15 PM

(GOMD-S1-034-2017) Materials modeling by design: A swarm-intelligence approach (Invited)

P. Biswas*[1]; D. Limbu[1]; D. Drabold[2]

1. The University of Southern Mississippi, Physics and Astronomy, USA
2. Ohio University, USA

1:45 PM

(GOMD-S1-035-2017) Predicting Structural Relaxation in a Glass-to-Metal Seal Connector: How Does Long-Term Storage Affect Performance?

B. Elisberg*[1]; J. Christensen[1]; D. Anderson[1]

1. Sandia National Laboratories, USA

2:00 PM

(GOMD-S1-036-2017) Force Enhanced Atomic Refinement: A new paradigm for modeling amorphous materials

D. Drabold*[1]; A. Pandey[1]; P. Biswas[2]

1. Ohio University, Dept. of Physics and Astronomy, USA
2. University of Southern Mississippi, Physics and Astronomy, USA

2:15 PM

(GOMD-S1-037-2017) Modeling of phase separation in binary silicate glasses

H. Inoue*[1]

1. The University of Tokyo, Institute of Industrial Science, Japan

2:30 PM

(GOMD-S1-038-2017) Ab-initio modeling of vibrational spectra of silicate glasses and decomposition into principal structural components

D. A. Kilymis[1]; B. Hehlen*[1]; S. Peuget[2]; J. Delaye[2]; S. Ispas[1]

1. University of Montpellier, Physics, France
2. CEA Marcoule, France

2:45 PM

(GOMD-S1-039-2017) Machine Learning for Glass Properties Prediction: Effects of data quality and model choice

A. Tandia*[1]

1. Corning Incorporated, Modeling & Simulation, USA

3:00 PM

(GOMD-S1-040-2017) "Qualimetry" of Viscosity-Temperature Curve: "Best Equation" – For What?

A. Priven*[1]

1. Corning Korea, Republic of Korea

3:15 PM

(GOMD-S1-041-2017) Multi-composition EPSR modelling of chalcogenide glasses

E. Nilsson*[1]; J. Towey[1]; E. Barney[1]

1. Department of Mechanical, Materials and Manufacturing Engineering, United Kingdom

3:30 PM

Break

3:45 PM

(GOMD-S1-042-2017) Modeling the Atomic Structure of Calcium Aluminosilicate Glasses Using an Iterative Simulation-Experiment Methodology

K. Gong[1]; C. White*[1]

1. Princeton University, Civil and Environmental Engineering, USA

4:00 PM

(GOMD-S1-043-2017) The role of Ga^{3+} in oxide glass network structures studied by solid state nuclear magnetic resonance

J. Ren*[1]

1. Shanghai Institute of Optics and Fine Mechanics of the Chinese Academy of Sciences, China

4:15 PM

(GOMD-S1-044-2017) Segregation of Network Modifiers in Borosilicate Glasses: Insights from a New Transferable Potential

M. Wang[1]; M. M. Smedskjaer[2]; J. C. Mauro[3]; G. Sant[1]; M. Bauchy*[1]

1. University of California, Los Angeles, Civil and Environmental Engineering Department, USA
2. Aalborg University, Denmark
3. Corning Incorporated, USA

4:30 PM

(GOMD-S1-045-2017) Realistic inversion of diffraction data for amorphous solids: An application

B. Bhattarai*[1]; A. Pandey[1]; P. Biswas[2]; D. Drabold[1]

1. Ohio University, Department of Physics and Astronomy, USA
2. The University of Southern Mississippi, Department of Physics and Astronomy, USA

4:45 PM

(GOMD-S1-046-2017) Enhancing MD simulations with minimal knowledge of electronic gap

K. Prasai*[1]; P. Biswas[2]; D. Drabold[1]

1. Ohio University, Physics and Astronomy, USA
2. The University of Southern Mississippi, Department of Physics and Astronomy, USA

5:00 PM

(GOMD-S1-047-2017) Improved Description of the Structure of Silicate Glasses through Reactive Molecular Dynamics Simulations

Y. Yu*[1]; B. Wang[1]; G. Sant[1]; M. Bauchy[1]

1. University of California, Los Angeles, Civil and Environmental Engineering, USA

GOMD Symposium 2: Glasses in Healthcare: Fundamentals and Applications

Structural Basis of Bioactive Glass Design

Room: Waikoloa 3

Session Chairs: Akash Akash, Glidewell Dental; Qiang Fu, Corning Incorporated

1:15 PM

(GOMD-S2-011-2017) Formation and Structure of Calcium Phosphate Invert Glasses (Invited)

T. Kasuga*[1]; H. Maeda[1]; T. Tamura[2]; A. Obata[1]; S. Lee[3]; T. Nakano[3]

1. Nagoya Institute of Technology, Division of Advanced Ceramics, Japan
2. Nagoya Institute of Technology, Division of Applied Physics, Japan
3. Osaka University, Division of Materials & Manufacturing Science, Japan

1:45 PM

(GOMD-S2-012-2017) Designing polymers as organic source for synthesis of silicate hybrids: Lessons learned and future perspectives (Invited)

A. L. Macon*[1]; Y. Goto[1]; L. Connell[2]; J. Chung[2]; J. Jones[2]; A. Obata[1]; T. Kasuga[1]

1. Nagoya Institute of Technology, Japan
2. Imperial College, United Kingdom

2:15 PM

(GOMD-S2-013-2017) A rigorous approach for studying the dissolution behavior of bioactive glasses

N. Stone-Weiss*[1]; R. Youngman[2]; N. J. Smith[2]; A. Goel[1]

1. Rutgers University, Materials Science and Engineering, USA
2. Corning Incorporated, Science and Technology Division, USA

2:30 PM

(GOMD-S2-014-2017) In Vitro Dissolution Behavior of Scaffolds Sintered from Bioactive Glass S53P4

L. Aalto-Setälä*[1]; P. Uppstu[1]; O. Karlström[1]; N. Lindfors[2]; L. Hupa[1]

1. Åbo Akademi University, Finland
2. Helsinki University, Finland

2:45 PM

(GOMD-S2-015-2017) 3D printed bioactive glass and its behaviour in vivo

X. Shi*[1]; A. Nommeots-Nomm[2]; N. M. Todd[3]; A. Devlin-Mullin[3]; P. D. Lee[4]; C. A. Mitchell[3]; J. Jones[1]

1. Imperial College, Materials, United Kingdom
2. Tampere University of Technology, Finland
3. Ulster University, United Kingdom
4. The University of Manchester, United Kingdom

3:00 PM

(GOMD-S2-016-2017) Evaluating the adhesion of bioactive glasses onto titanium alloy substrates under mode I loading condition

A. Matinmanesh*[1]; O. Rodriguez[1]; M. Towler[1]; P. Zalzal[2]; E. H. Schemitsch[3]; M. Papini[1]

1. Ryerson University, Mechanical and Industrial Engineering, Canada
2. Oakville Trafalgar Memorial Hospital, Canada
3. St. Michael's Hospital, Canada

3:15 PM

(GOMD-S2-017-2017) Effect of dense strontium containing sol-gel derived bioactive glass nanoparticles (Sr-BGNPs) on human mesenchymal stem cells (hMSCs)

P. Naruphontjirakul*[1]; L. Siwei[1]; A. E. Porter[1]; J. Jones[1]

1. Imperial College London, Materials, United Kingdom

3:30 PM

Break

Glasses for Dental or Soft Tissue Applications

Room: Waikoloa 3

Session Chairs: Chengtie Wu, Shanghai Institute of Ceramics, Chinese Academy of Sciences

3:45 PM

(GOMD-S2-018-2017) Crystallization and densification behavior in lithium silicate glass ceramics (Invited)

P. Bhargava*[1]

1. IIT Bombay, Metallurgical Engineering and Materials Science, India

4:15 PM

(GOMD-S2-019-2017) Dental Materials: Trends and Challenges (Invited)

A. Akash*[1]

1. Glidewell Dental, USA

4:45 PM

(GOMD-S2-020-2017) 3D bioactive glasses with antibacterial ability for wound healing

A. Obata*[1]; Q. Ju[1]; E. G. Norris[2]; A. L. Macon[1]; G. Poologasundarampillai[3]; J. Jones[2]; T. Kasuga[1]

1. Nagoya Institute of Technology, Japan
2. Imperial College London, United Kingdom
3. The University of Manchester, United Kingdom

GOMD Symposium 4: Glass Technology and Crosscutting Topics

Glass Corrosion II: Testing and Characterization

Room: Kona 2

Session Chairs: Joseph Ryan, Pacific Northwest National Lab; S. Sundaram, Alfred University

1:15 PM

(GOMD-S4-013-2017) Structure and Chemical Durability of Lead Crystal Glass (Invited)

F. Angeli*[1]; P. Jollivet[1]; T. Charpentier[1]; M. Fournier[1]; S. Gin[1]

1. CEA, France

1:45 PM

(GOMD-S4-014-2017) Chemical durability of UK vitrified high level waste in Si-saturated solutions

M. T. Harrison*[1]

1. National Nuclear Laboratory, WM&D, United Kingdom

2:00 PM

(GOMD-S4-015-2017) Silicate glass stability under various pH conditions

S. Gin*[1]

1. CEA, DTCD, France

2:15 PM

(GOMD-S4-016-2017) Contribution of the different glass alteration mechanims as a function of glass composition and experimental conditions

A. Verney-Carron*[1]; L. Sessegolo[1]; M. Saheb[1]; P. Ausset[1]; R. Losno[2]; D. Mangin[3]; N. Valle[4]

1. LISA, France
2. IPGP, France
3. University de Lorraine, France
4. LIST, Luxembourg

2:30 PM

(GOMD-S4-017-2017) Dissolution behavior of neodymium-containing aluminoborate glasses

M. Kim*[2]; C. Lee[1]; N. C. Hyatt[2]; J. Heo[1]

1. Pohang University of Science and Technology(POSTECH), Material Science and Engineering, Republic of Korea
2. The University of Sheffield, Materials Science and Engineering, United Kingdom

2:45 PM

(GOMD-S4-018-2017) Sensitivity Analysis of Transition State Theory Kinetic Rate Law Parameters as Applied to Nuclear Waste Glasses

J. Neeway*[1]; J. Ryan[1]; B. Parruzot[1]; M. Asmussen[1]; P. Rieke[1]

1. Pacific Northwest National Lab, USA

3:00 PM

(GOMD-S4-019-2017) Evaluation of a novel leaching assessment for nuclear waste glasses

C. L. Thorpe[1]; R. J. Hand[1]; N. C. Hyatt[1]; A. A. Kruger[3]; D. A. Kosson[4]; B. Riley[2]; C. L. Corkhill*[1]

1. University of Sheffield, Materials Science and Engineering, United Kingdom
2. Pacific Northwest National Lab, USA
3. US Department of Energy, Office of River Protection, USA
4. Vanderbilt University, USA

3:15 PM

(GOMD-S4-020-2017) Role of modifier identity and network structure in corrosion of aluminosilicate glasses

N. J. Smith*[1]; R. Schaut[1]; E. Bakowska[1]

1. Corning Incorporated, USA

3:30 PM

Break

3:45 PM

(GOMD-S4-021-2017) Structure – dissolution relationship of a ZnO/CaO-modified base glass for high level waste

A. J. Fisher*[1]; C. L. Corkhill[1]; R. J. Hand[1]; L. J. Gardner[1]; N. C. Hyatt[1]

1. The University of Sheffield, Material Science and Engineering, United Kingdom

4:00 PM

(GOMD-S4-022-2017) Topological Model of the Dissolution Kinetics of Silicate Glasses

M. Wang[1]; I. Pignatelli[1]; T. Oey[1]; M. M. Smedskjaer[2]; J. C. Mauro[3]; G. Sant*[1]; M. Bauchy[1]

1. University of California, Los Angeles, USA
2. Aalborg University, Denmark
3. Corning Incorporated, USA

4:15 PM

(GOMD-S4-023-2017) A review of experiments with the International Simple Glass

T. Kaspar*[1]; J. Ryan[1]

1. Pacific Northwest National Lab, USA

4:30 PM

(GOMD-S4-024-2017) Dissolution Kinetics of the International Simple Glass (ISG) in Brine Solutions at 90°C

J. P. Icenhower*[1]; Y. Xiong[1]; L. Kirkes[1]; J. Dean[1]; C. Marrs[1]; J. Knox[1]

1. Sandia National Laboratories, Repository Performance, USA

4:45 PM

(GOMD-S4-025-2017) Dependence of pH on Alteration Layer Formation for International Simple Glass

J. Reiser*[1]; J. Ryan[2]; N. Wall[1]

1. Washington State University, Chemistry, USA
2. Pacific Northwest National Lab, Energy and Environment Directorate, USA

GOMD Symposium 5: Professor Jacques Lucas Honorary Symposium

IR Materials I

Room: Kona 5

Session Chair: Jean-Luc Adam, University Rennes - CNRS

1:15 PM

(GOMD-S5-018-2017) Structure and Dynamics of Fast Ion Conducting Chalcogenide Glasses: A 30 Year Quest for Faster and Better (Invited)

S. W. Martin*[1]

1. Iowa State University, Materials Science & Engineering, USA

1:35 PM

(GOMD-S5-019-2017) The effect of silver on the structural and optical properties of thin films in the system $Ag_x(As_{40}S_{60})_{100-x}$

M. Nalin*[1]; M. Resende[1]; S. Santagnelli[1]; A. Douaud[2]; S. Messaddeq[2]; M. El-Amraoui[2]; Y. Messaddeq[2]

1. Institute of Chemistry - UNESP, General and Inorganic Chemistry, Brazil
2. Laval University, COPL, Canada

1:50 PM

(GOMD-S5-020-2017) Optimizing properties in chalcogenides glasses: From simple structural models to rigidity guided molecular simulations (Invited)

M. Micoulaut*[1]

1. UPMC, France

2:10 PM

(GOMD-S5-021-2017) Compositional dependence of Ag-photodoping behaviors in bulk sulfide chloride glasses

K. Kadono*[1]; K. Hosoya[2]; Y. Tokuda[3]; A. Okada[1]; T. Wakasugi[1]

1. Kyoto Institute of Technology, Faculty of Materials Science and Engineering, Japan
2. Kyoto Institute of Technology, Graduate School of Science and Technology, Japan
3. Shiga University, Faculty of Education, Japan

2:25 PM

(GOMD-S5-022-2017) From the chemistry of chalcogenide glasses to the creation of the SelenOptics company (Invited)

J. Troles*[1]; A. Chardon[3]; L. Brilland[2]

1. University of Rennes 1, France
2. SelenOptics, France
3. Photonics Bretagne, France

2:45 PM

(GOMD-S5-023-2017) Fabrication and Characterization of High-resolution Chalcogenide Imaging Fiber Bundles

B. Zhang[1]; Z. Yang*[1]; C. Zhai[1]; S. Qi[1]; H. Ren[1]; Y. Yu[2]; B. Luther-Davies[2]

1. Jiangsu Normal University, China
2. Australian National University, Australia

3:00 PM

Break

IR Materials II

Room: Kona 5

Session Chair: Setsuhisa Tanabe, Kyoto University

3:15 PM

(GOMD-S5-024-2017) Recent development of materials for IR applications (Invited)

L. Zhang*[1]; X. Jiang[1]; X. Yuan[1]; X. Mao[1]

1. Shanghai Intitute of Optics and Fine Mechanics, CAS, China

3:35 PM

(GOMD-S5-025-2017) Development of chalcogenide glass fibers for mid-infrared sensing (Invited)

B. Bureau*[1]; C. Boussard-Pledel[1]; V. Nazabal[1]; J. Lucas[1]

1. University of Rennes 1, Institute of Chemical Sciences, France

3:55 PM

(GOMD-S5-026-2017) Highly Dispersive Ge-Ga-Sb-S Glasses for Long-Wavelength Infrared Lens Applications

J. Lee*[1]; J. Yi[1]; W. Lee[1]; J. Choi[2]; Y. Choi[1]

1. Korea Aerospace University, Republic of Korea
2. KOPTI, Republic of Korea

4:10 PM

(GOMD-S5-027-2017) Linking optical and structural propertes of glasses (Invited)

G. Calas*[1]; L. Galoisy[1]; L. Cormier[1]; G. Lelong[1]

1. University P&M Curie, Paris, Mineralogy, France

4:30 PM

(GOMD-S5-028-2017) Why are obsidians black?

L. Galoisy*[1]; G. Calas[1]; M. Chassé[1]

1. UPMC, IMPMC, France

4:45 PM

(GOMD-S5-029-2017) Chalcogenide Glasses for Phononic Devices (Invited)

P. Lucas*[1]; P. Deymier[1]; N. Boechler[2]

1. University of Arizona, USA
2. University of Washington, USA

PACRIM Third International Richard M. Fulrath Symposium on Discontinuous Progress for Ceramic Innovations

Fulrath Session II

Room: Queen's 6

Session Chairs: Roger Narayan, NC State University; Ken-ichi Kakimoto, Nagoya Institute of Technology

1:15 PM

(PACRIM-FUL-009-2017) Piezoelectric Enhancement of Bismuth based Piezoelectric Ceramics by Nanodomain Engineering (Invited)

S. Wada*[1]

1. University of Yamanashi, Material Science and Technology, Japan

1:35 PM

(PACRIM-FUL-010-2017) Technical Challenges in Lead-free Alkali Niobate Piezoceramics (Invited)

K. Kakimoto*[1]

1. Nagoya Institute of Technology, Frontier Research Institute for Materials Science, Japan

1:55 PM

(PACRIM-FUL-011-2017) Donor doped cadmium oxide: A gateway material for mid-infrared plasmonics (Invited)

J. Maria*[1]; K. Kelley[1]; E. Runnerstrom[1]; E. Sachet[1]; C. T. Shelton[1]; J. Ihlefeld[2]

1. North Carolina State University, Materials Science and Engineering, USA
2. Sandia National Laboratories, USA

2:15 PM

Break

2:30 PM

(PACRIM-FUL-012-2017) Aliovalent substitution of $BaTi_2O_5$ (Invited)

T. Goto*[1]

1. IMR Tohoku University, Japan

2:50 PM

(PACRIM-FUL-013-2017) 3D printing of bioceramics in bone disorders: Understanding the science and clinical significance (Invited)

S. Bose*[1]

1. Washington State University, School of Mechanical and Materials Engineering, USA

3:10 PM

(PACRIM-FUL-014-2017) Transparent and Luminescent SiAlON bulk ceramics for high power LED (Invited)

J. Tatami*[1]; T. Takahashi[2]; M. Iijima[1]

1. Yokohama National University, Japan
2. Kanagawa Academy of Science and Technology, Japan

3:30 PM

Break

4:00 PM

(PACRIM-FUL-015-2017) High-Energy Electron Beam Lithography of Ceramic Nanowires for Breath-Gas Sensors (Invited)

P. Gouma*[1]

1. University of Texas, Arlington, MSE, USA

4:20 PM

(PACRIM-FUL-016-2017) THz dielectric spectra and lattice dynamics of perovskite oxides (Invited)

T. Hoshina*[1]; H. Takeda[1]; T. Tsurumi[1]

1. Tokyo Institute of Technology, School of Materials and Chemical Technology, Japan

4:40 PM

(PACRIM-FUL-017-2017) The photochemical properties of polar surface domains on non-polar surfaces (Invited)

G. Rohrer*[1]; P. Salvador[1]

1. Carnegie Mellon University, USA

5:00 PM

(PACRIM-FUL-018-2017) Grain Boundary Atomic Structures, Vacancies and Dopants of Oxide Ceramics (Invited)

Y. Ikuhara*[1]

1. University of Tokyo, JFCC, Tohoku University, Japan

PACRIM Symposium 02: Virtual Materials Design and Ceramic Genome

Modeling of Functional Materials I

Room: Kohala 4

Session Chair: William Weber, University of Tennessee

1:15 PM

(PACRIM-S2-018-2017) Thematic Simulation Platform for Nano Materials Design (Invited)

K. Lee*[1]

1. Korea Institute of Science and Technology, Republic of Korea

1:35 PM

(PACRIM-S2-019-2017) Carbon-based Nanomaterials in Energy Applications manipulated by Atomic Functionalization (Invited)

T. Liao*[1]

1. Queensland University of Technology, School of Chemistry, Physics and Mechanical Engineering, Australia

1:55 PM

(PACRIM-S2-020-2017) Structural study of metal oxide nanoparticle structure on functional nanowire gas sensor devices (Invited)

S. Steinhauer[2]; J. Vernieres[2]; J. Zhao[1]; Z. Wang[3]; F. Djurabekova*[1]; K. Nordlund[1]; P. Grammatikopoulos[2]; M. Sowwan[2]

1. University of Helsinki, Department of Physics, Finland
2. Okinawa Institute of Science and Technology (OIST) Graduate University, Nanoparticles by Design Unit, Japan
3. Xi'an Jiaotong University, China

2:15 PM

(PACRIM-S2-021-2017) Spin-orbit coupling effects in 5d metal oxide superlattices from DFT calculations (Invited)

H. Xu*[1]; J. Liu[2]

1. The University of Tennessee, Department of Materials Science and Engineering, USA
2. The University of Tennessee, Department of Physics & Astronomy, USA

2:35 PM

(PACRIM-S2-022-2017) High-Throughput Design of Two-Dimensional Electron Gas Systems Based on Perovskite Oxide Heterostructures (Invited)

K. Yang*[1]

1. University of California San Diego, Department of NanoEngineering, USA

2:55 PM

(PACRIM-S2-023-2017) Theoretical investigation of defect interaction in $SrTiO_3$ (Invited)

B. Liu*[1]; Y. Gao[1]

1. Shanghai University, China

3:15 PM

(PACRIM-S2-024-2017) Investigation of ferromagnetism of Al-doped 6H-SiC and theoretical calculation

Y. Huang*[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

3:30 PM

Break

Modeling of Functional Materials II

Room: Kohala 4

Session Chair: Kwang-Ryeol Lee, Korea Institute of Science and Technology

3:45 PM

(PACRIM-S2-025-2017) Porous graphene-like 2D membranes as lithium ion battery anode materials (Invited)

M. Hankel*[1]; D. J. Searles[1]

1. The University of Queensland, Australia

4:10 PM

(PACRIM-S2-026-2017) Understanding the Chemical Bonds in Thermoelectric Materials (Invited)

J. Yang*[1]

1. Shanghai University, Materials Genome Institute, China

4:35 PM

(PACRIM-S2-027-2017) Computer Simulation of the Effects of Disorder on Li Diffusion in Ceramics (Invited)

R. Devanathan*[1]

1. Pacific Northwest National Lab, USA

4:55 PM

(PACRIM-S2-028-2017) Hydrogen-transfer-mediated electrochemical reactions to increase storage capacity in Li-ion and Na-ion Batteries (Invited)

J. Liu*[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

5:15 PM

(PACRIM-S2-029-2017) Reactive interatomic potentials for metal oxides

K. Nordlund*[1]; J. Byggmästar[1]; F. Djurabekova[1]

1. University of Helsinki, Finland

PACRIM Symposium 03: Novel, Green, and Strategic Processing and Manufacturing Technologies

Novel, Green, and Strategic Processing III

Room: King's 3

Session Chairs: Zhengyi Fu, Wuhan University of Technology; Yoshihiro Hirata, Kagoshima University

1:15 PM

(PACRIM-S3-025-2017) Processing and Manufacturing Technologies of Complex Ceramic Materials using Rapid High-Energy Phenomena (Invited)

J. Lis*[1]; D. Kata[1]; L. Chlubny[1]; A. Tajdus[2]; T. Slomka[3]

1. AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Poland
2. AGH University of Science and Technology, Faculty of Mining and Geoengineering, Poland
3. AGH University of Science and Technology, Faculty of Geology, Geophysics and Enviromental Protection, Poland

1:40 PM

(PACRIM-S3-026-2017) Preparation of Mg Submicrometer Particles Prepared by Pulsed Wire Discharge (Invited)

H. Suematsu*[1]; K. Tanaka[1]; N. Hieu[1]; T. Suzuki[2]; T. Nakayama[1]; K. Niihara[2]

1. Nagaoka University of Technology, Extreme Energy-Density Research Institute, Japan
2. Nagaoka University of Technology, Department of Nuclear System Safety Engineering, Japan

2:05 PM

(PACRIM-S3-027-2017) Fabrication of Silica Glass from Mesoporous Powder by SPS

L. Wang*[1]; W. Jiang[1]

1. Donghua University, China

2:20 PM

(PACRIM-S3-028-2017) Optimization of Spark-Plasma-Sintering (SPS) Processing for Attaining Transparent $MgAl_2O_4$ Spinel

K. Morita*[1]; B. Kim[1]; H. Yoshida[1]; K. Hiraga[1]; Y. Sakka[1]

1. National Institute for Materials Science (NIMS), Japan

2:35 PM

(PACRIM-S3-029-2017) Ultra-fast densification of boron carbide by flash spark plasma sintering

Z. Fan*[1]; B. Niu[1]; J. Zhang[1]; W. Wang[1]; Z. Fu[1]

1. Wuhan University of Technology, China

2:50 PM

(PACRIM-S3-030-2017) Microwave sintering of nuclear ceramics: Development of a specific microwave setup and sintering tests on UO_2 pellets

J. Croquesel*[1]; S. Pillon[1]; F. Valdivieso[2]; S. Saunier[2]

1. CEA, DTEC/SECA/LFC, France
2. Ecole des Mines de Saint Etienne, France

3:05 PM

(PACRIM-S3-031-2017) Investigation on thermal effects during the preparation of carbide by microwave heating

R. Zhang*[1]; B. Song[2]; B. Fan[2]; X. Guo[1]

1. Zhengzhou University of Aeronautics, Henan Key Laboratory of Aeronautical Material and Application Technology, China
2. Zhengzhou University, College of Material Science and Engineering, China

3:20 PM

Break

3:35 PM

(PACRIM-S3-032-2017) New concept aiming for high performance SiC-polycrystalline fiber (Invited)

T. Ishikawa*[1]; H. Oda[2]

1. Tokyo University of Science, Yamaguchi, Applied Chemistry, Japan
2. Ube Industries, Ltd., Japan

4:00 PM

(PACRIM-S3-033-2017) Controlling factors for creating dense SiC-polycrystalline fiber

R. Usukawa*[1]; H. Oda[2]; T. Ishikawa[1]

1. Tokyo University of Science, Yamaguchi, Applied Chemistry, Japan
2. Ube Industries, Ltd., Inorganic Products Development Center, Japan

4:15 PM

(PACRIM-S3-034-2017) Pressure-Assisted Sintering of Sulfide-Based Infrared Optical Ceramics (Invited)

Y. Wu*[1]; Y. Li[1]

1. Alfred University, Kazuo Inamori School of Engineering, USA

4:40 PM

(PACRIM-S3-035-2017) Microstructure and mechanical properties of B_4C--TiB_2--SiC composites fabricated by reactive hot pressing from the B_4C–TiC–Si as raw materials

W. Wang*[1]; Z. Fu[1]; H. Wang[1]

1. Wuhan University of Technology, China

4:55 PM

(PACRIM-S3-036-2017) A Novel BN-MAS System Composite Ceramics with Greatly Improved Mechanical Properties Prepared by Low Temperature Hot-pressing

J. Zhang*[1]; Z. Yang[2]; Y. Xu[1]

1. Beijing Institute of Space Long March Vehicle, China
2. Institute for Advanced Ceramics, School of Materials Science and Engineering, Harbin Institute of Technology, China

PACRIM Symposium 07: Porous Ceramics: Innovative Processing and Advanced Applications

High SSA Ceramics II

Room: King's 2

Session Chairs: Ulrich Vogt, Empa, Swiss Federal Laboratories for Materials Science and Technology; Jingyang Wang, Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences

1:15 PM

(PACRIM-S7-020-2017) Micro-Meso Porous Alkali Bonded Ceramics (Invited)

V. Medri*[1]; E. Papa[1]; M. Mazzocchi[1]; E. Landi[1]; S. Amari[2]; J. Manaud[3]; A. Vaccari[4]

1. National Research Council of Italy, ISTEC, Italy
2. Chimie ParisTech, École Nationale Supérieure de Chimie de Paris, France
3. University of Limoges, Faculty of Sciences and Technologies of Limoges, France
4. University of Bologna, "Toso Montanari" Department of Industrial Chemistry, Italy

1:45 PM

(PACRIM-S7-021-2017) Capacitive properties of carbon spheres with hierarchical pore structure synthesized by hydrothermal carbonization and alkaline activation (Invited)

M. Inada*[1]; K. Hayashi[1]; J. Hojo[1]

1. Kyushu University, Japan

2:15 PM

(PACRIM-S7-022-2017) Designed M@SiCN ceramics for various catalytic applications (Invited)

G. Motz*[1]; R. Kempe[2]

1. University of Bayreuth, Ceramic Materials Engineering, Germany
2. University of Bayreuth, Inorganic Chemistry II, Germany

2:45 PM

(PACRIM-S7-023-2017) Mesoporous Ceramics through Precursor Chemistry: From Design of 3D SiC, Si_3N_4 and SiCN-based Structures to Catalytic Application (Invited)

A. Lale[1]; U. B. Demirci[2]; S. Bernard*[1]

1. CNRS, France
2. University Montpellier, France

3:05 PM

(PACRIM-S7-024-2017) Topochemical conversions of Mn oxide nanosheets to tunnel structures: Control over 2-D and 3-D nanostructuring

T. Hey[1]; P. Metz[1]; S. T. Misture*[1]

1. Alfred University, MSE, USA

3:25 PM

Break

Novel Engineering Applications of Porous Ceramics I

Room: King's 2

Session Chairs: Samuel Bernard, CNRS; Valentina Medri, National Research Council of Italy

3:45 PM

(PACRIM-S7-025-2017) Innovative Engineering Applications for Reticulated Cellular Ceramics (Invited)

U. F. Vogt*[1]; B. Fumey[1]; G. Plesch[2]; A. Fernandez[3]; A. Bonk[1]; P. Dimopoulos[4]; A. Steinfeld[5]

1. Empa, Swiss Federal Laboratories for Materials Science and Technology, Materials for Energy Conversion, Switzerland
2. Comenius University, Department of Inorganic Chemistry, Slovakia
3. Instituto de Ciencia de Materiales de Sevilla, Advanced Laboratory for the NANO-analysis of Novel FUNCtional Materials, Spain
4. Empa, Swiss Federal Laboratories for Materials Science and Technology, Automotive Powertrain Technologies Laboratory, Switzerland
5. ETH, Renewable Energy Carriers, Switzerland

4:15 PM

(PACRIM-S7-026-2017) Application of porous carbon material for heat shield of re-entry capsule (Invited)

Y. Kubota*[1]; R. Inoue[2]; Y. Kogo[2]; T. Aoki[1]; Y. Ishida[1]; T. Ogasawara[3]

1. Japan Aerospace Exploration Agency, Structures and Advanced Composite Research Unit, Japan
2. Tokyo University of Science, Department of Materials Science and Technology, Japan
3. Tokyo University of Agriculture and Technology, Departmenta of Mechanical System Engineering, Japan

4:45 PM

(PACRIM-S7-027-2017) Optimal nanostability of super thermal insulation materials (Invited)

J. Wang*[1]

1. Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences, High-performance Ceramics Division, China

5:05 PM

(PACRIM-S7-028-2017) Fabrication and characterization of HA/BT piezoelectric biocomposites with aligned porous structures

K. Zhou*[1]; F. Xue[1]; D. Zhang[1]

1. Central South University, State Key Laboratory of Powder Metallurgy, China

PACRIM Symposium 11: Engineering Ceramics: Processing and Characterizations

Thermal Properties

Room: King's 1

Session Chairs: You Zhou, National Institute of Advanced Industrial Science and Technology (AIST); Young-Wook Kim, University of Seoul

1:15 PM

(PACRIM-S11-021-2017) High Thermal Conductivity Silicon Nitride Substrates for Power Device Application (Invited)

Y. Zhou*[1]; H. Hyuga[1]; H. Miyazaki[1]; D. Kusano[2]; K. Hirao[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan
2. Japan Fine Ceramics Co. Ltd., Japan

1:45 PM

(PACRIM-S11-022-2017) Factors Affecting Thermal Conductivity of Silicon Carbide Ceramics (Invited)

Y. Kim*[1]; S. Jang[1]; T. Cho[1]

1. University of Seoul, Dept. of Materials Science & Engineering, Republic of Korea

2:15 PM

(PACRIM-S11-023-2017) Influence of Silicon Powder Characteristics on Microstructure and Thermal Conductivity of GPSed Reaction Bonded Silicon Nitride

J. Ko*[1]; M. Kim[1]; H. Kim[1]; J. Kim[1]; Y. Park[1]

1. KIMS (Korea Institute of Materials Science), Republic of Korea

2:30 PM

(PACRIM-S11-024-2017) Mechanical and Thermal Properties of Pressureless Sintered Silicon Nitride Containing β-Si_3N_4 Seeds

H. Yeom*[1]; Y. Kim[1]

1. Functional Ceramics Laboratory, Department of Materials Science and Engineering, Republic of Korea

2:45 PM

(PACRIM-S11-025-2017) Theoretical and Experimental Analyses of Young's Modulus and Thermal Expansion Coefficient of the Alumina-Mullite System

Y. Hirata[1]; S. Itoh[1]; T. Shimonosono[1]; S. Sameshima*[1]

1. Kagoshima University, Department of Chemistry, Biotechnology, and Chemical Engineering, Japan

3:00 PM

(PACRIM-S11-026-2017) Influence of iron on crystallization behavior and thermal stability of the insulating materials - porous calcium silicates

S. Haastrup*[1]; D. Yu[1]; Y. Yue[1]

1. Aalborg University, Chemistry and Bioscience, Denmark

3:15 PM

(PACRIM-S11-027-2017) Development of mold slag for controlling heat transfer by scattering behavior of iron particles in CaO-SiO_2-B_2O_3 glasses

D. Yoon*[1]; J. Cho[2]; S. Kim[1]

1. Pohang University of Science and Technology(POSTECH), Materials Science and Engineering, Republic of Korea
2. Pohang University of Science and Technology(POSTECH), Graduate Institute of Ferrous Technology, Republic of Korea

3:30 PM

Break

Applications and Nanotechnology

Room: King's 1

Session Chairs: Abhaya Bakshi, Morgan Advanced Materials; Hagen Klemm, FhG IKTS Dresden

3:45 PM

(PACRIM-S11-028-2017) Improvement of hydrothermal corrosion resistance of SiC fibers for CVI-SiC/SiC composites (Invited)

S. Suyama*[1]; M. Ukai[1]; M. Uchihashi[1]; K. Kakiuchi[1]; H. Heki[1]

1. Toshiba Corporation, Japan

4:15 PM

(PACRIM-S11-029-2017) High dielectric strength ceramic for power tubes (Invited)

A. K. Bakshi*[1]; M. Habermann[1]; C. Lee[1]

1. Morgan Advanced Materials, USA

4:45 PM

(PACRIM-S11-030-2017) TiO_2 photocatalytic nanofilms: After design, what are the issues to consider towards their successful application in the building sector?

E. I. Cedillo-González*[1]; C. Mugoni[2]; C. Siligardi[2]

1. Universidad Autonoma de Nuevo Leon, Facultad de Ciencias Quimicas, Mexico
2. Università degli Studi di Modena e Reggio Emilia, Dipartimento di Ingegneria "Enzo Ferrari", Italy

5:00 PM

(PACRIM-S11-031-2017) An ancient nanotechnology in ceramic and its application in today

F. Wang*[1]; P. Shi[1]

1. Shaanxi University of Science & Technology, China

5:15 PM

(PACRIM-S11-032-2017) Doped $BaTiO_3$ 1D-nanostructures prepared by template-mediated colloidal chemistry

A. Ianculescu*[1]; C. A. Stanciu[1]; B. Vasile[1]; R. Trusca[1]; M. Cernea[2]; L. Trupina[2]; A. Nicoara[1]

1. Politehnica University Bucharest, Romania
2. National Institute of Materials Physics, Romania

5:30 PM

(PACRIM-S11-033-2017) Preparation and characterization of copper silica-based nanocomposites

M. Dulski*[1]; J. Peszke[1]; A. Nowak[1]; K. Balin[1]; S. Sulowicz[1]; Z. Piotrowska-Seget[1]; B. Nowak[1]; A. Mrozek-Wilczkiewicz[1]; K. Malarz[1]; M. Wojtyniak[1]; J. Szade[1]

1. University of Silesia, Poland

5:45 PM

(PACRIM-S11-034-2017) Correlations between processing routes, microstructure developments and properties of bulk polycrystalline 'ceramic alloys' and nanocomposites

A. Mukhopadhyay*[1]; L. Gurnani[1]; M. K. Satam[1]

1. Indian Institute of Technology (IIT) Bombay, Metallurgical Engineering and Materials Science, India

PACRIM Symposium 17: Advanced Functional Ceramics and Critical Materials Perspective

Advanced Functional Ceramics and Critical Materials Perspective_3

Room: Kohala 2

Session Chairs: Junichi Hojo, Kyushu University; Yamato Hayashi, Tohoku University; Kenji Toda, Niigat University

1:15 PM

(PACRIM-S17-021-2017) Fabrication and electromagnetic property of Fe/SiC hybrid fiber (Invited)

Y. Zhang*[1]; Y. Hou[1]; Q. Chen[1]

1. Northwestern Polytechical University, Materials Science, China

1:35 PM

(PACRIM-S17-022-2017) Fabrication and Application of Ag Nanowire Flexible Transparent Conductive films by Organic Precursor Painting Reduction Method (Invited)

Y. Hayashi*[1]

1. Tohoku University, Appl. Chem, Japan

1:55 PM

(PACRIM-S17-023-2017) Thermal Conductivity and Electromagnetic Property of Dual-functional Sheet Composed of Ceramic Coated Fe-alloy Powders and Silicone Polymer

H. Choi*[1]; K. Lee[2]; S. Suh[1]

1. SungKyunKwan University, Material Science and Engineering, Republic of Korea
2. Nopion Corporation, R&D Center, Republic of Korea

2:10 PM

(PACRIM-S17-024-2017) Observation of Abnormal Ionic Diffusion for the water assisted room temperature solid state reaction under 400 K

K. Toda*[1]; S. Kim[1]; K. Uematsu[1]; M. Sato[1]

1. Niigata University, Japan

2:25 PM

(PACRIM-S17-025-2017) Structural and Magnetic Properties of Polymorphic Nickel Titanate Nanofibers

S. K. Balakrishnamurthy*[1]; V. C. Gudla[2]; R. Ambat[2]; S. K. Kalpathy[3]; S. Anandhan[1]

1. National Institute of Technology Karnataka, Metallurgical and Materials Engineering, India
2. Technical University of Denmark, Produktionstorvet, Mechanical Engineering, Denmark
3. Indian Institute of Technology Madras, Metallurgical and Materials Engineering, India

2:40 PM

(PACRIM-S17-026-2017) Various Factors on Dye-Sensitized Solar Cells of Mesoporous Titania-Based Electrodes by Sol-Gel Processes (Invited)

J. Hojo*[1]; M. Inada[1]

1. Kyushu University, Faculty of Engineering, Japan

3:00 PM

(PACRIM-S17-027-2017) Microstructural Design and Dielectric Properties of Conductor/Insulator Nanocomposite Materials (Invited)

S. Ueno*[1]; Y. Hattori[1]; H. Kakiuchi[1]; S. Wada[1]

1. University of Yamanashi, Japan

3:20 PM

Break

3:35 PM

(PACRIM-S17-028-2017) Preparation and characterization of textured 0.99($K_{0.5}Na_{0.5}$)$_{0.95}Li_{0.05}Nb_{0.93}Sb_{0.07}O_3-0.01CaZrO_3$ ceramics by templated grain growth

B. Liu*[1]

1. Tongji University, School of Materials Science and Engineering, China

3:50 PM

(PACRIM-S17-029-2017) Catalytic Combustion-type Carbon Monoxide Gas Sensor Applying Platinum-loaded Oxide Ion Conducting Solids (Invited)

N. Imanaka*[1]

1. Osaka University, Applied Chemistry, Japan

4:10 PM

(PACRIM-S17-030-2017) Liquid gigahertz viscosity sensors using shear mode c-axis tilted ScAlN piezoelectric thin films

Y. Yamakawa*[1]; R. Karasawa[1]; T. Mori[2]; K. Sano[1]; M. Suzuki[1]; T. Yanagitani[3]

1. Waseda University, Japan
2. Nagoya Institute of Technology, Japan
3. Waseda University, JST PRESTO, Japan

4:25 PM

(PACRIM-S17-031-2017) Divalent Cation Conducting Solid Electrolytes with NASICON-type Structure (Invited)

S. Tamura*[1]; N. Imanaka[1]

1. Osaka University, Japan

PACRIM Symposium 19: Transparent Ceramic Materials and Devices

Transparent Ceramic Materials and Devices III

Room: Kohala 3

Session Chair: Yiquan Wu, Alfred University

1:15 PM

(PACRIM-S19-020-2017) Photoluminescent MgAlON Spinel Transparent Ceramics Doped by Rare Earth and Transition Metal Cations (Invited)

H. Wang*[1]; X. Liu[1]; B. Chen[1]; B. Tu[1]; W. Wang[1]; Z. Fu[1]

1. Wuhan University of Technology, State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, China

1:45 PM

(PACRIM-S19-021-2017) Low-Temperature Spark Plasma Sintering of Transparent Ceramics by Using SiC Molding Set (Invited)

B. Kim*[1]

1. National Institute for Materials Science, Field-Assisted Sintering Group, Japan

2:15 PM

(PACRIM-S19-022-2017) Optical damage performance of conductive transparent indiun tin oxide and gallium nitride: Spatial, temporal, and lifetime modeling

S. Elhadj*[1]; J. Yoo[1]; R. Negres[1]; M. Marlon[1]; J. Adams[1]; N. Shen[1]; I. Bass[1]; D. Cross[1]; J. Bude[1]

1. LLNL, Targets System Optics Technology- Condensed Matter and Materials Division, USA

2:30 PM

(PACRIM-S19-023-2017) Transparent Sialon Ceramics

S. Lee*[1]

1. Sun Moon University, Materials Engineering, Republic of Korea

2:45 PM

(PACRIM-S19-024-2017) Fabrication of Textured ZnO Transparent Ceramic by Slip Casting in High Magnetic Field and Spark Plasma Sintering

D. Lin*[1]; L. Fan[1]; J. Xie[1]; L. Zhang[1]; Y. Shi[1]

1. Shanghai University, Department of Electronics and Information Materials, China

3:00 PM

(PACRIM-S19-025-2017) Processing of photoluminescent transparent polycrystalline alumina doped by rare earth elements

K. Maca*[1]; K. Drdlikova[1]; D. Drdlik[1]; R. Klement[2]; D. Galusek[2]

1. Brno University of Technology, Czech Republic
2. Joint Glass Centre of the IIC SAS, TnU AD, and FChFT STU, Slovakia

PACRIM Symposium 20: Crystalline Materials for Electrical, Optical, and Medical Applications

Piezo/Ferro

Room: Kohala 1

Session Chair: Christo Guguschev, Leibniz Institute for Crystal Growth

1:45 PM

(PACRIM-S20-016-2017) Strontium and tantalum based ferroelectric perovskite oxide materials

F. Marlec[1]; C. Le Paven*[1]; F. Cheviré[2]; L. Le Gendre[1]; R. Benzerga[1]; B. Guiffard[3]; T. Dufay[3]; F. Tessier[2]; A. Sharaiha[1]

1. University of Rennes 1, Institute of Electronics and Telecommunications of Rennes (IETR), France
2. University of Rennes 1, Institut des Sciences Chimiques de Rennes, France
3. University of Nantes, Institute of Electronic and Telecommunications of Rennes, France

2:00 PM

(PACRIM-S20-017-2017) Polarity inverted PZT/$PbTiO_3$ ferroelectric epitaxial film for frequency switchable resonator filters

T. Shimizu*[1]; T. Mori[2]; M. Suzuki[1]; T. Yanagitani[4]; K. Wasa[3]

1. Waseda University, Advanced Science and Engineering, Japan
2. Nagoya Institute of Technology, Engineering, Japan
3. Yokohama City University, Japan
4. Waseda University, JST PRESTO, Japan

2:15 PM

(PACRIM-S20-018-2017) Piezoelectric pressure wave sensor for health care application

K. Kobayashi[1]; T. Ishiguro[1]; Y. Doshida[1]; T. Gotoh[1]; H. Kishi*[1]

1. Taiyo Yuden Co., Ltd., R&D Laboratory, Japan

2:30 PM

(PACRIM-S20-019-2017) Growth of Lead-Free Piezoelectric Single Crystals by Solid State Single Crystal Growth

J. G. Fisher*[1]; E. Uwiragiye[1]; H. Sun[1]; U. Farooq[1]; S. Moon[1]; J. Lee[1]; H. Han[2]; H. Kim[2]; W. Jo[2]

1. Chonnam National University, Materials Science and Engineering, Republic of Korea
2. Ulsan National Institute of Science and Technology, Materials Science and Engineering, Republic of Korea

2:45 PM

(PACRIM-S20-020-2017) Growth of Ca-doped 0.8($Na_{0.5}Bi_{0.5}$)TiO_3-0.2 $SrTiO_3$ Single Crystals by Solid State Crystal Growth

P. G. LE*[1]; J. G. Fisher[1]

1. Chonnam National University, Materials Science and Engineering, Republic of Korea

3:00 PM

(PACRIM-S20-021-2017) Electrical resistivity and piezoelectricity of $Ca_3TaGa_{3-x}Al_xSi_2O_{14}$ single crystals as a function of oxygen partial pressure and Al content

X. Fu*[1]; V. Garcia[1]; Y. Kitanaka[2]; Y. Noguchi[2]; M. Miyayama[2]; K. Shimamura[1]; N. Ohashi[1]

1. National Institute for Materials Science, Japan
2. The University of Tokyo, Japan

3:15 PM

(PACRIM-S20-022-2017) Growth and Physical Properties of Multiferroic $LuFeO_3$ and $YbFeO_3$ Thin Films

R. C. Rai*[1]

1. SUNY Buffalo State College, Physics, USA

3:30 PM

Break

Optical Material I

Room: Kohala 1

Session Chair: Luisa Bausa, Universidad Autonoma de Madrid

3:45 PM

(PACRIM-S20-023-2017) The origin of coloration and its effect on the physical properties of $CaGdAlO_4$ crystal (Invited)

X. Tao*[1]

1. Shandong University, State Key Lab of Crystal Materials, China

4:15 PM

(PACRIM-S20-024-2017) Crystal Semiconductor Core Optical Fibers (Invited)

J. Ballato*[1]

1. Clemson University, USA

4:45 PM

(PACRIM-S20-025-2017) Characterization of Yb-doped $CaYAlO_4$ single crystal for ultrafast lasers (Invited)

T. Ogawa*[1]; A. Eilanlou[1]; M. Higuchi[2]; S. Wada[1]; K. Midorikawa[1]

1. RIKEN, Japan
2. Hokkaido University, Japan

5:15 PM

(PACRIM-S20-026-2017) Crystal growth and Terahertz time-domain spectroscopy of $Sm_xR_{1-x}FeO_3$ (R-Tb,Er)orthoferrites

A. Wu*[1]; X. Zhao[1]; B. Wang[1]; L. Su[1]; Z. Jin[2]; G. Ma[2]

1. Shanghai Institute of Ceramics, CAS, China
2. Shanghai University, China

PACRIM Symposium 25: Ceramics for Next Generation Nuclear Energy

Accident Tolerant Cladding and Fuel Materials for Nuclear Energy

Room: Kona 1

Session Chair: Andrew Nelson, Los Alamos National Lab

1:15 PM

(PACRIM-S25-022-2017) Advanced Nuclear Fuels by Field Assisted Sintering Technology: Accident Tolerance and Fuel Performance Modeling (Invited)

J. Lian*[1]

1. Rensselaer Polytechnic Institute, USA

1:45 PM

(PACRIM-S25-023-2017) Field assisted sintering of UO_2

E. Kardoulaki*[1]; A. Raftery[1]; J. Valdez[1]; D. Byler[1]; K. Mcclellan[1]

1. Los Alamos National Laboratory, Materials Science and Technology Division, USA

2:00 PM

(PACRIM-S25-024-2017) Development of high density fissile composite nuclear fuels

A. T. Nelson*[1]; J. T. White[1]; K. Mcclellan[1]

1. Los Alamos National Lab, Materials Science and Technology, USA

2:15 PM

(PACRIM-S25-025-2017) Al additions to U_3Si_2 to increase oxidation resistance

E. Sooby Wood*[1]; J. T. White[1]; A. T. Nelson[1]

1. Los Alamos National Lab, Materials Science and Technology, USA

2:30 PM

(PACRIM-S25-026-2017) Mechanical Degradation of SiC_f/SiC Composite after Hydrothermal Corrosion and Thermal Shock

D. Kim*[1]; H. Lee[1]; J. Park[1]; W. Kim[1]

1. Korea Atomic Energy Research Institute, Nuclear Materials Development Division, Republic of Korea

2:45 PM

(PACRIM-S25-027-2017) $Zr_{n+1}AlC_n$ and $Zr_{n+1}SiC_n$ MAX phases for future fission environments: Challenges and limitations

E. Zapata-Solvas*[1]; N. Ni[2]; W. E. Lee[1]

1. Imperial College London, Centre for Nuclear Engineering. Dpt. of Materials, United Kingdom
2. Imperial College London, Centre for Advanced Structural Ceramics. Dept. of Materials, United Kingdom

3:00 PM

Break

Advancements in Modelling Materials for Nuclear Applications

Room: Kona 1

Session Chair: Andrew Nelson, Los Alamos National Lab

3:30 PM

(PACRIM-S25-029-2017) Nuclear Fuel Modelling and Perspectives on Canadian Efforts in Fuel Development (Invited)

M. H. Piro*[1]

1. University of Ontario Institute of Technology, Faculty of Energy Systems and Nuclear Sciences, Canada

4:00 PM

(PACRIM-S25-030-2017) Combining Simulation and Experiments to Accelerate Reactor Fuel Development

M. R. Tonks*[1]

1. Pennsylvania State University, Mechanical and Nuclear Engineering, USA

4:15 PM

(PACRIM-S25-031-2017) DFT calculations on the role of Cr-doping for enhanced UO_2 sintering

M. W. Cooper*[1]; D. A. Andersson[1]

1. Los Alamos National Lab, Materials Science and Technology Division, USA

4:30 PM

(PACRIM-S25-032-2017) Uranium Silicide and Nitride-Silicide Composite Fuels: Phase Behavior in Processing and Irradiation

T. M. Besmann*[1]; M. Noordhoek[1]; T. Wilson[1]; M. Bogala[1]; A. T. Nelson[2]; E. Sooby Wood[2]; J. W. McMurray[3]; S. Middleburgh[5]; P. Xu[4]; E. J. Lahoda[6]

1. University of South Carolina, Nuclear Engineering, USA
2. Los Alamos National Lab, USA
3. Oak Ridge National Lab, USA
4. Westinghouse - Columbia, USA
5. Westinghouse - Vasteras, Sweden
6. Westinghouse - Cranberry Township, USA

4:45 PM

(PACRIM-S25-033-2017) Thermophysical properties and oxygen transport in $(Th_xPu_{1-x})O_2$

C. Galvin*[1]

1. Imperial College, Materials, United Kingdom

PACRIM Symposium 28: Advanced Materials and Technologies for Electrochemical Energy Storage Systems

Characterization I

Room: Queen's 5

Session Chair: Stefan Adams, National University of Singapore

1:15 PM

(PACRIM-S28-020-2017) Near-Field Optical Spectroscopy and Imaging of Interfaces and Interphases of Li-ion Electrode Materials (Invited)

R. Kostecki*[1]; M. Ayache[1]; I. Lucas[1]; J. Syzdek[1]

1. LBNL, USA

1:45 PM

(PACRIM-S28-021-2017) Reaction mechanism of the Li-ion negative electrode TiSnSb using ^{119}Sn Mössbauer and ^{7}Li MAS NMR spectroscopies (Invited)

N. Dupre*[1]; K. Johnston[2]; M. Sougrati[3]; L. Steviano[3]; A. Darwiche[3]; C. P. Grey[4]; L. Monconduit[3]; D. Guyomard[1]

1. CNRS-IMN, ST2E, France
2. Durham University, United Kingdom
3. ICG, France
4. University of Cambridge, Chemistry, United Kingdom

2:15 PM

(PACRIM-S28-022-2017) Advancing Alkali-Ion Battery Technology Through Understanding Function: X-Ray and Neutron Studies of Electrode Structure and Operational Mechanism (Invited)

V. K. Peterson*[1]; W. Pang[1]

1. Australian Nuclear Science and Technology Organisation, Australian Centre for Neutron Scattering, Australia

2:45 PM

(PACRIM-S28-023-2017) Phase assemblage/transformations and dimensional aspects effecting stress developments and electrochemical behavior of battery electrode materials (Invited)

A. Mukhopadhyay*[1]

1. Indian Institute of Technology (IIT) Bombay, Metallurgical Engineering and Materials Science, India

3:15 PM

(PACRIM-S28-024-2017) Fabrication and characterization of structure-controlled cathodic thin films for lithium ion secondary batteries

Y. H. Ikuhara*[1]; X. Gao[1]; Y. Sugawara[1]; C. Fisher[1]; A. Kuwabara[1]; H. Moriwake[1]; K. Kohama[2]; Y. Ikuhara[3]

1. Japan Fine Ceramics Center, Nanostructures Research Laboratory, Japan
2. Toyota Motor Corporation, Japan
3. The University of Tokyo, Japan

3:30 PM

Break

Characterization II

Room: Queen's 5

Session Chair: Kiyoshi Kanamura, Tokyo Metropolitan University

3:45 PM

(PACRIM-S28-025-2017) Real-Time Observation of Electrochemistry in Nanoscale Ceramics (Invited)

R. S. Yassar*[1]

1. University of Illinois, Department of Mechanical & Industrial Engineering, USA

4:15 PM

(PACRIM-S28-026-2017) Non-intrusive operando battery diagnosis and prognosis (Invited)

M. Dubarry*[1]

1. Hawaii Natural Energy Institute, USA

4:45 PM

(PACRIM-S28-027-2017) Fundamental understanding of batter materials at atomic and electronic levels using in-situ/operando synchrotron x-ray and neutron techniques (Invited)

Y. Ren*[1]

1. Argonne National Lab, X-ray Science Division, USA

5:15 PM

(PACRIM-S28-028-2017) Insight into Microstructural Evolution in Lithium-based Batteries by Electron Microscopy

D. Miller*[1]

1. Argonne National Laboratory, USA

PACRIM Symposium 29: Advances in Polar, Magnetic and Semiconductor Materials: Extending Temperature Limits

High Temperature Dielectrics

Room: Queen's 4

Session Chairs: Do-Kyun Kwon, Korea Aerospace University; Beihai Ma, Argonne National Laboratory

1:15 PM

(PACRIM-S29-017-2017) Ceramic and Nano-Polymer Capacitors for Energy Storage and Energy Transduction Applications (Invited)

C. Randall*[1]; M. Lanagan[1]; R. Rajagopalan[1]

1. Penn State University, Materials Science and Engineering, USA

1:45 PM

(PACRIM-S29-018-2017) Fabrication of Multi-Layer Glass Capacitors (Invited)

R. H. Wilke*[1]; H. J. Brown-Shaklee[1]; A. Casias[1]; B. Cunningham[1]; M. Vecchio[2]; R. Vudatha[3]

1. Sandia National Laboratories, USA
2. Pennsylvania State University, USA
3. Cornell University, USA

2:15 PM

(PACRIM-S29-019-2017) The influence of non-stoichiometry and chemical doping on the electrical properties of $Na_{1/2}Bi_{1/2}TiO_3$ ceramics (Invited)

D. C. Sinclair*[1]

1. University of Sheffield, Materials Science & Engineering, United Kingdom

2:45 PM

(PACRIM-S29-020-2017) Development of PLZT-based Ceramic Capacitors for High-Temperature Power Inverters in Electric Drive Vehicles (Invited)

B. Balachandran*[1]; B. Ma[1]; T. H. Lee[1]; S. E. Dorris[1]

1. Argonne National Laboratory, Energy Systems Division, USA

3:15 PM

(PACRIM-S29-021-2017) Effects of Residual Stress on Dielectric Properties of PLZT Film Capacitors

B. Ma*[1]; T. H. Lee[1]; S. E. Dorris[1]; B. Balachandran[1]

1. Argonne National Laboratory, USA

3:30 PM

Break

3:45 PM

(PACRIM-S29-022-2017) High temperature dielectric capacitors based on doped-HfO_2 thin films (Invited)

Z. Hu*[1]; J. G. Jones[1]; N. X. Sun[2]; G. J. Brown[1]

1. Air Force Research Laboratory, Materials and Manufacturing Directorate, USA
2. Northeastern University, Department of Electrical and Computer Engineering, USA

4:15 PM

(PACRIM-S29-023-2017) High Temperature Dielectric and Energy Storage Properties of $Bi_{0.5}Na_{0.5}TiO_3$-$NaNbO_3$ Ceramics and Multilayer Ceramic Capacitors (Invited)

H. Liu*[1]; Q. Xu[1]; C. Su[1]; H. Hao[1]; S. Zhang[1]; Z. Yao[1]; M. Cao[1]

1. Wuhan University of Technology, School of Material Science and Engineering, China

4:45 PM

(PACRIM-S29-024-2017) Novel Dielectric Composite Films Incorporated with Two-Dimensional Oxide Nanosheet Fillers (Invited)

H. Bae[1]; B. Kim[1]; D. Kwon*[1]

1. Korea Aerospace University, Materials Engineering, Republic of Korea

PACRIM Symposium 31: Advances in Bioceramics: Biomineralization and Bioinspired Materials

On Bone: Formation of a Complex Bioceramic

Room: Monarchy

Session Chairs: Stephan Wolf, Friedrich-Alexander-University Erlangen-Neurnberg; Hortense Le Ferrand, ETH Zürich

1:15 PM

(PACRIM-S31-019-2017) Formation of hard-soft tissue interfaces: Lessons from collagen biomineralization (Invited)

E. Sone*[1]

1. University of Toronto, Institute of Biomaterials & Biomedical Engineering and Department of Materials Science & Engineering, Canada

1:45 PM

(PACRIM-S31-020-2017) Apatite Glass-Ceramics as a Substrate for Studying Protein-guided Mineralization

S. Habelitz*[1]; C. Russel[2]; W. Li[1]

1. University of California, San Francisco, PRDS, USA
2. University of Jena, GlassChemie, Germany

2:00 PM

(PACRIM-S31-021-2017) Self-assembly of type I collagen molecules into fibrils (Invited)

F. Nudelman*[1]; J. Sindt[1]; B. Marzec[1]; A. Young[3]; N. Sommerdijk[2]; P. Murray[3]; P. Camp[1]

1. University of Edinburgh, Chemistry, United Kingdom
2. Eindhoven University of Technology, Dept. of Chemical Engineering and Chemistry, Netherlands
3. University of Strathclyde, Electronic and Electrical Engineering, United Kingdom

2:30 PM

(PACRIM-S31-022-2017) Pre-nucleation clusters versus polymer-induced liquid precursors in collagen intrafibrillar mineralization

X. Huang*[2]; L. Niu[3]; C. S. Tay[4]; T. Luo[5]; F. Tay[1]

1. Augusta University, USA
2. Guanghua School and Hospital of Stomatology, Sun Yat-sen University, China
3. The Fourth Military Hospital, Prosthodontics, China
4. University of Toronto, Canada
5. School of Stomatology, Guangzhou Medical University, China

2:45 PM

(PACRIM-S31-023-2017) A new model of collagen intrafibrillar mineralisation based on establishment of Gibbs-Donnan equilibrium (Invited)

F. Tay*[1]

1. Augusta University, USA

3:15 PM

(PACRIM-S31-024-2017) Bone as an interpenetrating composite - 3D-printed models and finite element simulation

F. A. Sabet*[1]; F. Y. Su[2]; S. Pang[1]; J. Mok[3]; M. Tolley[4]; I. M. Jasiuk[1]; J. McKittrick[4]

1. University of Illinois at Urbana-Champaign, Department of Mechanical Science and Engineering, USA
2. University of California, San Diego, Department of Materials Science and Engineering, USA
3. University of California, San Diego, Department of Structural Engineering, USA
4. University of California, San Diego, Department of Mechanical and Aerospace Engineering, USA

3:30 PM

Break

Engineering of Hard Tissues I

Room: Monarchy

Session Chairs: David Kisailus, UC Riverside; Po-Yu Chen, National Tsing Hua University

3:45 PM

(PACRIM-S31-025-2017) Fabrication of porous carbonate apatite bone replacement using calcium sulfate granules as precursor (Invited)

K. Ishikawa*[1]; T. I. Arifta[1]; K. Tsuru[1]

1. Kyushu University, Department of Biomaterials, Japan

4:15 PM

(PACRIM-S31-026-2017) Hydorxyapatite/collagen bone-like nanocomposite for medical applications (Invited)

M. Kikuchi*[1]; T. Sato[2]; Y. Shirosaki[3]; M. Aizawa[2]; K. Kadowaki[4]; M. Uezono[4]; K. Moriyama[4]; K. Takakuda[4]

1. National Institute for Materials Science (NIMS), Bioceramics Group, Japan
2. Meiji University, Japan
3. Kyushu Institute of Technology, Japan
4. Tokyo Medical and Dental University, Japan

4:45 PM

(PACRIM-S31-027-2017) Development of Functional Heterostuctured Bone Substitute for Cell loading and Drug Delivery

N. Raja*[1]; H. Yun[2]

1. Korea University of Science and Technology, Advanced Materials Engineering, Republic of Korea
2. Korea Institute of Materials Science, Engineering Ceramics Department, Republic of Korea

5:00 PM

(PACRIM-S31-028-2017) Novel Nanofibrous Bilayer Scaffolds Incorporated with Different Cells for Regenerating Complex Body Tissues

Y. Zhou*[1]; M. Wang[1]

1. The University of Hong Kong, Hong Kong

5:15 PM

(PACRIM-S31-029-2017) Comparison of Demineralization Methods for Porcine Femur Cortical Bone

F. Y. Su*[1]; S. Pang[2]; R. Hsiong[1]; I. M. Jasiuk[2]; J. McKittrick[1]

1. University of California, San Diego, USA
2. University of Illinois at Urbana-Champaign, USA

GOMD Graduate Student Posters

Room: Grand Promenade

5:30 PM

(GOMD-GSP-001-2017) Measurement of the Forward Dissolution Rate of the International Simple Glass using the Single-Pass-Flow-Through Method

A. J. Fisher*[1]; C. L. Corkhill[1]; R. J. Hand[1]; N. C. Hyatt[1]

1. The University of Sheffield, Material Science and Engineering, United Kingdom

(GOMD-GSP-002-2017) Interactions between Simulant Vitrified Nuclear Wastes and Idealised Cement Leachates

C. Mann*[1]; E. M. Pierce[2]; J. R. Eskelsen[2]; C. L. Thorpe[1]; N. C. Hyatt[1]; J. Provis[1]; C. L. Corkhill[1]

1. University of Sheffiled, Material Science and Engineering, United Kingdom
2. Oak Ridge National Lab, USA

(GOMD-GSP-003-2017) Influence of bubble-induced motion on the mixing of glass melts

D. Boloré*[1]; F. Pigeonneau[1]; P. Chamelot[2]; M. Gibilaro[2]; L. Massot[2]; O. Masbernat[3]; E. Cid[3]

1. Saint-Gobain Recherche, France
2. Laboratoire de Génie Chimique, Procédés Electrochimiques, France
3. Laboratoire de Génie Chimique, Génie des Interfaces & Milieux Divisés, France

(GOMD-GSP-004-2017) Foaming Glass Using High Pressure Sintering

M. B. Østergaard*[1]; R. R. Petersen[1]; J. Konig[2]; M. Bockowski[3]; Y. Yue[1]

1. Aalborg University, Chemistry and Bioscience, Denmark
2. Jozef Stefan Institute, Advanced Materials Department, Slovenia
3. Polish Academy of Sciences, Institute of High Pressure Physics, Poland

(GOMD-GSP-005-2017) Synthesis, Sintering, and Thermal Properties of ThN

S. S. Parker*[1]; A. Parkison[1]; J. T. White[1]; A. T. Nelson[1]

1. Los Alamos National Laboratory, Material Science and Technology Division, USA

(GOMD-GSP-006-2017) Impact of Hot Compression on the Stress Optic Coefficient of Oxide Glasses

T. K. Bechgaard*[1]; L. M. Thirion[2]; S. Rzoska[3]; M. Bockowski[3]; J. C. Mauro[2]; M. M. Smedskjaer[1]

1. Aalborg University, Denmark
2. Corning Incorporated, USA
3. Institute of High-Pressure Physics, Polish Academy of Sciences, Poland

(GOMD-GSP-007-2017) Origin of the Mixed Alkaline Earth Effect on the Hardness of Silicate Glasses

Y. Yu*[1]; A. N. Krishnan[1]; M. M. Smedskjaer[2]; J. C. Mauro[3]; M. Bauchy[1]

1. University of California, Los Angeles, Civil and Environmental Engineering, USA
2. Aalborg University, Denmark
3. Corning Incorporated, USA

(GOMD-GSP-008-2017) Structural investigation on hydrous phosphate glasses

R. Balzer*[1]; H. Behrens[1]; U. Bauer[1]; M. Fechtelkord[2]; A. Welsch[3]

1. Leibniz University of Hannover, Institute of Mineralogy, Germany
2. Ruhr-Universität Bochum, Institute of Geology, Mineralogy and Geophysics, Germany
3. The University of Sydney, Vibrational Spectroscopy Core Facility and School, Australia

(GOMD-GSP-009-2017) The structural role of Ta_2O_5 in SiO_2-CaO-ZnO-SrO-P_2O_5 glasses

A. Alhalawani[1]; M. Towler*[1]

1. Ryerson University, Mechanical and Industrial Engineering, Canada

(GOMD-GSP-010-2017) Iron specification in lithium iron phosphate glasses

M. Stranghoener*[1]; H. Behrens[1]; A. Welsch[2]

1. Leibniz University Hannover, Institute of Mineralogy, Germany
2. The University of Sydney, Vibrational Spectroscopy Core Facility and School of Chemistry, Australia

(GOMD-GSP-011-2017) Nd^{3+}-doped silicate glasses as a color filter for white LED with wide color gamut coverage

K. Han*[1]; S. Kim[1]; Y. Kim[1]; C. Shin[2]; K. Chung[2]; H. Hwang[2]; W. Chung[1]

1. Kongju National University, Advanced Materials Engineering, Republic of Korea
2. NEPES, Republic of Korea

(GOMD-GSP-012-2017) Phosphor-in-Glass composed of red-green phosphors for white LED with wide color gamut coverage

S. Kim*[1]; K. Han[1]; W. Im[2]; C. Shin[3]; K. Chung[3]; H. Hwang[3]; W. Chung[1]

1. Kongju National University, Division of Advanced Matrials Engineering, Republic of Korea
2. Chonnam National University, School Materials Science and Engineering, Republic of Korea
3. Nepes Institute of Science and Technology, Republic of Korea

(GOMD-GSP-013-2017) Effects of Rare-Earth Co-doping and Heat Treatment on Zinc Borosilicate Glass Phosphors

S. Bosna*[1]; H. Sade[1]; S. Dayioglugil[1]; G. Soydan[1]; N. Solak[1]

1. Istanbul Technical University, Metallurgical and Materials Engineering, Turkey

GOMD Undergraduate Student Posters

Room: Grand Promenade

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(GOMD-UGSP-001-2017) Thermal Study of Bio Active Borosilicate Glass that Contains Cerium Oxide Nano Particles

J. Ard*[1]; K. S. Ranasinghe[1]; R. Singh[1]; D. E. Day[2]; G. Humble[3]

1. Kennesaw State University, Physics, USA
2. Missouri University of Science & Technology, USA
3. Paulding High School, Physics and Physical Science Science Department, USA

(GOMD-UGSP-002-2017) Technological aspects and characterization of solution-based arsenic selenide thin films

M. White*[1]; J. Allen[1]; J. Bunton[1]; B. Gaither[1]; A. Kovalskiy[1]

1. Austin Peay State University, Department of Physics and Astronomy, USA

(GOMD-UGSP-003-2017) Specific Heat Capacity of Amorphous Materials near the Absolute Zero

R. Karsdorf*[1]; F. Werr[1]; A. Lenhart[1]; D. de Ligny[2]

1. TH Nürnberg, Materials Engineering, Germany
2. FAU Erlangen, Materials Science, Germany

(GOMD-UGSP-004-2017) Glass technology and use in ancient Byzantine Turkey: Color, composition, deterioration, and field identification of glass at Çadir Höyük

E. Fergerstrom*[1]; H. Meredith[2]; J. McCloy[1]

1. Washington State University, School of Mechanical and Materials Engineering, USA
2. Washington State University, Department of Fine Arts, USA

(GOMD-UGSP-005-2017) Producing Amorphous Tellurium Dioxide

A. DeCeanne*[1]; S. Feller[1]; B. Hauke[1]; B. Smith[1]; K. Bozer[1]; Z. Thune[1]; I. Tillman[1]; M. Affatigato[1]; D. Holland[2]; E. Barney[3]; R. Orman[2]; A. Hannon[4]

1. Coe College, Physics, USA
2. University of Warwick, Physics, United Kingdom
3. University of Nottingham, United Kingdom
4. Rutherford Appleton Laboratory, United Kingdom

(GOMD-UGSP-006-2017) Temperature-resolved ToF-SIMS of Display Glass Surfaces

C. T. Dahlquist*[1]; C. V. Cushman[1]; B. M. Lunt[1]; M. R. Linford[1]; N. J. Smith[2]

1. Brigham Young University, Chemistry, USA
2. Corning Incorporated, Science and Technology Division, USA

GOMD Poster Session (non-student)

Room: Grand Promenade

5:30 PM

(GOMD-P-001-2017) Phase separation in ancien Chinese glazes

W. Li*[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

(GOMD-P-003-2017) Charge Transfer (C T) Spectra of Vanadyl (VO^{2+}(VS) and Vanadyl (VO^{2+}(VP)) doped lead phosphate glasses

C. Churya*[1]

1. Tirumala Engineering College, Jawaharlal Nehru Technology University, Hyderabad, India

(GOMD-P-004-2017) IR Study of vanadyl ion doped lead phosphate Glasses

C. Churya*[1]

1. Tirumala Engineering College, Jwaharlal Nehru Technology University, Hyderabad, India

(GOMD-P-005-2017) From Nano-Ductility to Macroscale Brittleness: Modeling the Fracture of Glass at Different Scales via Molecular Dynamics and Peridynamics Simulations

N. Krishnan*[1]; B. Wang[1]; J. C. Mauro[2]; M. Bauchy[1]

1. University of California, Los Angeles, Civil and Environmental Engineering, USA
2. Corning Incorporated, USA

(GOMD-P-006-2017) In-situ observation of the structural change in $MgO-B_2O_3-SiO_2$ glass at high pressure

A. Yamada*[1]; M. Harada[1]; A. Masuno[2]; K. Yamanaka[3]; K. Mitsuhara[3]; S. Yoshida[1]; J. Matsuoka[1]

1. The University of Shiga Prefecture, Japan
2. The University of Tokyo, Japan
3. SR Center, Ritsumeikan University, Japan

(GOMD-P-007-2017) A new model for medium-range structure in vitreous silica

S. Cheng*[1]

1. Lawrence Berkeley National Laboratory, Molecular Foundry, USA

(GOMD-P-008-2017) First-principles K-edge XANES simulation for doped Ti in $CaO-P_2O_5$ invert glass

T. Tamura*[1]; H. Maeda[1]; M. Kohyama[2]

1. Nagoya Institute of Technology, Japan
2. National Institute of Advanced Industrial Science and Technology (AIST), Japan

(GOMD-P-009-2017) Study of radiation resistance of erbium-doped-nanoparticles optical fiber for space applications

M. Lancry*[1]; B. Hari Babu[2]; N. Ollier[2]; H. El Hamzaoui[3]; A. Pastouret[4]; M. Bouazaoui[3]; L. Bigot[3]; B. Poumellec[1]

1. University Paris Sud, France
2. Laboratoire des Solides Irradiés, CEA-CNRS-Ecole Polytechnique, France
3. University Lille 1, PhLAM, France
4. Draka - Prysmian, France

(GOMD-P-010-2017) Photoluminescence from lead selenide quantum dots embedded in glasses

J. Wang*[1]; J. Han[1]; J. Xie[1]; X. Zhao[1]

1. Wuhan University of Technology, State Key Lab of Silicate Materials for Architectures, China

(GOMD-P-011-2017) Tuning luminescence and electrical properties in $CuAlO_2$ by chemical unit substitution

Y. Liu*[1]; Y. Wu[1]

1. Alfred University, Materials Science, USA

(GOMD-P-012-2017) Effects of Particle Size on Microstructure using Laser Sealable Frit

J. A. Duprey*[1]; A. Hall[2]; L. Lamberson[1]; R. Morena[1]

1. Corning Incorporated - CRDC, Glass Research, USA
2. Corning Incorporated, Chemical Analysis, USA

(GOMD-P-013-2017) Glass forming ability in the TeO_2-ZnO-NiO system

O. Zamyatin*[1]; Y. Medvedeva[1]; E. Zamyatina[1]

1. Lobachevsky State University of Nizhni Novgorod, Chemistry, Russian Federation

(GOMD-P-014-2017) Optical properties of the TeO_2– ZnO glasses doped with Cu^{2+}

O. Zamyatin*[1]; E. Zamyatina[1]; V. Plotnichenko[2]

1. Lobachevsky State University of Nizhni Novgorod, Chemistry, Russian Federation
2. Fiber Optics Research Center of the Russian Academy of Sciences, Russian Federation

(GOMD-P-015-2017) Complex oxides as a starting material for synthesis of the ternary tellurite glasses

O. Zamyatin*[1]; E. Zamyatina[1]; A. Sibirkin[1]

1. Lobachevsky State University of Nizhni Novgorod, Chemistry, Russian Federation

(GOMD-P-016-2017) Introduction to the new 20-inch MCP-PMT glass bulb production

X. Zhang*[1]

1. Insitute of High Energy Physics, Chinese Academy of Sciences, China

(GOMD-P-017-2017) Eu^{3+} and Er^{3+} environment modification by Electron and femtosecond Laser irradiation in phosphate glasses

M. Mahfoudhi[1]; R. Desmarchelier[2]; M. Lancry[2]; N. Ollier*[1]

1. CEA, France
2. ICMMO, France

(GOMD-P-018-2017) Photoluminescence properties of Ce^{3+}-doped $Y_3Al_5O_{12}$ phosphors obtained by controlled crystallization of eutectic Y_2O_3-Al_2O_3 glass microspheres

K. Haladejová[1]; R. Klement*[1]; A. Prnová[1]; D. Galusek[1]

1. University of Alexander Dubcek in Trencin, Vitrum Laugaricio – Joint Glass Centre of the IIC SAS, TnU AD and FChPT STU, Slovakia

(GOMD-P-019-2017) Elaboration and structural study of Yb-doped optical fibers preforms'cores prepared by a plasma process

A. Barnini[1]; T. Robin[2]; D. Caurant*[1]; B. Cadier[2]; T. Gotter[2]; C. Guyon[1]; G. Aka[1]; T. Charpentier[3]

1. Chimie Paristech CNRS, IRCP, France
2. iXblue, France
3. CEA Saclay, France

(GOMD-P-020-2017) The Generation of The Residual Stress in ABS type Glaze of Bone China

J. Choi*[1]; H. Park[1]; Y. Han[1]; H. Kim[1]

1. Korea Institute of Ceramic Engineering and Technology (KICET), Engineering Ceramic Center, Republic of Korea

(GOMD-P-021-2017) Elasticity/Plasticity of Network Bonds in Chemically Strengthened Glasses

S. Tietje*[1]; R. Schaut[1]

1. Corning Incorporated, S&T, Glass Research, USA

(GOMD-P-022-2017) Chemical strengthening of soda-lime-silicate glass: Effect of impurities and Na enrichment of the KNO_3 bath

V. M. Sglavo*[1]; H. Hassani[1]

1. University of Trento, Italy

(GOMD-P-024-2017) Development of chalcogenide glasses for mid-IR fiber sensors

V. Shiryaev*[1]; A. Velmuzhov[1]; M. Sukhanov[1]

1. Institute of Chemistry of High-Purity Substances, Russian Academy of Sciences, Russian Federation

(GOMD-P-025-2017) Mid-infrared Luminescence of Dysprosium ions in modified Ga-Sb-S Chalcogenide Glasses and Fibers

A. Yang[1]; Z. Yang*[1]; J. Qiu[1]; M. Zhang[1]; H. Ren[1]; C. Zhai[1]; S. Qi[1]; D. Tang[1]

1. Jiangsu Normal University, China

(GOMD-P-026-2017) Nontoxic Chalcogenide Fibers for 2-12 μm Mid-infrared Supercontinuum Generation

Z. Yang*[1]; B. Zhang[1]; Y. Yu[2]; C. Zhai[1]; S. Qi[1]; B. Luther-Davies[2]

1. Jiangsu Normal University, China
2. Australian National University, Australia

PACRIM Graduate Student Posters

Room: Grand Promenade

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(PACRIM-GSP-001-2017) Condition of deposit and prediction of internal structure of CeO_2 thin films fabricated by RF sputtering method

S. Miwa*[1]; T. Hashizume[2]; A. Saiki[2]

1. University of Toyama, Graduate School of Science and Engneering for Education, Japan
2. University of Toyama, Graduate School of Science and Engineering for Research, Japan

(PACRIM-GSP-002-2017) Electrical, Thermal, and Mechanical Properties of SiC-BN Composites

H. Yeom*[1]; Y. Seo[1]; Y. Kim[1]

1. Functional Ceramics Laboratory, Department of Materials Science and Engineering, Republic of Korea

(PACRIM-GSP-003-2017) Bioactive Layers On Titanium Substrates Based On The Black Glasses

M. Lesniak[1]; M. Gaweda[1]; P. Jelen[1]; E. Dlugon[1]; M. T. Sitarz*[1]

1. AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Poland

(PACRIM-GSP-005-2017) Influence of sulfate ion on phase and dispersion of $Y_3Al_5O_{12}$ nanopowders with the co-crystallization method

G. Fan*[1]; Z. Zeng[1]; X. Wang[1]; X. Wang[1]; W. Lu[1]; F. Liang[1]

1. Huazhong University of Science and Technology, Huazhong University of Science and Technology, China

(PACRIM-GSP-006-2017) Crystal-oriented tetragonal (Li,Na,K) NbO_3 ceramics

Y. Ono*[1]; S. Tanaka[1]; T. Harada[2]; H. Shimizu[2]; Y. Doshida[2]

1. Nagaoka University of Technology, Japan
2. Taiyo Yuden Co., Ltd., Japan

(PACRIM-GSP-007-2017) Flash sintering of porcelain stoneware

M. Biesuz*[1]

1. University of Trento, Department of Industrial Engineering, Italy

(PACRIM-GSP-008-2017) Synthesis of Ti-Rich *BEA-Type Zeolite and Characterization of Ti Species during Crystallization

H. Horikawa*[1]; T. Iida[1]; R. Osuga[2]; K. Ohara[3]; J. N. Kondo[2]; T. Okubo[1]; T. Wakihara[1]

1. The University of Tokyo, Engineering, Japan
2. Tokyo Institute of Technology, Japan
3. Japan Synchrotron Radiation Research Institute, Japan

(PACRIM-GSP-009-2017) Tensile Mechanical Behavior of Three-Dimensionally Networked Porous Carbon Materials

M. Nakajima*[1]; R. Inoue[1]; E. Kojo[1]; Y. Kubota[2]; Y. Kogo[1]

1. Tokyo University of Science, Japan
2. Japan Aerospace Exploration Agency, Japan

(PACRIM-GSP-010-2017) Porous Al_2O_3 Catalyst Carrier by 3D Additive Manufactureing for Syngas Reforming

N. Fan[1]; Y. Huang*[1]; Y. Chen[1]; W. Wei[1]; B. Liu[2]; A. Wang[1]; R. Luo[1]

1. National Taiwan University, Taiwan
2. National Cheng Kung University, Taiwan

(PACRIM-GSP-011-2017) Evaluation of Ceramic/Ceramic (SIC/SIC) Joint interface prepare via brazing

A. Ghazi Daryani*[1]

1. Sharif University Technology, Material Science & Engineering, Islamic Republic of Iran

(PACRIM-GSP-012-2017) Removal of methyl orange over the Cu^{2+} substituted $MgAl_2O_4$ spinel prepared via the coprecipitation method

J. Tang*[1]; Y. Liu[1]; D. Chen[1]; J. Chen[1]; B. Wang[1]

1. China University of Geosciences, Beijing, China

(PACRIM-GSP-013-2017) Enhancement of Red Phosphorescence Properties of Pr^{3+} activated Calcium Titanate

H. Sade*[1]; S. Dayioglugil[1]; S. Bosna[1]; G. Soydan[1]; N. Solak[1]

1. Istanbul Technical University, Metallurgical and Materials Engineering, Turkey

(PACRIM-GSP-014-2017) Influence of Si Particle Size Distribution and Milling Fluid on SRBSN Ceramic Substrate with High Thermal Conductivity for Powder Modules

H. Oh*[1]; H. Lee[1]

1. Kumoh National Institute of Technology, Advanced Material Science and Engineering, Republic of Korea

(PACRIM-GSP-015-2017) Electrochomic properties of WO_3 films synthesized by direct agent assisted hydrothermal metheods

S. Park*[1]; C. Nam[1]

1. Hannam University, Photonics and Sensors, Republic of Korea

(PACRIM-GSP-016-2017) Effect of the ZnO addition on the structure and technological properties of the ceramic glazes by variable molar ratio of the SiO_2/Al_2O_3

M. Lesniak*[1]

1. AGH University of Science and Technology in Krakow, Faculty of Materials Science and Ceramics, Poland

(PACRIM-GSP-017-2017) Advanced photocatalytic properties of UCNP supported TiO_2 nanotube photocatalyst for air purification

B. Ye*[1]; J. Baik[2]; B. Jeong[1]; E. Kim[1]; H. Kim[1]

1. Korea Institute of Industrial Technology, Republic of Korea
2. Ulsan National Institute of Science and Technology, Republic of Korea

(PACRIM-GSP-018-2017) Y_2O_3-Al_2O_3-SiO_2 (YAS) Coatings for High-Plasma resistant Al_2O_3 ceramics in Semiconductor Etching Process

E. Park*[1]; H. Lee[1]

1. Kumoh National Institute of Technology, Advanced Materials Science and Engineering, Republic of Korea

(PACRIM-GSP-019-2017) Synthesis and characterisation of alkali aluminosilicate ceramics

G. Christopoulou*[1]; P. A. Bingham[1]; H. A. Jones[1]; G. A. Jubb[2]; F. Modarresifar[2]

1. Sheffield Hallam University, Materials and Engineering Research Institute, United Kingdom
2. Morgan Advanced Materials, United Kingdom

(PACRIM-GSP-020-2017) Preparation of $ZrW_{2-x}Mo_xO_8$ ceramic by a hydrothermal process combined with spark plasma sintering method and evaluation of its thermal properties

H. Wei*[1]; M. Hasegawa[1]; Y. Yamaguchi[2]; K. Fujimoto[2]; K. Nishio[1]

1. Tokyo University of Science, Department of Materials Science and Technology, Japan
2. Tokyo University of Science, Department of Pure and Applied Chemistry, Japan

(PACRIM-GSP-021-2017) Thermal conductive h-BN/CNT flexible paper using recycling waste paper

M. Lee*[1]; H. Lee[2]; B. Ye[1]; D. Kim[3]; H. Kim[1]

1. Korea Institute of Industrial Technology, Republic of Korea
2. Pusan National University, Republic of Korea
3. Korea University, Republic of Korea

(PACRIM-GSP-022-2017) A Study on the Wear Characteristics of AISI 4140 steel by Nitriding Treatment Methods

M. Kim*[1]; H. Park[1]; H. Kim[2]; K. Moon[1]

1. Korea Institute of Industrial Technology, Heat Treatment R&D Group, Republic of Korea
2. INHA University, Materials Science and Engineering, Republic of Korea

(PACRIM-GSP-023-2017) Piezoelectric Enhancement of Thermally Annealed Fine and Coarse-Grained Barium Titanate Ceramics

G. P. Khanal*[1]; S. Kim[1]; S. Ueno[1]; S. Wada[1]

1. University of Yamanashi, Japan

(PACRIM-GSP-024-2017) Appropriate suspension for the preparation of $(Bi_{0.5}Na_{0.5})TiO_3$-hexagonal $BaTiO_3$ ceramics by electrophoretic deposition (EPD) method

M. Kim*[1]; R. Itou[1]; T. S. Suzuki[2]; T. Uchikoshi[2]; S. Wada[1]

1. University of Yamanashi, Interdisciplinary Graduate School of Medicine and Engineering, Japan
2. National Institute for Materials Science (NIMS), Ceramics Processing Group, Japan

(PACRIM-GSP-025-2017) Direct Fabrication of $CuFeO_2$/Fe photocathode by Hydrothermal method for solar hydrogen evolution

M. Ito*[1]; C. Izawa[1]; T. Watanabe[1]

1. Meiji University, Japan

(PACRIM-GSP-026-2017) Microwave-Assisted Solvothermal Synthesis of Potassium Niobate Nanocubes

R. Kunisada*[1]; S. Ueno[1]; T. Chikata[1]; S. Wada[1]

1. University of Yamanashi, Japan

(PACRIM-GSP-027-2017) In-situ electric filed induced lattice strain observation and crystallographic structures of $BiFeO_3$-$BaTiO_3$ lead-free ceramics

S. Kim*[1]; G. P. Khanal[1]; C. Moriyoshi[2]; Y. Kuroiwa[2]; S. Wada[1]

1. University of Yamanashi, Japan
2. Hiroshima University, Japan

(PACRIM-GSP-028-2017) Microwave dielectric and ferroelectric properties of strontium and tantalum based ferroelectric ceramics

F. Marlec[1]; C. Le Paven*[1]; R. Benzerga[1]; L. Le Gendre[1]; F. Cheviré[2]; V. Laur[3]; B. Guiffard[4]; T. Dufay[4]; F. Tessier[2]; A. Sharaiha[1]

1. University of Rennes 1, Institute of Electronics and Telecommunications of Rennes (IETR), France
2. University of Rennes 1, Institut des Sciences Chimiques de Rennes, France
3. University of Bretagne Occidentale, LAB-STICC, France
4. University of Nantes, Institute of Electronic and Telecommunications of Rennes, France

(PACRIM-GSP-029-2017) Evaluation of residual stress in glass using optical measurement methods

F. Werr*[1]; R. Karsdorf[1]; A. Lenhart[1]; D. de Ligny[4]; H. Katte[2]; A. Cornet[3]; V. Martinez[3]

1. TH Nuernberg, Materials Technology, Germany
2. ilis gmbh, Germany
3. Université Claude Bernard Lyon 1, Institut Lumière Matière, France
4. Friedrich-Alexander-University Erlangen-Nuernberg, Institute of Glass and Ceramics, Germany

(PACRIM-GSP-030-2017) M-doped SnO_2/metal/M-doped SnO_2 multilayer deposited on PET for transparent conducting thin films

J. Jang[1]; Y. Cho[1]; J. Choi*[1]

1. Korea Institute of Science and Technology, Center for Electronics Materials, Republic of Korea

(PACRIM-GSP-031-2017) Fabrication of $(K_{0.5}Na_{0.5})NbO_3$ based transparent ceramics by a pressureless, conventional sintering technique

K. Hirai*[1]; I. Fujii[1]; T. Wada[1]

1. Ryukoku University, Materials Chemistry, Japan

(PACRIM-GSP-032-2017) Luminescence properties of Eu^{3+} doped glass ceramics containing $ZnAl_2O_4$

Q. Wei*[1]; C. Liu[1]; J. Han[1]

1. Wuhan University of Technology, China

(PACRIM-GSP-033-2017) Two-Step Sintering of Partially-Stabilized Zirconia for Applications in Ceramic Crowns

B. A. Darmawan*[1]; J. G. Fisher[1]; G. Oh[2]; S. Park[2]

1. Chonnam National University, Materials Science and Engineering, Republic of Korea
2. Chonnam National University, Department of Prosthodontics, School of Dentistry, Republic of Korea

(PACRIM-GSP-034-2017) Fabrication of Photo-functional Xanthene Dye/ZnO Hybrid Films by a Chemical Bath Deposition Method

D. Hyakutake*[1]; E. Hosono[2]; M. Hagiwara[1]; H. Matsuda[2]; S. Fujihara[1]

1. Keio University, Japan
2. AIST, Japan

(PACRIM-GSP-035-2017) Scintillation and Optical Properties of Sm-doped C12A7 Single Crystals

N. Kumamoto*[1]; D. Nakauchi[1]; G. Okada[1]; N. Kawaguchi[1]; T. Yanagida[1]

1. Nara Institute of Science and Technology, Japan

(PACRIM-GSP-036-2017) Improvement of critical current density in MgB_2 superconductors by NaF-doping

N. Takahashi*[1]; M. Nagao[1]; S. Watauchi[1]; Y. Takano[2]; I. Tanaka[1]

1. University of Yamanashi, Japan
2. National Institute for Materials Science (NIMS), Japan

(PACRIM-GSP-037-2017) Scintillation and Photoluminescence Properties of $Sc:Al_2O_3$ Ceramics

N. Noor Azman*[1]; T. Kato[1]; G. Okada[1]; N. Kawaguchi[1]; T. Yanagida[1]

1. Nara Institute of Science and Technology, Japan

(PACRIM-GSP-038-2017) Carrier generation in p-type wide gap semiconductor, Sn-Nb-O system

S. Akane*[1]; N. Kikuchi[2]; S. Ikeda[1]; Y. Aiura[2]; K. Nishio[1]

1. Tokyo University of Science, Graduate School of Industrial Science and Technology, Japan
2. National Institute of Advanced Industrial Science and Technology (AIST), Japan

(PACRIM-GSP-039-2017) The Effect of Rare Earth Dopants on Sintering Behavior of Lead Zirconate Titanate (PZT)

S. Dayioglugil*[1]; S. Bosna[1]; H. Sade[1]; E. Kondakci[1]; N. Solak[1]

1. Istanbul Technical University, Metallurgical and Materials Engineering, Turkey

(PACRIM-GSP-040-2017) Optical Properties of Rare Earth Element Doped CeO_2 Thin Films Deposited by Mist Deposition Method

Y. Hara*[1]; T. Hashizume[3]; A. Saiki[2]

1. University of Toyama, Graduate School of Science and Engineering for Education, Japan
2. University of Toyama, Graduate School of Science and Engineering for Research, Japan
3. University of Toyama, Organization for Promotion of Research, Japan

(PACRIM-GSP-041-2017) Fabrication of a Ni/MgO Nanocomposite Catalyst by Exolution

Y. Park*[1]; H. Hwang[1]

1. Inha University, Republic of Korea

(PACRIM-GSP-042-2017) Synthesis of Pt/WO_3 nano-particle dispersed PDMS membrane for hydrogen gas leakage sensor

Y. Makino*[1]; Y. Yamaguchi[2]; R. Ishihara[1]; K. Nishio[1]

1. Tokyo University of Science, Department of Materials Science and Technology, Japan
2. Tokyo University of Science, Department of Pure and Applied Chemistry, Japan

(PACRIM-GSP-043-2017) Improvement of Thermoelectric Properties and Phase Studies in p-type $Ca_3Co_4O_9$ Ceramics

A. Demirkesen*[1]; F. Kurt[1]; E. Yaris[1]; A. Ozdemir[1]; N. Solak[1]

1. Istanbul Technical University, Metallurgical and Materials Engineering, Turkey

(PACRIM-GSP-044-2017) Thermoelectric properties of V, Fe co-substituted $MnSi_\gamma$ synthesized by melt-grown method

M. Sato*[1]; H. Hamada[1]; K. Hayashi[1]; Y. Miyazaki[1]

1. Tohoku University, Applied Physics, Japan

(PACRIM-GSP-045-2017) Preparation and thermoelectric properties of Sn_2S_3 with electron lone pairs

W. Saito*[1]; H. Nagai[1]; K. Hayashi[1]; Y. Miyazaki[1]

1. Tohoku University, Applied Physics, Japan

(PACRIM-GSP-046-2017) Solvothermal Fabrication of Cesium Tungsten Bronze

Y. Yao*[1]; Y. Gao[1]

1. Shanghai University, School of Materials Science and Engineering, China

(PACRIM-GSP-047-2017) Fabrication of Depleted U_3O_8 Samples for use as a Fast Neutron Detector

B. Musicó*[1]; S. Lawson[1]; C. B. Shaver[1]; B. Rowell[1]; S. Dhungana[2]; G. Bhattarai[2]; M. Paquette[2]; A. Caruso[2]; T. T. Meek[1]

1. University of Tennessee, Materials Science and Engineering, USA
2. University of Missouri, Kansas City, Department of Physics and Astronomy, USA

(PACRIM-GSP-048-2017) Electrical Properties of Sintered U_3O_8

C. B. Shaver*[1]; S. Lawson[1]; B. Musicó[1]; B. Rowell[1]; S. Dhungana[2]; G. Bhattarai[2]; M. Paquette[2]; A. Caruso[2]; T. T. Meek[1]

1. University of Tennessee, Materials Science and Engineering, USA
2. University of Missouri, Kansas City, Department of Physics and Astronomy, USA

(PACRIM-GSP-049-2017) Low temperature sintering of hydroxyapatite-based waste form

M. u. Hassan*[1]; H. Ryu[1]

1. Korea Advanced Institute of Science and Technology, Republic of Korea

(PACRIM-GSP-050-2017) Characterization of the Stoichiometry of Sintered Depleted U_3O_8 using Automated Cerimetry

S. Lawson*[1]; C. B. Shaver[1]; B. Musicó[1]; B. Rowell[1]; S. Dhungana[2]; G. Bhattarai[2]; M. Paquette[2]; A. Caruso[2]; T. T. Meek[1]

1. University of Tennessee, Materials Science and Engineering, USA
2. University of Missouri, Kansas City, Department of Physics and Astronomy, USA

(PACRIM-GSP-051-2017) Physical properties of Inorganic Binder Based on Sodium Silicate Solution in Accordance with SiO_2/Na_2O ratio

W. Kim[2]; S. Ha[1]; W. Kim[1]; Y. Kim[2]; J. Park*[1]

1. DR AXION Enterprise Co. Ltd., Chemical Research Institute, Republic of Korea
2. Pusan National University, School of Materials Science and Engneering, Republic of Korea

(PACRIM-GSP-052-2017) In-situ sol-gel synthesis of titanium dioxide-graphene oxide heterostructures for water purification technologies

U. Naknikham*[1]; V. Boffa[1]; Y. Yue[1]

1. Inorganic Chemistry, Chemistry, Bioscience and Engineering, Denmark

(PACRIM-GSP-053-2017) Structure and synthesis of a garnet-type lithium ion conductor $Li_7La_3Zr_2O_{12}$

E. Yi*[1]; K. Yoon[1]; H. Hwang[1]

1. Inha University, Republic of Korea

(PACRIM-GSP-054-2017) Fabrication of all solid-state transparent thin film batteries using olivine structure

H. Lee*[1]; N. S. Parmar[1]; K. Kim[2]; J. Choi[1]

1. Korea Institute of Science and Technology, Center for Electronic Materials, Republic of Korea
2. Yonsei University, Department of Material science and Engineering, Republic of Korea

(PACRIM-GSP-055-2017) Dynamic behavior of wood: Investigating microstructural effects on the impact resistance of wood

A. K. Matsushita*[1]; D. Gonzalez[1]; M. B. Frank[1]; J. Jae[1]; J. McKittrick[1]

1. University of California, San Diego, USA

(PACRIM-GSP-056-2017) Optimization of Artificial Bone Construct Fabrication via Paste Extrusion 3D Printing

C. M. Gigliotti*[1]; R. W. Marks[3]; Z. R. Wilczynski[1]; J. Moore[2]; J. H. Adair[4]

1. Pennsylvania State University, Bioengineering, USA
2. Pennsylvania State University, Mechanical Engineering, USA
3. Pennsylvania State University, Biomedical Engineering, USA
4. Pennsylvania State University, Materials Science and Engineering, USA

(PACRIM-GSP-057-2017) Current progress in the designing of novel polymer matrix composites by Streolithography (SL)

E. Kramer*[1]; L. Yutrzenka[1]; D. Blue[1]; R. Larson[1]; S. Gupta[1]

1. University of North Dakota, Mechanical Engineering, USA

(PACRIM-GSP-058-2017) On the Design of Novel Ceramics based Scaffolds and Composites

K. Hall*[1]; S. Gupta[1]

1. University of North Dakota, Mechanical Engineering, USA

PACRIM Undergraduate Student Posters

Room: Grand Promenade

5:30 PM

(PACRIM-UGSP-001-2017) Effects of surface condition of HAp powders on microwave absorption behavior and Its catalysis Properties

R. Iwasaki*[1]; H. Nishikawa[1]; M. Fuji[1]; T. Shirai[1]

1. Nagoya Institute of Technology, Advanced Ceramics Research Center, Japan

(PACRIM-UGSP-002-2017) Fabrication of Electrical Conductive Alumina by Combination of Gel-casting and Inert Gas Sintering

M. Hattori*[1]; M. Nanko[2]; M. Fuji[1]; T. Shirai[1]

1. Nagoya Institute of Technology, Advanced Ceramics Research Center, Japan
2. Nagaoka University of Technology, Japan

(PACRIM-UGSP-003-2017) Effects of Milling Process on the Powder Surfaces and Its Dispersion Properties

W. Shimizu*[1]; M. Ishihara[1]; M. Fuji[1]; T. Shirai[1]

1. Nagoya Institute of Technology, Advanced Ceramics Research Center, Japan

(PACRIM-UGSP-004-2017) Preparation of highly dispersed Pd/SiO_2 catalysts: Effect of calcination temperature of SiO_2 on Pd dispersion

J. Kwon*[1]; J. Kim[1]; J. Park[3]; H. Lee[2]; M. Lee[1]

1. Korea Institute of Industrial Technology, Republic of Korea
2. Ulsan University, Chemical Engineering, Republic of Korea
3. DR AXION Co.Ltd, R&D center, Republic of Korea

(PACRIM-UGSP-005-2017) Influence of calcination temperature on Al_2O_3 structure properties and catalytic characteristics of Pd/Al_2O_3

M. Byun*[1]; J. Kim[1]; D. Park[2]; M. Lee[1]

1. Korea Institute of Industrial Technology, Republic of Korea
2. Department of Polymer Science and Chemical Engineering, Pusan National University, Republic of Korea

PACRIM Poster Session (non-student)

Room: Grand Promenade

5:30 PM

(PACRIM-P-001-2017) Modeling of structure and calculation of mechanical properties of ceramic nanoparticles with diamond-like structure

D. Zakarian*[1]; A. Khachatrian[1]; V. Kartuzov[1]; E. Kartuzov[1]

1. Frantzevich Institute for Problems of Materials Science NAS Ukraine, Ukraine

(PACRIM-P-002-2017) Deposition Kinetics and Characterizations of BN Coatings Deposited by Chemical Vapor Deposition

Y. Peng*[1]; A. Li[1]; M. Wang[1]; L. Jia[1]

1. Shanghai University, School of Materials Science and Engineering, China

(PACRIM-P-003-2017) Modeling the Formation of Sodium and Calcium Aluminosilicate Gels at the Mesoscale Using Coarse-Grained Monte Carlo

K. Yang[1]; C. White*[1]

1. Princeton University, Civil and Environmental Engineering, USA

(PACRIM-P-004-2017) Conductive Network in Complex Chalcogen-based Compounds

L. Xi*[1]; J. Yang[1]; X. Xu[2]; W. Zhang[1]; L. Chen[2]

1. Shanghai University, China
2. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

(PACRIM-P-005-2017) Preparation of mullite whiskers reinforced SiC/Al_2O_3 composites by Microwave Sintering

B. Fan*[1]; H. Wang[1]; R. Zhang[1]; K. Guan[1]

1. Zhengzhou University, College of Material Science and Engineering, China

(PACRIM-P-006-2017) Characteristics of $LiMn_2O_4$ synthesized by the rapid solid phase reaction using microwave for lithium ion battery

T. Hashizume[1]; A. Saiki[2]; T. Shimizu[3]; S. Miwa*[3]

1. University of Toyama, Organization for Promotion of Research, Japan
2. University of Toyama, Graduate School of Science and Engineering for Research, Japan
3. University of Toyama, Graduate School of Science and Engineering for Education, Japan

(PACRIM-P-007-2017) A Novel Sol-Gel Route to Synthesize $(Sr_{0.5}Ba_{0.5})Nb_2O_6$

S. Wu*[1]; T. Chen[1]; X. Liu[1]; X. Chen[1]

1. Zhejiang University, School of Materials Science and Engineering, China

(PACRIM-P-008-2017) Electrical Properties of SiC ceramics fabricated by spark plasma sintering

S. Jang[1]; Y. Kim*[1]; B. Jang[2]; T. Nishimura[2]

1. University of Seoul, Dept. of Materials Science & Engineering, Republic of Korea
2. National Institute for Materials Science (NIMS), Japan

(PACRIM-P-009-2017) Synthesis of soluble and meltable polymer precursors with low oxygen content for ZrC/SiC/C ultra-high-temperature ceramic nanocomposites

C. Shao*[1]; J. Wang[1]; X. Long[1]

1. National University of Defense Technology, Science and Technology on Advanced Ceramic Fibers and Composites Laboratory, China

(PACRIM-P-010-2017) One pot synthesis and pyrolysis of polyborosilazane to silicon boron nitride carbon

Z. Yang*[1]; Q. Chen[1]; D. Jia[1]; Y. Zhou[1]; Y. Liu[2]

1. Harbin Institute of Technology, China
2. China University of Geosciences, China

(PACRIM-P-011-2017) Fabrication of oxide-dispersion-strengthened FeCrAl alloy and its application to nuclear fuel cladding

D. Park*[1]; J. Park[1]; Y. Jung[1]; B. Choi[1]; H. Kim[1]; J. Yang[1]; Y. Koo[1]

1. Korea Atomic Energy Research Institute, Republic of Korea

(PACRIM-P-012-2017) Thermal diffusivity of Cu-Cu/RGO Composites

H. Lee*[1]

1. KITECH, Republic of Korea

(PACRIM-P-013-2017) Study of Size Separation of Sub-Millimeter Granular Material Using Vibro-Fluidization

J. Gowda[1]; J. Wollmershauser[1]; S. D. Johnson*[1]

1. Naval Research Laboratory, USA

(PACRIM-P-014-2017) Polycrystalline nanosialon material with low thermal conductivity

Z. Pedzich*[1]; W. Wierzba[1]; P. Putyra[2]; P. Rutkowski[1]; M. M. Bucko[1]

1. AGH University of Science and Technology, Department of Ceramics and Refractory Materials, Poland
2. Institute of Advanced Manufacturing Techniques, Poland

(PACRIM-P-015-2017) Application a high-pressure for superconducting materials synthesis

A. Sklyarova*[1]; S. Shinoda[1]; T. Nagumo[1]; H. Suematsu[1]

1. Extreme Energy-Density Research Institute, Nagaoka University of Technology, Japan

(PACRIM-P-016-2017) Relation between the applied pulse and current fluctuation cycle and morphology of YSZ thin films fabricated by the electrochemical deposition method

A. Saiki*[1]; T. Hashizume[2]; T. Fujita[1]

1. University of Toyama, Materials Science and Engineering, Faculty of Engineering, Japan
2. University of Toyama, Collaboration and Promotion Center for Industry and Academia, Japan

(PACRIM-P-017-2017) Microstructure and grain size distributions in magnesia-alumina spinel ceramics prepared by spark plasma sintering

T. Uhlirova[1]; V. Necina[1]; W. Pabst*[1]

1. University of Chemistry and Technology, Prague, Department of Glass and Ceramics, Czech Republic

(PACRIM-P-018-2017) Numerical modeling of elastic moduli and conductivity of porous alumina – effects of pore shape and pore size distribution

W. Pabst*[1]; E. Gregorova[1]; T. Uhlirova[1]

1. University of Chemistry and Technology, Prague, Department of Glass and Ceramics, Czech Republic

(PACRIM-P-019-2017) High-performance γ-alumina porous green bodies with hierarchical heterogeneities

A. Kocjan*[1]; T. Konegger[2]; A. Dakskobler[3]

1. Jozef Stefan Institute, Slovenia
2. Vienna University of Technology, Austria
3. VALL-CER d.o.o., Slovenia

(PACRIM-P-020-2017) Effect of microstructures of gelation freezing derived porous ceramics on thermal conductivity

C. Matsunaga*[1]; H. Hyuga[1]; Y. Yoshizawa[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Structural Materials Research Institute, Japan

(PACRIM-P-022-2017) Microstructural characterization of three-dimensionally networked porous carbon material using X-ray CT and FIB-Technique

R. Inoue*[1]; G. Li[1]; E. Kojo[1]; M. Nakajima[1]; Y. Kubota[2]; Y. Kogo[1]

1. Tokyo University of Science, Japan
2. Japan Aerospace Exploration Agency, Japan

(PACRIM-P-023-2017) Piezoceramic cellular foams

F. Eichhorn[1]; J. Biggemann[1]; S. Kellermann[1]; A. Kawai[2]; K. Kato[2]; K. Kakimoto[2]; T. Fey*[1]

1. Friedrich-Alexander University Erlangen-Nürnberg, Department Material Science and Engineering, Germany
2. Nagoya Institute of Technology, Department of Materials Science and Engineering, Graduate School of Engineering, Japan

(PACRIM-P-024-2017) Micro-Meso Porous Alkali Bonded Ceramics as Solid Adsorbent for CO_2 capture

V. Medri*[1]; E. Papa[1]; E. Landi[1]; F. Miccio[1]; M. Minelli[2]; F. Doghieri[2]

1. National Research Council of Italy, ISTEC, Italy
2. University of Bologna, Department of Civil, Chemical Environmental and Materials Engineering (DICAM), Italy

(PACRIM-P-025-2017) Thermally insulating mullite foams prepared with wheat flour – from preparation to tomography

E. Gregorova*[1]; T. Uhlirova[1]; W. Pabst[1]

1. UCT Prague, Department of Glass and Ceramics, Czech Republic

(PACRIM-P-026-2017) Temperature dependence of Young's modulus of silicate ceramics from the magnesia-alumina-silica system

E. Gregorova*[1]; T. Smolikova[1]; W. Pabst[1]

1. UCT Prague, Department of Glass and Ceramics, Czech Republic

(PACRIM-P-027-2017) Recycled glass foam for microwave absorber application

R. Benzerga*[1]; R. Lebullenger[2]; V. Laur[3]; L. Le Gendre[1]; Y. Lamri[1]; A. Sharaiha[1]; P. Queffelec[3]

1. IETR - University Rennes 1, France
2. ISCR - University Rennes 1, France
3. Lab-STICC UBO, France

(PACRIM-P-028-2017) Metamaterial for microwave absorption improvement of pyramidal absorbers

L. Pometcu[1]; A. Sharaiha[1]; R. Benzerga*[1]; P. Poliguen[2]

1. IETR - University Rennes 1, France
2. DGA/DS, France

(PACRIM-P-029-2017) Evaluation of Ceramic/Ceramic (Al_2O_3/Al_2O_3) Joint Interface Prepared via Brazing

M. Leylaz Mehrabadi*[1]

1. University of Tehran, School of Metallurgy and Materials Eng, Islamic Republic of Iran

(PACRIM-P-030-2017) New Applications of Graphene in GaN Based optoelectronics and Its Thermal Stability Study

C. Leiming*[1]

1. Zhengzhou University of Aeronautics, China

(PACRIM-P-031-2017) Microwave-assisted construct Ag/ZnO/g-C_3N_4 ternary micro/nano composites with enhanced photocatalytic activity under visible light irradiation

H. Lu*[1]; X. Li[1]; Z. Zhang[1]; R. Zhang[1]

1. Zhengzhou University, Materials Science and Engineering, China

(PACRIM-P-032-2017) Nano-glass ceramic cathodes for Li^+/Na^+ mixed-ion batteries

W. He*[1]; Y. Yue[2]

1. Qilu University of Technology, Shandong Key Laboratory of Glass and Functional Ceramics, China
2. Aalborg University, Section of Chemistry, Denmark

(PACRIM-P-033-2017) Controlled Synthesis of Various Copper Oxide Nanostructures as Functional Material for Gas Sensor

Y. Oh*[1]

1. Korea Institute of Science and Technology, Opto-Electronics Materials Devices Research Center, Republic of Korea

(PACRIM-P-034-2017) Active metal brazing substrates superior in thermal fatigue resistance obtained by highly-thermal conductive silicon nitrides with high toughness

H. Miyazaki*[1]; Y. Zhou[1]; S. Iwakiri[2]; H. Hirotsuru[2]; K. Hirao[1]; S. Fukuda[1]; N. Izu[1]; H. Hyuga[1]

1. National Institute of AIST, Advanced Manufacturing Research Institute, Japan
2. Denka. Co, Ceramic Research Dept., Japan

(PACRIM-P-035-2017) International Standards for Properties and Performance of Advanced Ceramics – Over 30 Years of ASTM Committee C28 Standards

M. G. Jenkins*[1]; J. Salem[2]; G. D. Quinn[3]; J. Helfinstine[4]; S. T. Gonczy[5]

1. Bothell Engineering and Science Technologies, USA
2. NASA Glenn Research Center, USA
3. NIST, USA
4. Corning Incorporated, USA
5. Gateway Materials Technology, USA

(PACRIM-P-036-2017) Adhesion measurement of thin silicate coatings on LAS glass substrates

M. Jeon*[1]; J. Lee[1]; Y. Han[2]; S. Lee[3]

1. Korea Testing Laboratory, Materials & Components Technology Center, Republic of Korea
2. Korea Institute of Ceramic Engineering and Technology, Republic of Korea
3. KC Glass & Materials, Republic of Korea

(PACRIM-P-037-2017) Preparation of separative-phase fancy glaze derived from iron ore slag

X. Wang*[1]

1. Shaanxi University of Science & Technology, China

(PACRIM-P-038-2017) Ball indentation test after thermal fatigue of plasma sprayed E/TBC

K. Lee*[1]; Y. Chae[1]; J. Park[2]

1. Kookmin University, School of Mechanical Systems Engineering, Republic of Korea
2. Korea Atomic Energy Research Institute, Republic of Korea

(PACRIM-P-039-2017) Rare earth ions doped fluorophosphate glass-fluoride crystal composites: The preparation and spectral properties

J. Fan*[1]; S. Chen[1]; L. Zhang[1]

1. Shanghai Institute of Optics and Fine Mechanics, China

(PACRIM-P-040-2017) The Cu matrix composites reinforced by TiN/TiB_2 particulates synthesized via self-propagating high temperature synthesis

J. Yin*[1]; Y. Zeng[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

(PACRIM-P-041-2017) Formation of nanostructure AlTiN coating layer on WC tool material

K. Kim*[1]; Y. Kim[1]; Y. Lee[1]; J. Lee[2]

1. Sejong University, Republic of Korea
2. Kong Ju National University, Republic of Korea

(PACRIM-P-042-2017) Boron nitride/Silicon nitride composites with high properties prepared by gas pressure sintering

L. Zhao*[1]; S. Lee[1]

1. Korea Institute of Materials Science, Republic of Korea

(PACRIM-P-043-2017) Elasticity and Structure of Silicate Glasses under in-situ Static and Shock-Wave Presssures

M. Manghnani*[1]; A. Hushur[2]; T. Sekine[5]; Q. Williams[4]

1. University of Hawaii, Hawaii Institute of Geophysics & Planetology, USA
2. Xinjiang University, China
4. University of Californa, Santa Cruz, USA
5. Center for High Pressure Science and Technology Advanced Research (HPSTAR), China

(PACRIM-P-044-2017) Crystal structure of the defect pyrochlore potassium tantalate on ion-exchanging dipped in sodium aqueous solution by Rietveld analysis

T. Hashizume*[1]; A. Saiki[2]; S. Miwa[3]

1. University of Toyama, Organization for Promotion of Research, Japan
2. University of Toyama, Graduate School of Science and Engineering for Research, Japan
3. University of Toyama, Graduate School of Science and Engineering for Education, Japan

(PACRIM-P-045-2017) A new AlB_{12} based composite with aluminum matrix

V. Kartuzov*[1]; P. Mazur[1]; O. Vasiliev[1]; V. Muratov[1]; Y. Kartuzov[1]

1. Institut for Problems of Materials Sciences NAS of Ukraine, Ukraine

(PACRIM-P-046-2017) Influence of Grain Size on the Mechanical Properties and Sputtering Resistance of h-BN Ceramics

X. Duan*[1]; D. Jia[1]; Z. Wang[1]; Z. Yang[1]; Y. Zhou[1]

1. Harbin Institute of Technology, China

(PACRIM-P-047-2017) Aerosol Deposition of MgB_2 as a novel processing method for superconducting tapes

D. Hanft*[1]; T. Stöcker[1]; P. Glosse[2]; S. Denneler[2]; T. Berthold[2]; M. Oomen[2]; S. Kauffmann-Weiss[3]; E. Günther[3]; F. Weis[4]; M. Weiss[4]; W. Häßler[5]; B. Holzapfel[3]; R. Moos[1]

1. University of Bayreuth, Functional Materials, Germany
2. Siemens AG, Germany
3. Karlsruhe Institute of Technology, Germany
4. Palas GmbH, Germany
5. Leibniz Institute for Solid State and Materials Research, Germany

(PACRIM-P-048-2017) Two-Stage Sintering of Nano-sized Yttria Stabilized Zirconia

E. Gorzkowski*[1]; J. Drazin[2]; S. Wimmer[1]

1. Naval Research Lab, USA
2. ASEE, USA

(PACRIM-P-049-2017) Dielectric Thick Film Produced via Aerosol Deposition

E. Gorzkowski*[1]; E. Patterson[2]; S. D. Johnson[1]

1. Naval Research Lab, USA
2. ASEE, USA

(PACRIM-P-050-2017) Plasma Emission during the Collision of Ceramic Particles on Aerosol Deposition

J. Akedo*[1]; T. Saeki[1]

1. ACT, AIST, Japan

(PACRIM-P-051-2017) Hybrid aerosol deposition towards delight design

K. Shinoda*[1]; T. Saeki[1]; M. Mori[1]; J. Akedo[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Advanced Coating Technology Research Center, Japan

(PACRIM-P-052-2017) Utilization of Al Scrap Waste and Fabrications of Advanced Ceramics

M. Shahien*[1]; E. M. Ewais[1]

1. Central Metallurgical Research & Development Institute, CMRDI, Refractory & Ceramic Materials Division, Advanced Materials Department, Egypt

(PACRIM-P-053-2017) Thermal Sprayed AlN Coatings from Deposition to Properties

M. Shahien*[1]; M. Shahien[2]; M. Yamada[1]; M. Fukumoto[1]

1. Toyohashi University of Technology, Mechanical Engineering, Japan
2. Central Metallurgical Research & Development Institute, CMRDI, Advanced Materials, Egypt

(PACRIM-P-054-2017) New Challenge on Suspension Plasma Spraying of Fine Ceramics

M. Shahien*[1]; M. Shahien[2]; M. Suzuki[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Advanced Coating Technology Research Center, Japan
2. Central Metallurgical Research and Development Institute, CMRDI, Advanced Materials, Egypt

(PACRIM-P-055-2017) Tribological characteristics of conventional and spark plasma sintered TiCN based cermets

V. Verma[1]; B. Kumar*[1]

1. IIT Roorkee, India

(PACRIM-P-056-2017) The friction properties of Zr-Cu-Si-N coatings synthesized by magnetron sputtering process with single alloying targets

K. Moon[1]; H. Lee[1]; T. Kim[1]; G. Bang[1]; S. Shin*[1]

1. KITECH, Heat Treatment Technology R&BD Group, Republic of Korea

(PACRIM-P-057-2017) The mechanical properties of Ti-Si based coating synthesized by magnetron sputtering process with single alloying targets

K. Moon[1]; H. Lee[1]; T. Kim[1]; G. Bang[1]; S. Shin*[1]

1. KITECH, Heat Treatment Technology R&BD Group, Republic of Korea

(PACRIM-P-058-2017) Selective Design of Graphene and Graphene Oxide Quantum dots for biolabelling application

S. Mhin*[1]; S. Kang[3]; H. Han[2]

1. Korea Institute of Industrial Technology, Heat treatment R&D group, Republic of Korea
2. Korea Institute of Industrial Technology, Republic of Korea
3. Hanyang University, Materials Science and Engineering, Republic of Korea

(PACRIM-P-059-2017) Low frictional coating of Ti contained nanocomposite and a-C:H layers for automobile components by the plasma enhanced chemical vapor deposition

Y. Cho*[1]; Y. Choi[1]; J. Sle[1]; K. Moon[1]

1. KITECH, Republic of Korea

(PACRIM-P-060-2017) 'Peeled-wire' like CNT-SiO_2 core-shell structure with self-exposed end caps

Y. Jeong*[1]; W. Han[2]

1. Korea Institute of Industrial Technology, Republic of Korea
2. Seoul Womens University, Department of Chemistry, Republic of Korea

(PACRIM-P-061-2017) Porous geopolymer insulating filling for basalt reinforced CMC

A. Natali Murri[1]; E. Landi[1]; V. Medri*[1]; L. Laghi[2]; C. Mingazzini[3]

1. CNR ISTEC, Italy
2. CertiMaC ScarL, Italy
3. ENEA, TEMAF, Italy

(PACRIM-P-128-2017) Preparation and Structure of Geopolymer-based Alkali-activated CFB Ash Composite for Removing Ni^{2+} from Wastewater

W. Mozgawa*[1]; M. Krol[1]

1. AGH University of Science and Technology, Faculty of Materials Science and Ceramic, Poland

(PACRIM-P-062-2017) Sintering behavior of Ag-Ni electrode powder with core-shell structure

K. Kim[1]; J. Koo[1]; J. Choi*[1]; Y. Han[1]

1. Korea Institute of Ceramic Engineering and Technology (KICET), Engineering Ceramic Center, Republic of Korea

(PACRIM-P-063-2017) Functional bulk MgB_2 – based superconductors for application in fault current limiters

T. Prikhna*[1]; V. Sokolovsky[2]; V. Meerovich[2]; V. Moshchil[1]; V. Sverdun[1]; A. Kozyrev[1]

1. Institute for Superhard Materials of the National Academy of Sciences of Ukraine, Ukraine
2. Ben-Gurion University of the Negev, Israel, Israel

(PACRIM-P-064-2017) $LaRNiMnO_6$ (R=Pr, Nd, Sm) Double Perovskite Ceramics as New Candidates for Multiferroic Materials

X. Chen*[1]; H. Lin[1]; X. Shi[1]

1. Zhejiang University, School of Materials Science and Engineering, China

(PACRIM-P-065-2017) Direct Fabrication of $BaTaO_2N$ film on Tantalum substrate by ammonothermal method

Y. Maruyama*[1]; T. Watanabe[1]

1. Meiji University, Japan

(PACRIM-P-066-2017) Optical and Electrical Properties of MSO/Ag/ MSO/ SiO_2 Hybrid Film Deposited on PET Film

G. Jang*[1]

1. Chungbuk National University, Materials Engineering, Republic of Korea

(PACRIM-P-067-2017) Fabrication and Study of Bi_2O_3-SiO_2 based Glass-ceramics

J. Xie*[1]; F. Zhang[1]; D. Lin[1]; T. Wang[1]; L. Zhang[1]; Y. Shi[1]

1. Optoelectronic Materials and Device Research Centre, Department of Electronics and Information Materials, School of Materials Science and Engineering, China

(PACRIM-P-068-2017) Fracture threshold of radius of curvature of a silver nanowires electrode for highly flexible devices

S. Kim*[1]; D. Kim[1]; J. Ahn[2]

1. Korea Institute of Science and Technology, Clean Energy Research Center, Republic of Korea
2. Korea Institute of Science and Technology(KIST), Advanced Analysis Center, Republic of Korea

(PACRIM-P-069-2017) High strength and transparent micro capillary ceramics via insert ceramic injection molding technology

S. Kim*[1]; D. Kim[1]; G. Choi[1]; J. Park[2]; G. Kim[3]

1. Korea Institute of Science and Technology, Clean Energy Research Center, Republic of Korea
2. MID Co., Ltd., Ceramic R&D Center, Republic of Korea
3. Kosma Co., Ltd., R&D Center, Republic of Korea

(PACRIM-P-070-2017) Ultrahigh Transparency Ce:GAGG Ceramic Prepared by Hot Isostatic Pressing Process

X. Chen*[1]; Y. Wu[1]

1. Alfred University, Kazuo Inamori School of Engineering, USA

(PACRIM-P-071-2017) Erbium oxyorthosilicate films prepared by sol-gel spin-coating

L. Fan[1]; Y. Wu*[1]; Y. Shi[2]

1. Alfred University, Materials Science, USA
2. Shanghai University, School of Materials Science and Engineering, USA

(PACRIM-P-072-2017) Investigation of cerium-modified barium titanate ceramics prepared by the sol-gel method

C. A. Stanciu*[1]; A. Ianculescu[1]; B. Vasile[1]; R. Trusca[1]; M. Cernea[2]; I. Pintilie[2]

1. Politechnica University of Bucharest, Department of Oxide Materials Science & Engineering, Romania
2. National Institute of Materials Physics, Romania

(PACRIM-P-073-2017) Microstructure of ZnO thin films by Raman spectroscopy

E. Burov*[1]; O. Majerus[2]; S. Grachev[1]; Y. Le Du[2]

1. Saint-Gobain, Laboartoire Mixte Saint-Gobain/CNRS, France
2. Ecole Nationale Supérieure de Chimie de Paris, LCMCP (Chimie ParisTech), France

(PACRIM-P-074-2017) Concentration-dependent Cytotoxicity of Sub-micron Oxide Particles in Prostate Cancer Cells

J. G. Fisher*[1]; U. Farooq[1]; E. Hwang[5]; U. Thuan[4]; Y. Jung[4]; J. Lee[3]; V. Lakshmanan[2]

1. Chonnam National University, Materials Science and Engineering, Republic of Korea
2. Chonnam National University Medical School, Biomedical Sciences, Republic of Korea
3. Chonnam National University Hwasun Hospital, Research Center for Cancer Immunotherapy, Republic of Korea
4. Chonnam National University Medical School, Biochemistry, Republic of Korea
5. Chonnam National University Hwasun Hospital, Urology, Republic of Korea

(PACRIM-P-075-2017) Usage of layered silicates for observation on photophysical interaction between dye molecules and metal nanoparticles

M. Eguchi*[1]

1. National Institute for Materials Science (NIMS), Japan

(PACRIM-P-076-2017) New wide-gap, p-type conductive oxide, $Sn_2M_2O_7$ (M=Nb and Ta) pyroclore

N. Kikuchi*[1]; K. Nishio[2]; Y. Aiura[1]; S. Akane[2]; S. Ikeda[2]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan
2. Tokyo University of Science, Japan

(PACRIM-P-077-2017) Innovative Copper-containing Ceria-based Anodes for Intermediate Temperature Solid Oxide Fuel Cells

A. Iannaci*[1]; V. De Marco[2]; V. M. Sglavo[2]

1. Istituto nazionale scienza e tecnologia dei materiali INSTM, Italy
2. University of Study of Trento, Italy

(PACRIM-P-078-2017) Synthesis of lanthanum silicate apatite type from the basic catalysis reaction of sodium silicate

C. Yamagata*[1]; F. S. Silva[1]; V. Ribas de Morais[1]

1. Nuclear and Energy Research Institute, Department of Material Science and Engineering, Brazil

(PACRIM-P-079-2017) Measurement of the fracture energy of glass/steel joints in planar solid oxide cell stacks

K. Agersted*[1]; H. Abdoli[2]; P. Alizadeh[3]; B. F. Sørensen[4]; H. L. Frandsen[1]; D. Boccaccini[1]

1. Technical University of Denmark, DTU Energy, Denmark
2. Science and Research Branch, Islamic Azad University, Department of Materials Engineering, Islamic Republic of Iran
3. Tarbiat Modares University, Department of Materials Science and Engineering, Islamic Republic of Iran
4. Technical University of Denmark, DTU Wind Energy, Denmark

(PACRIM-P-080-2017) Optimisation of sealing process and interfaces between glass-ceramic sealing and SOC stack components

K. Agersted*[1]; F. Smeacetto[2]; A. Gianfranco[2]; I. Ritucci[1]; R. Kiebach[1]

1. Technical University of Denmark, DTU Energy, Denmark
2. Politecnico di Torino, Department of Applied Science and Technology, Italy

(PACRIM-P-081-2017) The effect of carbon nanostructured materials on the hydrogen release of light metal-borohydrides

A. Nale[1]; F. Pendolino[1]; A. Maddalena[1]; P. Colombo*[1]

1. University of Padova, Industrial Engineering, Italy

(PACRIM-P-082-2017) Analysis of property and application of LSCF–SCDC composite cathode materials

Y. Wu*[1]; C. Li[1]

1. National Taipei University of Technology, Institute of Material Science and Engineering, Taiwan

(PACRIM-P-083-2017) Crystal structure and low-temperature thermoelectric properties of metastable cubic $Ge_2Sb_2Te_5$ bulk material

T. Omoto[1]; I. Yamada[2]; Y. Kubota[1]; A. Kosuga*[1]

1. Osaka Prefecture University, Department of Physical Science, Graduate School of Science, Japan
2. Osaka Prefecture University, Nanoscience and Nanotechnology Research Center, Research Organization for the 21st Century, Japan

(PACRIM-P-084-2017) Evolution of herringbone structures in GeTe-based thermoelectric materials with adding elements

H. Lee*[1]; S. Kim[1]; S. Lee[1]; S. Lee[1]; J. Jo[1]

1. Kyungpook National University, Materials Science and Engineering, Republic of Korea

(PACRIM-P-085-2017) Preparation and properties of $Bi_2Se_xTe_{3-x}$ Bulk Materials

J. Zheng[1]; S. Chen[1]; K. Cai*[1]

1. Tongji University, School of Materials Science & Engineering, China

(PACRIM-P-086-2017) Synthesis and thermoelectric characterization of silicon and metal silicides nanocomposites

K. Kurosaki*[1]; S. Tanusilp[1]; Y. Ohishi[1]; H. Muta[1]; S. Yamanaka[1]

1. Osaka University, Japan

(PACRIM-P-087-2017) Weak chemical bonds contributing to the intrinsically low thermal conductivity in α-MgAgSb thermoelectric materials

T. Zhu*[1]; X. Zhao[1]

1. Zhejiang University, Materials Science and Engineering, China

(PACRIM-P-088-2017) Growth behavior of Bi_2Te_3 and Sb_2Te_3 thin films on graphene substrate grown by plasma-enhanced chemical vapor deposition

C. Lee[1]; G. Kim[1]; Y. Lee*[1]

1. Korea Research Institute of Chemical Technology, Advanced Materials Division, Republic of Korea

(PACRIM-P-089-2017) Optical, electrical and magnetic properties of SiC ceramics and related composites

Z. Huang*[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

(PACRIM-P-090-2017) A facile process to prepare n-type carbon buckypapers and their enhanced thermoelectric performance

Y. Yoo*[1]

1. Korea Research Institute of Chemical Technology, Republic of Korea

(PACRIM-P-091-2017) Novel semi-transparent inorganic thin film solar cells based on ultrathin Sb_2S_3 films prepared by atomic layer deposition

D. Kim*[1]; S. Sung[1]; S. Lee[1]; S. Park[1]; K. Yang[1]; J. Kang[1]

1. Daegu Gyeongbuk Institute of Science and Technology, Convergence Research Center for Solar Energy, Republic of Korea

(PACRIM-P-092-2017) Electrical and Optical Properties of In-Zn-Sn-O Thin Films

H. Y. Lee*[1]; M. Putri[1]

1. Yeungnam University, Materials Science and Engineering, Republic of Korea

(PACRIM-P-093-2017) Prodigiosin pigment as natural sensitizer for TiO_2 films and its potential use as photovoltaic material in solar cells

P. Hernández-Velasco[1]; M. Rodríguez-Delgado[2]; J. Villarreal-Chiu*[1]

1. Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Laboratorio de Biotecnología, Mexico
2. Tecnológico de Monterrey, Laboratorio de Nanotecnología Ambiental, Centro del Agua para América Latina y el Caribe, Mexico

(PACRIM-P-094-2017) Fabrication of $CuSbS_2$ compound films by metal stack sulfurization for photovoltaic applications

S. Sung*[1]; D. Kim[1]; S. Park[1]; S. Lee[1]; K. Yang[1]; J. Kang[1]

1. Daegu Gyeongbuk Institute of Science and Technology, Convergence Research Center for Solar Energy, Republic of Korea

(PACRIM-P-095-2017) Effect of Lead and Tellurium Oxides on Contact Formation of Silicon Solar Cells

M. Naylor*[1]; R. Mayberry[1]; M. Hoerteis[1]

1. Heraeus Precious Metals North America, LLC, Photovoltaics Global Business Unit, USA

(PACRIM-P-128-2017) Nanostructures of Thin films for photoelectrochemical water splitting

P. Zhang*[1]; L. Gao[1]; X. Song[1]

1. Shanghai Jiao Tong University, School of Materials Science and Engineering, China

(PACRIM-P-096-2017) Effects of (Fe+He) Irradiation on Ti_3AlC_2: characterization of defects and microstructure evolution

L. Pang*[1]

1. Institute of Modern Physics, Chinese Academy of Sciences, China

(PACRIM-P-097-2017) Oxygen potential, oxygen diffusion, electrical conductivity and defect equilibria in PuO_{2-x}

M. Watanabe*[1]; M. Kato[1]

1. Japan Atomic Energy Agency, Japan

(PACRIM-P-098-2017) Materials for radioactive ion beam sources: From glassy carbon to lanthanum hexaboride

S. Rothe*[1]

1. CERN, Engineering Department, Switzerland

(PACRIM-P-099-2017) Low-cost preparation method for anti-dirt coating on concrete block using titanium oxide photocatalytic powder

S. Ono*[1]; N. Kishikawa[1]; S. Kawase[1]; T. Hayashi[1]; N. Asano[1]

1. Nagoya Municipal Industrial Research Institute, Japan

(PACRIM-P-101-2017) Adaptation of the Chevron-Notch Beam Fracture Toughness Method to Large Specimens Harvested from Diesel Particulate Filters

A. Wereszczak[1]; O. Jadaan[2]; M. Modugno[1]; G. W. Hatala[2]; M. Lance*[1]

1. Oak Ridge National Lab, USA
2. University of Mount Union, USA

(PACRIM-P-102-2017) Parasitic Reactions in Nano-sized Silicon Anodes for Lithium-ion Batteries

H. Gao*[1]; Y. Ren[2]; X. Zuo[2]; G. Xu[1]; L. Xiao[3]; I. Plümel[3]; H. Wiggers[3]; K. Amine[1]; Z. Chen[1]

1. Argonne National Lab, Chemical Science and Engineering Division, USA
2. Argonne National Laboratory, X-ray Science Division, Advanced Photon Source, USA
3. University of Duisburg-Essen, Institute for Combustion and Gas Dynamics–Reactive Fluids (IVG), Germany

(PACRIM-P-103-2017) Conditioning the safety index of Ni-rich cathode oxides for lithium ion batteries

J. Gim*[1]; B. T. Yonemoto[1]; J. Liu[1]; H. Gao[1]; G. Xu[1]; K. Amine[1]; Z. Chen[1]

1. Argonne National Lab, CSE, USA

(PACRIM-P-104-2017) Study on Performance Enhancement Mechanism of Hydrogenated $Li_4Ti_5O_{12}$ using Ptychography

J. Eom*[1]

1. Korea Automotive Technology Institute (KATECH), Clean & Energy Materials R&D Center, Republic of Korea

(PACRIM-P-105-2017) Case Studies on Non-Aqueous Zn Ion Systems to Develop Multivalent Ion Batteries

S. Han*[1]; P. Senguttuvan[1]; S. Kim[1]; A. L. Lipson[1]; S. Tepavcevic[1]; B. Ingram[1]; T. Fister[1]; C. Johnson[1]; J. Vaughey[1]

1. Argonne National Lab, USA

(PACRIM-P-106-2017) Advancing automotive Li-ion batteries with Aerosol-based synthesis of high-voltage cathode materials

D. Zarvalis[1]; G. Gkanas[1]; G. Kastrinaki[1]; S. Lorentzou*[1]; A. G. Konstandopoulos[1]

1. CERTH, Aerosol & Particle Technology Laboratory, APTL, Greece

(PACRIM-P-107-2017) Li_2ZrO_3 -coated Overlithiated Layered Oxides for the High Performance Cathode Material in Lithium Ion Batteries

J. Park[1]; Y. Kwon[1]; H. Kim[1]; Y. Lee[1]; W. Choi*[1]

1. Korea Institute of Science and Technology, Center for Energy Convergence, Republic of Korea

(PACRIM-P-108-2017) Hollow MoS2-carbon anode materials synthesized with a space-confined reaction for high performance lithium ion batteries

X. Song*[1]; Z. Sun[1]; P. Zhang[1]; L. Gao[1]

1. Shanghai Jiao Tong University, China

(PACRIM-P-109-2017) Synthesis and Electrochemical properties of Li_2CO_3-coated Nanocrystalline Fe_2O_3 anodes for Li-ion Batteries

Y. Liu*[1]; Y. Yang[1]; M. Gao[1]; H. Pan[1]

1. Zhejiang University, School of Materials Science and Engineering, China

(PACRIM-P-110-2017) Carbon-sphere-intercalated holey graphene electrode for high energy density electrochemical capacitors

S. Wu[2]; K. Hui[3]; K. Hui*[1]

1. University of Macau, Institute of Applied Physics and Materials Engineering, Macao
2. Pusan National University, School of Materials Science and Engineering, Republic of Korea
3. University of East Anglia, Faculty of Science, United Kingdom

(PACRIM-P-111-2017) Directing the lithium-sulfur reaction pathway via sparingly solvating electrolytes for high energy density batteries

C. Lee*[1]; Q. Pang[4]; S. Ha[2]; L. Cheng[3]; L. Nazar[4]; K. G. Gallagher[2]; M. Balasubramanian[1]

1. Argonne National Lab, XSD, USA
2. Argonne National Lab, CSE, USA
3. Argonne National Lab, MSD, USA
4. University of Waterloo, Canada

(PACRIM-P-112-2017) Millimeter-Wave Heating of Lossy Ceramics for Beamed Energy Applications

B. Jawdat*[1]; B. W. Hoff[1]; M. Hilario[2]; F. Dynys[3]

1. Air Force Research Lab, USA
2. University of Southern California, USA
3. NASA Glenn Research Center, USA

(PACRIM-P-113-2017) Effects of Electron Beam Irradiation on the Electrical Properties of ZnO Thin Film Transistor

B. Jun*[1]; J. Choi[1]; I. Cho[1]; C. Kim[1]

1. Korea Atomic Energy Research Institute, Neutron Utilization Technology Division, Republic of Korea

(PACRIM-P-114-2017) Development of High Reliability Glass-Polymer Laminates

M. Lanagan*[1]; M. Sarkarat[2]; M. Yuan[2]; R. Rajagopalan[2]; Z. Shihai[3]

1. Pennsylvania State University, Dept. of Engineering Science and Mechanics, USA
2. Pennsylvania State University, Materials Research Institute, USA
3. PolyK Technologies LLC, USA

(PACRIM-P-116-2017) Biodeterioration of Ancient Glasses and Implications to the Long-term Modeling of Glass Alteration

J. L. Weaver*[1]; C. Pearce[1]; P. DePriest[2]; R. Koestler[2]; R. Sjoblom[3]; D. Peeler[1]; A. A. Kruger[4]

1. Pacific Northwest National Laboratory, USA
2. Smithsonian, Museum Conservation Institute, USA
3. Lulea University of Technology, Sweden
4. Department of Energy, Office of River Protection, USA

(PACRIM-P-117-2017) Alteration of glass fiber vs. glass powder: Reducing uncertainty in rate measurement

B. Parruzot*[1]; A. A. Kruger[2]; J. Ryan[1]

1. Pacific Northwest National Lab, Energy and Environment Directorate, USA
2. Department of Energy, Office of River Protection, USA

(PACRIM-P-118-2017) Thermal and Radiation Stability of Magnesium Potassium Phosphate Cements for Waste Encapsulation

L. J. Gardner*[1]; C. L. Corkhill[1]; S. A. Bernal[2]; J. Provis[1]; N. C. Hyatt[1]

1. The University of Sheffield, Materials Science and Engineering, United Kingdom
2. The University of Sheffield, Civil and Structural Engineering, United Kingdom

(PACRIM-P-119-2017) Synthesis and characterization of simulant corium materials produced from meltdown of the Chernobyl reactor Unit 4

N. C. Hyatt*[1]; S. T. Barlow[1]; D. Bailey[1]; A. J. Fisher[1]; C. L. Corkhill[1]; M. C. Stennett[1]

1. The University of Sheffield, Materials Science & Engineering, United Kingdom

(PACRIM-P-120-2017) Multicomponent diffusion and crystallization in borosilicate glass melt

H. Pablo[1]; S. Schuller*[1]; M. Roskosz[2]; M. Toplis[3]; E. Gouillart[4]; T. Charpentier[5]

1. CEA, DTCD, France
2. MNHN, France
3. IRAP, France
4. Saint-Gobain Recherche, France
5. CEA, DSM, France

(PACRIM-P-121-2017) Applications of ellipsometry to the analysis of corroded glass surfaces

T. Kaspar*[1]; J. Ryan[2]; J. Reiser[3]

1. Pacific Northwest National Lab, Physical and Computational Sciences Directorate, USA
2. Pacific Northwest National Lab, Energy and Environment Directorate, USA
3. Washington State University, USA

(PACRIM-P-122-2017) Effects of processing parameters on microstructure and crystallization behaviour of sol-gel SiO_2-P_2O_5-CaO bioglass

S. Mollazadeh*[1]

1. Ferdowsi University of Mashhad, Engineering, Islamic Republic of Iran

(PACRIM-P-123-2017) Thermal stability of Si-hydroxyapatite synthesised by solution combustion methode

S. Mollazadeh*[1]

1. Ferdowsi University of Mashhad, Engineering, Islamic Republic of Iran

(PACRIM-P-124-2017) Machinability and Cellular Responses of (Y,Nb)-TZP for Dental Implants

Y. Jo[1]; D. Kim*[2]; J. Han[3]

1. Seoul National University, Dental Research Institute, Republic of Korea
2. Sejong University, Department of Advanced Materials Engineering, Republic of Korea
3. Seoul National University, Department of Prosthodontics, School of Dentistry, Republic of Korea

(PACRIM-P-125-2017) In vitro and in vivo study of a novel zirconia/tantalum biocermet for hard tissue implants

J. F. Bartolomé*[1]; A. Smirnov[1]; J. Moya[1]; R. Couceiro[2]; F. Guitian[3]; A. Martínez-Insua[3]

1. Instituto de Ciencia de Materiales de Madrid (ICMM) - Consejo Superior de Investigaciones Científicas (CSIC), Spain
2. Translational Medical Oncology; Health Research Institute of Santiago (IDIS); Fundacion Ramon Dominguez, SERGAS, Spain
3. Instituto de Cerámica de Galicia, Universidad de Santiago de Compostela (USC), Spain

(PACRIM-P-126-2017) Co-electrospray of Mesemchymal Stem Cells and Gene with Non-viral Vector in Hydrogel Microspheres for Enhanced Stem Cell-based Therapy

Q. Zhao[1]; H. Sun[1]; M. Wang*[1]

1. The University of Hong Kong, Department of Mechanical Engineering, Hong Kong

(PACRIM-P-127-2017) Polymer-metal Hybrid Nanoparticles as a Novel Gene Vector for Cancer Imaging and Therapy

Q. Guan[1]; M. Wang*[1]

1. The University of Hong Kong, Department of Mechanical Engineering, Hong Kong

Wednesday, May 24, 2017

GOMD Award Lectures

Stookey Lecture of Discovery

Room: Kona 5

8:30 AM

Introduction

8:35 AM

(GOMD-PL-002-2017) In Pursuit of Perfect Glass: Fifty Years and Still At It (Invited)

P. C. Schultz*[1]

1. Peter Schultz Consulting, LLC., Virgin Islands (U.S.)

9:30 AM

Break

GOMD Symposium 1: Fundamentals of the Glassy State

Glass Formation and Relaxation I

Room: Kona 4

Session Chairs: Ellyn King, Corning Incorporated; Pierre Lucas, Univ of Arizona

9:45 AM

(GOMD-S1-048-2017) Link between Elasticity and Viscosity of Glass-forming Systems (Invited)

L. Huang*[1]; S. Jaccani[1]

1. Rensselaer Polytechnic Institute, Materials Science and Engineering, USA

10:10 AM

(GOMD-S1-049-2017) Structure, Dynamics and Glass Formation – New Insight from Metallic Glass-Forming Liquids (Invited)

K. F. Kelton*[1]

1. Washington University, Physics, USA

10:35 AM

(GOMD-S1-050-2017) Revisiting the Stretched Exponential Relaxation of Glasses

O. Gulbiten*[1]; J. C. Mauro[1]

1. Corning Incorporated, Science & Technology Division, USA

10:50 AM

(GOMD-S1-051-2017) Activation Enthalpy of Anelastic Relaxation in Ionomer Glasses using Impulse Excitation Technique

A. K. Swarnakar[1]; A. Stamboulis[2]; O. Van der Biest*[1]

1. K U Leuven, Materials Engineering, Belgium
2. University of Birmingham, School of Metallurgy and Materials, United Kingdom

11:05 AM

(GOMD-S1-052-2017) Importance of liquid fragility for energy applications of ionic liquids

S. Krohns*[1]; P. Sippel[1]; P. Lunkenheimer[1]; A. Loidl[1]

1. University of Augsburg, Experimental Physics V, Germany

11:20 AM

(GOMD-S1-053-2017) Influence of Equilibrium and Nonequilibrium Viscosities on Delayed Elasticity

Z. Zheng*[1]; J. C. Mauro[1]; D. C. Allan[1]; X. Guo[1]; O. Gulbiten[1]

1. Corning Incorporated, USA

11:35 AM

(GOMD-S1-054-2017) Enthalpy Relaxation and its Correlation to the Medium-Range Structural Evolution in a Hyperquenched SiO_2–Al_2O_3 System

Y. Zhang*[1]; D. Zhao[2]; Y. Yue[3]

1. Qilu University of Technology, China
2. Unifrax I LLC, USA
3. Aalborg University, Denmark

11:50 AM

(GOMD-S1-055-2017) Correlation between Fragility and Configurational Heat Capacity in Calcium Aluminosilicate Glasses

T. K. Bechgaard*[1]; J. C. Mauro[2]; M. Bauchy[3]; Y. Yue[1]; L. R. Jensen[1]; M. M. Smedskjaer[1]

1. Aalborg University, Denmark
2. Corning Incorporated, USA
3. University of California, Los Angeles, USA

GOMD Symposium 3: Optical and Electronic Materials and Devices: Fundamentals and Applications

Photon and glass interaction

Room: Kona 3

Session Chairs: Matt Dejneka, Corning Incorporated; Xiaoju Guo, Corning Incorporated

9:45 AM

(GOMD-S3-037-2017) Femtosecond Laser-Matter Interactions in Ternary Zinc Phosphate Glasses (Invited)

D. Krol*[1]

1. University of California, Davis, Materials Science and Engineering, USA

10:15 AM

(GOMD-S3-038-2017) Ultrafast Laser Modification of Optical Glasses

D. K. Dobesh*[1]; S. T. Locker[1]; S. K. Sundaram[1]

1. Alfred University, Glass Science, USA

10:30 AM

(GOMD-S3-039-2017) Thermal and Structural Analysis of Ultrafast Laser Irradiated Oxide Glasses

S. T. Locker*[1]; P. Tumurugoti[2]; S. K. Sundaram[2]

1. Alfred University, Glass Science, USA
2. Alfred University, USA

10:45 AM

(GOMD-S3-040-2017) Formation of Nanoscale Surface Deformation in Fused Silica by CO_2 Laser Pulses

B. Nayak*[1]

1. Corning Incorporated, USA

11:00 AM

(GOMD-S3-041-2017) Compositional trends and energy dependence of photoinduced effects in spin-coated chalcogenide glass thin films

A. Kovalskiy*[1]; M. White[1]; J. Allen[1]; J. Bunton[1]; J. R. Oelgoetz[1]; R. Golovchak[1]; P. Xiong-Skiba[1]; M. Vlcek[2]

1. Austin Peay State University, Department of Physics and Astronomy, USA
2. University of Pardubice, Center of Materials and Nanotechnologies, Faculty of Chemical Technology, Czech Republic

11:15 AM

(GOMD-S3-042-2017) Chalcogenide glasses – their micro/nanostructuring, examples of applications

M. Vlcek*[1]; L. Loghina[1]; S. Slang[1]; J. Buzek[3]; K. Palka[3]; A. Kovalskiy[2]

1. FCHT University of Pardubice, Center of Materials and Nanotechnologies, Czech Republic
2. Austin Peay State University, Department of Physics and Astronomy, USA
3. FCHT University of Pardubice, Department of General and Inorganic Chemistry, Czech Republic

11:30 AM

(GOMD-S3-043-2017) Tellurite glass film for enhanced emission and collection efficiency of NV center in nanodiamond

X. Pan*[1]; J. Zhao[1]; Y. Ruan[1]; H. Ebendorff-Heidepriem[1]

1. ARC Centre of Excellence for Nanoscale BioPhotonics, Institute for Photonics and Advanced Sensing and School of Physical Sciences, the University of Adelaide, Australia

Optical Fibers

Room: Waikoloa 3

Session Chair: Bruno Bureau, University of Rennes 1

9:45 AM

(GOMD-S3-044-2017) Fluoride Glass Fibers (Invited)

M. Saad*[1]

1. Thorlabs, R&D, USA

10:15 AM

(GOMD-S3-045-2017) Development of all-solid chalcogenide microstructured optical fibers

J. Troles*[1]; C. Caillaud[1]; G. Renversez[2]; T. Jouan[1]; L. Brilland[3]

1. University of Rennes 1, France
2. Institut Fresnel, UMR 7249, France
3. SelenOptics, France

10:30 AM

(GOMD-S3-046-2017) Molten Core Fabrication of Intrinsically Low Nonlinearity Glass Optical Fibers

M. Cavillon*[1]; J. Ballato[1]; P. Dragic[2]; C. Kucera[1]; T. Hawkins[1]

1. Clemson University, Materials Science and Engineering, USA
2. University of Illinois at Urbana-Champaign, Department of Electrical and Computer Engineering, USA

10:45 AM

(GOMD-S3-047-2017) Tellurium based fibers for far infrared

C. Boussard-Pledel*[1]; S. Cui[1]; B. Bureau[1]; J. Lucas[1]

1. University of Rennes, France

GOMD Symposium 4: Glass Technology and Crosscutting Topics

Glass Corrosion III: Novel Interrogation Methods

Room: Kona 2

Session Chairs: John McCloy, Washington State University; Mike Harrison, National Nuclear Laboratory

9:45 AM

(GOMD-S4-026-2017) Mechanistic Studies of Ancient Glass Corrosion

J. Ryan*[1]

1. Pacific Northwest National Lab, USA

10:00 AM

(GOMD-S4-027-2017) Unique Insight into Glass Corrosion Dynamics by In Situ Hyperspectral Raman Imaging

L. Dohmen*[2]; C. Lenting[1]; T. Geisler[1]

1. University of Bonn, Germany
2. Schott AG, Germany

10:15 AM

(GOMD-S4-028-2017) Glass Alteration In-Situ Monitoring using Raman Spectroscopy

B. Parruzot*[1]; A. Lines[1]; C. D. Lukins[1]; J. Ryan[1]

1. Pacific Northwest National Lab, Energy and Environment Directorate, USA

10:30 AM

(GOMD-S4-029-2017) Nanoscale and Multi-Isotope Tracer Observations at the Borosilicate Glass Corrosion Interface

C. Lenting*[1]; M. Kilburn[2]; M. Klinkenberg[3]; O. Plümper[4]; T. Geisler[1]

1. Uni Bonn, Steinmann-Institut, Germany
2. The University of Western Australia, Centre for Microscopy, Characterisation and Analysis, Austria
3. Forschungszentrum Juelich, Institut für Energie- und Klimaforschung, Germany
4. Universiteit Utrecht, Earth Sciences, Netherlands

10:45 AM

(GOMD-S4-030-2017) About the relevance of ion beam irradiations to simulate the radiation aging of nuclear glass

S. Peuget[1]; A. Mir*[2]; S. Miro[1]; C. Jegou[1]

1. CEA, France
2. University of Huddersfield, School of Computing and Engineering, United Kingdom

11:00 AM

(GOMD-S4-031-2017) Influence of Irradiation on the Structure and Corrosion of Borosilicate Glasses

N. Krishnan[1]; M. Wang[1]; B. Wang*[1]; J. C. Mauro[2]; G. Sant[1]; M. Bauchy[1]

1. University of California, Los Angeles, Civil and Environmental Engineering, USA
2. Corning Incorporated, USA

11:15 AM

(GOMD-S4-032-2017) Chemical durability of iron phosphate waste forms containing 40 wt% of a high MoO_3 Collins-CLT waste with different cooling rates

J. Hsu*[1]; J. Bai[1]; R. Brow[1]; C. Kim[2]; J. Szabo[2]; A. Zervos[2]

1. Missouri S&T, USA
2. MO-SCI Corporation, USA

11:30 AM

(GOMD-S4-033-2017) High Alumina Borosilicate Glass Development for High-Level Waste, Part I: Toxic Leaching Characteristic Procedure and Product Consistency Test

Y. Chou*[1]; M. J. Schweiger[1]; J. Vienna[1]; J. B. Lang[1]; V. Gervasio[1]; N. L. Canfield[1]; L. P. Darnell[1]; R. L. Russell[1]; B. McCarthy[1]; G. Piepel[1]; S. K. Cooley[1]; K. M. Fox[2]; T. Edwards[2]; A. A. Kruger[3]

1. Pacific Northwest National Lab, USA
2. Savannah River National Lab, USA
3. US DOE, USA

GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium

GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium I

Room: Kona 5

Session Chairs: Himanshu Jain, Lehigh University; Ralf Müller, Bundesanstalt für Materialforschung und -prüfung (BAM)

9:45 AM

Opening Remarks (T.Honma)

10:00 AM

(GOMD-S6-001-2017) Design and Control of Crystallization in Oxide Glasses (Invited)

T. Komatsu*[1]

1. Nagaoka University of Technology, Japan

10:45 AM

(GOMD-S6-002-2017) Fortunate Period and Experience in Komatsu Lab (Invited)

T. Fujiwara*[1]

1. Tohoku University, Applied Physics, Japan

11:15 AM

(GOMD-S6-003-2017) Diffusion processes controlling viscous flow and crystallization in silicate liquids (Invited)

E. D. Zanotto*[1]; F. Tiemi[1]; R. Lancelotti[1]; D. R. Cassar[1]; A. M. Rodrigues[1]; R. Nuernberg[1]; M. L. Nascimento[2]

1. UFSCar, DEMa, Brazil
2. Universidade Federal da Bahia, Faculty of Sciences, Brazil

PACRIM Symposium 07: Porous Ceramics: Innovative Processing and Advanced Applications

Mechanical Properties of Porous Ceramics

Room: King's 2

Session Chairs: Günter Motz, University of Bayreuth; Yuki Kubota, Japan Aerospace Exploration Agency

8:30 AM

(PACRIM-S7-029-2017) Comparison of 4 point bending and compression test on porous ceramics (Invited)

M. Stumpf[1]; B. Zierath[1]; T. Fey*[1]

1. Friedrich-Alexander University Erlangen-Nürnberg, Department Material Science and Engineering, Germany

9:00 AM

(PACRIM-S7-030-2017) Experimental investigation and analysis of mechanical properties of three-dimensionally networked porous carbon material

R. Inoue*[1]; L. Geng[1]; E. Kojo[1]; M. Nakajima[1]; Y. Kubota[2]; Y. Kogo[1]

1. Tokyo University of Science, Japan
2. Japan Aerospace Exploration Agency, Japan

9:20 AM

(PACRIM-S7-031-2017) Are minimum solid area models useful?

W. Pabst*[1]; E. Gregorova[1]

1. University of Chemistry and Technology, Prague, Department of Glass and Ceramics, Czech Republic

9:40 AM

Break

Novel Engineering Applications of Porous Ceramics II

Room: King's 2

Session Chairs: Tobias Fey, Friedrich-Alexander University Erlangen-Nürnberg; Ryo Inoue, Tokyo University of Science

10:15 AM

(PACRIM-S7-032-2017) Gas Flow Sputtered Thermal Barrier Coatings for Turbine Components

N. Rösemann*[2]; K. Ortner[1]; M. Bäker[2]; J. Petersen[1]; G. Bräuer[3]; J. Rösler[2]

1. Fraunhofer Institute for Surface Engineering and Thin Films IST, Germany
2. TU Braunschweig, Institute for Materials, Germany
3. TU Braunschweig, Institute for Surface Technology, Germany

10:35 AM

(PACRIM-S7-033-2017) Microstructure characterization of porous ceramics via Minkowski functionals

W. Pabst*[1]; T. Uhlirova[1]; E. Gregorova[1]

1. University of Chemistry and Technology, Prague, Department of Glass and Ceramics, Czech Republic

10:55 AM

(PACRIM-S7-034-2017) Thermal Conductivity of Foam Glasses Prepared using High Pressure Sintering

M. B. Østergaard*[1]; R. R. Petersen[1]; J. Konig[2]; M. Bockowski[3]; Y. Yue[1]

1. Aalborg University, Chemistry and Bioscience, Denmark
2. Jozef Stefan Institute, Advanced Materials Department, Slovenia
3. Polish Academy of Sciences, Institute of High Pressure Physics, Poland

PACRIM Symposium 10: Multifunctional Nanomaterials and Their Heterostructures for Energy and Sensing Devices

Nano- and Heterostructures for Solar Energy Capture and Conversion (PV, Solar Fuels, Catalysis) I

Room: Queen's 5

Session Chair: Sanjay Mathur, University of Cologne

8:30 AM

(PACRIM-S10-001-2017) On the Effects of Design, Interfacial Electronic Structure and Dimensions on the Performance & Stability of Photoelectrodes for Solar Water Splitting (Invited)

L. Vayssieres*[1]

1. Xian Jiaotong University, IRCRE, School of Energy & Power Engineering, China

8:55 AM

(PACRIM-S10-002-2017) Reducing charge recombination of hematite electrodes for solar water oxidation by controlling grain boundary effect (Invited)

A. M. de Freitas[1]; F. L. de Souza*[1]

1. Federal University of ABC, Center of Natural Science and Humanity, Brazil

9:20 AM

Break

Nano- and Heterostructures for Solar Energy Capture and Conversion (PV, Solar Fuels, Catalysis) II

Room: Queen's 5

Session Chair: Sanjay Mathur, University of Cologne

10:00 AM

(PACRIM-S10-003-2017) Visible Light-driven Water Splitting on Semiconductor Metal Oxide Photoanodes (Invited)

J. Augustynski*[1]

1. Centre for New Technologies, Warsaw University, Poland

10:30 AM

(PACRIM-S10-004-2017) Design and constructing of Fe_3O_4/ Graphene super-paramagnetic nano-architecture for photo-catalytic hydrogen Evolution driven by visible light

W. Zhang*[1]; G. Lu[1]

1. Lanzhou Institute of Chemical Physics, Chinese Academy of Science, State Key Laboratory for Oxo Synthesis and Selective Oxidation, China

10:45 AM

(PACRIM-S10-005-2017) The enhancement of carrier conductivity and charge mobility by iodine doping on graphene oxide and their roles on solar hydrogen generation

G. Lu*[1]

1. Lanzhou Institute of Chemical Physics, China

11:00 AM

(PACRIM-S10-006-2017) From precursors to functional materials: Nanostructured thin-films for energy harvesting, storage and conversion (Invited)

Y. Gönüllü*[1]; A. Möllmann[1]; J. Leduc[1]; M. Pyeon[1]; D. Bialuschewski[1]; S. Öz[1]; E. Jung[1]; T. Fischer[1]; S. Mathur[1]

1. University of Cologne, Institute of Inorganic Chemistry, Germany

PACRIM Symposium 11: Engineering Ceramics: Processing and Characterizations

Mechanical Properties III

Room: King's 1

Session Chairs: Jingyang Wang, Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences; Tohru Suzuki, National Institute for Materials Science

8:30 AM

(PACRIM-S11-035-2017) Capability of plastic deformation in $RE_2Si_2O_7$ disilicates (Invited)

J. Wang*[1]

1. Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences, High-performance Ceramics Division, China

9:00 AM

(PACRIM-S11-036-2017) Mechanical properties of textured alumina prepared by colloidal processing in a magnetic field

T. S. Suzuki*[1]; T. Uchikoshi[1]; B. Kim[1]; K. Morita[1]

1. National Institute for Materials Science, Japan

9:15 AM

(PACRIM-S11-037-2017) Microstructural Effects on Glass-Ceramic Mechanical Response and Slow Crack Growth Behavior

K. T. Strong*[1]; S. Dai[2]; D. Bencoe[3]; T. Diebold[1]; K. Ewsuk[3]

1. Sandia National Laboratories, Material Mechanics and Tribology, USA
2. Sandia National Laboratories, Microsystem Packaging and Polymer Processing, USA
3. Sandia National Laboratories, Electrical, Optical, & Nano Materials, USA

9:30 AM

(PACRIM-S11-038-2017) Synthesis, characterization and properties of a glass-ceramic material based on the system $BaO\text{-}TiO_2\text{-}Ta_2O_5\text{-}B_2O_3\text{-}Al_2O_3$

A. I. Sánchez-Vázquez*[1]; J. J. Ruiz-Valdés[1]; A. Álvarez-Méndez[1]; J. Ibarra-Rodríguez[1]

1. Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico

9:45 AM

(PACRIM-S11-039-2017) Toughening mechanisms in the $ZrO_2\text{-}YO_{1.5}\text{-}TaO_{2.5}$ ternary system

S. Heinze*[1]; C. Levi[1]

1. UC Santa Barbara, Materials, USA

10:00 AM

Break

Mechanical Properties IV

Room: King's 1

Session Chair: Rajan Tandon, Sandia National Laboratories

10:15 AM

(PACRIM-S11-040-2017) Failure Modes and Mechanics of Fracture in Co-Fired Engineering Ceramics (Invited)

R. Tandon*[1]; A. Thom[2]

1. Sandia National Laboratories, USA
2. Medtronic Inc, USA

10:45 AM

(PACRIM-S11-041-2017) Charcterization and Modeling of Microstructural level Stresses in Brittle Materials

M. Teague*[1]; S. Grutzik[1]; T. Buchheit[1]

1. Sandia National Laboratories, USA

11:00 AM

(PACRIM-S11-042-2017) Anisotropic heterogeneities for improved fracture toughness – using mica as a model system

M. T. Johnson*[1]; T. Ekeh[1]; N. R. Brodnik[1]; K. Faber[1]

1. California Institute of Technology, Applied Physics and Materials Science, USA

11:15 AM

(PACRIM-S11-043-2017) Fracture of Wet Particulate Materials: Effect of Saturation on the Toughness

M. L. Sesso*[1]; G. Franks[1]

1. The University of Melbourne, Department of Chemical and Biomolecular Engineering, Australia

11:30 AM

(PACRIM-S11-044-2017) Sense-Dependent Fracture Toughness in Additively Manufactured Composites with Anisotropic Heterogeneities

N. R. Brodnik*[1]; C. Hsueh[2]; K. Bhattacharya[1]; G. Ravichandran[2]; K. Faber[1]

1. California Institute of Technology, Materials Science, USA
2. California Institute of Technology, Mechanical Engineering, USA

11:45 AM

(PACRIM-S11-045-2017) Sintering, structure and properties of AlB_{12}–based ceramics

T. Prikhna*[1]; P. Barvitskiy[1]; V. Sverdun[1]; R. A. Haber[2]; V. Muratov[3]; V. Domnich[2]; S. Dub[1]; M. Karpets[3]; V. Kovylaev[4]

1. Institute for Superhard Materials of the National Academy of Sciences of Ukraine, Ukraine
2. Rutgers University, The State University of New Jersey, Department of Materials Science and Engineering, USA
3. Institute for Problems in Material Science of the National Academy of Sciences of Ukraine, Ukraine
4. "Proton-21" Electrodynamics Laboratory (EDL), Ukraine

PACRIM Symposium 12: Design, Development, and Applications of Ceramic-Matrix Composites

CMC I

Room: Kohala 3

Session Chair: Walter Krenkel, University of Bayreuth

8:30 AM

(PACRIM-S12-002-2017) SiC_f/SiC Ceramic Matrix Composites' Durability Dependence on Mechanical and Thermal Loading Histories (Invited)

A. S. Almansour*[1]; J. D. Kiser[1]; C. Smith[1]; R. Bhatt[2]

1. NASA Glenn Research Center, Ceramic and Polymer Composites Branch, USA
2. Ohio Aerospace Institute at NASA GRC, Ceramic and Polymer Composites Branch, USA

8:55 AM

(PACRIM-S12-003-2017) Determination of material properties for short fiber reinforced ceramic matrix composite under bending load

Y. Shi*[1]; D. Koch[1]

1. DLR - German Aerospace Center, Institute of Structures and Design, Ceramic Composites and Structures, Germany

9:10 AM

(PACRIM-S12-004-2017) Preparation of interphase in C/SiC composites and the effect on mechanical properties

Y. Zhu*[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, Structural Ceramics Engineering Research Center, China

9:25 AM

(PACRIM-S12-005-2017) Al_2O_3-based ceramic with high density prepared under high temperature gradient direction solidification (Invited)

K. Gao*[1]; X. Guo[1]; R. Zhang[1]

1. Zhengzhou University of Aeronautics, Henan Key Laboratory of Aeronautical Material and Application Technology, China

9:50 AM

Break

10:05 AM

(PACRIM-S12-006-2017) Oxidation behaviors of SiC_f/SiC composite ablated by Kerosene-Oxygen flame (Invited)

J. Park*[1]; B. Lim[2]; H. Moon[3]; H. Lee[1]; D. Kim[1]; W. Kim[1]

1. Korea Atomic Energy Research Institute, Nuclear Materials Development Division, Republic of Korea
2. Dai Yang Ind. Co., Republic of Korea
3. SeWon Hardfacing, Co., Republic of Korea

10:30 AM

(PACRIM-S12-007-2017) Materials & Processing, Design & Analysis, Testing & Data Review in Support of CMH-17 for CMCS in Aero Applications An Overview and Progress to Date

M. G. Jenkins*[1]; J. E. Gallego[1]

1. Bothell Engineering and Science Technologies, USA

10:45 AM

(PACRIM-S12-008-2017) The mechanical properties of CMCs torque tube

X. Liu*[1]; L. Cheng[1]

1. Northwestern Polytechnical University, China

11:00 AM

(PACRIM-S12-009-2017) Mechanical behavior of C/SiC composite under atomic oxygen environment

D. Wang*[1]; X. Liu[1]

1. Northwestern Polytechnical University, School of Materials Science and Engineering, China

11:15 AM

(PACRIM-S12-010-2017) Microstructure, mechanical properties and oxidation resistance of SiC_f/SiC composites incorporated with boron nitride nanotubes

G. Zhu*[1]; S. Dong[1]; D. Ni[1]; C. Xu[2]; D. Wang[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, CMCs Laboratory, China
2. Florida State University, USA

PACRIM Symposium 14: Novel Spray Coatings

Fine Particle Spray Technology

Room: King's 3

Session Chairs: Jun Akedo, AIST; Sanjay Sampath, Stony Brook University

8:30 AM

(PACRIM-S14-001-2017) Development of Anti-scratch and Highly Transparent Alumina Coating using Aerosol Deposition (Invited)

J. Park*[1]

1. IONES, Republic of Korea

9:00 AM

(PACRIM-S14-002-2017) Deposition of Transparent Alpha-Alumina on Glass by Granule Spray in Vacuum

D. Park*[1]; S. D. Johnson[2]; B. Hahn[1]; J. Ryu[1]; W. Yoon[1]; J. Choi[1]; J. Kim[1]

1. Korea Institute of Materials Science, Republic of Korea
2. Naval Research Laboratory, USA

9:15 AM

(PACRIM-S14-003-2017) Uniform and dense Al_2O_3 coating fabricated from fine particles by low power rf induction plasma

T. Saeki*[1]; K. Shinoda[1]; M. Mori[2]; J. Akedo[1]

1. National Institute of Advanced Industrial Science and Technology(AIST), Advanced Coating Technology Research Center (ACT-RC), Japan
2. (Ryukoku University), National Institute of Advanced Industrial Science and Technology (AIST), Japan

9:30 AM

(PACRIM-S14-004-2017) Fine Ceramic Coating Deposition by 4 kW Plasma Spraying System

M. Shahien*[1]; M. Shahien[2]; M. Suzuki[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Advanced Coating Technology Research Center, Japan
2. Central Metallurgical Research and Development Institute, CMRDI, Advanced Materials, Egypt

9:45 AM

(PACRIM-S14-005-2017) Thermal sprayed dense ceramic coating fabricated by using fine particle

K. Sato*[1]

1. Fujimi Incorporated, Thermal Spray Dept., Japan

10:00 AM

Break

Process Improvement of Aerosol Deposition

Room: King's 3

Session Chairs: Kentaro Shinoda, National Institute of Advanced Industrial Science and Technology (AIST); Balu Balachandran, Argonne National Laboratory

10:15 AM

(PACRIM-S14-006-2017) An Empirical Growth Dynamics Model for Aerosol Deposited Films (Invited)

S. D. Johnson*[1]; D. Park[2]

1. Naval Research Laboratory, USA
2. Korea Institute of Materials Science, Republic of Korea

10:45 AM

(PACRIM-S14-007-2017) Some novel aspects when manufacturing alumina films by the Aerosol Deposition Method (ADM)

R. Moos*[1]; M. Schubert[1]; J. Exner[1]; M. Hahn[1]; N. Leupold[1]; J. Kita[1]

1. University of Bayreuth, Dept. of Functional Materials, Germany

11:00 AM

(PACRIM-S14-008-2017) Study on Improving Deposition Efficiency of Aerosol Deposition Method (Invited)

K. Naoe*[1]; M. Nishiki[1]

1. Hitachi, Ltd., Research & Development Group, Japan

11:30 AM

(PACRIM-S14-009-2017) Mechanism Investigation of Ceramic Thick Film Coating on Plastic/Resin Layer by Aerosol Deposition Method

H. Noda*[1]; J. Akedo[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Advanced Coating Technology Research Center, Japan

11:45 AM

(PACRIM-S14-010-2017) High temperature water vapor stability of thermal reflection coating formed by aerosol deposition

M. Tanaka*[1]; S. Hori[2]; S. Kitaoka[1]; M. Yoshida[2]; O. Sakurada[2]; K. Nishioka[3]; Y. Kagawa[3]

1. Japan Fine Ceramics Center, Japan
2. Gifu University, Japan
3. The University of Tokyo, Japan

PACRIM Symposium 16: Geopolymers: Low-Energy and Environmentally-Friendly Ceramics

Geopolymers I

Room: Queen's 6

Session Chair: Claire White, Princeton University

8:30 AM

(PACRIM-S16-001-2017) Mechanical characterization of fly-ash/borosilicate based geopolymers (Invited)

G. Taveri*[1]; I. Dlouhy[1]

1. Institute of Physics of Materials, Czech Republic

9:00 AM

(PACRIM-S16-002-2017) Crystal engineering and reaction kinetics of functional metakaoline-based geopolymers (Invited)

M. Pernechele*[1]; T. Troczynski[1]; M. Ho[1]; R. Grutze[1]; M. Pawlik[1]

1. University of British Columbia, Material Engineering, Canada

9:30 AM

(PACRIM-S16-003-2017) Characterizing the role of water on the structure and mechanical properties of aluminosilicate geopolymers (Invited)

M. R. Sadat[2]; K. Muralidharan*[1]; L. Zhang[2]

1. University of Arizona, Materials Science and Engineering, USA
2. University of Arizona, Civil Engineering and Engineering Mechanics, USA

10:00 AM

Break

Geopolymers II

Room: Queen's 6

Session Chair: Krishna Muralidharan, University of Arizona

10:15 AM

(PACRIM-S16-004-2017) The material properties of cellulose nanofiber (CNF) reinforced metakaolin based geopolymer composites (Invited)

S. Cho*[1]

1. Hyundai Motor Group, Republic of Korea

10:45 AM

(PACRIM-S16-005-2017) Role of magnesium and amorphous calcium carbonate in reducing the extent of carbonation degradation in silicate-activated slag pastes (Invited)

E. McCaslin[1]; C. White*[1]

1. Princeton University, Chemical and Biological Engineering, USA

PACRIM Symposium 17: Advanced Functional Ceramics and Critical Materials Perspective

Advanced Functional Ceramics and Critical Materials Perspective IV

Room: Kohala 2

Session Chairs: Kazuyoshi Ogasawara, Kwansei Gakuin University; Yuji Noguchi, The University of Tokyo

9:45 AM

(PACRIM-S17-032-2017) Diagram Approach to the Inverse Problem to Find Novel Mn^{4+}-Doped Red Phosphors (Invited)

K. Ogasawara*[1]

1. Kwansei Gakuin University, Department of Chemistry, Japan

10:05 AM

(PACRIM-S17-033-2017) Microstructures and their relevance to photoluminescence in Eu^{2+} doped $SrAl_2O_4$

S. Mori*[1]

1. Osaka Prefecture University, Materials Science, Japan

10:20 AM

(PACRIM-S17-034-2017) Electromechanical coupling hysteresis curves of PZT epitaxial ferroelectric films determined by gigahertz ultrasonic method (Invited)

T. Yanagitani*[1]; T. Mori[2]; K. Wasa[3]

1. Waseda University, Japan
2. Nagoya Institute of Technology, Japan
3. Yokohama City University, Japan

10:40 AM

(PACRIM-S17-035-2017) Enhanced piezoresponse in polar perovskite oxides: Polarization twist in (Bi,Na)TiO_3-based ferrielectrics (Invited)

Y. Noguchi*[1]; Y. Kitanaka[1]; M. Miyayama[1]

1. The University of Tokyo, Department of Applied Chemistry, Japan

11:00 AM

(PACRIM-S17-036-2017) Ferroelectric and thermal Properties of $xPb(Zn_{0.5}Te_{0.5})O_3$-(1-x)PZT Ceramics (Invited)

G. Li[1]; X. Huang*[1]; J. Zeng[1]; X. Ruan[1]; X. Shi[1]; L. Zheng[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, Functional Ceramics and Devices, China

11:20 AM

(PACRIM-S17-037-2017) Enhanced energy storage density and its variation tendency in $CaZr_xTi_{1-x}O_3$ ceramcis

H. Zhou*[1]; X. Zhu[1]; X. Chen[1]

1. Zhejiang University, Materials Science and Engineering, China

PACRIM Symposium 20: Crystalline Materials for Electrical, Optical, and Medical Applications

Optical Material II

Room: Kohala 1

Session Chair: Xutang Tao, Shandong University

8:30 AM

(PACRIM-S20-028-2017) Interaction Between Localized Surface Plasmons and Yb^{3+} Doped Nonlinear Solid-State Gain Media (Invited)

L. Sanchez-García[1]; M. Ramirez[1]; P. Molina[1]; J. Carvajal[2]; M. Aguilo[2]; F. Diaz[2]; L. E. Bausa*[1]

1. Universidad Autonoma de Madrid, Fisica de Materiales, Spain
2. Universidad Rovira i Virgili, Fisica i Cristalografia de Materiales i Nanomaterials, Spain

9:00 AM

(PACRIM-S20-029-2017) Plasmon Enhanced SHG in Patterned Ferroelectric Crystals (Invited)

A. Gomez-Tornero[1]; P. Molina[2]; C. Tserkezis[2]; L. E. Bausa[1]; M. Ramirez*[1]

1. Universidad Autonoma de Madrid, Spain
2. Technical University of Denmark, Department of Photonics Engineering, Denmark

9:30 AM

(PACRIM-S20-030-2017) Core-shell structure induces new ground states in ceramics of strontium titanate (Invited)

B. Hehlen*[1]; J. Kiat[2]; M. Al-Sabbagh[1]; M. Anoufa[2]; C. Bogicevic[2]; A. Al-Zein[3]

1. University of Montpellier, Physics, France
2. Ecole centrale Paris, France
3. Beirut Arab University, Lebanon

10:00 AM

Break

10:15 AM

(PACRIM-S20-031-2017) Microstructure, compositional effects, and ionic conductivity relationship in highly conductive Nasicon glass-ceramics (Invited)

A. Martins Rodrigues*[1]; A. Cruz-Rodriguez[3]; J. Narváez-Semanate[2]; A. Muñoz Nieto[1]; J. Ortiz Mosquera[1]; R. Nuernberg[1]

1. Federal University of Sao Carlos, Materials Engineering, Brazil
2. Universidad del Cauca, Colombia
3. Institut de Ciència de Materials de Barcelona, Spain

10:45 AM

(PACRIM-S20-032-2017) Fabrication, Properties, and Solid-State NMR Investigation of a Highly Intertwined Lithium Disilicate Glass-Ceramic

S. Huang*[1]; Y. Li[1]; S. Wei[1]; Z. Zujovic[2]; Z. Huang[3]; W. Gao[1]; P. Cao[1]

1. University of Auckland, Department of Chemical and Materials Engineering, New Zealand
2. University of Auckland, Centre for NMR, School of Chemical Sciences, New Zealand
3. China University of Geosciences (Beijing), School of Materials Science and Technology, China

11:00 AM

(PACRIM-S20-033-2017) Translucent Mullite Ceramics with Anisotropic Grains (Invited)

A. Kocjan*[1]; M. Cesnovar[1]; D. Vengust[1]; T. Kosmac[1]; A. Dakskobler[2]

1. Jozef Stefan Institute, Slovenia
2. VALL-CER d.o.o., Slovenia

PACRIM Symposium 25: Ceramics for Next Generation Nuclear Energy

Advancements in Nuclear Reactor and Fuel Development

Room: Kona 1

Session Chair: Josef Matyas, PNNL

8:30 AM

(PACRIM-S25-034-2017) Development of MA-bearing MOX fuels for Next-Generation Nuclear Energy (Invited)

M. Kato*[1]

1. Japan Atomic Energy Agency, Fast Reactor Fuel Cycle Technology Development Department, Japan

9:00 AM

(PACRIM-S25-035-2017) Fabrication of $(U,Ce)O_2$ and $(U,Am)O_2$ pellets with controlled porosity from oxide microspheres

L. Ramond*[1]; P. Coste[1]; M. Bataille[1]; S. Picart[1]; A. Gauthé[1]

1. CEA, France

9:15 AM

(PACRIM-S25-036-2017) Fabrication process of neutron absorber inserted oxide fuel pellet

Q. M. Mistarihi[1]; M. Yahya[1]; Y. Kim[1]; H. Ryu*[1]

1. Korea Advanced Institute of Science and Technology, Republic of Korea

9:30 AM

(PACRIM-S25-037-2017) Feasibility Study of Zirconium Silicide as a Heavy Reflector in the Energy Multiplier Module (EM^2)

G. Jacobsen*[1]; H. Choi[1]; E. Song[1]; C. Deck[1]

1. General Atomics, Nuclear Technologies and Materials, USA

9:45 AM

(PACRIM-S25-038-2017) Hot Pressing of CeO_2 as a Surrogate for $^{238}PuO_2$ Ceramic Fuel Pellets used in Radioisotope Thermoelectric Generators

D. Kramer*[1]; S. M. Goodrich[1]; C. D. Barklay[1]

1. University of Dayton, USA

10:00 AM

Break

Development and Production of Critical Isotopes and Targets

Room: Kona 1

Session Chair: Alexander Gottberg, TRIUMF

10:15 AM

(PACRIM-S25-039-2017) Target materials for the production of radioisotopes: The importance of the microstructure (Invited)

J. Ramos*[1]

1. CERN, Engineering Department, Switzerland

10:45 AM

(PACRIM-S25-040-2017) Recent developments on ISOL targets for the SPES project for nuclear physics and applications

S. Corradetti*[1]; L. Biasetto[2]; S. Carturan[2]; F. Borgna[2]; M. Ballan[3]; M. Manzolaro[1]; M. Innocentini[4]; P. Colombo[2]; A. Andrighetto[1]

1. Istituto Nazionale di Fisica Nucleare, Laboratori Nazionali di Legnaro, Italy
2. University of Padova, Italy
3. University of Ferrara, Italy
4. University of Riberão Preto, Brazil

11:00 AM

(PACRIM-S25-041-2017) New Target Materials for Exotic Radioisotope Beams

A. Gottberg*[1]; P. Kunz[1]; L. Egoriti[1]; J. Wong[1]; P. Bricault[1]

1. TRIUMF, Targets and Ion Sources, Canada

11:15 AM

(PACRIM-S25-042-2017) High-Power Ceramic Target Materials for Isotope Beam Production at ISAC-TRIUMF

L. Egoriti*[1]; A. Gottberg[1]; P. Bricault[1]; P. Kunz[1]

1. TRIUMF, Canada

11:30 AM

(PACRIM-S25-043-2017) Radium Targets for the Reactor Production of Alpha Emitting Medical Radioisotopes

R. Copping*[1]; D. Denton[1]; K. Murphy[1]; J. Wright[1]; E. Hickman[1]; C. Marcus[1]; D. W. Stracener[1]; S. Mirzadeh[1]

1. Oak Ridge National Lab, USA

11:45 AM

(PACRIM-S25-044-2017) Astatine - The rarest element on Earth: isotope production, fundamental properties and applications

S. Rothe*[1]

1. CERN, Engineering Department, Switzerland

PACRIM Symposium 28: Advanced Materials and Technologies for Electrochemical Energy Storage Systems

Cell + Theory

Room: Waikoloa 2

Session Chair: Craig Arnold, Princeton University

8:30 AM

(PACRIM-S28-029-2017) Functioning of Insertion Battery Electrodes: Understanding the Correlation Between Local Phenomena and Macroscopic Output of Battery Cell (Invited)

M. Gaberscek*[1]

1. National Institute of Chemistry, Materials Chemistry, Slovenia

9:00 AM

(PACRIM-S28-030-2017) Coupling Mechanics and Electrochemistry in Li-ion Batteries: Strain Derivatives and Piezoelectrochemical Energy Harvesting (Invited)

C. B. Arnold*[1]

1. Princeton University, Department of Mechanical and Aerospace Engineering, USA

9:30 AM

(PACRIM-S28-031-2017) Computational insights into cation intercalation processes: Case studies of $Na_{2/3}Fe_{2/3}Mn_{1/3}O_2$ and Zr_2WO_8 (Invited)

J. Hart*[1]; O. Al Bahri[2]; N. Sharma[2]

1. UNSW Australia, School of Materials Science and Engineering, Australia
2. UNSW Australia, School of Chemistry, Australia

10:00 AM

Break

Negative

Room: Waikoloa 2

Session Chair: Miran Gaberscek, National Institute of Chemistry

10:15 AM

(PACRIM-S28-032-2017) First-principles molecular-dynamics study for solid-liquid interface film (Invited)

K. Sodeyama*[1]

1. National Institute for Materials Science (NIMS), Center for Materials Research by Information Integration (cMI2), Japan

10:45 AM

(PACRIM-S28-033-2017) Flexible elecrochemical energy storage devices based on 3D nitrogen-doped graphene foam with encapsulated germanium quantum dot (Invited)

H. Yang*[1]

1. Singapore University of Technology and Design, Singapore

11:15 AM

(PACRIM-S28-034-2017) Carbon Coated Metal Oxide Network for Lithium-Ion Battery Electrodes

H. Luo*[1]

1. New Mexico State University, USA

11:30 AM

(PACRIM-S28-035-2017) Investigation of battery conversion reaction kinetics in oxide in-plane nanostructures

J. Kim*[1]; T. Fister[1]; B. Lee[2]; A. Mane[3]; H. Suh[4]; J. Emery[5]; P. Nealey[4]; J. Elam[3]; P. Fenter[1]

1. Argonne National Lab, Chemical Sciences and Engineering Division, USA
2. Argonne National Lab, Advanced Photon Source, USA
3. Argonne National Lab, Energy Systems Division, USA
4. University of Chicago, Institute for Molecular Engineering, USA
5. Northwestern University, Materials Science and Engineering, USA

11:45 AM

(PACRIM-S28-036-2017) Understanding Irradiation Effect on the Structure and Electrochemical Charge Storage Properties of TiO_2 Anode for Lithium-ion Batteries

H. Xiong*[1]; K. A. Smith[1]; A. Savva[1]; J. Wharry[2]; D. P. Butt[3]

1. Boise State University, Materials Science and Engineering, USA
2. Purdue University, USA
3. University of Utah, USA

PACRIM Symposium 29: Advances in Polar, Magnetic and Semiconductor Materials: Extending Temperature Limits

High Frequency and High Temperature Materials

Room: Queen's 4

Session Chairs: Michael Lanagan, Penn State University; Paul Ohodnicki, National Energy Technology Laboratory

8:30 AM

(PACRIM-S29-025-2017) Development of Low Temperature Co-fired Alumina with a Small Quantity of Sintering Additives (Invited)

K. Shigeno*[1]; H. Fujimori[2]

1. National Institute of Technology (NIT), Ube College, Japan
2. Yamaguchi University, Japan

9:00 AM

(PACRIM-S29-026-2017) Development of efficient ferrite systems for operation at high temperature and high frequency (Invited)

P. Andalib[1]; Y. Chen[2]; V. G. Harris*[1]

1. Northeastern University, Electrical Engineering, USA
2. Rogers Innovation Center, USA

9:30 AM

(PACRIM-S29-027-2017) Characterization of High Temperature Dielectrics at Millimeter Wavelengths (Invited)

B. W. Hoff*[1]; M. Hilario[1]; B. Jawdat[1]; D. Agrawal[2]; M. Lanagan[2]; J. Cheng[2]; F. Dynys[3]

1. Air Force Research Lab, USA
2. The Pennsylvania State University, USA
3. NASA Glenn Research Center, USA

10:00 AM

Break

10:15 AM

(PACRIM-S29-028-2017) Elevated Temperature W-Band Dielectric Property Measurements of Alumina-Silicon Carbide and Yttria-Stabilized Zirconia Ceramic Composites

M. Hilario*[1]; B. W. Hoff[2]; B. Jawdat[2]

1. University of Southern California, USA
2. Air Force Research Lab, USA

10:30 AM

(PACRIM-S29-029-2017) The codes of matter: A simple model for design of new class of materials (Invited)

X. Wang*[1]

1. University of Wollongong, Australia

11:00 AM

(PACRIM-S29-030-2017) High thermal conductivity and high mechanical strength alumina base composites for chip type energy storage device packaging (Invited)

H. Kim*[1]; C. Kim[1]; E. Go[1]

1. Korea Institute of Ceramic Engineering and Technology (KICET), Nano Materials Convergence Center, Republic of Korea

11:30 AM

(PACRIM-S29-031-2017) Nanocomposite Soft Magnetic Materials for High Frequency and High Power Conversion Applications

P. Ohodnicki*[1]

1. National Energy Technology Laboratory, USA

11:45 AM

(PACRIM-S29-032-2017) Enhanced resonance magnetoelectric coupling in(1-1)connectivity composites

Z. Chu*[1]; H. Shi[1]; W. Shi[1]; J. Wu[1]; S. Dong[1]

1. Peking University, College of Engineering, China

PACRIM Symposium 31: Advances in Bioceramics: Biomineralization and Bioinspired Materials

Engineering of Hard Tissues II

Room: Monarchy

Session Chairs: Hui-suk Yun, Korea Institute of Materials Science; Joanna McKittrick, UC San Diego

8:30 AM

(PACRIM-S31-030-2017) Biomimetic mineralized elastin-like scaffolds and surfaces for biomedical applications (Invited)

C. Aparicio*[1]; Y. Li[1]; J. Rodriguez-Cabello[2]

1. University of Minnesota, Minnesota Dental Research Center for Biomaterials and Biomechanics, USA
2. University of Valladolid, GIR Bioforge, Spain

9:00 AM

(PACRIM-S31-031-2017) From Structure and Mechanics of Bone and Teeth to Surface Designs of Orthopaedic Implants (Invited)

R. Wang*[1]

1. University of British Columbia, Materials Engineering, Canada

9:30 AM

(PACRIM-S31-032-2017) Bio-inspired adhesive coating of scaffold materials for bone regeneration (Invited)

H. Shin*[1]

1. Hanyang University, Bioengineering, Republic of Korea

10:00 AM

Break

Bio-Inspiration for Mechanical Design

Room: Monarchy

Session Chairs: Joanna McKittrick, UC San Diego; Stephan Wolf, Friedrich-Alexander-University Erlangen-Neurnberg

10:15 AM

(PACRIM-S31-033-2017) Impact Resistant Biological Composites: Inspiration for the Next Generation of Multifunctional Materials

N. Yaraghi[1]; N. Suksangpanya[2]; L. Grunenfelder[1]; D. Restrepo Arango[2]; S. Herrera[1]; R. Wuhrer[3]; P. Zavattieri[2]; D. Kisailus*[1]

1. UC Riverside, Chemical and Environmental Engineering, USA
2. Purdue University, USA
3. Western Sydney University, Australia

10:30 AM

(PACRIM-S31-034-2017) Twisting cracks and other competing mechanisms in biomineralized Bouligand Structures (Invited)

N. Suksangpanya[1]; N. Guarin[1]; N. Yaraghi[2]; D. Kisailus[2]; P. Zavattieri*[1]

1. Purdue University, Lyles School of Civil Engineering, USA
2. University of California, Riverside, USA

11:00 AM

(PACRIM-S31-035-2017) Direct Measurement of Abrasion-Resistance in Sea Urchin Tooth (Invited)

H. Espinosa*[1]; A. Zaheri[2]

1. Northwestern University, Department of Mechanical Engineering, USA
2. Northwestern University, Theoretical and Applied Mechanics Program, USA

11:30 AM

(PACRIM-S31-036-2017) Mapping performance trade-offs for biologically-inspired design: Mimicking the tail skeletons of syngnathid fishes (Invited)

M. Porter*[1]

1. Clemson University, USA

12:00 PM

(PACRIM-S31-037-2017) Thermo-mechanical properties spider silks and low temperature derivation of graphitic fibers

T. Dugger[1]; H. Tang[1]; S. Correa[2]; S. Sarkar[1]; C. Hayashi[2]; D. Kisailus*[1]

1. UC Riverside, Materials Science and Engineering, USA
2. University of California Riverside, Biology, USA

PACRIM Young Investigators Forum: Design and Application of Next-Generation Multifunctional Materials-Addressing the New Millennium's Societal Challenges

Academics, Research, Industry, and Funding

Room: Kohala 4

Session Chairs: Surojit Gupta, University of North Dakota; Eva Hemmer, University of Ottawa; Valerie Wiesner, NASA Glenn Research Center

8:30 AM

(PACRIM-YIF-001-2017) The Impact of Materials Research and Education on Society (Invited)

L. D. Madsen*[1]

1. National Science Foundation, DMR, USA

9:00 AM

(PACRIM-YIF-002-2017) Do Not Forget the Right Characterization! (Invited)

I. Dutta*[1]; B. Wheaton[1]

1. Corning Incorporated, Characterization Sciences, USA

9:25 AM

(PACRIM-YIF-003-2017) Jumping... ahead? Travelling through a mixed research career between different countries....not permanent position reached yet (Invited)

A. Benayas*[1]

1. Institut National de la Recherche Scientifique, Energie Matériaux Télécommunications, Canada

9:50 AM

Panel Discussion

10:00 AM

Break

Next Generation High Temperature Ceramics based Materials

Room: Kohala 4

Session Chairs: Thomas Fischer, University of Cologne; Indrajit Dutta, Corning Incorporated; Akira Miura, Hokkaido University

10:15 AM

(PACRIM-YIF-004-2017) Polymer-derived ceramic sensors for High Temperature and Harsh Environment Applications (Invited)

G. Shao*[1]; C. Ma[1]; M. Jiang[1]; W. Zhao[1]; R. Zhang[2]; L. An[3]

1. Zhengzhou University, School of Materials Science and Engineering, China
2. Zhengzhou University of Aeronautics, China
3. University of Central Florida, Materials Science and Engineering, USA

10:40 AM

(PACRIM-YIF-005-2017) High-temperature durability of oxide-oxide ceramic matrix composites exposed to engine-relevant conditions (Invited)

M. J. Walock*[1]; V. Heng[3]; A. Nieto[1]; A. Ghoshal[1]; D. Driemeyer[2]; M. Murugan[1]

1. US Army Research Laboratory, Vehicle Technology Directorate, USA
2. The Boeing Company, Extreme Environmental Materials, USA
3. The Boeing Company, USA

11:05 AM

(PACRIM-YIF-006-2017) Developing Protective Coatings Resistant to Molten CMAS Damage to Enable Next-Generation, Efficient Aircraft Engines Utilizing CMC Components (Invited)

V. L. Wiesner*[1]

1. NASA Glenn Research Center, Materials and Structures Division, USA

11:30 AM

(PACRIM-YIF-007-2017) Fabrication of translucent and fluorescent Eu doped $CaAlSiN_3$ bulk ceramics by spark plasma sintering

T. Takahashi*[1]; J. Tatami[2]; M. Iijima[2]

1. Kanagawa Academy of Science and Technology, Japan
2. Yokohama National University, Japan

11:50 AM

(PACRIM-YIF-008-2017) On the development of novel MAXCER (MAX-Ceramics) Composites for Multifuncational Applications

J. Nelson*[1]; S. Gupta[1]

1. University of North Dakota, Mechanical Engineering, USA

GOMD Award Lectures

Norbert J. Kreidl Award Lecture

Room: Kona 5

12:00 PM

Introduction

12:05 PM

(GOMD-PL-003-2017) Stretched Exponential Relaxation of Glasses: Origin of the Mixed Alkali Effect (Invited)

Y. Yu*[1]; J. C. Mauro[2]; M. Bauchy[1]

1. University of California, Los Angeles, Civil and Environmental Engineering, USA
2. Corning Incorporated, Science and Technology Division, USA

GOMD Symposium 1: Fundamentals of the Glassy State

Glass Formation and Relaxation II

Room: Kona 4

Session Chairs: Ozgur Gulbiten, Corning Incorporated; Xiaoju Guo, Corning Incorporated

1:15 PM

(GOMD-S1-056-2017) Understanding the sub-T_g relaxation in mechanically excited chalcogenide glasses by comparison with hyperquenched glasses (Invited)

Y. Yue*[3]; A. Qiao[1]; H. Tao[1]

1. Wuhan University of Technology, China
3. Aalborg University, Denmark

1:45 PM

(GOMD-S1-057-2017) Non-Newtonian Rheology of Glass-Forming Liquids: Observation of Universal Patterns (Invited)

S. Sen*[1]; W. Zhu[1]; B. Aitken[2]

1. UC Davis, USA
2. Corning Incorporated, USA

2:15 PM

(GOMD-S1-058-2017) Contribution of relaxation processes in properties of glass articles obtained by rapid cooling

O. Prokhorenko*[1]

1. L.G.P. International, USA

2:30 PM

(GOMD-S1-059-2017) Impact of Ta or Ti Additions on the Structure and Properties of AlP Silicate Glasses

R. Youngman*[1]; B. Aitken[1]

1. Corning Incorporated, Science & Technology Division, USA

2:45 PM

(GOMD-S1-060-2017) Boron speciation in copper doped sodium aluminoborosilicate glasses

N. Lonnroth*[1]; R. Youngman[1]

1. Corning Incorporated, S&T, USA

3:00 PM

(GOMD-S1-061-2017) Properties of nitrogen rich Mg-Ca-Si-O-N glasses

S. Ali*[1]; J. C. Mauro[2]

1. Linnæus University, School of Engineering, Department of Built Environment and Energy Technology, Sweden
2. Corning Incorporated, Science and Technology Division, USA

3:15 PM

(GOMD-S1-062-2017) Structure and crystallization properties of Zn aluminosilicate glasses

L. Cormier*[1]; J. Brahamcha-Marin[1]; V. Montouillout[2]

1. UPMC - CNRS, Institut of Mineralogy, Material Sciences and Cosmochimie, France
2. CNRS, CEMHTI, France

3:30 PM

Break

3:45 PM

(GOMD-S1-063-2017) Atomic-scale in-situ observation of phase coarsening process in glass

K. Nakazawa*[1]; S. Amma[2]; T. Miyata[1]; T. Mizoguchi[1]

1. University of Tokyo, Institute of Industrial Science, Japan
2. Asahi Glass, Japan

4:00 PM

(GOMD-S1-064-2017) Redox processes in silicate melts

D. R. Neuville*[1]; M. Cicconi[2]

1. IPGP-CNRS-USPC, Géomatériaux, France
2. Universität Erlangen-Nürnberg, Department Werkstoffwissenschaften, Lehrstuhl für Glas und Keramik, Germany

4:15 PM

(GOMD-S1-065-2017) Transrotational Solid State Order Discovered by TEM in Crystallizing Amorphous Films and New Model of Amorphous State Based on Curved Lattice Clusters

V. Y. Kolosov*[1]

1. Ural Federal University, Institute of Natural Sciences, Russian Federation

4:30 PM

(GOMD-S1-066-2017) Universality in the Non-Newtonian Shear Thinning Behavior of Simple Binary Chalcogenide Liquids in the Systems As-Se and Ge-Se

W. Zhu*[1]; M. A. Marple[1]; B. Aitken[2]; S. Sen[1]

1. UC Davis, Materials Science Engineering, USA
2. Corning Incorporated, USA

4:45 PM

(GOMD-S1-116-2017) Structural Changes in Lead Phosphate Glasses doped with Vanadyl

C. Churya*[1]

1. Jawaharalal Nehru Technological University Hyderabad, Tirumala Engineering College, India

5:00 PM

(GOMD-S1-117-2017) Heterogeneous Nucleation Measurements by Differential Thermal Analysis

K. S. Ranasinghe*[1]; D. E. Day[2]; C. Ray[2]; G. Humble[3]

1. Kennesaw State University, Physics, USA
2. Missouri University of Science & Technology, USA
3. South Paulding High School, Physics and Physical Science Department, USA

Glass and Entropy

Room: Kona 3

Session Chair: Lothar Wondraczek, University of Jena

1:15 PM

(GOMD-S1-068-2017) The very different ways in which "excess" entropy develops above T_g in "fragile" vs "strong" liquid systems (Invited)

C. A. Angell*[1]

1. Arizona State University, School of Molecular Sciences, USA

1:45 PM

(GOMD-S1-069-2017) Revisit of entropy issues by using the concept of spatial sampling (Invited)

A. Takada*[1]; R. Conradt[2]; P. Richet[3]

1. Asahi Glass Company, Japan
2. RWTH Aachen University, Germany
3. Institut de Physique du Globe de Paris, France

2:15 PM

(GOMD-S1-070-2017) Configuration entropy: A glimpse into the molecular structure of melts (Invited)

D. R. Neuville*[1]; C. Le Losq[2]

1. IPGP-CNRS-USPC, Géomatériaux, France
2. The Australian National University, Research School of Earth Sciences, Australia

2:45 PM

(GOMD-S1-071-2017) Spin glass transition of amorphous oxides containing transition elements (Invited)

K. Tanaka*[1]

1. Kyoto University, Japan

3:15 PM

(GOMD-S1-072-2017) On the relation between glass composition, local structure, and macroscopic properties

R. Conradt*[1]

1. RWTH Aachen University, GHI, Germany

3:30 PM

Break

3:45 PM

(GOMD-S1-073-2017) Collective modes and thermodynamics of the liquid state (Invited)

K. Trachenko*[1]

1. Queen Mary University of London, Physics, United Kingdom

4:15 PM

(GOMD-S1-074-2017) Pressure-Promoted Relaxation: Access to Forbidden Glassy States (Invited)

M. M. Smedskjaer*[1]; M. N. Svenson[1]

1. Aalborg University, Department of Chemistry and Bioscience, Denmark

4:45 PM

(GOMD-S1-075-2017) Particle dynamics of disordered colloidal suspensions with varying interparticle attraction strength

P. Habdas[1]; Z. Brown[1]; M. Iwanicki[3]; M. Gratale[2]; X. Ma[2]; A. Yodh*[2]

1. Saint Joseph's University, Department of Physics, USA
2. University of Pennsylvania, Department of Physics and Astronomy, USA
3. University of Pennsylvania, Department of Biochemistry and Biophysics, USA

5:00 PM

(GOMD-S1-076-2017) Investigation of relaxation mechanisms in glasses by combined DSC, Raman and Brillouin spectroscopies

A. Veber*[1]; M. Cicconi[1]; D. de Ligny[1]

1. Friedrich-Alexander University Erlangen-Nürnberg, Materials Science and Engineering, Germany

5:15 PM

(GOMD-S1-077-2017) Effect of water on structure and dynamics of sodium borosilicate glasses

H. Behrens*[1]; U. Bauer[1]; S. Reinsch[2]; J. Stebbins[3]; E. I. Morin[3]; P. Kiefer[4]; J. Deubener[4]

1. Leibniz University of Hannover, Institute of Mineralogy, Germany
2. BAM Federal Institute for Materials Research and Testing, Germany
3. Stanford University, USA
4. TU Clausthal, Germany

GOMD Symposium 3: Optical and Electronic Materials and Devices: Fundamentals and Applications

Quantum Processes in Glasses I

Room: Kona 2

Session Chairs: S. Sundaram, Alfred University; Jun Yang, Corning Incorporated

1:15 PM

(GOMD-S3-049-2017) Quantum Mechanical Simulations of Silicate Glasses (Invited)

A. Cormack*[1]

1. Alfred University, USA

1:45 PM

(GOMD-S3-050-2017) Large-Area Luminescent Solar Concentrators Fabricated by Doctor-Blade Deposition of Quantum Dots onto Window Glass (Invited)

K. Wu[1]; H. Li[1]; J. Lim[1]; V. Klimov*[1]

1. Los Alamos National Laboratory, Chemistry, USA

2:15 PM

(GOMD-S3-051-2017) Glassy dynamics and a universal viscosity collapse of supercooled liquids as a consequence of the equilibrium liquid to solid transition (Invited)

Z. Nussinov*[1]

1. Washington University in Saint Louis, Physics, USA

2:45 PM

(GOMD-S3-052-2017) Surface Passivation of Quantum Dots in Glasses (Invited)

C. Liu*[1]; M. Xia[1]; J. Han[1]; X. Zhao[1]

1. Wuhan University of Technology, China

3:15 PM

Break

Quantum Processes in Glasses II

Room: Kona 2

Session Chairs: S. Sundaram, Alfred University; Jun Yang, Corning Incorporated

3:30 PM

(GOMD-S3-053-2017) Controllable Fabrication of Novel All Solid-State Quantum Dot-doped Glass Fibers (Invited)

G. Dong*[1]; J. Qiu[1]

1. South China University of Technology, School of Materials Science and Engineering, China

4:00 PM

(GOMD-S3-055-2017) Electric Field – Assisted Formation of Quantum Dots in Glasses

B. B. Tesfamariam*[1]; H. Lee[1]; J. Wang[2]; J. Heo[1]

1. Pohang University of Science and Technology(POSTECH), Department of Materials Science and Engineering, Republic of Korea
2. Wuhan University of Technology, State Key Laboratory of Silicate Materials for Architectures, China

Glass-based Optical Devices

Room: Waikoloa 3

Session Chair: Heike Ebendorff-Heidepriem, University of Adelaide

1:15 PM

(GOMD-S3-056-2017) Side-emitting optical fiber: Fabrication routes, properties and applications in functional lighting (Invited)

L. Wondraczek*[1]

1. University of Jena, Germany

1:45 PM

(GOMD-S3-057-2017) New technique for direct laser writing of a low-loss waveguide in chalcogenide glasses

D. Le Coq*[1]; E. Bychkov[2]; P. Masselin[2]

1. University of Rennes 1, ISCR - Glass and Ceramic Team, France
2. University of Littoral Côte d'Opale, France

2:05 PM

(GOMD-S3-058-2017) Nanocomposite Melting Gels with Gold Citrate Nanospheres

S. Kallontzi*[1]; L. Fabris[1]; L. C. Klein[1]; A. Jitianu[2]

1. Rutgers University, Materials Science and Engineering, USA
2. Lehman College-CUNY, Department of Chemistry and Biochemistry, USA

2:25 PM

(GOMD-S3-059-2017) Optical properties and structure in tin silicate glasses

A. Saitoh*[1]; K. Suzuki[1]; G. Tricot[2]; Y. Hashida[1]; M. Itadani[1]; H. Takebe[1]

1. Ehime University, Materials Science and Engineering, Japan
2. LASIR UMR-CNRS 8516, Université de Lille 1, France

2:45 PM

(GOMD-S3-060-2017) Generation of Au and Au/Ag nanostructures in soda-lime silicate glasses by ArF excimer laser irradiation

M. Dubiel*[1]; M. Heinz[1]; J. Meinertz[2]; J. Ihlemann[2]; A. Hoell[3]

1. Martin Luther University Halle-Wittenberg, Institute of Physics, Germany
2. Laser-Laboratorium Göttingen e.V., Germany
3. Institute of Nanospectroscopy, HZB Berlin, Germany

3:05 PM

(GOMD-S3-061-2017) Enhancing Accuracy of Refractive Index Determination of Glass Beads via Retroreflectivity Measurement

S. Shin[1]; W. Chung[2]; J. Kim[3]; S. Cho[4]; Y. Choi*[1]

1. Korea Aerospace University, Republic of Korea
2. Kongju National University, Republic of Korea
3. Korea Institute of Ceramic Engineering and Technology (KICET), Republic of Korea
4. Ewha Industrial Co. Ltd., Republic of Korea

3:25 PM

Break

3:40 PM

(GOMD-S3-062-2017) Pulsed Laser Deposition of Transparent Fluoride Glass

C. W. Bond*[1]; R. L. Leonard[1]; A. Petford-Long[2]; J. Johnson[1]

1. University of Tennesee, USA
2. Northwestern University, USA

4:00 PM

(GOMD-S3-063-2017) Glasses for diffusion-based IR-GRIN optics

D. Gibson*[1]; S. Bayya[1]; V. Nguyen[1]; J. Sanghera[1]; C. McClain[2]; M. Kotov[3]

1. NRL, Code 5622, USA
2. University Research Foundation, USA
3. Sotera Defense Solutions, USA

4:20 PM

(GOMD-S3-064-2017) Durable probe for reliable in-situ measurements of high-temperature NIR absorption of molten glass

O. Prokhorenko*[1]

1. L.G.P. International, USA

GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium

GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium II

Room: Kona 5

Session Chairs: Yoshihiro Takahashi, Tohoku University; Jianrong Qiu, South China University of Technology

1:15 PM

(GOMD-S6-004-2017) Crystallization of silicate glasses at deep and shallow undercoolings (Invited)

J. Deubener*[1]; S. Krüger[1]

1. Clausthal Univeristy of Technology, Institute of Non-Crystalline Materials, Germany

1:45 PM

(GOMD-S6-005-2017) Sintering and foaming of barium silicate glass powders (Invited)

R. Müller*[1]; B. Agea-Blanco[1]; S. Reinsch[1]

1. Bundesanstalt für Materialforschung und -prüfung (BAM), Materials Engineering, Germany

2:15 PM

(GOMD-S6-006-2017) Pyrophosphate glass-ceramics as a cathode active material for natural abundant sodium ion batteries (Invited)

T. Honma*[1]; T. Komatsu[1]

1. Nagaoka Univeristy of Technology, Department of Materials Sciencs and Technology, Japan

2:45 PM

(GOMD-S6-007-2017) Laser Irradiation of Lead and Barium Vanadate Glasses (Invited)

M. Affatigato*[1]; R. Dongol[1]; P. Dulal[1]; W. Lubberden[2]; S. Feller[1]

1. Coe College, Physics, USA
2. Central College, Physics, USA

3:15 PM

Break

GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium III

Room: Kona 5

Session Chairs: Kenji Shinozaki, AIST; Joachim Deubener, Clausthal University of Technology

3:30 PM

(GOMD-S6-008-2017) Crystallization of PbS Quantum Dots on Rare-Earth Oxide Clusters (Invited)

J. Heo*[1]

1. Pohang University of Science and Technology(POSTECH), Materials Science and Engineering, Republic of Korea

4:00 PM

(GOMD-S6-009-2017) Glass and glass-ceramics for solar-pumped lasers (Invited)

S. Mizuno*[1]

1. Toyota Central R&D Labs, Inc., Japan

4:30 PM

(GOMD-S6-010-2017) Development of Light-storage Glass Composites using the Frozen Sorbet Technique (Invited)

T. Nakanishi*[1]

1. Hokkaido University, Japan

5:00 PM

(GOMD-S6-011-2017) Tin-phosphate glass with crystal-like open structure (Invited)

A. Sakamoto*[1]; Y. Himei[5]; K. Shinozaki[4]; T. Honma[3]; T. Komatsu[3]

1. OLED Material Solutions Co., Japan
3. Nagaoka University of Technology, Japan
4. AIST, Japan
5. NEG, Japan

PACRIM Symposium 08: Additive Manufacturing and 3-D Priniting Technologies

Direct Writing Technologies

Room: King's 2

Session Chair: Soshu Kirihara, Osaka University

1:15 PM

(PACRIM-S8-001-2017) Direct Write Additive Manufacturing of "Born Qualified" Ceramic Components

A. W. Cook*[1]; C. DiAntonio[1]; D. Kammler[1]; H. J. Brown-Shaklee[1]; F. Abdeljawad[1]

1. Sandia National Laboratories, USA

1:45 PM

(PACRIM-S8-002-2017) Additive Manufacturing Toward Turbine Engine and Electric Motor Applications

M. C. Halbig*[1]; M. Singh[2]

1. NASA Glenn Research Center, USA
2. Ohio Aerospace Institute, USA

2:00 PM

(PACRIM-S8-003-2017) Silica Glass with Tailored Refractive Index Profile Using Direct-Ink-Write Additive Manufacturing

R. J. Dylla-Spears*[1]; D. T. Nguyen[1]; C. Meyers[2]; J. Destino[1]; N. Dudukovic[1]; E. Duoss[1]; J. Hughes[1]; M. A. Johnson[1]; L. R. Siegel[1]; J. E. Smay[3]; W. A. Steele[1]; C. Spadaccini[1]; T. I. Suratwala[1]; T. D. Yee[1]; C. Zhu[1]

1. Lawrence Livermore National Laboratory, USA
2. University of Minnesota, Department of Earth Sciences, USA
3. Oklahoma State University, Department of Chemical Engineering, USA

2:15 PM

(PACRIM-S8-004-2017) Multi-scaled Porosity of 3-D Printed Particle Stabilised Ceramic Foams

M. L. Sesso*[1]; G. Franks[1]

1. The University of Melbourne, Department of Chemical and Biomolecular Engineering, Australia

2:30 PM

(PACRIM-S8-005-2017) Robocasting of Alumina – Alginate slurries

D. Glymond*[1]; L. Vandeperre[1]

1. Imperial College, Materials, United Kingdom

Fused Deposition and Ink Jet Printing Technologies

Room: King's 2

Session Chair: Adam Cook, Sandia National Laboratories

2:45 PM

(PACRIM-S8-006-2017) Fundamentals of Melt Extrusion Process for 3D Additive Manufacturing

Y. Huang*[1]; P. Wang[1]; Y. Chen[1]; W. Wei[1]

1. National Taiwan University, Taiwan

3:00 PM

(PACRIM-S8-007-2017) Inexpensive thermal inkjet printing of sol-gel based YSZ layer on dense and porous substrates

C. Gadea*[1]; Q. Hanniet[1]; D. Marani[1]; S. Hojgaard[1]; V. Esposito[1]

1. DTU Energy, Denmark

3:15 PM

Break

Emerging Technologies

Room: King's 2

Session Chair: Michael Halbig, NASA Glenn Research Center

3:45 PM

(PACRIM-S8-009-2017) Additive Manufacturing of Ceramics: High-Value Added Ceramic Products Manufacturing Technologies (Invited)

T. Ohji*[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan

4:15 PM

(PACRIM-S8-010-2017) In operando non-destructive evaluation techniques for additive manufacturing (Invited)

A. Michaelis*[1]

1. Fraunhofer IKTS, Germany

4:45 PM

(PACRIM-S8-011-2017) 3D printing of clays and pastes by the extrusion freeforming (EFF) method

H. Colorado*[1]

1. Universidad de Antioquia, Colombia

5:00 PM

(PACRIM-S8-012-2017) A Modular Direct Write Additive Manufacturing Approach in the Printing of Alumina and Multi-Materials

J. M. Lavin*[1]; D. M. Keicher[1]; S. Mani[1]; M. Essien[2]; S. Whetten[1]; L. Evans[1]; A. W. Cook[1]

1. Sandia National Laboratories, USA
2. IDS, USA

Stereolithography

Room: King's 2

Session Chair: Alexander Michaelis, Fraunhofer IKTS

5:15 PM

(PACRIM-S8-013-2017) Ceramics Additive Manufacturing: New Approach using Continuous Film Supply type Digital Light Processing

W. A. Sarwar*[1]; H. Yun[2]

1. Korea Institute of Science and Technology, Advanced Materials Engineering, Republic of Korea
2. Korea Institute of Materials Science, Engineering Ceramics, Republic of Korea

5:30 PM

(PACRIM-S8-014-2017) Additive Manufacturing of Silica Glass by Stereolithography

C. Liu*[1]; X. Liu[1]; J. Qiu[2]; B. Qian[2]

1. Zhejiang University, Material Science and Engineering, China
2. Zhejiang University, Optical Science and Engineering, China

5:45 PM

(PACRIM-S8-015-2017) Stereolithographic Additive Manufacturing of Ceramic Components Using Ultra Violet Laser Dewaxing and Sintering

S. Kirihara*[1]

1. Osaka University, Joining and Welding Research Institute, Japan

PACRIM Symposium 09: Ceramic Integration and Joining Technologies

Joining and Integration Issues

Room: Queen's 6

Session Chair: Mrityunjay Singh, Ohio Aerospace Institute

1:15 PM

(PACRIM-S9-001-2017) Joining of ceramics by brazing alloys: Thermodynamics and kinetics of interfacial interactions (Invited)

F. Hodaj*[1]

1. Grenoble Institute of Technology, Materials Science, France

1:45 PM

(PACRIM-S9-002-2017) Joining of silicon carbide for industrial applications

M. Kuhn*[1]; A. Katz[1]; R. H. Bryden[1]

1. Saint-Gobain Innovative Materials, Northboro Research & Development Center, USA

2:00 PM

(PACRIM-S9-003-2017) Strain and Strain Rate Matched Glass-ceramic to Metal Seals

S. Dai*[1]; B. Elisberg[2]; M. Rodriguez[2]; N. Lyon[2]

1. Sandia National Laboratories, Materials Science Center, USA
2. Sandia National Laboratories, USA

2:15 PM

(PACRIM-S9-004-2017) SiC Joining Technology Using SiC-SiO_2-Al_2O_3-Y_2O_3: Microstructure and Mechanical Strength Characterization

C. P. Shih*[1]; H. Khalifa[1]; E. Song[1]

1. General Atomics, USA

2:30 PM

(PACRIM-S9-005-2017) All Silicon Carbide Tube to Plate CMC Joints and Their Use in Heat Exchangers

J. Zhang*[1]; G. Jacobsen[1]; J. Sheeder[1]; C. Deck[1]

1. General Atomics, USA

PACRIM Symposium 10: Multifunctional Nanomaterials and Their Heterostructures for Energy and Sensing Devices

Nanostructures and Devices for Energy Generation, Storage and Catalysis

Room: Queen's 5

Session Chairs: Amr Helmy, University of Toronto; Hidehiro Kamiya, Tokyo University of Agriculture and Technology

1:15 PM

(PACRIM-S10-008-2017) Conversion of Light Energy into Heat and Hot Electrons Using Hybrid Nanostructures with Plasmonic Hot Spots (Invited)

A. Govorov*[1]; L. Besteiro[1]

1. Ohio University, Department of Physics and Astronomy, USA

1:45 PM

(PACRIM-S10-009-2017) Hybrid 1D/2D Carbon-based composite materials with direct applications in batteries, supercapacitors and fuel cells (Invited)

D. Chua*[1]

1. National University of Singapore, Materials Science & Engineering, Singapore

2:15 PM

(PACRIM-S10-010-2017) Incorporation of carbon nanomaterials for the improvement of the exciton dissociation efficiency in hybrid OPV

B. Aissa*[1]

1. Institut National de la Recherche Scientifique, Energy, Materials and Telecommunications, Canada

2:30 PM

(PACRIM-S10-011-2017) In situ Synchrotron X-ray Spectroscopy for Energy Material (Invited)

C. Dong*[1]

1. Tamkang University, Department of Physics, Taiwan

3:00 PM

(PACRIM-S10-012-2017) Local Structural and Electrical Properties of VO_2/ZnO Nanostructures (Invited)

S. Han*[1]

1. Chonbuk National University, Physics Education, Republic of Korea

3:30 PM

(PACRIM-S10-013-2017) Experimental and Theoretical Approach to Ternary Silicon Nitride-Based Phosphors

Z. Lences*[1]; I. Ibrahim[1]; P. Sajgalik[1]

1. Institute of Inorganic Chemistry, Slovak Academy of Sciences, Ceramics Department, Slovakia

Processing of Functional Nanomaterials and Interface-driven Functional Multi-material Heterostructures and Nanocomposites

Room: Queen's 5

Session Chairs: Alexander Govorov, Ohio University; Sang-Wook Han, Chonbuk National University; Daniel Chua, National University of Singapore

3:45 PM

(PACRIM-S10-014-2017) Novel Architectures for Integrated Photonic Circuits Optimized for 2D Materials (Invited)

P. Chang[1]; Y. Su[1]; C. Lin[1]; A. Helmy*[1]

1. University of Toronto, The Edward S. Rogers Sr. Department of Electrical and Computer Engineering, Canada

4:15 PM

(PACRIM-S10-015-2017) Interfacial design in dielectric nanocomposite by liquid-crystalline polymers

H. Luo*[1]; K. Zhou[1]; D. Zhang[1]

1. Central South University, State Key Laboratory of Powder Metallurgy, China

4:30 PM

(PACRIM-S10-016-2017) Organic Ligands Structure Design for Concentrated TiO_2 Nanoparticle Dispersions in various organic solvents and polymer (Invited)

H. Kamiya*[1]; Y. Okada[1]

1. Tokyo University of Agriculture and Technology, Institute of Engineering, Japan

5:00 PM

(PACRIM-S10-017-2017) Flexible and individually addressable vertical nanotube crossbar arrays on graphene layers

Y. Tchoe*[1]; Y. Song[1]; J. Park[1]; H. Kim[1]; K. Lee[1]; J. Yoon[1]; J. Park[1]; H. Oh[1]; H. Yoon[1]; T. Lee[1]; G. Yi[1]

1. Seoul National University, Department of Physics and Astronomy, Republic of Korea

5:15 PM

(PACRIM-S10-018-2017) Fabrication of low-dimensional carbon and titania nanotube composites via solution chemical process and their electrical properties

S. Eom*[1]; S. Cho[2]; T. Goto[2]; T. Sekino[2]

1. Osaka University, Division of Materials and Manufacturing Science Graduate School of Engineering, Japan
2. Osaka University, The Institute of Scientific and Industrial Research (ISIR), Japan

5:30 PM

(PACRIM-S10-019-2017) Shape-Controlled Barium Titanate: From nanorods array to ordered nanosheets array and nanospheres

L. Yao*[1]; J. Zhai[2]; H. Chen[1]

1. University of Macau, Faculty of Science and Technology, Macao
2. Tongji University, Functional Materials Research Laboratory, China

5:45 PM

(PACRIM-S10-020-2017) The origin of ferroelectricity in strained $CaTiO_3$/$SrTiO_3$ superlattices

R. Engel-Herbert*[1]

1. The Pennsylvania State University, Materials Science and Engineering, USA

6:00 PM

(PACRIM-S10-021-2017) Development of Miniature Generator Combined with Magnetic Ceramic Material and Silicon Micro Air Turbine

K. Mishima*[1]; K. Kudo[1]; M. Takato[1]; K. Saito[1]; F. Uchikoba[1]

1. Nihon University, Japan

PACRIM Symposium 12: Design, Development, and Applications of Ceramic-Matrix Composites

CMC II

Room: Kohala 3

Session Chair: Ji Yeon Park, Korea Atomic Energy Research Institute

1:15 PM

(PACRIM-S12-011-2017) Ceramic matrix composites with improved high-temperature stability (Invited)

H. Klemm*[1]; C. Steinborn[1]; W. Kunz[1]; K. Schönfeld[1]

1. FhG IKTS Dresden, Germany

1:40 PM

(PACRIM-S12-012-2017) DSMC Simulation of High Mach Number Taylor-Couette Flow

S. Pradhan*[1]

1. Indian Institute of Science, Department of Chemical Engineering, India

1:55 PM

(PACRIM-S12-013-2017) Novel MAX-phase/SiC fiber composites: Processing, properties and near net shaping

J. Gonzalez-Julian*[1]; J. Llorente[2]; M. Bram[1]; M. Belmonte[2]; R. Vassen[1]; O. Guillon[1]

1. Forschungszentrum Juelich, Germany
2. Institute of Ceramics and Glass, CSIC, Spain

2:10 PM

(PACRIM-S12-014-2017) Mechanical Properties of SiC_f/SiC Composites with Carbon and Boron Nitride Interfacial Coatings Formed by Electrophoretic Deposition Method (Invited)

K. Yoshida*[1]; R. Shirata[1]; T. Ajito[1]; T. Yano[1]; M. Kotani[2]; T. Aoki[2]; T. Ogasawara[3]

1. Tokyo Institute of Technology, Japan
2. Japan Aerospace Exploration Agency (JAXA), Japan
3. Tokyo University of Agriculture and Technology, Japan

2:35 PM

(PACRIM-S12-015-2017) Core-shell and composites ferroelectrics ceramics for electrocaloric applications

M. Anoufa*[1]; J. Kiat[1]; C. Bogicevic[1]

1. CentraleSupelec, Laboratoire SPMS, France

2:50 PM

(PACRIM-S12-016-2017) C_f/SiC-ZrC-ZrB_2 fabricated by reactive infiltration of $ZrSi_2$ into C_f/B_4C-C preform with adjustable pore structure

X. Chen*[1]; S. Dong[1]; Y. Kan[1]; H. Zhou[1]; D. Ni[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

3:05 PM

(PACRIM-S12-017-2017) Microstructural and mechanical characterization of damage tolerant SiC/SiCN ceramic matrix composites manufactured via PIP process

B. Mainzer*[1]; R. Jemmali[1]; M. Frieß[1]; D. Koch[1]

1. DLR - German Aerospace Center, Institute of Structures and Design, Germany

3:20 PM

Break

3:35 PM

(PACRIM-S12-018-2017) Novel Manufacturing Techniques for Oxide Fiber Composites (Invited)

W. Krenkel*[1]; G. Puchas[1]; S. Knohl[1]

1. University of Bayreuth, Germany

4:00 PM

(PACRIM-S12-019-2017) Impact of Preform Composition and Geometry on Reactive Alloy Melt Infiltration

R. B. Reitz*[1]; F. W. Zok[1]; C. G. Levi[1]

1. University of California, Santa Barbara, Materials, USA

4:15 PM

(PACRIM-S12-022-2017) High energy-storage density and Low loss in the niobate-based glass-ceramic composite materials for energy-storage applications

H. Wang*[1]; J. Liu[1]; J. Zhai[1]; B. Shen[1]

1. Functional Materials Research Laboratory, China

4:30 PM

(PACRIM-S12-023-2017) Mode II delamination onset in carbon fibre reinforced SiC: End-notched flexure testing and cohesive zone modelling

S. Hofmann*[1]; D. Koch[1]

1. DLR - German Aerospace Center, Ceramic Composites and Structures, Germany

4:45 PM

(PACRIM-S12-024-2017) High Temperature Mechanical Properties of BN Particle Dispersion SiC Composites

T. Hinoki*[1]; S. Yanagawa[1]; K. Shimoda[2]

1. Kyoto University, Japan
2. National Institute for Materials Science (NIMS), Japan

PACRIM Symposium 14: Novel Spray Coatings

Advanced Spray Coatings

Room: King's 3

Session Chairs: Dongming Zhu, NASA Glenn Research; Byung-Koog Jang, National Institute for Materials Science (NIMS)

1:15 PM

(PACRIM-S14-011-2017) Solution Plasma Spray: Addressing some of the challenges (Invited)

E. H. Jordan*[1]

1. University of Connecticut, Mechanical Engineering, USA

1:45 PM

(PACRIM-S14-012-2017) Advanced High Temperature Coatings by Liquid Feedstock Plasma Spraying

N. Markocsan*[1]

1. University West, Sweden

2:00 PM

(PACRIM-S14-013-2017) Solution Precursor Plasma Spray of Superhydrophobic Ceramic Coatings: Investigation of Wetting Behavior

P. Xu[1]; L. Pershin[1]; T. Coyle*[2]; J. Mostaghimi[1]

1. University of Toronto, Mechanical and Industrial Engineering, Canada
2. University of Toronto, Materials Science and Engineering, Canada

2:15 PM

(PACRIM-S14-014-2017) Microstructure and Thermal Properties Characterization of YSZ Coatings with Different Porosity Deposited by Suspension Plasma Spray Process

P. Xu[1]; L. Pershin[1]; T. Coyle[2]; J. Mostaghimi*[1]

1. University of Toronto, Mechanical and Industrial Engineering, Canada
2. University of Toronto, Materials Science and Engineering, Canada

2:30 PM

(PACRIM-S14-015-2017) Formation of porous ceramic coatings by plasma spraying with suspension and fine feedstock

M. Suzuki*[1]; M. Shahien[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Advanced Coating Process Research Center, Japan

2:45 PM

(PACRIM-S14-016-2017) Thermal Spray as an Additive/Layered Manufacturing Technology for Energy Related Applications

S. Sampath*[1]

1. Stony Brook University, Center for Thermal Spray Research, USA

3:00 PM

(PACRIM-S14-017-2017) Functionally Graded Thermal Barrier Coatings Fabricated by Cold Spray Technique

K. Ogawa*[1]; K. Lee[1]; K. Sato[2]

1. Tohoku University, Fracture and Reliability Research Institute, Japan
2. Fujimi Incorporated, Thermal Spray Materials Dept, Japan

3:15 PM

(PACRIM-S14-018-2017) Photoactive Surfaces by Cold Spraying of Semiconductors

M. Villa Vidaller*[1]; A. Rzeszutek-Pistidda[2]; M. Schieda[2]; F. Gaertner[1]; T. Klassen[1]

1. Helmut-Schmidt-University. University of the Federal Armed Forces, Institute of Materials Technology, Germany
2. Helmholtz-Zentrum Geesthacht Centre for Materials and Coastal Research, Institut for Materials Research, Germany

3:30 PM

Break

Environmental Barrier Coatings

Room: King's 3

Session Chairs: Eric Jordan, University of Connecticut; Kazuhiro Ogawa, Tohoku University

3:45 PM

(PACRIM-S14-019-2017) Robust Multifunctional High Temperature Coatings for Gas Turbine Components using Affordable Processing Approach (Invited)

B. Gogia*[1]; D. Hass[1]

1. Directed Vapor Technologies Intl, USA

4:15 PM

(PACRIM-S14-020-2017) Advanced Environmental Barrier Coating Development for SiC-SiC Ceramic Matrix Composite Components

D. Zhu*[1]; B. J. Harder[1]; J. B. Hurst[1]

1. NASA Glenn Research, Materials and Structures Division, USA

4:30 PM

(PACRIM-S14-021-2017) Characteristics by High Temperature Exposure of RE-doped Silicate Environmental Barrier Coatings (Invited)

B. Jang*[1]; S. Ueno[2]; K. Lee[3]; S. Kim[4]; Y. Oh[4]; H. Kim[4]

1. National Institute for Materials Science (NIMS), Research Center for Structural Materials, Japan
2. Nihon University, College of Engineering, Japan
3. Kookmin University, School of Mechanical Systems Engineering, Republic of Korea
4. Korea Institute of Ceramic Engineering and Technology, Engineering Ceramic Center, Republic of Korea

5:00 PM

(PACRIM-S14-022-2017) Microstructure control of Yb silicate layers prepared by EB-PVD

T. Yokoi*[1]; N. Yamaguchi[1]; D. Yokoe[1]; T. Kato[1]; T. Matsudaira[1]; S. Kitaoka[1]; M. Takata[1]

1. Japan Fine Ceramics Center, Japan

5:15 PM

(PACRIM-S14-024-2017) Next-Generation Graded High Temperature Ceramic Matrix Composites (CMC) Based Propulsion Components (Invited)

A. Ghoshal*[1]; M. Murugan[1]; M. J. Walock[1]; A. Nieto[1]; C. Shiao[1]; B. D. Barnett[1]; M. S. Pepi[1]; J. Swab[1]; R. Dowding[1]

1. US Army Research Laboratory, USA

5:45 PM

(PACRIM-S14-023-2017) High Temperature Degradation of Advanced Thermal and Environmental Barrier Coatings (TEBCs) by CaO-MgO-Al_2O_3-SiO_2 (CMAS)

G. Costa*[1]; D. Zhu[1]

1. NASA Glenn Research Center, USA

PACRIM Symposium 17: Advanced Functional Ceramics and Critical Materials Perspective

Advanced Functional Ceramics and Critical Materials Perspective V

Room: Kohala 2

Session Chairs: Nobuhito Imanaka, Osaka University; Satoshi Wada, University of Yamanashi; Shinji Tamura, Osaka University

1:30 PM

(PACRIM-S17-038-2017) Recent Developments in Relaxor-PT Piezoelectric Ceramics and Crystals (Invited)

F. Li[1]; S. Zhang[1]; D. Lin[1]; S. Taylor[2]; J. Luo[2]; L. Chen[1]; T. Shrout*[1]

1. The Pennsylvania State University, USA
2. (3) TRS Technologies, USA

1:50 PM

(PACRIM-S17-039-2017) Structural, Dielectric and Magnetic Properties of $Ba_3SrLn_2Fe_2Nb_8O_{30}$ (Ln=La, Nd, Sm) Filled Tungsten Bronze Ceramics

W. Chen*[1]; W. Yang[2]; X. Liu[1]; X. Chen[1]

1. Zhejiang University, China
2. Ningbo Branch of China Academy of Ordnance Science, China

2:05 PM

(PACRIM-S17-040-2017) High-k dielectric thin films using A-site modified perovskite nanosheets

H. Yim*[1]; S. Yoo[1]; Y. Sung[2]; J. Choi[1]

1. Korea Institute of Science and Technology, Center for Electronic Materials, Republic of Korea
2. Seoul National University, Republic of Korea

2:20 PM

(PACRIM-S17-041-2017) Low Temperature Synthesis of Perovskite-based Nano-complex Ceramics by Solvothermal Solidification Method for Dielectric and Piezoelectric Enhancement (Invited)

S. Wada*[1]

1. University of Yamanashi, Material Science and Technology, Japan

2:40 PM

(PACRIM-S17-042-2017) Reliability Studies on Dielectric Materials of Multi-Layered Ceramic Capacitors (Invited)

A. Ando*[1]

1. Murata Mfg. Co., Japan

3:00 PM

(PACRIM-S17-043-2017) Microstructure and dielectric characteristics of $BiMeO_3$-$BaTiO_3$ (Me:$Zn_{1/2}Ti_{1/2}$,Al) ceramics for capacitor applications (Invited)

H. Hao*[1]; M. Liu[1]; T. Wang[1]; Y. Lu[1]; S. Zhang[1]; Z. Yao[1]; M. Cao[1]; H. Liu[1]

1. Wuhan University of Technology, China

3:20 PM

Break

3:45 PM

(PACRIM-S17-044-2017) Synthesis and applications of low-dimensional NBT-based micro/nano-materials

D. Zhang*[1]; X. Zhou[1]

1. Central South University, State Key Laboratory of Powder Metallurgy, China

4:00 PM

(PACRIM-S17-045-2017) Dielectric properties and resource criticality aspects of hexagonal manganites

S. Krohns*[1]; D. Meier[2]; A. Ruff[1]

1. University of Augsburg, Experimental Physics V, Germany
2. Norwegian University of Science and Technology, Materials Science and Engineering, Norway

4:15 PM

(PACRIM-S17-046-2017) Freeze-Casting of Lead-Free Dielectric Composites

E. Gorzkowski*[1]; E. Patterson[2]; G. L. Brennecka[3]; M. A. Beuerlein[3]

1. Naval Research Lab, USA
2. ASEE, USA
3. Colorado School of Mines, USA

PACRIM Symposium 20: Crystalline Materials for Electrical, Optical, and Medical Applications

Phosphor

Room: Kohala 1

Session Chair: Mariya Zhuravleva, University of Tennessee

1:15 PM

(PACRIM-S20-034-2017) Rapid Screening of Novel Phosphor Materials Using Melt Quenching Method (Invited)

K. Toda*[1]

1. Niigata University, Japan

1:45 PM

(PACRIM-S20-036-2017) Single crystal phosphors for high-power white lighting (Invited)

K. Shimamura*[1]; V. Garcia[1]; D. Inomata[2]; K. Iizuka[2]

1. National Institute for Materials Science, Japan
2. Tamura Corporation, Japan

2:15 PM

(PACRIM-S20-037-2017) Photoluminescence properties and application of yellow $Ca_{0.65}Si_{10}Al_2O_{0.7}N_{15.3}$:xEu^{2+} phosphors for white LEDs

B. Wang*[1]; Y. Liu[1]; J. Chen[1]; Y. Xia[1]; J. Tang[1]

1. China University of Geosciences, School of Materials Science and Technology, China

2:30 PM

(PACRIM-S20-038-2017) Synthesis and Characterization of Fluorochromic Phosphor Materials

S. Fujihara*[1]; R. Hara[1]; Y. Tsuchiya[1]; M. Hagiwara[1]

1. Keio University, Japan

2:45 PM

(PACRIM-S20-039-2017) Mechanisms of Li$^+$ ions in the Emission Enhancement of $KMg_4(PO_4)_3$:Eu^{2+} for White Light-emitting diodes

J. Chen*[1]; Y. Liu[1]; B. Wang[1]; J. Tang[1]

1. China University of Geoscience Beijing, School of Material Science and Technology, China

3:00 PM

(PACRIM-S20-040-2017) Enhanced persistent luminescence properties of Ce^{3+} activated garnet (Invited)

Y. Katayama*[1]

1. University of Tokyo, Graduate School of Arts and Sciences, Japan

PACRIM Symposium 23: Materials for Solar Thermal Energy Conversion and Storage

CSP Absorbers and Reactors / Thermal Storage Materials

Room: Queen's 4

Session Chairs: Martin Roeb, DLR - German Aerospace Center; Anthony McDaniel, Sandia National Laboratories

1:15 PM

(PACRIM-S23-001-2017) New solar-selective CSP receiver coatings studied by environmental in situ methods (Invited)

M. Krause*[1]; R. Wenisch[1]; I. Heras[2]; F. Lungwitz[1]; D. Janke[1]; E. Guillén[2]; A. Erbe[1]; R. Escobar Galindo[2]; S. Gemming[1]

1. Helmholtz-Zentrum Dresden - Rossendorf, Inst. for Ion Beam Physics and Materials Research, Germany
2. Abengoa Research, Spain

1:45 PM

(PACRIM-S23-002-2017) Ceramic structured reactors for solar H_2 production

S. Lorentzou*[1]; A. Zygogianni[1]; C. Pagkoura[1]; G. Karagiannakis[1]; A. G. Konstandopoulos[1]

1. CERTH, Aerosol & Particle Technology Laboratory, APTL, Greece

2:00 PM

(PACRIM-S23-003-2017) Spectral absorptivity of alumina beads for solar particle receivers

M. Schmucker*[1]; C. Happich[2]; B. Gobereit[2]

1. German Aerospace Center, Institute of Materials Research, Germany
2. German Aerospace Center, Institute of Solar Research, Germany

2:15 PM

(PACRIM-S23-004-2017) Cobalt Oxide Thermochemical Heat Storage for Concentrated Solar Power Applications (Invited)

N. Vahedi[1]; Q. Ranjha[1]; A. Oztekin*[1]

1. Lehigh University, Mechanical Engineering and Mechanics, USA

2:45 PM

(PACRIM-S23-005-2017) Investigations of Graphite Foam-$MgCl_2$ Based Latent Heat Thermal Energy Storage (LHTES) Prototypes for Concentrated Solar Power (CSP) Plants

D. Singh[2]; W. Yu[2]; T. Kim[2]; D. France[3]; W. Zhao*[1]

1. University of North Texas, USA
2. Argonne National Lab, USA
3. University of Illinois at Chicago, USA

3:00 PM

(PACRIM-S23-006-2017) Mn-based combined oxides and porous structures for hybrid sensible/thermochemical solar energy storage in air-operated solar thermal power plants

C. C. Agrafiotis[1]; T. Block[2]; S. Tescari[1]; M. Roeb*[1]; C. Sattler[1]

1. DLR - German Aerospace Center, Institute of Solar Research, Germany
2. DLR - German Aerospace Center, Institute of Materials Research, Germany

3:15 PM

(PACRIM-S23-007-2017) Structured active materials for thermocehmical energy storage

G. Karagiannakis*[1]; S. Lorentzou[1]; K. Sakellariou[1]; N. Tsongidis[1]; C. Pagkoura[1]; A. G. Konstandopoulos[1]

1. Centre for Research & Technology Hellas, Aerosol & Particle Technology Laboratory, Greece

3:30 PM

Break

Materials for Solar Fuel Production

Room: Queen's 4

Session Chair: Weihuan Zhao, University of North Texas

3:45 PM

(PACRIM-S23-008-2017) Redox Materials for Solar Thermal Energy Conversion

M. Roeb*[1]; M. Schmucker[1]; C. Sattler[1]

1. DLR - German Aerospace Center, Germany

4:00 PM

(PACRIM-S23-009-2017) Redox kinetics of pure and Zr^{+4} doped CeO_2 used for thermochemical hydrogen production

N. Knoblauch*[1]; L. Hoffmann[1]; C. Esser[1]; F. Seeliger[1]; H. Simon[1]; M. Schmucker[1]

1. DLR - German Aerospace Center, Germany

4:15 PM

(PACRIM-S23-010-2017) A novel solar thermochemical water splitting material $BaCe_{0.25}Mn_{0.75}O_3$ for hydrogen production

D. Barcellos[2]; M. Sanders[2]; J. Tong[3]; A. McDaniel*[1]; R. O'Hayre[2]

1. Sandia National Laboratories, USA
2. Colorado School of Mines, Metallurgical and Materials Engineering Department, USA
3. Clemson University, Department of Materials Science and Engineering, USA

4:30 PM

(PACRIM-S23-011-2017) Solar fuel production: Ceramic materials development, evaluation and simulation

D. Dimitrakis[1]; M. Syrigou[1]; S. Lorentzou*[1]; A. Zygogianni[1]; C. Pagkoura[1]; G. Karagiannakis[1]; M. Kostoglou[2]; A. G. Konstandopoulos[1]

1. CERTH, Aerosol & Particle Technology Laboratory, APTL, Greece
2. Aristotle University of Thessaloniki, Department of Chemistry, Greece

4:45 PM

(PACRIM-S23-012-2017) Catalytic SO_3 Decomposition Activity and Stability of Supported Molten Vanadate Catalysts for Solar Thermochemical Water Splitting Cycles

M. Machida*[1]; T. Matsukawa[1]; S. Hinokuma[1]

1. Kumamoto University, Japan

PACRIM Symposium 26: Advances in Materials and Technology for Perovskite and Next Generation Solar Cells

Synthesis and Functionalization of Nanomaterials for Photovoltaic Applications

Room: King's 1

Session Chairs: Yoon-Bong Hahn, Chonbuk National University; Qingwen Li, Suzhou institute of Nanotech and Nanobionics

1:15 PM

(PACRIM-S26-001-2017) Dye-sensitized Tandem Solar Cells: Design and Applications (Invited)

J. Park*[1]; K. Choi[2]; H. Kim[3]

1. Yonsei University, Republic of Korea
2. UNIST, Republic of Korea
3. Korea University, Republic of Korea

1:45 PM

(PACRIM-S26-002-2017) Advanced Materials and Devices for the Flexible Photovoltaics: Dye-Sensitized and Perovskite Solar Cells (Invited)

M. Ko*

2. Hanyang University, Department of Chemical Engineering, Republic of Korea

2:15 PM

(PACRIM-S26-003-2017) Air-processable and scalable formation of high quality organic films on an aqueous substrate

J. Lee*[1]

1. Korea Advanced Institute of Science and Technology, Graduate School of EEWS, Republic of Korea

2:30 PM

(PACRIM-S26-004-2017) Inorganic Carbon Nanotube Hybrids for Photovoltaic Applications (Invited)

Q. Li*[1]

1. Suzhou Institute of Nanotech and Nanobionics, Division of Nanomaterials, China

3:00 PM

(PACRIM-S26-005-2017) Air-Stable High Efficiency Hybrid Solar Cells with Metal Oxide and Graphene Based Nanocomposites (Invited)

Y. Hahn*[1]

1. Chonbuk National University, School of Chemical Engineering, Republic of Korea

3:30 PM

Break

Advances in Materials and Technologies for Perovskite-based Solar Cells I

Room: King's 1

Session Chairs: Fang-Chung Chen, National Chiao Tung University; Jin Young Kim, Seoul National University

3:45 PM

(PACRIM-S26-006-2017) Strategies for enhancing stability of highly efficient p-i-n type planar perovskite solar cells (Invited)

J. Kim*[1]

1. Seoul National University, Department of Materials Science and Engineering, Republic of Korea

4:15 PM

(PACRIM-S26-007-2017) High-efficient organic and perovskite photovoltaic devices for low-power indoor applications (Invited)

F. Chen*[1]

1. National Chiao Tung University, Department of Photonics, Taiwan

4:45 PM

(PACRIM-S26-008-2017) Band-gap engineering in $KNbO_3$-$BiMeO_3$ (Me=Mn, Fe and Co)

C. Pascual-González*[1]; G. Schileo[2]; A. Feteira[1]

1. Sheffield Hallam University, Material Engineering Research Institute, United Kingdom
2. Dyesol UK Ltd, United Kingdom

PACRIM Symposium 30: Glasses and Ceramics for Nuclear and Hazardous Waste Treatment

Waste Vitrification Technologies: Development and Implementation

Room: Kona 1

Session Chairs: Kevin Fox, Savannah River National Laboratory; Yifeng Wang, Sandia National Laboratories

1:15 PM

(PACRIM-S30-001-2017) Basic Research for French Industrial Vitrification Process (Invited)

S. Schuller*[3]; G. Barba Rossa[3]; P. Brun[3]; M. Delaunay[3]; R. Didierlaurent[1]; J. Hollebecque[3]; V. Labe[3]; S. Lemonnier[3]; A. Ledoux[3]; L. Meslin[1]; C. Michel[3]; E. Sauvage[3]; E. Régnier[2]; E. Rousset[1]

1. AREVA NC LCV, France
2. CEA, DEN, DTCD, SECM, LDMC, France
3. CEA, DEN, DTCD, SCDV, LDPV, France

1:45 PM

(PACRIM-S30-002-2017) Recent Progress of Nuclear Waste Vitrification in China (Invited)

K. Xu*[1]; L. Liu[2]; M. Chen[3]; F. Wang[4]; L. Wu[4]; Y. Qiao[5]; Q. Liao[4]; P. Lin[3]; X. Zhao[1]

1. Wuhan University of Technology, State Key Laboratory of Silicate Materials for Architectures, China
2. China Institute of Atomic Energy, China
3. China Nuclear Power Technology Research Institute, China
4. Southwest University of Science and Technology, China
5. Shanghai Institute of Applied Physics, Chinese Academy of Science, China

2:15 PM

(PACRIM-S30-003-2017) Advanced Glass Property: Composition Models and their Impacts on Hanford Waste Glass Estimates

J. Vienna*[1]; G. Piepel[1]; D. Kim[1]

1. PNNL, USA

2:30 PM

(PACRIM-S30-004-2017) Accumulation of spinel crystals during vitrification of high-level waste glasses

J. Matyas*[1]; M. Edwards[2]; G. Sevigny[3]; J. Venarsky[4]; A. A. Kruger[5]

1. PNNL, Radiological Materials & Detection, USA
2. PNNL, Actinide Science, USA
3. PNNL, Nuclear Chemistry and Engineering, USA
4. PNNL, Process Engineering, USA
5. DOE-ORP, USA

2:45 PM

(PACRIM-S30-005-2017) Practical Aspects of Crystallization in High Level Nuclear Waste Glasses

K. M. Fox*[1]; D. McClane[1]; J. Amoroso[1]; M. Fowley[1]; D. Miller[1]; A. A. Kruger[2]

1. Savannah River National Laboratory, USA
2. US Department of Energy - Office of River Protection, USA

3:00 PM

(PACRIM-S30-006-2017) High Alumina Borosilicate Glass Development for High-Level Waste, Part II: Viscosity and Electrical Conductivity

Y. Chou*[1]; M. J. Schweiger[1]; J. Vienna[1]; B. McCarthy[1]; J. L. Mayer[1]; J. B. Lang[1]; V. Gervasio[1]; L. P. Darnell[1]; R. L. Russell[1]; G. Piepel[1]; S. K. Cooley[1]; A. A. Kruger[2]

1. Pacific Northwest National Lab, USA
2. US DOE, USA

3:15 PM

(PACRIM-S30-007-2017) Solubility of Cs_2O and ZrO_2 into iron-phosphate glass system, Cr_2O_3-CoO-Al_2O_3-Fe_2O_3-P_2O_5

T. Yano*[1]; H. Kofuji[2]

1. Tokyo Institute of Technology, Department of Materials Science and Engineering, Japan
2. Japan Atomic Energy Agency (JAEA), Fast Reactor Fuel Cycle Technology Development Department, Advanced Fast Reactor Cycle System R&D Center, Japan

3:30 PM

Break

3:45 PM

(PACRIM-S30-008-2017) Development of a new glass formulation for the immobilisation of HLW containing molybdenum and large amounts of sodium

R. J. Hand*[1]; C. Brigden[1]; L. Hollands[1]; M. T. Harrison[2]; C. Stephen[2]; T. Taylor[2]; M. Cowley[4]; K. Spencer[4]; C. J. Steele[4]; J. Longmore[3]; R. Patel[3]

1. University of Sheffield, Materials Science & Engineeering, United Kingdom
2. NNL, United Kingdom
3. Cera Dynamics Ltd, United Kingdom
4. Sellafield Ltd, United Kingdom

4:00 PM

(PACRIM-S30-009-2017) Compositional dependence of molybdenum solubility vs. retention in aluminoborosilicate glasses

A. Brehault[1]; H. Kamat[1]; L. M. Thirion[2]; J. C. Mauro[2]; D. S. Patil[3]; R. Youngman[2]; J. McCloy[3]; A. Goel*[1]

1. Rutgers University, USA
2. Corning Incorporated, USA
3. Washington State University, USA

4:15 PM

(PACRIM-S30-010-2017) Effect of Rare Earths on the solubility and crystallization of Mo in borosilicate glasses for nuclear waste immobilization

D. S. Patil*[1]; M. Konale[1]; A. Brehault[2]; J. Marcial[1]; E. Nienhuis[1]; A. Goel[2]; J. McCloy[1]

1. Washington State University, Mechanical and Materials Engineering, USA
2. The State University of New Jersey, Department of Materials Science and Engineering, USA

4:30 PM

(PACRIM-S30-011-2017) Rheological Study of the Cold Cap

B. McCarthy*[1]; D. Dixon[1]; M. Wheeler[1]; D. Cutforth[1]; M. J. Schweiger[1]; P. Hrma[1]; R. Pokorny[2]; M. Hujova[2]

1. Pacific Northwest National Lab, USA
2. University of Chemistry and Technology Prague, Czech Republic

4:45 PM

(PACRIM-S30-012-2017) Comparison between a Melter-Produced and Laboratory-Fabricated Cold Cap

D. Dixon*[1]; B. McCarthy[1]; M. Wheeler[1]; D. Cutforth[1]; M. J. Schweiger[1]; P. Hrma[1]; R. Pokorny[2]; M. Hujova[2]

1. Pacific Northwest National Lab, USA
2. University of Chemistry and Technology Prague, Department of Chemical Engineering, Czech Republic

5:00 PM

(PACRIM-S30-013-2017) Evaluation of Melt Rate for High Level Waste Feeds using Integated Cold Cap-Melter Model

D. P. Guillen*[1]; A. W. Abboud[1]; R. Pokorny[2]

1. Idaho National Laboratory, Materials Science and Engineering, USA
2. UCT Prague, Laboratory of Inorganic Materials, Czech Republic

5:15 PM

(PACRIM-S30-014-2017) Thermal properties of simulated Hanford waste glasses

C. Rodriguez*[1]; J. Chun[1]; N. L. Canfield[1]; E. C. Rönnebro[1]; J. Vienna[1]; A. A. Kruger[2]

1. Pacific Northwest National Lab, Material Science, USA
2. DOE Office of River Protection, USA

PACRIM Symposium 32: Nanostructured Bioceramics and Ceramics for Biomedical Applications

Nanostructured Bioceramics I

Room: Monarchy

Session Chairs: Antonio Benayas, Institut National de la Recherche Scientifique; Fiorenzo Vetrone, Institut National de la Recherche Scientifique

1:15 PM

(PACRIM-S32-001-2017) Molecular Biomimetics: Genetically-Engineered-Peptide Guided Technology and Medicine (Invited)

M. Sarikaya*[1]

1. University of Washington, Mater Sci and Eng., Chem Eng and Oral Health Sci., USA

1:45 PM

(PACRIM-S32-002-2017) Nanosized fluoride hosts plus lanthanide-ions doping: A cocktail with more than potential applications on imaging and nanothermometry (Invited)

A. Benayas*[1]; A. Skripka[1]; W. da Silva[2]; K. Santacruz[3]; F. Vetrone[1]

1. Institut National de la Recherche Scientifique, Energie Matériaux Télécommunications, Canada
2. UFAL, Brazil
3. UNISON, Mexico

2:15 PM

(PACRIM-S32-003-2017) Nanoscale structure and properties of Biomaterials (Invited)

F. Rosei*[1]

1. INRS, Canada

2:45 PM

(PACRIM-S32-004-2017) Tunable Self-Organized Bio-Interfaces: Where Solid Materials Meet Biology (Invited)

C. Tamerler*[1]

1. University of Kansas, Mechanical Engineering Department and Institute of Bioengineering Research, USA

3:15 PM

(PACRIM-S32-005-2017) Bioinspired Materials for Human cellular bone

J. Xiong*[1]

1. Harbin Institute of Technology, China

3:30 PM

Break

3:45 PM

(PACRIM-S32-006-2017) Modulating charge dynamics in composite systems for advanced applications (Invited)

A. Vomiero*[1]

1. Lulea University of Technology, Engineering Sciences & Mathematics, Sweden

4:15 PM

(PACRIM-S32-023-2017) A Biomimetic Approach to Remineralization of Dental Caries (Invited)

N. Saxena[1]; J. E. Mizels[1]; M. A. Cremer[1]; L. Gower*[1]

1. University of Florida, Materials Science & Engineering, USA

4:45 PM

(PACRIM-S32-007-2017) Multifunctional Nanoplatforms Triggered by Near-infrared Light (Invited)

F. Vetrone*[1]

1. Université INRS, Centre Énergie, Matériaux et Télécommunications, Canada

5:15 PM

(PACRIM-S32-008-2017) Cell Encapsulation and Delivery by Coaxial Electrosprayed Microspheres for Tissue Engineering

Y. Zhou*[1]; M. Wang[1]

1. The University of Hong Kong, Hong Kong

PACRIM Young Investigators Forum: Design and Application of Next-Generation Multifunctional Materials-Addressing the New Millennium's Societal Challenges

Frontiers in Nanotechnology

Room: Kohala 4

Session Chairs: Valerie Wiesner, NASA Glenn Research Center; Michael Walock, US Army Research Laboratory; Yang Bai, University of Science and Technology Beijing

1:15 PM

(PACRIM-YIF-009-2017) Preparation of high-pure V_2C MXene and electrochemistry properties as Li-ion batteries (Invited)

A. Zhou*[1]; F. Liu[1]

1. Henan Polytechnic University, School of Materials Science and Engineering, China

1:40 PM

(PACRIM-YIF-010-2017) Morphology controlled synthesis of niobium oxide nanoparticles for functional applications (Invited)

T. Fuchigami*[1]; K. Kakimoto[1]

1. Nagoya Institute of Technology, Japan

2:05 PM

(PACRIM-YIF-011-2017) Particle orientation in colloidal processing with UV curable binder under magnetic field

S. Baba*[1]; S. Tanaka[1]

1. Nagaoka University of Technology, Japan

2:25 PM

(PACRIM-YIF-012-2017) Cationic polymer-anionic surfactant complex as multi-functional surface modifier of nanoparticles for material processing

M. Iijima*[1]; T. Tsutsumi[1]; M. Kataoka[1]; K. Hasegawa[1]; S. Morita[1]; J. Tatami[1]

1. Yokohama National University, Graduate School of Environment and Information Sciences, Japan

2:45 PM

(PACRIM-YIF-013-2017) From Molecules to Materials: A Scientific Trip around the Globe (Invited)

E. Hemmer*[1]

1. University of Ottawa, Chemistry and Biomolecular Sciences, Canada

3:10 PM

Panel Discussion

3:30 PM

Break

Innovative Materials Manufacturing

Room: Kohala 4

Session Chairs: Aiguo Zhou, Henan Polytechnic University; Teruaki Fuchigami, Nagoya Institute of Technology

3:45 PM

(PACRIM-YIF-014-2017) Low-temperature nitridation of oxides via $NaNH_2$ melt (Invited)

A. Miura*[1]; M. Higuchi[1]; K. Tadanaga[1]

1. Hokkaido University, Japan

4:10 PM

(PACRIM-YIF-015-2017) Micropore aligned films based on Metal Organic Frameworks heteroepitaxially-grown on metal hydroxide scaffold

K. Okada*[1]; K. Ikigaki[2]; M. Takahashi[2]; P. Falcaro[3]; C. Doonan[4]; Y. Tokudome[2]; K. Machida[1]

1. Osaka University, Graduate School of Engineering, Japan
2. Osaka Prefecture University, Japan
3. Graz University of Technology, Austria
4. The University of Adelaide, Australia

4:30 PM

(PACRIM-YIF-016-2017) Flexible control of positive and negative electrocaloric effect in ferroelectric materials for high-efficient solid state cooling (Invited)

Y. Bai*[1]

1. University of Science and Technology Beijing, China

4:55 PM

(PACRIM-YIF-017-2017) Knowledge transfer from academia to industry: A business model from SMEs for SMEs

T. Fischer*[1]; S. Mathur[1]

1. Materials Alliance Cologne, Steinbeis GmbH & Co. KG für Technologietransfer, Germany

5:15 PM

(PACRIM-YIF-018-2017) On the Development of Novel MAX Reinforced Metal (MRM) Composites

F. AlAnazi*[1]; S. Gupta[1]

1. University of North Dakota, Mechanical Engineering, USA

Thursday, May 25, 2017

GOMD Award Lectures

Varshneya Glass Science Lecture

Room: Kona 5

8:30 AM

Introduction

8:35 AM

(GOMD-PL-004-2017) Pathways of glass→crystal transformation (Invited)

H. Jain*[1]

1. Lehigh University, International Materials Institute for New Functionality in Glass, USA

9:30 AM

Break

GOMD Symposium 1: Fundamentals of the Glassy State

Glass at High Temperature

Room: Kona 4

Session Chairs: Anita Zeidler, University of Bath; Liping Huang, Rensselaer Polytechnic Institute

9:45 AM

(GOMD-S1-078-2017) Accessing supercooled liquid dynamics of extremely poor glass formers by a containerless levitation viscometer (Invited)

Y. Yue*[3]; H. Liu[1]; R. Pan[3]; N. Greaves[2]; H. Tao[3]; Z. Shan[3]

1. Aalborg University, Denmark
2. University of Cambridge, United Kingdom
3. Wuhan University of Technology, China

10:15 AM

(GOMD-S1-079-2017) Aluminum Local Structure and Dynamics in Refractory Melts: An In-Situ High-Temperature ^{27}Al Nuclear Magnetic Resonance Point of View (Invited)

P. Florian*[1]; V. Sarou-Kanian[1]; A. Novikov[1]; C. Le Losq[3]; D. R. Neuville[2]; D. Massiot[1]

1. CEMHTI-CNRS, France
2. IPGP-CNRS, France
3. The Australian National University, Research School of Earth Sciences, Australia

10:45 AM

(GOMD-S1-080-2017) Raman linewidths of the 800-1200 cm^{-1} region of crystals, glasses and melts with implications for curve fitting of Raman spectra

W. Nesbitt[1]; G. Bancroft[2]; G. Henderson*[3]; C. O'Shaughnessy[3]

1. University of Western Ontario, Earth Sciences, Canada
2. University of Western Ontario, Chemistry, Canada
3. University of Toronto, Earth Sciences, Canada

11:00 AM

(GOMD-S1-081-2017) Understanding Sodium Borate Glasses and Melts from Their Elastic Response to Temperature

S. Jaccani*[1]; L. Huang[1]

1. Rensselaer Polytechnic Institute, Materials Science and Engineering, USA

11:15 AM

(GOMD-S1-082-2017) Effects of Iron and Water on Effective Thermal Conductivity of Glass Melts

H. Tokunaga*[1]; K. Hayashi[1]

1. Asahi Glass Co., Ltd., New Product R&D Center, Japan

11:30 AM

(GOMD-S1-083-2017) High Temperature Infrared Transmitting Chalcogenide Glasses for Remote Sensing

J. Roth*[1]; S. W. Martin[1]

1. Iowa State University, MSE, USA

11:45 AM

(GOMD-S1-084-2017) Mobility and local environment of Zr diffusion in glass furnace

M. Ficheux*[1]; L. Cormier[2]; E. Burov[1]; K. Plevacova[3]

1. Saint-Gobain, SVI, France
2. IMPMC, France
3. EV - Saint Gobain Recherche, France

GOMD Symposium 3: Optical and Electronic Materials and Devices: Fundamentals and Applications

Sciences and Applications of Optical Ceramics and Glass-ceramics

Room: Waikoloa 3

Session Chair: Woohong (Rick) Kim, Naval Research Laboratory

9:30 AM

(GOMD-S3-065-2017) Eu-doped SiAlON and borophospate glass composites for white LED

H. Segawa*[1]; N. Hirosaki[1]

1. National Institute for Materials Science (NIMS), Japan

9:45 AM

(GOMD-S3-066-2017) Structural Determination of the Stillwellite $LaBGeO_5$ Transparent Ferroelectric Nanocomposite

A. L. Paterson*[1]; A. Hannon[2]; U. Werner-Zwanziger[1]; J. Zwanziger[1]

1. Dalhousie University, Chemistry, Canada
2. Rutherford Appleton Laboratory, ISIS Facility, United Kingdom

10:00 AM

(GOMD-S3-067-2017) Nanoparticles in glass: When gold meets surface

Y. Wei*[1]; J. Zhao[1]; H. Ebendorff-Heidepriem[1]

1. ARC Centre of Excellence for Nanoscale BioPhotonics, Institute for Photonics and Advanced Sensing, The University of Adelaide, Australia

10:15 AM

(GOMD-S3-068-2017) Additive Manufacturing of Ceramic Optical Components (Invited)

J. Choi*[1]; A. W. Cook[1]; C. DiAntonio[1]; B. Jared[1]; E. Winrow[1]

1. Sandia National Laboratories, USA

10:30 AM

(GOMD-S3-069-2017) Laser Induced Glass-Ceramics for GRIN applications

L. Sisken*[1]; M. Melvin[1]; I. Mingareev[1]; M. Richardson[1]; C. R. Baleine[2]; K. Richardson[1]

1. University of Central Florida, CREOL, USA
2. Lockheed Martin, Missiles and Fire Control, USA

10:45 AM

(GOMD-S3-071-2017) Color Conversion Property Modification of Cd-S-Se Quantum Dot Embedded Glasses via Compositional Change for White LED

K. Han*[1]; W. Im[2]; J. Heo[3]; W. Chung[1]

1. Kongju National University, Advanced Materials Engineering, Republic of Korea
2. Chonnam National University, School of Materials Sci. and Eng., Republic of Korea
3. Pohang University of Science and Technology(POSTECH), Dept. of Materials Sci. and Eng., Republic of Korea

11:00 AM

(GOMD-S3-072-2017) Preparation and densification of $CaLa_2S_4$ ceramics by Hot Pressing (Invited)

G. R. Durand*[1]; O. Merdrignac-Conanec[1]; X. Zhang[1]; N. Hakmeh[1]

1. UMR CNRS 6226 "Institut des Sciences Chimiques de Rennes", Equipe Verres et Céramiques, France

11:15 AM

(GOMD-S3-073-2017) Densification and Grain Growth of Calcium Lanthanum Sulfide Infrared Optical Ceramics via Field Assisted Sintering (Invited)

Y. Li*[1]; Y. Wu[1]

1. Alfred University, Kazuo Inamori School of Engineering, USA

11:30 AM

(GOMD-S3-074-2017) Preparation of silica glass incorporating metastable β-Zn_2SiO_4:Mn nano-phosphor

T. Akai*[1]; M. Murakami[1]; T. Uchida[1]; M. Yamashita[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Inorganic Functional Rearch Institute, Japan

Glasses in Detector Applications

Room: Kona 3

Session Chairs: Mario Affatigato, Coe College; S. Sundaram, Alfred University

9:45 AM

(GOMD-S3-075-2017) Rare Earth Activated Glasses: Exploratory Investigation Toward New Scintillators (Invited)

L. G. Jacobsohn*[1]; U. Akgun[2]

1. Clemson University, Materials Science and Engineering, USA
2. Coe College, Physics, USA

10:15 AM

(GOMD-S3-076-2017) Luminescent glasses for hadron calorimeter (Invited)

C. Siligardi*[1]; C. Mugoni[1]; S. Barbi[1]; C. Gatto[2]; M. Affatigato[3]

1. University of Modena and Reggio Emilia, Department of Engineering "Enzo Ferrari", Italy
2. Fermi National Accelerator Laboratory, USA
3. Coe College, USA

10:45 AM

(GOMD-S3-077-2017) Electrical Conductivity of Doped Tellurium Vanadate Glass Systems

M. Hedlund*[1]; I. Illari[2]; L. McDonald[1]; S. Feller[1]; M. Affatigato[1]

1. Coe College, Physics, USA
2. Barnard College of Columbia University, Physics and Astronomy, USA

11:00 AM

(GOMD-S3-078-2017) Photomultiplier Tube (PMT) Glass Optimization and Property Evaluation for Neutrino Detection Application – MD Simulation and Experimental Study

R. Dongol*[1]; A. Tandia[2]; S. K. Sundaram[1]

1. Alfred University, Materials Science and Engineering, USA
2. Corning Incorporated, USA

11:15 AM

(GOMD-S3-079-2017) Study on the large area MCP-PMT glass radioactivity reduction

J. Zhao[1]; X. Zhang*[1]

1. Insitute of High Energy Physics, Chinese Academy of Sciences, China

GOMD Symposium 4: Glass Technology and Crosscutting Topics

Glass Surfaces and Treatments I

Room: Kona 2

Session Chairs: Robert Schaut, Corning Incorporated; Nicholas Smith, Corning Incorporated

9:45 AM

(GOMD-S4-034-2017) Water on Glass Surfaces: Dissolution, SCC vs Strengthening, Proton Transport (Invited)

S. H. Garofalini*[1]

1. Rutgers Univ, USA

10:15 AM

(GOMD-S4-035-2017) Potentiality of zinc salts treatment for ancient glass objects showing atmospheric alteration in museums

F. Alloteau[1]; O. Majerus[1]; I. Biron[2]; P. Lehuédé[2]; D. Caurant*[1]

1. Chimie Paristech CNRS, IRCP, France
2. C2RMF, France

10:30 AM

(GOMD-S4-036-2017) Surface Structure and Reactivity of CAS Glasses

L. Wang*[1]; A. Cormack[1]; G. Agnello[2]; N. J. Smith[2]; R. Manley[2]

1. Alfred University, Ceramic Engineering, USA
2. Corning Incorporated, USA

10:45 AM

(GOMD-S4-037-2017) Two ways of solving glass chemical durability challenges in manufacturing: Yield improvement for NCVM process

Y. Jin*[1]; A. Li[1]

1. Corning Incorporated, USA

11:00 AM

(GOMD-S4-038-2017) Water speciation and reactions at/in soda lime silica and calcium aluminosilicate glass surfaces

S. H. Kim*[2]; C. G. Pantano[4]; N. Sheth[4]; J. Luo[1]; J. Barnerjee[3]

1. University of Massachusetts, Chemical Engineering, USA
2. Pennsylvania State University, Chemical Engineering, USA
3. Pennsylvania State University, Materials Research Institute, USA
4. Pennsylvania State University, Materials Science and Engineering, USA

11:15 AM

(GOMD-S4-039-2017) Monitoring Early Corrosion Kinetics with In-situ pH and Conductivity Probes

R. Schaut*[1]; S. Tietje[1]

1. Corning Incorporated, S&T, Glass Research, USA

11:30 AM

(GOMD-S4-040-2017) Temperature-Resolved ToF-SIMS of Display Glass Surfaces

C. V. Cushman*[1]; B. M. Lunt[3]; C. T. Dahlquist[1]; N. J. Smith[2]; M. R. Linford[1]

1. Brigham Young University, Chemistry and Biochemistry, USA
2. Corning Incoroporated, Science and Technology Division, USA
3. Brigham Young Univeristy, Information Technology, USA

11:45 AM

(GOMD-S4-041-2017) Multi-Instrument Depth Profiles of Display Glasses

C. V. Cushman[1]; B. Sturgell[1]; G. I. Major[1]; B. M. Lunt[2]; C. T. Dahlquist[1]; P. Bruener[3]; J. Zakel[3]; T. Grehl[3]; N. J. Smith[4]; M. R. Linford*[1]

1. Brigham Young University, Chemistry and Biochemistry, USA
2. Brigham Young University, Information Technology, USA
3. IONTOF GmbH, Germany
4. Corning Incorporated, Science and Technology Division, USA

GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium

GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium IV

Room: Kona 5

Session Chairs: Akihiko Sakamoto, OLED Material Solutions Co.; Jong Heo, Pohang University of Science and Technology(POSTECH)

9:45 AM

(GOMD-S6-012-2017) Control of crystallization in glass for photonic device (Invited)

J. Qiu*[1]

1. College of Optical Science and Engineering, Zhejiang University, China

10:15 AM

(GOMD-S6-013-2017) Single crystal growth by laser-induced solid-solid conversion: Concepts and Applications (Invited)

K. Veenhuizen[1]; C. Au-Yeung[1]; S. McAnany[2]; D. Nolan[3]; B. Aitken[3]; H. Jain[2]; V. Dierolf*[1]

1. Lehigh University, Physics, USA
2. Lehigh University, Material Science, USA
3. Corning Incorporated, USA

10:45 AM

(GOMD-S6-014-2017) On-chip fabrication of glass microsphere laser by localized laser heating (Invited)

T. Kishi*[1]; T. Kumagai[1]; N. Matsushita[1]; T. Yano[1]

1. Tokyo Institute of Technology, Japan

11:15 AM

(GOMD-S6-015-2017) Femtosecond Laser Writing of Electro-optic Crystalline Structures in Glass (Invited)

C. M. Liebig*[1]; J. Goldstein[1]; S. A. McDaniel[2]; K. Douglas[1]; G. Cook[2]

1. Air Force Research Laboratories, Materials and Manufacturing, USA
2. Air Force Research Laboratories, Sensors Directorate, USA

11:45 AM

(GOMD-S6-016-2017) A compositional strategy for laser-induced fabrication of single crystal architecture in glass

S. McAnany*[1]; K. Veenhuizen[2]; B. Aitken[3]; D. Nolan[3]; V. Dierolf[2]; H. Jain[1]

1. Lehigh University, Materials Science & Engineering, USA
2. Lehigh University, Physics, USA
3. Corning Incorporated, USA

PACRIM Symposium 01: Characterization and Modeling of Ceramic Interfaces: Structure, bonding, and Grain Growth

Interface Thermodynamics

Room: Kohala 3

Session Chairs: Klaus van Benthem, University of California, Davis; Wolfgang Rheinheimer, Karlsruhe Institute of Technology

8:30 AM

(PACRIM-S1-001-2017) Spontaneously-Formed 2-D Interfacial Phases: From Tailoring Materials for Energy Applications to Forecasting Activated Sintering (Invited)

J. Luo*[1]

1. UCSD, USA

9:00 AM

(PACRIM-S1-002-2017) Predicting phase behavior of interfaces with evolutionary algorithms (Invited)

Q. Zhu[2]; R. E. Rudd[1]; T. Frolov*[1]

1. Lawrence Livermore National Laboratory, USA
2. University of Nevada Las Vegas, Department of Physics and Astronomy, USA

9:30 AM

(PACRIM-S1-003-2017) Characterization of interface, segregation and phase separation structures by analytical TEM

S. Cheng*[1]

1. Lawrence Berkeley National Laboratory, Molecular Foundry, USA

9:45 AM

(PACRIM-S1-004-2017) Atomistic simulations of energetically stable grain boundary structures and its diffusional property in MgO

T. Yokoi*[1]; A. Nakamura[1]; K. Matsunaga[1]

1. Nagoya University, Materials Science & Engineering, Japan

10:00 AM

Break

10:15 AM

(PACRIM-S1-005-2017) Zero Grain Boundary Excess Energies in Oxides (Invited)

R. Castro*[1]

1. University of California, Davis, Material Science & Engineering, USA

10:45 AM

(PACRIM-S1-006-2017) Atomic-resolution STEM-EDS characterization of grain boundary chemistry in yttria-stabilized zirconia

B. Feng*[1]; N. Lugg[1]; A. Kumamoto[1]; Y. Ikuhara[1]; N. Shibata[1]

1. The University of Tokyo, Japan

11:00 AM

(PACRIM-S1-007-2017) Atomic structure of (001) low-angle tilt grain boundary with a slight twist component in strontium titanate

Y. Furushima*[1]; Y. Arakawa[1]; A. Nakamura[1]; E. Tochigi[3]; K. Matsunaga[1]

1. Nagoya University, Japan
3. University of Tokyo, Japan

11:15 AM

(PACRIM-S1-008-2017) Effect of Applied Electric Field on Grain Boundary Core Structures in Strontium Titanate Bicrystals

L. A. Hughes*[1]; K. van Benthem[1]

1. University of California, Davis, Materials Science and Engineering, USA

11:30 AM

(PACRIM-S1-009-2017) Surfaces and Interfaces in Oxides Under Oxidizing and Reducing Conditions: The Effect of Nickel (Invited)

A. Morrissey[2]; I. Reimanis*[1]; J. R. O'Brien[3]

1. Colorado School of Mines, USA
2. CoorsTek, Incorporated, USA
3. Off Grid Research, USA

PACRIM Symposium 04: Polymer-Derived Ceramics (PDCs) and Composites

Chemistry and Synthesis of PDCs

Room: King's 3

Session Chair: Paolo Colombo, University of Padova

8:30 AM

(PACRIM-S4-001-2017) Application of Novel Silsesquioxane and Silsesquiazane Derivatives; Polymeric Precursors for Ternary SiOC and SiON Ceramics (Invited)

Y. Iwase*[1]; Y. Horie[1]; Y. Iwamoto[2]

1. Toagosei Co Ltd., General Center of Research and Development, Japan
2. Nagoya Institute of Technology, Japan

9:00 AM

(PACRIM-S4-002-2017) Silicon-Based Non-Oxide Ceramics and Nanocomposites through Chemistry of Modified Organosilicon Polymers

S. Bernard*[1]

1. CNRS, France

9:15 AM

(PACRIM-S4-003-2017) Molecular Design of Preceramic Polymers (Invited)

T. Zhao*[1]

1. Institute of Chemistry, Chinese Acdemy of Science, China

9:45 AM

(PACRIM-S4-004-2017) Chemical formation of AlN from Al-carbodiimide polymer

Y. Iwamoto*[1]; Y. Daiko[1]; S. Honda[1]; E. Ionescu[2]; G. Mera[2]; R. Riedel[2]

1. Nagoya Institute of Technology, Japan
2. TU Darmstudt, Germany

10:00 AM

Break

Processing of PDCs

Room: King's 3

Session Chair: Peter Kroll, UT Arlington

10:15 AM

(PACRIM-S4-005-2017) New source of large and pure h-BN nanosheets (Invited)

Y. Li[2]; S. Yuan[2]; V. Garnier[2]; A. Brioude[1]; P. Steyer[2]; C. Journet[1]; B. Toury*[1]

1. University of Lyon, Laboratoire des Multimatériaux et Interfaces, France
2. Laboratoire Matériaux Ingénierie et Science, University of Lyon, France

10:45 AM

(PACRIM-S4-006-2017) Additive Manufacturing of ceramics from polysiloxanes

P. Colombo*[1]; J. E. Schmidt[1]; G. Franchin[1]; H. Elsayed[1]

1. University of Padova, Industrial Engineering, Italy

11:00 AM

(PACRIM-S4-007-2017) Preceramic Polymer-Derived SiBCN Fibers with tunable properties by Electrospinning and the polymer-derived ceramics route

Q. Chen*[1]; Z. Yang[1]; D. Jia[1]; Y. Zhou[1]

1. Harbin Institute of Technology, China

11:15 AM

(PACRIM-S4-008-2017) Facile synthesis, microstructure and photophysical properties of core-shell nanostructured (SiCN)/BN nanocomposites

Q. Zhang*[1]; D. Jia[1]; Z. Yang[1]; X. Duan[1]; Y. Zhou[1]

1. Harbin Institute of Technology, China

11:30 AM

(PACRIM-S4-009-2017) High surface area lotus type porous SiOC ceramics

D. Zeydanli*[2]; C. Vakifahmetoglu[1]

1. Istanbul Kemerburgaz University, Department of Mechanical Engineering, Turkey
2. Istanbul Technical University, Department of Chemistry, Turkey

11:45 AM

(PACRIM-S4-010-2017) Polymer-derived SiC nanofibers via electrospinning: fabrication and properties

B. Wang*[1]; K. Jian[1]; C. Shao[1]

1. National University of Defense and Technology, China

PACRIM Symposium 05: Advanced Powder-Processing and Manufacturing Technologies

Nanoparticle and Powder Design and Synthesis

Room: King's 2

Session Chairs: Junichi Tatami, Yokohama National University; Qian Liu, Shanghai Institute of Ceramics, Chinese Academy of Sciences

10:15 AM

(PACRIM-S5-001-2017) Rapid Preparation and Optimization of Inorganic Luminescent Materials by Combinatorial Method (Invited)

Q. Liu*[1]; Q. Wei[1]; Z. Zhou[1]; G. Liu[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, The State Key Lab. of High Performance Ceramics and Superfine Microstructure, China

10:45 AM

(PACRIM-S5-002-2017) Emulsion templating of poly (acrylic acid) by ammonium hydroxide/sodium hydroxide aqueous mixture for high-dispersed hollow silica nanoparticles

C. Takai*[1]; M. Ando[1]; M. Noritake[1]; H. Razavi Khosroshahi[1]; M. Fuji[1]

1. Nagoya Institute of Technology, Advanced Ceramics Research Center, Japan

11:00 AM

(PACRIM-S5-003-2017) Fabrication of Amorphous SiBN powders by Mechanical Alloying and its Crystallization Process

X. Liao*[1]; Z. Yang[1]; D. Jia[1]; Y. Zhou[1]

1. Harbin Institute of Technology, China

11:15 AM

(PACRIM-S5-004-2017) Monitoring Compaction and Densification of Ceramic Powders

R. A. Gerhardt*[1]

1. Georgia Institute of Technology, Materials Science and Engineering, USA

11:30 AM

(PACRIM-S5-005-2017) Simulation of irregular shaped particles breakage using ADEM

S. Ishihara*[1]; J. Kano[1]

1. Tohoku University, IMRAM, Japan

11:45 AM

(PACRIM-S5-006-2017) Pulverization of Y_2O_3 nanoparticles by using nanocomposite particles prepared by mechanical treatment

J. Tatami*[1]; K. Jeong[1]; M. Iijima[1]; T. Takahashi[2]

1. Yokohama National University, Japan
2. Kanagawa Academy of Science and Technology, Japan

PACRIM Symposium 10: Multifunctional Nanomaterials and Their Heterostructures for Energy and Sensing Devices

Multifunctional Integration for Chemical and Biosensors I

Room: Queen's 5

Session Chairs: Thomas Fischer, University of Cologne; Yong Yang, Shanghai Institute of Ceramics, Chinese Academy of Sciences

8:30 AM

(PACRIM-S10-022-2017) Functional Silicon Nanostructures and Their Use for Biological Applications (Invited)

Y. He*[1]

1. Soochow University, Institute of Functional Nano & Soft Materials (FUNSOM), and Collaborative Innovation Center of Suzhou Nano Science and Technology (NANO–CIC), China

9:00 AM

(PACRIM-S10-023-2017) High sensitivity, low energy consumption H2 and NO2 sensors with Pt/oxide/Pt sensor configuration (Invited)

B. Saruhan-Brings*[1]; A. A. Haidry[2]

1. DLR - German Aerospace Center, Institute of Materials Research, Germany
2. Nanjing University of Aeronautics and Astronautics (NUAA), College of Materials Science and Technology (CMST), China

9:30 AM

(PACRIM-S10-024-2017) Nanostuctured Oxide Ceramics for Sensors and Photocatalysts

P. Gouma*[1]

1. SUNY Stony Brook, MSE, USA

9:45 AM

(PACRIM-S10-025-2017) Selective Gas Sensors using Co_3O_4-SnO_2 Hollow Hetero-nanostructures Prepared by Galvanic Replacement

H. Jeong*[1]; J. Kim[1]; S. Jeong[1]; C. Kwak[1]; J. Lee[1]

1. Korea University, Materials Science and Engineering, Republic of Korea

10:00 AM

Break

Multifunctional Integration for Chemical and Biosensors II

Room: Queen's 5

Session Chairs: Bilge Saruhan-Brings, DLR - German Aerospace Center; Yao He, Soochow University

10:15 AM

(PACRIM-S10-026-2017) Niobium Pentoxide: One Promising Surface-Enhanced Raman Scattering Active Semiconductor Substrate (Invited)

Y. Yang*[1]; Y. Shan[1]; Z. Huang[1]; D. Jiang[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

10:45 AM

(PACRIM-S10-027-2017) Highly selective and sensitive detection of trimethylamine using Au-loaded Cr_2O_3 yolk-shell spheres

T. Kim*[1]; J. Yoon[1]; Y. Kang[1]; J. Lee[1]

1. Korea University, Materials Science and Engineering, Republic of Korea

11:00 AM

(PACRIM-S10-028-2017) Pt-doped SnO_2 hollow nanospheres prepared by Kirkendall effect for sensitive and selective detection of ethanol

B. Kim*[1]; J. Cho[1]; J. Yoon[1]; C. Na[1]; C. Lee[1]; J. Ahn[1]; Y. Kang[1]; J. Lee[1]

1. Korea University, Materials Science and Engineering, Republic of Korea

11:15 AM

(PACRIM-S10-029-2017) Synthesis of TiO_2-SnO_2 nanocomposites for application in the gas sensors

A. M. Marzec*[1]; Z. Pedzich[1]

1. AGH - University of Science and Technology, Department of Ceramics and Refractory Materials, Poland

11:30 AM

(PACRIM-S10-030-2017) Development of metal-organic framework-coated SAW sensors for sensitive detection of methane

J. Devkota*[1]; P. Ohodnicki[1]; D. W. Greve[2]

1. National Energy Technology Laboratory, USA
2. Carnegie Mellon University, Electrical and Computer Engineering, USA

11:45 AM

(PACRIM-S10-031-2017) Electrospun metal oxide fiber meshes for improved sensing of toxic analytes in the gas phase (Invited)

T. Fischer*[1]; Y. Gönüllü[1]; D. Graf[1]; S. Mathur[1]

1. University of Cologne, Institute of Inorganic Chemistry, Germany

PACRIM Symposium 13: Advanced Structural Ceramics for Extreme Environments

Materials Design, New Compositions, and Composites

Room: Kohala 4

Session Chair: William Fahrenholtz, Missouri University of Science & Technology

8:30 AM

(PACRIM-S13-001-2017) Designing Ceramic Composites for use at High Temperatures (Invited)

R. N. Singh*[1]

1. Oklahoma State University, School of Materials Science and Engineering, USA

9:00 AM

(PACRIM-S13-002-2017) Developing UHTCMCs: Effect of matrix additives on the resistance to oxidation

D. Sciti*[1]; A. Vinci[1]; L. Zoli[1]

1. ISTEC-CNR, Italy

9:15 AM

(PACRIM-S13-003-2017) Toughened and damage tolerant SiC ceramics by adding graphene-based fillers

M. Belmonte*[1]; P. Miranzo[1]; M. I. Osendi[1]

1. Institute of Ceramics and Glass, CSIC, Spain

9:30 AM

(PACRIM-S13-004-2017) Silicon Nitride and Silicon Carbide ceramics for Avionics and Space Instruments (Invited)

K. Berroth*[1]

1. FCT Ingenieurkeramik GmbH, Germany

9:45 AM

(PACRIM-S13-005-2017) First-principles investigation on segregation of solute atom (Y, Nb, Ta, Mo, W) in ZrB_2 grain boundaries and their effects on grain boundary strengths

F. Dai*[1]; Y. Zhou[1]

1. Aerospace Research Institute of Materials and Processing Technology, Science and Technology of Advanced Functional Composite Laboratory, China

10:00 AM

Break

Novel Processing and Characterization Methods

Room: Kohala 4

Session Chair: Diletta Sciti, ISTEC-CNR

10:15 AM

(PACRIM-S13-006-2017) Non-Cooled as well as Actively-Cooled Ceramic Matrix Composites in harsh propulsion environment (Invited)

S. Schmidt-Wimmer*[1]

1. Airbus Safran Launchers, Production Technology - Materials & Processes, Germany

10:45 AM

(PACRIM-S13-007-2017) Processing and Elevated Temperature Mechanical Properties of ZrB_2/ZrB_2-C Laminates

C. Wittmaier[1]; W. Fahrenholtz*[1]; G. Hilmas[1]

1. Missouri University of Science & Technology, Dept. of Materials Science and Engineering, USA

11:00 AM

(PACRIM-S13-008-2017) Interplay between nanolaminated structure and electron-phonon coupling inTi-based MAX phases

S. Dubois*[1]; A. Nassour[1]; V. Mauchamp[1]

1. PPRIME Institute, France

11:15 AM

(PACRIM-S13-009-2017) Improvement of Densification Uniformity in C/SiC Composites by Chemical Vapor Infiltration

K. Choi*[1]; J. Seo[1]; K. Kim[1]

1. Korea Institute of Ceramic Engineering and Technology (KICET), Icheon branch, Republic of Korea

11:30 AM

(PACRIM-S13-010-2017) Melt and Matrix modifications to the Reactive Melt Infiltration Process used for the manufacturing of UHTCMCs

M. Kuetemeyer*[1]

1. DLR - German Aerospace Center, KVS, Germany

11:45 AM

(PACRIM-S13-011-2017) Mechanical Behavior of Nuclear Grade SiC-SiC Tubing at Normal Operating and Accident Temperatures

G. Jacobsen*[1]; K. Shapovalov[1]; E. Song[1]; C. Deck[1]

1. General Atomics, Nuclear Technologies and Materials, USA

PACRIM Symposium 14: Novel Spray Coatings

Energy and Environmental Applications of Aerosol Deposition

Room: Waikoloa 2

Session Chairs: Scooter Johnson, Naval Research Laboratory; Kazuaki Naoe, Hitachi, Ltd.

8:30 AM

(PACRIM-S14-025-2017) Recent progress in research and development on fabricating all solid-state lithium ion battery by aerosol deposition method (Invited)

K. Kataoka*[1]; J. Akimoto[1]; J. Akedo[1]

1. AIST, Japan

9:00 AM

(PACRIM-S14-026-2017) The role of the Aerosol Deposition process on the film properties of $Li_7La_3Zr_2O_{12}$ thick-films

D. Hanft*[1]; R. Moos[1]

1. University of Bayreuth, Functional Materials, Germany

9:15 AM

(PACRIM-S14-027-2017) Aerosol Deposition of PLZT Films for Power Inverters in Electric Drive Vehicles

B. Balachandran*[1]; B. Ma[1]; T. H. Lee[1]; S. E. Dorris[1]

1. Argonne National Laboratory, Energy Systems Division, USA

9:30 AM

(PACRIM-S14-028-2017) Preparation and Properties of Al_2O_3 Ceramic Insulating Layer for High Power Devices by Aerosol Deposition Method

R. Aoyagi*[1]; H. Tsuda[1]; J. Akedo[1]

1. National Institute of Advanced Industrial Science and Technology, Japan

9:45 AM

(PACRIM-S14-029-2017) Plasma erosion behavior of Yttrium Oxide film formed by aerosol deposition method

H. Ashizawa*[1]; M. Kiyohara[1]

1. TOTO ltd, Japan

10:00 AM

Break

Novel Coating Deposition

Room: Waikoloa 2

Session Chair: Rintaro Aoyagi, National Institute of Advanced Industrial Science and Technology

10:15 AM

(PACRIM-S14-030-2017) Polymer-Assisted Deposition Epitaxial $Li(Ni,Co,Mn)O_2$ Thin Films

D. Huang[1]; Q. Zhou[1]; H. Luo*[1]

1. New Mexico State University, USA

10:30 AM

(PACRIM-S14-031-2017) Scalable solution assembly of 2D nanosheets for high-performance flexible electronics

M. Osada*[1]

1. National Institute for Materials Science, WPI-MANA, Japan

10:45 AM

(PACRIM-S14-032-2017) Formation of three-dimensional structures with high density composed of carbon short fibers

M. Mori*[1]; S. Mori[1]; N. Ikeda[2]; J. Kano[2]; Y. Nishina[2]; J. Akedo[3]

1. Ryukoku University, Japan
2. Okayama University, Japan
3. National Institute of Advanced Industrial Science and Technology (AIST), Japan

PACRIM Symposium 15: Advanced Wear-Resistant Materials: Tribology and Reliability

Wear Resistant Materials: Tribology and Reliability

Room: Queen's 4

Session Chair: Kouichi Yasuda, Tokyo Institute of Technology

8:30 AM

(PACRIM-S15-001-2017) Influence of data set size on linearity in 2-parameter Weibull plot

K. Yasuda*[1]

1. Tokyo Institute of Technology, Japan

8:45 AM

(PACRIM-S15-002-2017) Strength improvement and purification of $Yb_2Si_2O_7$/SiC nanocomposites by surface crack healing (Invited)

T. Nakayama*[1]; T. Son[1]; L. He[2]; H. Suematsu[1]; K. Niihara[1]; T. Suzuki[1]

1. Nagaoka Univ of Tech, Japan
2. Idaho National Laboratory, USA

9:15 AM

(PACRIM-S15-003-2017) Wear and cutting resistance of Al alloy/ ceramic interpenetrating composites

J. Liu*[1]; J. Binner[2]; L. Gao[1]

1. Shanghai Jiao Tong University, China
2. University of Birmingham, United Kingdom

9:30 AM

(PACRIM-S15-004-2017) The Wear Response of High Performance Cermets

K. P. Plucknett*[1]

1. Dalhousie University, Mechanical Engineering, Canada

9:45 AM

(PACRIM-S15-005-2017) Ultrathin MoS_2 coated TiO_2 nanosheet with high photocatalytic H_2 evolution efficency and durability

H. Han*[1]; K. Kim[1]; J. Ryu[2]; S. Mhin[1]; W. Han[3]

1. Korea Institute of Industrial Technology, Republic of Korea
2. Korea National University of Transportation, Republic of Korea
3. Seoul Womens University, Department of Chemistry, Republic of Korea

10:00 AM

Break

10:15 AM

(PACRIM-S15-008-2017) Influence of SiC content on high temperature erosion wear behavior of ZrB_2 ceramics

Y. Gupta[1]; S. Sharma[1]; A. W. Selokar[1]; B. Kumar*[1]; T. Venkateswaran[2]

1. IIT Roorkee, India
2. VSSC, India

10:30 AM

(PACRIM-S15-009-2017) Understanding Friction in MoS2 (Invited)

M. Chandross*[1]; T. Babuska[1]; J. Curry[2]; M. Dugger[1]; B. Krick[2]; N. Argibay[1]

1. Sandia National Laboratories, USA
2. Lehigh University, USA

11:00 AM

(PACRIM-S15-010-2017) Design and syntheses of hard coatings for industrial applications (Invited)

K. Kim*[1]

1. Pusan National University, School of Materials Science and Engineering, Republic of Korea

PACRIM Symposium 18: Microwave Dielectric Materials and Their Applications

Microwave Dielectric Materials and Their Applications I

Room: Kohala 2

Session Chairs: Xiang Ming Chen, Zhejiang University; Danilo Suvorov, Jozef Stefan Institute

8:30 AM

(PACRIM-S18-001-2017) Growth of $Ag(Nb_{0.5}ta_{0.5})O_3$ thin films by pulsed laser deposition for microwave dielectric applications (Invited)

D. Suvorov*[1]; M. Spreitzer[1]; L. Li[2]

1. Jozef Stefan Institute, Advanced Materials, Slovenia
2. Zhejiang University, Laboratory of Dielectric Materials, Department of Materials Science and Engineering, China

9:00 AM

(PACRIM-S18-002-2017) Microwave Ceramics: Beyond 5G (Invited)

I. M. Reaney*[1]

1. University of Sheffield, Materials Science and Engineering, United Kingdom

9:30 AM

(PACRIM-S18-003-2017) Structural evolution, grain growth mechanism and microwave dielectric properties of $Li_2Ti_{1-x}(Mg_{1/3}Nb_{2/3})xO_3$ (Invited)

J. Bian*[1]

1. Shanghai University, Departemnt of Inorganic Materials, China

10:00 AM

Break

10:15 AM

(PACRIM-S18-004-2017) Microwave and radio-frequency dielectric properties of oxynitride perovskite thin films (Invited)

C. Le Paven*[1]; F. Marlec[1]; R. Benzerga[1]; L. Le Gendre[1]; A. Ferri[3]; D. Fasquelle[4]; V. Laur[5]; F. Tessier[2]; F. Cheviré[2]; X. Castel[1]; A. Sharaiha[1]

1. University of Rennes 1, Institute of Electronics and Telecommunications of Rennes (IETR), France
2. University of Rennes 1, Institute of Chemistry of Rennes, France
3. University of Artois, France
4. University of Cote d'Opale, France
5. University of Brest, France

10:45 AM

(PACRIM-S18-005-2017) Weak Ferroelectricity and τ_f Controlling Mechanism of $Ba_2Zn_{(1+x)}Si_2O_{(7+x)}$ ($-1 \leq x \leq 1$) Low-Permittivity Microwave Dielectric Ceramics (Invited)

W. Lu*[1]; Z. Zou[1]; Z. Chen[1]; W. Lei[1]

1. Huazhong University of Science and Technology, School of Optical and Electronic Information, China

11:10 AM

(PACRIM-S18-006-2017) Dielectric Properties of Nano Size Magnesium Aluminum Silicates and Titanates Prepared by Soft Chemistry

C. Ozturk*[1]; E. Kondakci[1]; E. Lokcu[2]; A. Ozdemir[1]; N. Solak[1]

1. Istanbul Technical University, Metallurgical and Material Engineering, Turkey
2. Eskisehir Osmangazi University, Turkey

11:35 AM

(PACRIM-S18-007-2017) Ferroelectric New System of $Ba_4R_2Zr_4Nb_6O_{30}$ (R=La, Nd, Sm) with Filled Tungsten Bronze Structure

W. Feng*[1]; X. Zhu[1]; X. Liu[1]; X. Chen[1]

1. Zhejiang University, Materials Science and Engineering, China

PACRIM Symposium 20: Crystalline Materials for Electrical, Optical, and Medical Applications

Scintillator I

Room: Kohala 1

Session Chair: Lynn Boatner, Oak Ridge National Lab

8:30 AM

(PACRIM-S20-041-2017) Large Format Li Co-doped NaI:Tl (NaIL™) Scintillation Detector for Gamma-Ray and Neutron Dual Detection (Invited)

K. Yang*[1]; P. Menge[1]; V. Ouspenski[2]

1. Saint-Gobain Crystals, USA
2. Saint-Gobain Recherche, France

9:00 AM

(PACRIM-S20-042-2017) Recent Advanced Scintillation Crystals for Gamma-ray and Neutron Detection (Invited)

R. Hawrami*[1]; E. Ariesanti[1]; L. Soundara-Pandian[1]; J. Glodo[1]; K. S. Shah[1]

1. Radiation Monitoring Devices, Scintillation Detection, USA

9:30 AM

(PACRIM-S20-043-2017) Transparent Ceramic Scintillators (Invited)

N. Cherepy*[1]; Z. M. Seeley[1]; S. A. Payne[1]; P. Beck[2]; E. Swanberg[2]; H. Steven[2]; D. Schneberk[2]; G. Stone[2]; B. Wihl[2]; S. Fisher[2]; P. Thelin[2]; T. Stefanik[3]; J. Kindem[4]

1. Lawrence Livermore National Lab, Chemistry and Materials Science, USA
2. Lawrence Livermore National Lab, USA
3. Nanocerox, USA
4. Cokiya, USA

10:00 AM

Break

10:15 AM

(PACRIM-S20-044-2017) Cesium Hafnium Halide Ceramic Scintillators (Invited)

A. Burger*[1]; B. Goodwin[1]; E. Rowe[1]; M. Groza[1]; A. Husaker[1]; V. Buliga[1]; I. Jones[2]; Z. M. Seeley[2]; P. Beck[2]; N. Cherepy[2]; S. A. Payne[2]

1. Fisk University, USA
2. Lawrence Livermore National Lab, USA

10:45 AM

(PACRIM-S20-045-2017) Development of Novel Crystal Growth method for Halide Scintillator Single Crystals (Invited)

Y. Yokota*[1]

1. Tohoku University, New Industry Creation Hatchery Center (NICHe), Japan

11:15 AM

(PACRIM-S20-046-2017) Transient absorption spectroscopy of scintillaotrs (Invited)

M. Koshimizu*[1]; S. Yamashita[2]; Y. Muroya[3]; H. Yamamoto[3]; T. Yanagida[4]; Y. Fujimoto[1]; K. Asai[1]

1. Tohoku University, Department of Applied Chemistry, Japan
2. University of Tokyo, Department of Nuclear Engineering, Japan
3. Osaka University, The Institute of Industrial and Scientific Research, Japan
4. Nara Institute of Science and Technology, Japan

PACRIM Symposium 22: Direct Thermal to Electrical Energy Conversion Materials and Applications

Theories and New Concepts

Room: Queen's 6

Session Chairs: Michitaka Ohtaki, Kyushu University; Jong-Soo Rhyee, Kyung Hee University

8:30 AM

(PACRIM-S22-001-2017) Dynamics of entropy, charge and energy in thermoelectric materials and devices (Invited)

A. Feldhoff*[1]

1. Leibniz University Hannover, Institute of Physical Chemistry and Electrochemistry, Germany

9:00 AM

(PACRIM-S22-002-2017) Computational Design of Nanostructured Thermoelectrics (Invited)

C. Wolverton*[1]

1. Northwestern University, Materials Science and Eng., USA

9:30 AM

(PACRIM-S22-003-2017) Chiral Materials and Thermoelectrics (Invited)

Q. Li*[1]

1. Brookhaven National Laboratory, USA

10:00 AM

Break

Tellurides and Silicides

Room: Queen's 6

Session Chairs: Armin Feldhoff, Leibniz University Hannover; Qiang Li, Brookhaven National Laboratory

10:15 AM

(PACRIM-S22-004-2017) Nano precipitation and interface effect in thermoelectric bulk composites (Invited)

J. Rhyee*[1]

1. Kyung Hee University, Dept. of Applied Physics, Republic of Korea

10:35 AM

(PACRIM-S22-005-2017) Free-electron Creation at 60° Twin Boundary in Bi_2Te_3 (Invited)

S. Baek*[1]; J. Kim[1]

1. Korea Institute of Science and Technology, Center for Electronic Materials, Republic of Korea

10:55 AM

(PACRIM-S22-006-2017) Expanding the versatility of thermoelectric materials by the introduction of molecular-solders (Invited)

J. Son*[1]; S. Jo[1]; F. Kim[1]

1. Ulsan National Institute of Science and Technology, School of Materials Science and Engineering, Republic of Korea

11:15 AM

(PACRIM-S22-007-2017) Thermoelectric properties of lightly-substituted melt grown higher manganese silicides (Invited)

Y. Miyazaki*[1]; H. Hamada[1]; H. Nagai[1]; M. Sato[1]; K. Hayashi[1]; K. Yubuta[2]

1. Tohoku University, Department of Applied Physics, Japan
2. IMR Tohoku University, Japan

11:45 AM

(PACRIM-S22-008-2017) Crystal structure and thermoelectric properties of partially substituted melt-grown higher manganese silicides

H. Nagai*[1]; H. Hamada[1]; K. Hayashi[1]; Y. Miyazaki[1]

1. Tohoku University, Japan

PACRIM Symposium 26: Advances in Materials and Technology for Perovskite and Next Generation Solar Cells

Advances in Materials and Technologies for Perovskite-based Solar Cells II

Room: King's 1

Session Chairs: Qiquan Qiao, South Dakota State University

8:30 AM

(PACRIM-S26-009-2017) Ternary solvent for the $CH_3NH_3PbI_3$ perovskite film with uniform domain size (Invited)

K. Kim*[1]

1. Ewha Womans University, Republic of Korea

9:00 AM

(PACRIM-S26-010-2017) Nanoscale study of Perovskite solar cells for efficient charge transport (Invited)

Q. Qiao*[1]

1. South Dakota State University, USA

9:30 AM

(PACRIM-S26-011-2017) Exploitation of materials and process for facilitating commercialization of perovskite solar cells (Invited)

H. Jung*[1]

1. Sungkyunkwan University, School of Advanced Materials Science and Engineering, Republic of Korea

10:00 AM

Break

10:15 AM

(PACRIM-S26-012-2017) Inorganic Charge Transport Layers Grown by Atomic Layer Deposition for Water-Resistant Perovskite Solar Cells and Perovskite-Perovskite Tandem devices (Invited)

H. Shin*[1]; S. Seo[1]; C. Bae[1]; S. Jeong[1]

1. SungKyunKwan University, Department of Energy Science, Republic of Korea

10:45 AM

(PACRIM-S26-013-2017) Surface Modification and Structure Design of Perovskite Solar Cells (Invited)

M. Li*[1]

1. North China Electric Power Univeristy, School of Renewable Energy, China

PACRIM Symposium 30: Glasses and Ceramics for Nuclear and Hazardous Waste Treatment

Waste Glass Structure

Room: Kona 1

Session Chairs: Joseph Ryan, Pacific Northwest National Lab; Russell Hand, University of Sheffield

8:30 AM

(PACRIM-S30-015-2017) Determination of Solubility Constants of Saponite at Elevated Temperatures in High Ionic Strength Solutions: Applications to Nuclear Waste Isolation

Y. Xiong*[1]

1. Sandia National Laboratories, USA

8:45 AM

(PACRIM-S30-016-2017) Thermodynamic Assessment of Nepheline Formation in Nuclear Waste Glass

S. A. Utlak*[1]; T. M. Besmann[1]; C. Henager[2]; S. Hu[2]; Y. Li[2]

1. University of South Carolina, Nuclear Engineering, USA
2. Pacific Northwest National Lab, Nuclear Sciences Division, EED, USA

9:00 AM

(PACRIM-S30-017-2017) Role of iron in the crystallization of nepheline-based aluminosilicates

M. Ahmadzadeh*[1]; A. Goel[2]; J. McCloy[1]

1. Washington State University, Mechanical and Materials Engineering, USA
2. Rutgers University, USA

9:15 AM

(PACRIM-S30-018-2017) Effect of rare earths on the thermal stability and structure of silicate glasses

D. Caurant*[1]; O. Majerus[1]; T. Charpentier[2]; P. Loiseau[1]

1. Chimie Paristech CNRS, IRCP, France
2. CEA Saclay, NIMBE, France

9:30 AM

(PACRIM-S30-019-2017) The effect of Li addition on the crystallization behavior of Na aluminosilicate and borosilicate glasses: Comparisons of the local structure

J. Marcial*[2]; N. Washton[3]; A. Goel[5]; D. Watson[4]; S. W. Martin[4]; J. McCloy[1]

1. Washington State University, School of Mechanical and Materials Engineering, USA
2. Washington State University, Materials Science and Engineering Program, USA
3. Pacific Northwest National Lab, USA
4. Iowa State University, Materials Science and Engineering, USA
5. Rutgers University, Materials Science and Engineering, USA

9:45 AM

(PACRIM-S30-020-2017) Impact of iron on crystallization behavior and magnetic properties of sodium aluminoborosilicate glasses

A. A. Deshkar*[1]; M. Ahmadzadeh[2]; A. Scrimshire[4]; E. Han[1]; P. A. Bingham[4]; D. P. Guillen[3]; J. McCloy[2]; A. Goel[1]

1. Rutgers University, Materials Science & Engineering, USA
2. Washington State University, School of Mechanical & Materials Engineering, USA
3. Idaho National Laboratory, Materials Science & Engineering, USA
4. Sheffield Hallam University, Materials & Engineering Research Institute, United Kingdom

10:00 AM

Break

Geopolymer, Glass-Ceramic, and Composite Waste Forms I

Room: Kona 1

Session Chairs: Russell Hand, University of Sheffield; Joseph Ryan, Pacific Northwest National Lab

10:15 AM

(PACRIM-S30-021-2017) Glass-ceramic wasteforms for UK plutonium disposition produced by Hot Isostatic Pressing

N. C. Hyatt*[1]; S. Thornber[1]; M. C. Stennett[1]

1. The University of Sheffield, Materials Science & Engineering, United Kingdom

10:30 AM

(PACRIM-S30-022-2017) Long-term chemical durability testing of glass ceramics

C. L. Crawford*[1]

1. Savannah River National Laboratory, USA

10:45 AM

(PACRIM-S30-023-2017) Thermal Treatment of Plutonium Contaminated Materials

L. Boast*[1]; M. C. Stennett[1]; N. C. Hyatt[1]

1. University of Sheffield, MSE, United Kingdom

11:00 AM

(PACRIM-S30-024-2017) Hot isostatic pressing of ion exchange materials, from the Fukushima and Sellafield sites, to produce ceramic wasteforms

N. C. Hyatt*[1]; L. J. Gardner[1]; P. Heath[1]; M. C. Stennett[1]; S. Thornber[1]; R. J. Hand[1]; C. L. Corkhill[1]

1. The University of Sheffield, Materials Science & Engineering, United Kingdom

11:15 AM

(PACRIM-S30-025-2017) Hot Isostatic Pressing of Spent Ion Exchange Materials from the Fukushima and Sellafield Sites

L. J. Gardner*[1]; C. L. Corkhill[1]; R. A. McCaig[1]; N. C. Hyatt[1]

1. The University of Sheffield, Materials Science and Engineering, United Kingdom

11:30 AM

(PACRIM-S30-026-2017) Chemical behaviour of nuclear waste glass in presence of hardened OPC paste

K. Ferrand*[2]; S. Mercado[1]; K. Lemmens[2]; S. Liu[2]; A. Elia[2]; F. Angéli[3]

1. CRITT Matériaux, France
2. SCK-CEN, Belgium
3. CEA, France

11:45 AM

(PACRIM-S30-027-2017) Interactions between Simulant Vitrified Nuclear Wastes and Idealised Cement Leachates

C. Mann*[1]; C. L. Thorpe[1]; N. C. Hyatt[1]; J. Provis[1]; C. L. Corkhill[1]; E. M. Pierce[2]; J. R. Eskelsen[2]

1. University of Sheffiled, Material Science and Engineering, United Kingdom
2. Oak Ridge National Lab, Environmental Science Division, USA

PACRIM Symposium 32: Nanostructured Bioceramics and Ceramics for Biomedical Applications

Nanostructured Bioceramics II

Room: Monarchy

Session Chairs: Dagmar Galuskova, A. Dubcek University of Trencin; Rizhi Wang, University of Victoria

8:30 AM

(PACRIM-S32-009-2017) Lanthanide-based Nanostructures as Potential Players in the Biomedical Field (Invited)

E. Hemmer*[1]

1. University of Ottawa, Chemistry and Biomolecular Sciences, Canada

9:00 AM

(PACRIM-S32-010-2017) Atomistic Simulations of the Initial Stages of the Sol-Gel Synthesis of Bioactive Glasses (Invited)

A. Côté[2]; A. Tilocca[2]; A. Cormack*[1]

1. Alfred University, USA
2. University College London, United Kingdom

9:30 AM

(PACRIM-S32-011-2017) Calcium Phosphate Nanostructured Polymer Film as a New Platform for Drug Delivery (Invited)

R. Wang*[1]; T. Zhao[1]; S. Chen[1]

1. University of British Columbia, Canada

10:00 AM

Break

10:15 AM

(PACRIM-S32-012-2017) Release and Biological Performance of Theranostics from Novel Tissue Engineering Scaffolds for Cancer Patients (Invited)

L. Guo[1]; M. Wang*[1]

1. The University of Hong Kong, Department of Mechanical Engineering, Hong Kong

10:45 AM

(PACRIM-S32-013-2017) 3D Biomimetic Nanostructured Bioceramics and their Biomineralization Activities (Invited)

T. Shokuhfar*[1]

1. University of Illinois at Chicago, Department of Bioengineering, USA

11:15 AM

(PACRIM-S32-014-2017) Corrosion and low temperature degradation of zirconia based dental ceramics

D. Galuskova*[1]; S. Mikusinec[1]; A. Nowicka[1]; D. Galusek[1]

1. A. Dubcek University of Trencin, Slovakia

11:30 AM

(PACRIM-S32-015-2017) Synthesis and Properties of Calcium Phosphosilicate-Organic Nanoparticles (Invited)

J. H. Adair*[1]; M. Kester[2]; G. Matters[3]; G. Clawson[3]; Z. Wilczynski[3]; C. M. Gigliotti[3]; X. Tang[3]; W. Loc[3]; S. Linton[3]; C. McGovern[3]

1. Pennsylvania State University, Materials Science & Engineering, USA
2. University of Virginia, Pharmacology, USA
3. Pennsylvania State University, USA

GOMD Symposium 1: Fundamentals of the Glassy State

Topology and Rigidity

Room: Kona 3

Session Chairs: Mathieu Bauchy, University of California, Los Angeles; Morten Smedskjaer, Aalborg University

1:15 PM

(GOMD-S1-085-2017) Sharpness of Rigidity and Stress transitions in Chalcogenides (Invited)

P. Boolchand*[1]

1. University of Cincinnati, ECS, USA

1:45 PM

(GOMD-S1-086-2017) Revealing the role of rigidity on the fragility of glass-forming liquids from molecular simulations (Invited)

M. Micoulaut*[1]; C. Yildirim[1]; J. Raty[2]

1. UPMC, France
2. Université de Liège, Belgium

2:15 PM

(GOMD-S1-087-2017) Topological engineering of doped photonic glasses (Invited)

S. Zhou*[1]

1. South China University of Technology, School of Materials Science and Engineering, China

2:45 PM

(GOMD-S1-088-2017) Topological Controls on Fly Ash Dissolution Kinetics

T. Oey[1]; I. Pignatelli[1]; Y. Yu[1]; N. Neithalath[3]; J. W. Bullard[2]; M. Bauchy[1]; G. Sant*[1]

1. University of California, Los Angeles, USA
2. National Institute of Standards and Technology, Inorganic Materials Group, USA
3. Arizona State University, Ira A. Fulton Schools of Engineering, USA

3:00 PM

(GOMD-S1-089-2017) Dissolution Kinetics of Oxide Glasses: Effect of Network Topology

N. Mascaraque Alvarez*[1]; M. Bauchy[2]; M. M. Smedskjaer[1]

1. Aalborg University, Chemistry and Bioscience, Denmark
2. University of California, Civil and Environmental Engineering, USA

3:15 PM

(GOMD-S1-090-2017) The Atomic Topology of the Surface Controls the Hydration of Silica

Y. Yu*[1]; B. Wang[1]; G. Sant[1]; M. Bauchy[1]

1. University of California, Los Angeles, Civil and Environmental Engineering, USA

3:30 PM

Break

3:45 PM

(GOMD-S1-091-2017) Structural Evolution of Tetrahedral Liquids and Glasses (Invited)

P. Lucas*[1]; G. Coleman[1]

1. Univ of Arizona, USA

4:15 PM

(GOMD-S1-092-2017) Molecular Optimization of Calcium-Silicate-Hydrates: The Competition Between Density and Network Topology (Invited)

M. Abdolhosseini Qomi*[1]

1. University of California, Irvine, CEE, USA

4:45 PM

(GOMD-S1-093-2017) Irradiation-Induced Damage is Driven by Weak Topological Constraints

N. Krishnan*[1]; B. Wang[1]; Y. Le Pape[2]; G. Sant[1]; M. Bauchy[1]

1. University of California, Los Angeles, Civil and Environmental Engineering, USA
2. Oak Ridge National Lab, USA

5:00 PM

(GOMD-S1-094-2017) Topological Origin of Toughness and Brittleness in Silicate Glasses

Y. Yu[1]; B. Wang[1]; J. C. Mauro[2]; M. M. Smedskjaer[3]; M. Bauchy*[1]

1. University of California, Los Angeles, Civil and Environmental Engineering Department, USA
2. Corning Incorporated, USA
3. Aalborg University, Department of Chemistry and Bioscience, Denmark

5:15 PM

(GOMD-S1-095-2017) In-situ small-angle X-ray scattering study of electron density fluctuations in vitreous silica under the stress field of an indenter tip

G. N. Maurício de Macedo*[1]; S. Fuhrmann[1]; C. Krywka[2]; L. Wondraczek[1]

1. Friedrich-Schiller-University Jena, Chemistry and Geo Sciences, Germany
2. Helmholtz-Zentrum Geesthacht, Germany

5:30 PM

(GOMD-S1-096-2017) Dynamic Light Scattering in Mixed Na-Zn and Na-Al Metaphosphate Melts

D. Vu[1]; D. Sidebottom*[1]

1. Creighton University, Physics, USA

Glass under Flux

Room: Kona 4

Session Chair: Benoit Ruffle, Montpellier University

1:15 PM

(GOMD-S1-097-2017) Femtosecond laser modifications of fused silica for three-dimensional printing of complex devices (Invited)

Y. Bellouard*[1]

1. Ecole Polytechnique Fédérale de Lausanne (EPFL), STI/IMT, Switzerland

1:45 PM

(GOMD-S1-098-2017) Evaluation for the plasma resistance of alumino-silicate oxide glasses contained Y, B, Ca element under CF_4 / O_2 / Ar plasma mixture

J. Choi*[1]; H. Park[1]; Y. Han[1]; H. Kim[1]

1. Korea Institute of Ceramic Engineering and Technology (KICET), Engineering Ceramic Center, Republic of Korea

2:00 PM

(GOMD-S1-099-2017) Local glass structure modification during diffusion in Na_2O-CaO-Al_2O_3-SiO_2 (NCAS)

E. Burov*[1]; E. Gouillart[1]; C. Claireaux[2]; M. Toplis[3]

1. Saint-Gobain, Laboartoire Mixte Saint-Gobain/CNRS, France
2. Saint-Gobain Recherche, France
3. University Toulouse III, IRAP, France

2:15 PM

(GOMD-S1-100-2017) Transition between chaotic and self-organized patterns during femtosecond laser writing in glass: A tool for investigating glass fracture mechanics

C. E. Athanasiou*[1]; M. Hongler[1]; Y. Bellouard[1]

1. Ecole Polytechnique Fédérale de Lausanne, Microengineering, Switzerland

2:30 PM

(GOMD-S1-101-2017) Is there any evidence of amorphous to amorphous phase transformation due to radiation in oxide glasses?

S. Peuget*[1]; A. Mir[2]; C. Jegou[1]

1. CEA, France
2. University of Huddersfield, School of Computing and Engineering, United Kingdom

2:45 PM

(GOMD-S1-102-2017) Irradiation-Induced Damage in Quartz: The Critical Role of the Enthalpy Landscape

N. Krishnan*[1]; B. Wang[1]; Y. Yu[1]; Y. Le Pape[1]; G. Sant[1]; M. Bauchy[1]

1. University of California, Los Angeles, Civil and Environmental Engineering, USA

3:00 PM

(GOMD-S1-103-2017) Structure and point defects formation in densified silica glasses irradiated by 2.5 MeV electron

N. Ollier*[1]; K. Piven[1]; V. Martinez[2]; M. Christine[2]

1. CEA, France
2. ILM, France

3:15 PM

Break

Glass Processed under Extreme Conditions

Room: Kona 4

Session Chairs: Yuanzheng Yue, Aalborg University; Yves Bellouard, Ecole Polytechnique Fédérale de Lausanne (EPFL)

3:45 PM

(GOMD-S1-104-2017) Functional oxide glasses fabricated by aerodynamic levitation technique (Invited)

A. Masuno*[1]

1. Hirosaki University, Japan

4:15 PM

(GOMD-S1-105-2017) Network cation coordination in calcium aluminoborosilicate glasses: Pressure effects on recovered structural changes and densification

S. Bista*[1]; J. Stebbins[1]

1. Stanford University, Geological Sciences, USA

4:30 PM

(GOMD-S1-106-2017) Void structure in silica glass observed with positron annihilation lifetime spectroscopy: The effect on its optical properties

M. Ono*[1]; M. Fujinami[2]; S. Ito[1]

1. Asahi Glass Company, Research Center, Japan
2. Chiba University, Department of Applied Chemistry & Biotechnology, Japan

4:45 PM

(GOMD-S1-107-2017) Temperature analysis of ultrashort laser processed HPFS® glass through SEM images and thermal stress analysis

A. Rezikyan[1]; M. R. Ross[1]; J. Wu*[1]; P. J. Lezzi[1]; J. Luo[1]; A. Liu[1]

1. Corning Incorporated, USA

5:00 PM

(GOMD-S1-108-2017) Pressure effects on intermediate range and structural heterogeneity of glasses: From congruent compaction to local divergence (Invited)

L. Wondraczek*[1]

1. University of Jena, Germany

GOMD Symposium 4: Glass Technology and Crosscutting Topics

Glass Surfaces and Treatments II

Room: Kona 2

Session Chairs: Robert Schaut, Corning Incorporated; Nicholas Smith, Corning Incorporated

1:15 PM

(GOMD-S4-043-2017) Relationship between surface μ-roughness and interface slurry particle spatial distribution during glass polishing

T. I. Suratwala*[1]

1. Lawrence Livermore National Laboratory, Optics & Materials Science & Technology, USA

1:30 PM

(GOMD-S4-044-2017) Effects of variable contact dynamics and surface quality on flat glass-metal surface attraction

G. Agnello*[1]; R. Manley[1]; T. Brown[1]; C. Cole[1]

1. Corning Incorporated, USA

1:45 PM

(GOMD-S4-045-2017) Kinetics and Mechanisms of Phase Separation in Barium Borosilicate Glass Thin Films deposited by Magnetron Sputtering

J. Fonné*[1]; E. Gouillart[1]; E. Burov[1]; H. Montigaud[1]; S. Grachev[1]; D. Vandembroucq[2]

1. Saint-Gobain Recherche, UMR 125 CNRS/Saint-Gobain - Surface of Glass and Interfaces, France
2. UMR 7636 CNRS/ESPCI/Paris 6 UPMC/Paris 7 Diderot, Physics and Mechanics of Heterogeneous Media Laboratory, France

2:00 PM

(GOMD-S4-046-2017) Self-Healing Thin-Glass Coatings for High Temperature Applications

F. O. Mear*[1]; T. Carlier[1]; S. Saitzek[2]; J. Blach[2]; L. Montagne[1]

1. Lille 1 University, France
2. Artois University, France

2:15 PM

(GOMD-S4-047-2017) Strain in PMMA by water absorption; Implications for TV light guide plate shape

D. C. Allan*[1]; S. J. Koseba[1]; T. L. Werner[1]; L. K. Cornelius[1]

1. Corning Incorporated, Glass Research, USA

2:30 PM

(GOMD-S4-048-2017) Effect of Alkali Size on Network Dilation in Mixed Alkali-Aluminosilicate Glasses

E. A. King*[1]; C. Smith[1]; D. C. Allan[1]; J. C. Mauro[1]

1. Corning Incorporated, Glass Research, USA

2:45 PM

(GOMD-S4-049-2017) Effect of chemical tempering variables on structure evolution and mechanical properties of soda-lime-silicate glass

H. Hassani[1]; V. M. Sglavo*[1]

1. University of Trento, Italy

3:00 PM

(GOMD-S4-050-2017) Modifying the surface of soda lime silica glass by thermal poling in different chemical environments

J. Luo*[1]; C. G. Pantano[2]; S. H. Kim[1]

1. Pennsylvania State University, Chemical Engineering, USA
2. Pennsylvania State University, Material Science & Engineering, USA

3:15 PM

(GOMD-S4-051-2017) Electric field-assisted ion-exchange of silicate glass

V. M. Sglavo*[1]; A. Talimian[1]; E. Debattisti[1]

1. University of Trento, Italy

Challenges in Glass Manufacturing I

Room: Waikoloa 3

Session Chairs: Mathieu Hubert, CelSian Glass & Solar; Andreas Prange, RWTH Aachen University

1:15 PM

(GOMD-S4-052-2017) Needs for new melting technologies in specialty glass industry (Invited)

M. Hahn*[1]

1. Schott AG Germany, R&D, Germany

1:45 PM

(GOMD-S4-053-2017) Characterization of raw and waste materials to be used for production of stone wool melt

V. Schultz-Falk*[1]; P. A. Jensen[3]; K. Agersted[2]; M. Solvang[1]

1. ROCKWOOL International A/S, Denmark
2. Technical University of Denmark, Department of Energy Conversion and Storage, Denmark
3. Technical University of Denmark, Department of Chemical and Biochemical Engineering, Denmark

2:00 PM

(GOMD-S4-054-2017) Effects of raw materials and furnace atmosphere on batch-to-melt conversion in industrial glass melting (Invited)

A. Faber[1]; M. Rongen[1]; P. Marson[1]; O. Verheijen*[1]

1. CelSian Glass & Solar, Netherlands

2:30 PM

(GOMD-S4-055-2017) Neutron diffraction investigation of reactions in sodium aluminosilicate glass batch

J. Rygel*[1]; I. Peterson[1]; D. Ma[2]

1. Corning Incorporated, USA
2. Oak Ridge National Lab, USA

2:45 PM

(GOMD-S4-056-2017) Waste Treatment and Immobilization Plant, Applying Fundemental Glass Science for Engineering Solutions (Invited)

A. A. Kruger*[1]

1. US Department of Energy, Office of River Protection, USA

3:15 PM

(GOMD-S4-057-2017) Calculating Reaction Kinetics During the Batch-to-Melt Conversion

I. Peterson*[1]; J. Wright[1]; E. Stapleton[2]; A. Credle[2]; W. Johnson[3]

1. Corning Incorporated, Process Research, USA
2. Corning Incorporated, Science and Technology, USA
3. Corning Incorporated, Process Modeling, USA

3:30 PM

Break

Challenges in Glass Manufacturing II

Room: Waikoloa 3

Session Chairs: Mathieu Hubert, CelSian Glass & Solar; Oscar Verheijen, CelSian Glass & Solar

3:45 PM

(GOMD-S4-058-2017) Fundamentals of glass-rheology dependencies in tribologic systems relevant for glass forming (Invited)

A. Prange[1]; C. Roos*[1]

1. RWTH Aachen University, Glass and Ceramic Composites, Germany

4:15 PM

(GOMD-S4-059-2017) Towards glass wool and stone wool hybridization

C. Claireaux*[1]; N. Legendre[2]; O. Pons Y Moll[3]; J. Bernard[3]

1. Saint-Gobain Recherche, Elaboration des Verres, France
2. Saint-Gobain Isover G+H Aktiengesellschaft, Germany
3. Saint-Gobain Isover, France

4:30 PM

(GOMD-S4-060-2017) Furnace Start-Up Glass Defects: AZS Exudation or Corrosion?

K. R. Selkregg*[1]

1. Monofrax LLC, Technical, USA

4:45 PM

(GOMD-S4-061-2017) Interaction between a high zirconia refractory and a float glass

M. Ficheux*[1]; L. Cormier[2]; E. Burov[1]; K. Plevacova[3]

1. Saint-Gobain, SVI, France
2. IMPMC - CNRS, France
3. EV - Saint Gobain Recherche, France

GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium

GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium V

Room: Kona 5

Session Chairs: Tsuyoshi Honma, Nagaoka Univeristy of Technology; Edgar Zanotto, UFSCar

1:15 PM

(GOMD-S6-017-2017) Shape control of Li_2O-Al_2O_3-SiO_2 glass powder in heat treatment for crystallization (Invited)

S. Nakane*[1]; Y. Hosoda[1]

1. Nippon Electric Glass, Japan

1:45 PM

(GOMD-S6-018-2017) Relationship between crystallization of oxide glasses and the preparation condition (Invited)

H. Masai*[1]; Y. Takahashi[2]; T. Fujiwara[2]

1. Kyoto University, Institute for Chemical Research, Japan
2. Tohoku University, Department of Applied Physics, Japan

2:15 PM

(GOMD-S6-019-2017) Nontraditional molybdate and tungstate borate glasses, their crystallization behavior and immiscibility (Invited)

L. I. Aleksandrov*[1]; R. Iordanova[1]; Y. Dimitriev[2]; T. Komatsu[3]

1. Bulgarian Academy of Sciences, Institute of General and Inorganic Chemistry, Bulgaria
2. University of Chemical Technology and Metallurgy, Deapartment of Silicate Technology, Bulgaria
3. Nagaoka University of Technology, Japan

2:45 PM

(GOMD-S6-020-2017) Impact of stress formation on crystal structure and luminescence in glass-ceramics synthesized by crystallization of glass and supercooled melt (Invited)

K. Shinozaki*[1]; T. Akai[1]; M. Affatigato[3]; T. Komatsu[2]

1. National Institute of Advanced Industrial Science and Technology (AIST), Inorganic Functional Materials Research Institute, Japan
2. Nagaoka University of Technology, Department of Materials Science and Technology, Japan
3. Coe College, Physics Department, USA

3:15 PM

Break

GOMD Symposium 6: Professor Komatsu Kinen Honorary Symposium VI

Room: Kona 5

Session Chair: Mario Affatigato, Coe College

3:30 PM

(GOMD-S6-021-2017) Incorporation of some transition and noble metal ions in glasses and glass ceramics: Polarizability, basicity and non-random segregation (Invited)

L. Wondraczek*[1]

1. University of Jena, Germany

4:00 PM

(GOMD-S6-022-2017) VO_2-dispersed Glass as New Latent Heat Storage Material (Invited)

K. Muramoto[1]; Y. Takahashi*[1]; N. Terakado[1]; T. Fujiwara[1]

1. Tohoku University, Department of Applied Physics, Japan

4:30 PM

Closing Remarks (E. Zanotto)

PACRIM Symposium 01: Characterization and Modeling of Ceramic Interfaces: Structure, bonding, and Grain Growth

Interface Structure and Composition

Room: Kohala 3

Session Chairs: Jian Luo, UCSD; Katsuyuki Matsunaga, Nagoya University

1:15 PM

(PACRIM-S1-010-2017) Interface and Surface Atomic Structures of Li Ion Battery Materials (Invited)

Y. Ikuhara*[1]

1. Univ.Tokyo, JFCC, Tohoku Univ., Japan

1:45 PM

(PACRIM-S1-011-2017) Atomic Structure Investigation of Alumina Σ13 Grain Boundary Fabricated in Controlled Atmospheres

S. Ishihara*[1]; E. Tochigi[1]; N. Shibata[1]; Y. Ikuhara[1]

1. University of Tokyo, Institute of Engineering Innovation, Japan

2:00 PM

(PACRIM-S1-012-2017) Atomic-resolution STEM-EDS mapping of residual impurities in MgO Σ5 grain boundary

M. Saito*[1]; R. Ishikawa[1]; I. Ohnishi[2]; H. Sawada[2]; K. Inoue[3]; N. Shibata[1]; Y. Ikuhara[1]

1. The University of Tokyo, Japan
2. JEOL Ltd., Japan
3. Tohoku University, Japan

2:15 PM

(PACRIM-S1-013-2017) Subsurface Space-Charge Solute Segregation to Compensate Surface Excess Charge in Oxides (Invited)

S. Chung*[1]

1. Korea Advanced Institute of Sci. & Tech. (KAIST), Graduate School of EEWS, Republic of Korea

2:45 PM

(PACRIM-S1-014-2017) Dopant segregation at (110) low-angle tilt grain boundaries in magnesium oxide

A. Nakamura*[1]; K. Sawada[1]; E. Tochigi[2]; Y. Ikuhara[2]; T. Yokoi[1]; K. Matsunaga[1]

1. Nagoya University, Japan
2. University of Tokyo, Japan

3:00 PM

(PACRIM-S1-015-2017) Single Boundary Measurements of Fracture Toughness to Understand Effects of Chemistry (Invited)

S. J. Dillon*[1]

1. University of Illinois Urbana-Champaign, USA

3:30 PM

Break

3:45 PM

(PACRIM-S1-016-2017) Ultrahigh permittivity in core-shell ferroelectric ceramics: Theoretical approach and practical conclusions

J. Kiat*[1]; M. Anoufa[1]; C. Bogicevic[1]

1. Labo SPMS, Ecole Centrale-CNRS, France

4:00 PM

(PACRIM-S1-017-2017) DPC STEM characterization of ceramic interfaces (Invited)

N. Shibata*[1]

1. The University of Tokyo, Japan

4:30 PM

(PACRIM-S1-018-2017) Grain Boundary Resistance on Heat Transport (Invited)

M. Yoshiya*[1]; S. Fujii[1]; K. Funai[1]; M. Tanemura[1]; T. Yokoi[1]

1. Osaka University, Department of Adaptive Machine Systems, Japan

PACRIM Symposium 04: Polymer-Derived Ceramics (PDCs) and Composites

Structure and Properties of PDCs

Room: King's 3

Session Chair: Gurpreet Singh, Kansas State University

1:15 PM

(PACRIM-S4-011-2017) Characterizing the Impact of "Free" Carbon on Structure and Interfaces in Silicon Oxycarbide Ceramics (Invited)

P. Kroll*[1]

1. UT Arlington, USA

1:45 PM

(PACRIM-S4-012-2017) Control the thermal conductivity of SiC by modifying the polymer precursor

Y. Wang*[1]

1. Northwestern Polytechical University, China

2:00 PM

(PACRIM-S4-013-2017) (Thermo)mechanical properties of SiOC glasses and glass ceramics with different composition and microstructure

C. Stabler*[1]; M. Heilmaier[2]; L. Wondraczek[3]; T. Rouxel[4]; E. Ionescu[1]; R. Riedel[1]

1. Technical University Darmstadt, Germany
2. Karlsruhe Institute of Technology, Germany
3. University of Jena, Germany
4. University of Rennes 1, France

2:15 PM

(PACRIM-S4-014-2017) A low temperature study of magnetic properties of polymer derived SiCN ceramics, doped with Fe ions

S. K. Misra*[2]; S. I. Andronenko[1]; A. Rodionov[1]; I. Gilmutdinov[1]; R. Yusupov[1]

1. Kazan Federal University, Physics, Russian Federation
2. Concordia University, Physics, Canada

2:30 PM

(PACRIM-S4-015-2017) Physical properties and thermal resistance of Si-O-C(-H) ceramics obtained by polysiloxane pyrolysis

M. Narisawa*[1]; S. Takeuchi[1]; K. Sasakawa[1]; T. Kawai[1]; H. Inoue[1]

1. Osaka Prefecture University, Japan

2:45 PM

(PACRIM-S4-016-2017) SiCO Anode Materials: DFT Simulations of Li Insertion

P. Kroll*[1]; S. Haseen[1]

1. UT Arlington, USA

3:00 PM

(PACRIM-S4-017-2017) Flexible SiZrOC ultrafine fiber mat with ehanced high-temperature stability

Y. Wang*[1]; J. Wang[1]; H. Wang[1]

1. National University of Defense and Technology, China

3:15 PM

(PACRIM-S4-018-2017) Promising attempts to get ultrathin boron nitride layers by Polymer Derived Ceramics

F. Gombault*[1]; B. Toury[1]; A. Brioude[1]; C. Journet[1]

1. Université de Lyon, Laboratoire des Multimatériaux et Interfaces, France

3:30 PM

Break

PDCs Composites

Room: King's 3

Session Chair: Yuji Iwamoto, Nagoya Institute of Technology

3:45 PM

(PACRIM-S4-019-2017) Polysiloxane-Derived Porous SiOC Ceramics (Invited)

K. Lu*[1]; D. Erb[1]

1. Virginia Tech, USA

4:15 PM

(PACRIM-S4-020-2017) Creep/Stress Rupture Behavior and Failure Mechanisms of Full CVI and Full PIP SiC/SiC Composites at Elevated Temperatures in Air

R. Bhatt*[1]; J. D. Kiser[1]

1. Ohio Aerospace Institute, USA

4:30 PM

(PACRIM-S4-021-2017) Processing and Characterization of Graded CMCs with Through Thickness Thermal Conductivity Control

D. King[1]; M. Y. Chen*[1]

1. Air Force Research Lab, USA

4:45 PM

(PACRIM-S4-022-2017) Microstructural modification and mechanical properties of Magnesium Matrix Composites processed using polymer precursor

M. K. Surappa*[1]; C. Nagaraj[2]; H. Singh[3]; R. Raj[4]

1. Indian Institute of Science, Materials Engineering, India
2. Indian Institute of Technology, India
3. Indian Institute of Technology, Mechanical Engineering, India
4. University of Colorado, USA

5:00 PM

(PACRIM-S4-023-2017) Crystallization Behavior of Polymer-Derived Si-O-C during Ceramic Matrix Composite Processing

D. L. Poerschke*[1]; A. Braithwaite[1]; C. G. Levi[1]

1. University of California Santa Barbara, USA

5:15 PM

(PACRIM-S4-024-2017) Fabrication of three-dimensional four-directional (3D4D) braided SiC_f/SiC composites using EPD method and PIP process

X. Zhou*[1]; M. Li[1]; H. Wang[1]; J. Yu[1]; H. Hou[1]

1. National University of Defense Technology, Science and Technology on Advanced Ceramic Fibers and Composites Laboratory, China

PACRIM Symposium 05: Advanced Powder-Processing and Manufacturing Technologies

Particle Dispersion Control in Liquid or Polymer

Room: King's 2

Session Chairs: Jean-Pierre Erauw, Belgian Ceramic Research Centre; Chika Takai, Nagoya Institute of Technology

1:15 PM

(PACRIM-S5-007-2017) Rheological Behavior of h-BN Composite Based on the Difference of Aspect Ratio and Surface Condition

Y. Tominaga*[1]; Y. Hotta[1]

1. National Institute of Advanced Industrial Science and Technology, Japan

1:30 PM

(PACRIM-S5-008-2017) Internal structures of dispersed and flocculated slurries with high concertation

S. Tanaka*[1]; Y. Nagasawa[1]

1. Nagaoka University of Technology, Materials Science and Technology, Japan

1:45 PM

(PACRIM-S5-009-2017) PEI-fatty acid complex as dispersants for multi-component non-aqueous slurries and lubricants for Si_3N_4 based spray dried granules

M. Iijima*[1]; N. Okamura[1]; S. Sueyasu[1]; J. Tatami[1]

1. Yokohama National University, Graduate School of Environment and Information Sciences, Japan

2:00 PM

(PACRIM-S5-010-2017) Green and sintering compacts prepared by centrifugal compaction process using a stable slurry

Y. Hotta*[1]; K. Sato[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan

Novel Forming and Sintering Technology

Room: King's 2

Session Chair: Motoyuki Iijima, Yokohama National University

2:15 PM

(PACRIM-S5-011-2017) Achieving homogeneity in Spark Plasma Sintered fine ceramics (Invited)

J. Erauw*[1]; L. Boilet[1]; V. Dupont[1]; M. Cambier[1]; V. Lardot[1]; F. J. Cambier[1]

1. Belgian Ceramic Research Centre, Belgium

2:45 PM

(PACRIM-S5-012-2017) Fabrication of Highly Textured Hydroxyapatite Ceramics by Colloidal Processing in a High Magnetic Field and Sintering

Y. Sakka*[1]

1. National Institute for Materials Science (NIMS), Japan

3:00 PM

(PACRIM-S5-013-2017) A Facile Way to Fabricate Carbon-Ceramic Nanocomposites through Mechano-chemical Treatment Without Sintering Process

B. Peng*[1]; S. Goto[1]; C. Takai[1]; H. Razavi Khosroshahi[1]; M. Fuji[1]

1. Nagoya Institute of Technology, Japan

3:15 PM

(PACRIM-S5-014-2017) Laser cladding of Inconel 625 - tungsten carbide composites

D. Kata*[1]; J. Huebner[1]; J. Kusinski[2]; J. Lis[1]; A. Tajdus[3]; T. Slomka[4]

1. AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Poland
2. AGH University of Science and Technology, Faculty of Metals Engineering and Industrial Computer Science, Poland
3. AGH University of Science and Technology, Faculty of Mining and Geoengineering, Poland
4. AGH University of Science and Technology, Faculty of Geology, Geophysics and Environmental Protection, Poland

3:30 PM

Break

Nano/Microstructure Control

Room: King's 2

Session Chairs: Yuji Hotta, National Institute of Advanced Industrial Science and Technology (AIST); Shingo Ishihara, Tohoku University

3:45 PM

(PACRIM-S5-015-2017) Tailored Property and Processing Particle-Filled-Glass Composite Design and Development (Invited)

K. Ewsuk[1]; L. Criscenti*[1]

1. Sandia National Laboratories, USA

4:15 PM

(PACRIM-S5-016-2017) Enhancement infrared absorption inspired from natrual optical structure (Invited)

W. Zhang*[1]; D. Zhang[1]

1. Shanghai Jiao Tong University, State Key Lab of Metal Matrix Composites, China

4:45 PM

(PACRIM-S5-017-2017) Si based green body prepared through wet processing route and their microstructure effects on nitridation and post-reaction sintering properties

S. Morita*[1]; M. Iijima[1]; J. Tatami[1]

1. Yokohama National University, Graduate School of Environment and Information Sciences, Japan

5:00 PM

(PACRIM-S5-018-2017) Orientation behavior of multilayered-graphene coated glass fiber in a magnetic field

T. Takahashi*[1]; J. Tatami[2]

1. Kanagawa Academy of Science and Technology, Japan
2. Yokohama National University, Japan

PACRIM Symposium 06: Synthesis and Processing of Materials Using Electric Currents and Pressures

Electric Currents I

Room: King's 1

Session Chairs: Takashi Goto, IMR Tohoku University; Javier Garay, University of California, San Diego

1:15 PM

(PACRIM-S6-001-2017) Thermal Runaway in Flash Spark Plasma and Microwave Sintering (Invited)

E. A. Olevsky*[1]; C. Maniere[1]

1. San Diego State University, USA

1:45 PM

(PACRIM-S6-002-2017) Flash sintering of alumina: Evidences of oxide partial reduction

M. Biesuz*[1]

1. University of Trento, Department of Industrial Engineering, Italy

2:05 PM

(PACRIM-S6-003-2017) Direct Joule heated (Flash) Sintering of Ionic Conductive Ceramics in a Conventional Spark Plasma Sintering Furnace Using Standard Graphite Tooling

L. S. Walker*[1]

1. Thermal Technology, USA

2:25 PM

(PACRIM-S6-004-2017) Energy Coupled to Matter for Electric Field-Enhanced Sintering (Invited)

R. E. Brennan*[1]; B. McWilliams[1]; V. L. Blair[1]; J. Yu[1]; M. Kornecki[1]; F. Kellogg[1]; S. V. Raju[1]

1. US Army Research Laboratory, USA

2:55 PM

(PACRIM-S6-005-2017) Spark plasma sintering: From Finite Element Modeling of the process up to the elaboration of complex shapes (Invited)

C. Maniere[1]; L. Durand[2]; E. Brisson[3]; H. Desplats[3]; P. Carre[3]; P. Rogeon[3]; C. Estournes*[1]

1. CIRIMAT, LCMIE, France
2. CEMES, France
3. LIMATB, France

3:25 PM

Break

3:40 PM

(PACRIM-S6-006-2017) Flash sintering of TCP bioceramics

M. Frasnelli*[1]; V. M. Sglavo[1]

1. University of Trento, Industrial Engineering, Italy

4:00 PM

(PACRIM-S6-007-2017) Magnetic Field Processing and Sintering of Rare-Earth Doped Aluminum Oxide

V. L. Blair*[3]; N. Ku[1]; C. A. Moorehead[2]; J. Elward[1]; B. C. Rinderspacher[3]; R. E. Brennan[3]

1. ORISE, USA
2. Drexel University, USA
3. US Army Research Laboratory, Weapons and Materials Research Directorate, USA

4:20 PM

(PACRIM-S6-008-2017) Industrial Applications of Direct Current Based Spark Plasma/Field Assisted Sintering; Large Components and Uniformity

L. S. Walker*[1]

1. Thermal Technology, USA

4:40 PM

(PACRIM-S6-009-2017) A Finite Element Based Model to Validate Temperature Distribution Measurements in Electrical Insulator and Electrical Conductor Ceramics Using SPS

E. L. Corral*[1]

1. The University of Arizona, Materials Science and Engineering Department, USA

PACRIM Symposium 13: Advanced Structural Ceramics for Extreme Environments

Structural Stability in Extreme Environments

Room: Kohala 4

Session Chairs: Raj Singh, Oklahoma State University; Dechang Jia, Harbin Institute of Technology

1:15 PM

(PACRIM-S13-012-2017) Cyclic fatigue durability of EBC coated 3D SiC/SiC composites under thermal gradient conditions at 2700°F in air

C. Smith*[2]; B. J. Harder[2]; D. Zhu[2]; R. Bhatt[1]; S. Kalluri[1]

1. Ohio Aerospace Institute, USA
2. NASA Glenn Research Center, USA

1:30 PM

(PACRIM-S13-013-2017) The Microstructure, Mechanical Properties and Ablative Mechanism of Dense SiBN Monoliths by Mechanical Alloying and Hot Pressing

D. Jia*[1]; X. Liao[1]; Z. Yang[1]; Y. Zhou[1]

1. Harbin Institute of Technology, China

1:45 PM

(PACRIM-S13-014-2017) Ultra High Temperature Ceramics with controlled porosity

L. Larrimbe*[1]; L. Vandeperre[1]

1. Imperial College London, Department of Materials, United Kingdom

2:00 PM

(PACRIM-S13-016-2017) Fiber-reinforced ceramic composites made by precursor impregnation and pyrolysis process: Effects of filler materials

S. Lee[1]; J. Kim[1]; L. Zhao*[1]

1. Korea Institute of Materials Science, Republic of Korea

2:15 PM

(PACRIM-S13-017-2017) Thermal shock resistance and oxidation resistance of BN matrix composite ceramics

D. Cai*[1]; D. Jia[1]; Z. Yang[1]; Y. Zhou[1]

1. Harbin Institute of Technology, School of Materials Science and Engineering, China

2:30 PM

(PACRIM-S13-018-2017) A novel approach to the development of MeB_2 UHTCs: Improving oxidation resistance while maintaining structural performance

E. Zapata-Solvas*[1]; D. Gomez-Garcia[2]; A. Dominguez-Rodriguez[2]; W. E. Lee[1]

1. Imperial College London, Centre for Nuclear Engineering. Dpt. of Materials, United Kingdom
2. University of Seville, Condensed Matter Physics, Spain

2:45 PM

(PACRIM-S13-019-2017) Theoretical Investigations on the High Temperature Mechanical and Thermodymanic Properties of TMB_2 (TM = Ti, Zr, Hf)

H. Xiang*[1]; Y. Zhou[1]; Z. Feng[1]; Z. Li[1]

1. Aerospace Research Insitute of Materials and Processing Technology, China

3:00 PM

Break

Joining, Machining and Properties

Room: Kohala 4

Session Chair: Sylvain Dubois, PPRIME Institute

3:30 PM

(PACRIM-S13-020-2017) Joining of ZrB_2-$MoSi_2$ composite using powder-based metallic interlayer

N. Saito*[1]; K. Nakashima[1]

1. Kyushu University, Department of Materials Science and Engineering, Japan

3:45 PM

(PACRIM-S13-021-2017) Ablative and wear performances of graphene/glass-ceramics coatings for aerospace applications

E. Garcia[1]; A. Gómez-Gómez[1]; A. Nistal[1]; M. I. Osendi[1]; M. Belmonte[1]; P. Miranzo*[1]

1. Institute of Ceramics and Glass, CSIC, Spain

4:00 PM

(PACRIM-S13-022-2017) Evaluation of Environmental Barrier Coatings for Silicon Carbide

R. H. Bryden*[1]; L. Mertins[1]; J. Lebrun[2]; D. Woolley[2]; O. Kwon[2]; M. Kuhn[1]

1. Saint-Gobain, Ceramics - High Performance Refractories, USA
2. Saint-Gobain, R&D, USA

4:15 PM

(PACRIM-S13-023-2017) Oxidation Resistance of β-Sialon/TiN Composites: An Ion Beam Analysis (IBA) study

P. Calloch*[1]; W. J. Trompetter[2]; I. W. Brown[1]; K. J. MacKenzie[3]

1. Callaghan Innovation, Advanced Materials, New Zealand
2. GNS Science, New Zealand
3. MacDiarmid Institute for Advanced Materials and Nanotechnology, New Zealand

4:30 PM

(PACRIM-S13-024-2017) Effect of machining on mechanical properties of CMCs and OCMCs

R. Goller*[1]

1. University of Applied Sciences, Mechanical Engineering, Germany

4:45 PM

(PACRIM-S13-025-2017) From Ab-Initio Design to Synthesis of Coatings with Enhanced Hardness and Toughness

D. Edström[1]; D. G. Sangiovanni[1]; L. Hultman[1]; I. Petrov[2]; J. E. Greene[2]; V. Chirita*[1]

1. Linkoping University, IFM, Sweden
2. University of Illinois at Urbana-Champaign, MRL and Materials Science Department, USA

5:00 PM

(PACRIM-S13-026-2017) Pressureless Sintering of TiB_2-TiC composites with improved fracture toughness

Y. Wang*[1]

1. Harbin Institute of Technology, Institute for Advanced Ceramics, China

5:15 PM

(PACRIM-S13-027-2017) Effects of in situ amorphous graphite coating on ablation resistance of SiC fiber reinforced SiBCN ceramics in an oxyacetylene flame

D. Li*[1]; D. Jia[1]; Z. Yang[1]; X. Duan[1]; Y. Zhou[1]

1. Institute for Advanced Ceramics, School of Materials Science and Engineering, Harbin Institute of Technology, China

PACRIM Symposium 18: Microwave Dielectric Materials and Their Applications

Microwave Dielectric Materials and Their Applications II

Room: Kohala 2

Session Chairs: Hitoshi Ohsato, Nagoya Industrial Science Reserach Institte; Heli Jantunen, University of Oulu

1:15 PM

(PACRIM-S18-008-2017) Ultra low sintering temperature ceramics and their utilization for electronics applications (Invited)

H. M. Jantunen*[1]

1. University of Oulu, Microelectronics Research Unit, Finland

1:45 PM

(PACRIM-S18-009-2017) Hexagonal M-type microwave ferrite layers integrated in LTCC modules (Invited)

J. Topfer*[1]

1. Ernst-Abbe-Hochschule Jena, Germany

2:15 PM

(PACRIM-S18-018-2017) Empirical Modeling of the Structural Effects of Vacancies in Perovskites (Invited)

R. Ubic*[1]; K. Tolman[1]

1. Boise State University, USA

2:45 PM

(PACRIM-S18-011-2017) Stereolithographic Additive Manufacturing of Diamond Photonic Crystals with Alumina Micro Lattices (Invited)

S. Kirihara*[1]

1. Osaka University, Joining and Welding Research Institute, Japan

3:15 PM

Break

3:30 PM

(PACRIM-S18-012-2017) Microwave dielectric properties of direct casted TiO_2 added indialite/cordierite glass ceramic substrate (Invited)

J. Varghese[1]; H. Ohsato*[2]; V. Leite[3]; M. T. Sebastian[1]; H. Jantunen[1]

1. University of Oulu, Microelectronics Research Unit, Finland
2. University of Oulu (Finland) and Department of Research, Nagoya Industrial Science Research Institute, Japan
3. University of Oulu (Finland) and Department of Physics, Valley of Acarau University, Brazil

4:00 PM

(PACRIM-S18-013-2017) TiO_2 microspheres as flexible building blocks for dielectric composites (Invited)

C. Elissalde*[1]; J. Lesseur[1]; M. Albino[1]; U. Chung[1]; M. Sindler[2]; L. Fourier[1]; D. Bernard[1]; P. Mounaix[2]; C. Kadlec[3]; T. Fournier[4]; R. Czarny[5]; N. Penin[1]; J. Heintz[1]; M. Maglione[1]

1. ICMCB-CNRS, France
2. IMS-University Bordeaux, France
3. Institute of Physics-Academy of Science, Czech Republic
4. Plateforme Canoe-Université de Pau et des pays de l'Adour, France
5. Thales Research and Technology France, France

4:30 PM

(PACRIM-S18-014-2017) $SrLa(R_{0.5}Ti_{0.5})O_4$-Based (R = Mg, Zn) Microwave Dielectric Ceramics with Complex K_2NiF_4-Type Layered Perovskite Structure (Invited)

L. Li*[1]; G. Ren[1]; J. Zhu[1]; B. Liu[1]; X. Chen[1]

1. Zhejiang University, School of Materials Science and Engineering, China

PACRIM Symposium 20: Crystalline Materials for Electrical, Optical, and Medical Applications

Scintillator II

Room: Kohala 1

Session Chair: Nerine Cherepy, Lawrence Livermore Nat'l Lab

1:15 PM

(PACRIM-S20-047-2017) Growth and characterization of Eu-activated halide scintillators (Invited)

E. Bourret*[1]; T. Shalapska[1]; D. Perrodin[1]; G. Bizarri[1]; A. Tremsin[2]

1. Lawrence Berkeley National Laboratory, USA
2. University of California at Berkeley, USA

1:45 PM

(PACRIM-S20-048-2017) Multi-Ampoule Growth of Large Diameter Scintillator Crystals (Invited)

M. Zhuravleva*[1]; A. Lindsey[1]; M. Loyd[1]; L. Stand[2]; Y. Wu[1]; M. Koschan[2]; C. Melcher[1]

1. University of Tennessee, Scintillation Materials Research Center, and Department of Materials Science and Engineering, USA
2. University of Tennessee, Scintillation Materials Research Center, USA

2:15 PM

(PACRIM-S20-049-2017) Improved Alkali-Halide Scintillators with Divalent Rare-Earth Activators: The Elimination of Suzuki-Phase Precipitates (Invited)

L. L. Boatner*[1]; E. P. Comer[1]; G. W. Wright[1]; J. O. Ramey[1]; R. A. Riedel[1]; G. E. Jellison[1]; J. A. Kolopus[1]

1. Oak Ridge National Lab, Material Sciences and Technology, USA

2:45 PM

(PACRIM-S20-050-2017) Design, growth and characterization of directionally solidified eutectics for scintillator application

A. Yoshikawa*[1]

1. IMR, Tohoku University, Japan

PACRIM Symposium 21: Solid Oxide Fuel Cells and Hydrogen Technologies

SOFC Technologies

Room: Queen's 4

Session Chair: Fatih Dogan, Missouri University of Science and Technology

1:30 PM

(PACRIM-S21-001-2017) Solid Oxide Fuel Cells: A Multi-Fuel and Multi-Functional Technology (Invited)

P. Miranda*[1]; N. Q. Minh[2]

1. Coppe-Federal University of Rio de Janeiro, Metallurgy and Materials Engineering, Brazil
2. University of California, San Diego, USA

2:00 PM

(PACRIM-S21-002-2017) Portable power generation based on micro-tubular SOFCs (Invited)

M. Awano*[1]; Y. Fujishiro[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Inorganic Functional Materials Research Institute, Japan

2:30 PM

(PACRIM-S21-003-2017) Sinterability and conductivity of bismuth, iron and manganese-doped ceria ceramics

C. Chiu*[1]; Y. Chen[1]; W. Wei[1]

1. National Taiwan University, Materials Science and Engineering, Taiwan

2:45 PM

(PACRIM-S21-004-2017) Development of a SOFC/Battery-Hybrid System for Distributed Power Generation in India (Invited)

T. Pfeifer*[1]; A. Chakradeo[2]; N. Ahire[2]; M. Barthel[1]; C. Dosch[1]; R. Näke[1]; M. Hartmann[1]

1. Fraunhofer IKTS, Germany
2. h2e Power Systems, Pvt. Ltd., India

3:15 PM

Break

SOFC Electrolytes and Electrodes

Room: Queen's 4

Session Chair: Masanobu Awano, AIST

3:30 PM

(PACRIM-S21-005-2017) Innovative low-temperature powder synthesis process for SOFCs materials (Invited)

Y. Yamaguchi*[1]; H. Shimada[1]; H. Sumi[1]; T. Yamaguchi[1]; K. Nomura[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan

4:00 PM

(PACRIM-S21-006-2017) Improvement in electrochemical performance of proton-conducting solid oxide fuel cells by controlling Ni interdiffusion during co-sintering process (Invited)

H. Shimada*[1]; T. Yamaguchi[1]; H. Sumi[1]; Y. Yamaguchi[1]; K. Nomura[1]

1. National Institute of Advanced Industrial Sience and Technology (AIST), Japan

4:30 PM

(PACRIM-S21-007-2017) Microstructure-Performance Correlations in LSM-Based Solid Oxide Fuel Cell Cathodes

N. Hilli[1]; C. Cooper[1]; T. R. Dietrick[1]; Z. Liu[2]; R. Goettler[2]; A. H. Heuer[1]; M. R. De Guire*[1]

1. Case Western Reserve University, Materials Science and Engineering, USA
2. LG Fuel Cell Systems Inc., USA

4:45 PM

(PACRIM-S21-008-2017) Experimental Phase Diagram Studies in the La-Sr-Ga-Mg-Ni-O System for Solid Oxide Fuel Cells

G. Soydan*[1]; E. Kondakci[1]; A. Demirkesen[1]; N. Solak[1]

1. Istanbul Technical University, Metallurgical and Materials Engineering, Turkey

5:00 PM

(PACRIM-S21-009-2017) The effect of powder characteristics on initial performance of SOFC cathode

L. Ge*[1]; B. Ingram[1]; J. Carter[1]

1. Argonne National Lab, Chemical Science and Engineering, USA

PACRIM Symposium 22: Direct Thermal to Electrical Energy Conversion Materials and Applications

Oxides and Sulfides

Room: Queen's 6

Session Chairs: Thierry Caillat, NASA Jet Propulsion Laboratory; Takao Mori, National Institute for Materials Science (NIMS)

1:15 PM

(PACRIM-S22-009-2017) Enhancing the performance of $SrTiO_3$-based thermoelectrics by A-site vacancies, metallic inclusions and additions of graphene (Invited)

D. Srivastava[1]; F. Azough[1]; C. Norman[1]; Y. Lin[1]; K. Simpson[2]; M. Robbins[2]; I. Kinloch[1]; E. Guilmeau[3]; D. Kepaptsoglou[4]; Q. Ramasse[4]; R. Freer*[1]

1. University of Manchester, Materials, United Kingdom
2. European Thermodynamics, United Kingdom
3. CNRS CRISMAT, France
4. SuperSTEM, United Kingdom

1:45 PM

(PACRIM-S22-010-2017) Ultra-low Thermal Conductivity in β-Pyrochlore Oxides with a Rattler-in-a-Cage Crystal Structure

M. Ohtaki*[1]; K. Mizuta[1]; K. Suekuni[1]

1. Kyushu University, Interdisciplinary Graduate School of Engineering Sciences, Japan

2:00 PM

(PACRIM-S22-011-2017) Recent Progress in Complex Thermoelectric Sulphides (Invited)

E. Guilmeau*[1]; T. Barbier[1]; P. Lemoine[2]; O. Lebedev[1]; C. Bourgès[1]; V. Nassif[3]; B. Malaman[4]

1. CNRS CRISMAT, France
2. Institut des Sciences Chimiques de Rennes (ISCR), France
3. Institut Laue Langevin, France
4. Institut Jean Lamour, France

2:30 PM

(PACRIM-S22-012-2017) Cu_2SnS_3 as Novel p-type Thermoelectric Materials (Invited)

Y. Wang*[1]; L. Pan[1]; H. Zhao[1]; X. Xu[1]; R. Tian[2]; K. Koumoto[2]

1. Nanjing Tech University, College of Materials Science and Engineering, China
2. Toyota Physical and Chemical Research Institute, Japan

3:00 PM

(PACRIM-S22-013-2017) Excess Sn in $Cu_4Sn_7S_{16}$ responsible for the modification in band structures and reduction in lattice thermal conductivity

T. He[2]; N. Lin[2]; Z. Du[1]; Y. Chao[2]; J. Cui*[1]

1. Ningbo University of Technology, School of Materials and Chemical Engineering, China
2. Taiyuan University of Technology, China

3:15 PM

(PACRIM-S22-014-2017) Spherical Aberration Corrected TEM for Thermoelectric Materials

J. He*[1]

1. Southern University of Science and Technology, Shenzhen Key Laboratory of Thermoelectric Materials and Department of Physics, China

3:30 PM

Break

New Materials and Modules

Room: Queen's 6

Session Chairs: Robert Freer, University of Manchester; Emmanuel Guilmeau, CNRS CRISMAT

3:45 PM

(PACRIM-S22-015-2017) Bottom-up Nanostructuring for Enhanced Thermoelectric Performance (Invited)

T. Mori*[1]

1. National Institute for Materials Science (NIMS), Japan

4:15 PM

(PACRIM-S22-016-2017) Phonon scattering by dense dislocation arrays for high performance thermoelectrics

S. Kim*[1]

1. University of Seoul, Department of Materials Science and Engineering, Republic of Korea

4:30 PM

(PACRIM-S22-017-2017) Reduction of electron scattering and enhancement of thermoelectric performance in texture-controlled $Mg_{3.2}Sb_{1.5}Bi_{0.49}Te_{0.01}$

T. Kanno*[1]; H. Tamaki[1]; H. K. Sato[1]; Y. Miyazaki[2]

1. Panasonic Corporation, Advanced Research Lab., Japan
2. Tohoku University, Department of Applied Physics, Japan

4:45 PM

(PACRIM-S22-018-2017) Development of Earth Abundant Complex Zintl Phases for Thermoelectric Space Power Generation Applications

S. Bux*[1]; S. Ohno[2]; S. Chanakian[1]; K. Lee[1]; M. Wood[2]; Y. Hu[3]; H. Musunuri[1]; U. Aydemir[2]; D. Uhl[1]; B. Li[1]; J. Snyder[2]; S. Kauzlarich[3]; J. Fleurial[1]

1. Jet Propulsion Laboratory/California Institute of Technology, USA
2. Northwestern University, USA
3. University of California, Davis, USA

5:00 PM

(PACRIM-S22-019-2017) Skutterudite-Based Thermoelectric Technology for Integration into a Proposed eMMRTG for Space Power Applications (Invited)

T. Caillat*[1]

1. NASA Jet Propulsion Laboratory, USA

5:20 PM

(PACRIM-S22-020-2017) Development of High Performance Thermoelectric Modules for Harvesting Waste Heat (Invited)

N. Van Nong*[1]

1. Technical University of Denmark, Department of Energy Conversion and Storage, Denmark

5:40 PM

(PACRIM-S22-021-2017) Flexible Thermoelectric Generators Using Organic Materials by Printing Process (Invited)

S. Cho*[1]

1. Korea Research Institute of Chemical Technology, Division of Advanced Materials, Republic of Korea

PACRIM Symposium 24: Photovoltaic and Related Materials and Technologies

Photovoltaic Materials and Technologies I

Room: Queen's 5

Session Chairs: Tohru Sekino, Osaka University; Federico Rosei, INRS; Alberto Vomiero, Lulea University of Technology

1:15 PM

(PACRIM-S24-001-2017) Amorphous Oxide Semiconductor Thin Film for OPV with an Energy-Efficient Beneficial Coating Process (Invited)

T. Sugahara*[1]; S. Cong[1]; M. Karakawa[2]; K. Suganuma[1]

1. Osaka University, Japan
2. Kanazawa University, Japan

1:40 PM

(PACRIM-S24-002-2017) Energy-Related Phenomena in Metal Nanostructures with Hot Spots: Generation of Hot Plasmonic Electrons and Heat (Invited)

A. Govorov*[1]; L. Besteiro[1]

1. Ohio University, Physics, USA

2:05 PM

(PACRIM-S24-003-2017) Scanning near field optical microscopy applications in plasmonic solar cell design (Invited)

G. Fanchini*[1]

1. University of Western Ontario, Physics and Astronomy, Canada

2:30 PM

(PACRIM-S24-004-2017) Composite nanostructures for high-efficiency excitonic solar cells (Invited)

A. Vomiero*[1]

1. Lulea University of Technology, Engineering Sciences & Mathematics, Sweden

2:55 PM

(PACRIM-S24-005-2017) Paper-based platforms for solar-powered opto-electronic devices

E. Fortunato*[1]; R. Martins[1]; H. Aguas[1]; A. Vicente[1]

1. FCT-UNL, Materials Science, Portugal

3:10 PM

Break

3:25 PM

(PACRIM-S24-006-2017) Colloidal heterostrucutred quantum dots for liquid junction solar cells (Invited)

H. Zhao*[1]

1. INRS, EMT, Canada

3:50 PM

(PACRIM-S24-007-2017) Path Toward Ultra-High Efficiency Thin Silicon Photovoltaics (Invited)

N. P. Kherani*[1]

1. University of Toronto, Electrical & Computer Engineering, Canada

4:15 PM

(PACRIM-S24-009-2017) Photovoltaic perovskites (Invited)

R. Nechache*[1]

1. Ecole de technologie Superieure, Electrical Engineering, Canada

4:40 PM

(PACRIM-S24-010-2017) Novel Synthesis Method of Transparent Conductive Oxides (TCO) Nanoink (Invited)

A. Muramatsu*[1]

1. IMR Tohoku University, Institute of Multidisciplinary Research for Advanced Materials, Japan

PACRIM Symposium 30: Glasses and Ceramics for Nuclear and Hazardous Waste Treatment

Waste Form Simulations

Room: Kona 1

Session Chairs: Yaohiro Inagaki, Kyushu University; Charles Crawford, Savannah River National Laboratory

1:15 PM

(PACRIM-S30-028-2017) Mesoscale phase-field modeling of radioactive species extraction in hierarchical waste form materials

S. Hu*[1]; Y. Li[1]; C. Henager[1]; T. M. Besmann[2]; A. Grandjean[3]

1. Pacific Northwest National Lab, USA
2. University of South Carolina, USA
3. The French Alternative Energies and Atomic Energy Commission (CEA), DEN, DTCD, SPDE, Laboratoire des Procédés Supercritiques et de Décontamination, France

1:30 PM

(PACRIM-S30-029-2017) Modelling Heat Production by Fukushima Wasteforms

M. J. Rushton*[1]; D. Pletser[1]; L. Vandeperre[1]; W. E. Lee[1]

1. Imperial College, Materials, United Kingdom

Immobilization of Challenging Species

Room: Kona 1

Session Chairs: Yaohiro Inagaki, Kyushu University; Charles Crawford, Savannah River National Laboratory

1:45 PM

(PACRIM-S30-031-2017) Sequestration and Capture of Radioiodine in Lead Vanadium Iodoapatite Phases

E. V. Johnstone*[1]; D. Bailey[1]; N. C. Hyatt[1]

1. University of Sheffield, Materials Science and Engineering, United Kingdom

2:00 PM

(PACRIM-S30-032-2017) Silver Tellurite Glasses for Immobilization of ^{129}I from Reprocessing

C. Lee*[1]; J. Pyo[1]; H. Park[2]; J. Yang[2]; J. Heo[1]

1. Pohang University of Science and Technology(POSTECH), Department of Advanced Nuclear Engineering, Republic of Korea
2. Korea Atomic Energy Research Institute, Republic of Korea

2:15 PM

(PACRIM-S30-033-2017) Proposed Mechanism of Re Incorporation into Glass during Vitrification of Low-Activity Waste

D. Kim*[1]; T. Jin[1]; J. George[1]; A. A. Kruger[2]

1. PNNL, USA
2. DOE ORP, USA

2:30 PM

(PACRIM-S30-034-2017) Understanding Volatilization of Rhenium during Vitrification of Low-Activity Waste

J. George*[1]; D. Kim[1]; T. Jin[1]; M. J. Schweiger[1]; A. A. Kruger[2]

1. Pacific Northwest National Lab, USA
2. Department of Energy Office of River Protection, USA

2:45 PM

(PACRIM-S30-035-2017) Rhenium Partitioning during Melting of Simplified Nitrate-Containing Low-Activity Waste Glass Feed

T. Jin*[1]; B. L. Weese[1]; D. Kim[1]; M. J. Schweiger[1]; A. A. Kruger[2]

1. Pacific Northwest National Laboratory, USA
2. US Department of Energy, Office of River Protection, USA

3:00 PM

(PACRIM-S30-048-2017) High-density $Li_5La_3Ta_2O_{12}$ ceramics for ion-selective fission waste processing

H. J. Brown-Shaklee*[1]; M. Blea-Kirby[1]; J. Greigo[1]; M. Rodriguez[1]; J. Ihlefeld[1]; E. Spoerke[1]

1. Sandia National Laboratories, Electronic, Optical and Nano Materials, USA

PACRIM Symposium 32: Nanostructured Bioceramics and Ceramics for Biomedical Applications

Nanostructured Bioceramics III

Room: Monarchy

Session Chairs: Kohei Soga, Tokyo University of Science; Shiow-Kang Yen, Department of Materials Science and Engineering; Antonio Feteira, Sheffield Hallam University

1:15 PM

(PACRIM-S32-016-2017) Electrospinning for Cell Fiber Fabrication: Effects of Process Parameters on Fiber Quality (Invited)

H. Sun[1]; Q. Zhao[1]; M. Wang*[1]

1. The University of Hong Kong, Department of Mechanical Engineering, Hong Kong

1:45 PM

(PACRIM-S32-017-2017) Micro/nanostructured silica coatings modulate dental tissue attachment and orientation on ceramic implants (Invited)

D. Hansford*[1]; A. Peleaz-Vargas[2]; A. Carvalho[3]; D. Gallego-Pérez[1]; N. Higuita-Castro[1]; L. Grenho[3]; M. Laranjeiro[3]; M. P. Ferraz[4]; M. Fernandes[3]; F. Monteiro[3]

1. The Ohio State University, USA
2. Universidad Cooperativa de Colombia, Facultad de Odontología, Colombia
3. Universidade do Porto, Instituto de Engenharia Biomédica, Portugal
4. Universidade Fernando Pessoa, Centro de Estudos em Biomedicina, Portugal

2:15 PM

(PACRIM-S32-018-2017) Fluorescent Ceramic Nanoparticles for Biophotonics in the Second Biological Window (Invited)

K. Soga[1]; M. Kamimura*[1]

1. Tokyo University of Science, Dept Mater Sci & Tech, Japan

2:45 PM

(PACRIM-S32-019-2017) New Bioactive and Multifunctional Magnetic Nanoparticles: A Potential Revolution in Nanomedicine (Invited)

A. Tampieri*[1]; M. Sandri[1]; M. Montesi[1]; S. Panseri[1]; S. Sprio[1]; M. Iafisco[1]; A. Adamiano[1]

1. National Research Council of Italy, Institute of Science and Technology for Ceramics, Italy

3:15 PM

(PACRIM-S32-020-2017) Porous Geltin-Hydroxyapatite Composite Microspheres as Doxorubicin Carriers for Osteosarcoma Treatments: In-vitro Study

S. Yen*[1]; Y. Lai[2]; C. Lin[3]; Y. Liang[1]

1. National Chung Hsing University, Department of Materials Science and Engineering, Taiwan
2. China Medical University Hospital, Physical Medicine and Rehabilitation, Taiwan
3. Taichung Armed Force General Hospital, Department of Orthopaedic Surgery, Taiwan

3:30 PM

Break

3:45 PM

(PACRIM-S32-021-2017) Big Health Advances with Small Materials: 20 Years of Commercializing Medical Devices Using Nanotechnology (Invited)

T. Webster*[1]

1. Northeastern University, USA

4:15 PM

(PACRIM-S32-022-2017) Comparison of the mechanical properties and restorative quality of three commercial dental prosthetic materials

A. Feteira*[1]; A. Kounga[2]

1. Sheffield Hallam University, United Kingdom
2. Institut Straumann AG, Switzerland

4:30 PM

(PACRIM-S32-023-2017) Direct-Writing of 3D Scaffolds from Bioactive Glasses (Invited)

L. Hupa*[1]; S. Eqtesadi[1]; A. Motealleh[2]; P. Miranda[2]

1. Åbo Akademi University, Johan Gadolin Process Chemistry Centre, Finland
2. Universidad de Extremadura, Escuela de Ingenierías Industriales, Spain

Friday, May 26, 2017

GOMD Award Lectures

Varshneya Glass Technology Lecture

Room: Kona 5

8:30 AM

Introduction

8:35 AM

(GOMD-PL-005-2017) Volume holographic elements in photo-thermo-refractive glass: Features and applications (Invited)

L. Glebov*[1]

1. University of Central Florida, CREOL, USA

9:30 AM

Break

GOMD Symposium 1: Fundamentals of the Glassy State

Glass under Pressure

Room: Kona 4

Session Chair: Atsunobu Masuno, Hirosaki University

9:45 AM

(GOMD-S1-109-2017) Pressure induced structural changes in glassy materials (Invited)

A. Zeidler*[1]; P. Salmon[1]

1. University of Bath, Department of Physics, United Kingdom

10:15 AM

(GOMD-S1-110-2017) Elastic/plastic transformation of vitreous silica under pressure (Invited)

B. Ruffle*[1]

1. Montpellier University, Physics Department, France

10:45 AM

(GOMD-S1-111-2017) Elastic anomaly and mechanism of densification in the ternary SiO_2-Na_2O-Al_2O_3

D. de Ligny*[1]; M. Cicconi[1]; A. Veber[1]; A. Cornet[2]; C. Sonneville[2]; V. Martinez[2]; M. Christine[2]; B. Champagnon[2]

1. University Erlangen-Nürnberg, Materials Sciences and Engineering, Germany
2. University Lyon1, Institut Lumière Matière, France

11:00 AM

(GOMD-S1-112-2017) Polyamorphism in lithium borate glasses

G. Lelong*[1]; C. J. Sahle[2]; V. Giordano[3]; E. de Clermont[1]; L. Cormier[1]

1. UPMC, IMPMC, France
2. European Synchrotron Radiation Facility, France
3. Institut Lumière Matière, France

11:15 AM

(GOMD-S1-113-2017) The Elastic Limit of Silicate Glasses Using Molecular Dynamics

S. Goyal*[1]; V. Subramanian[1]

1. Corning Incorporated, USA

11:30 AM

(GOMD-S1-114-2017) Diffusion of water in silica: Influence of moderate stresses

S. Wiederhorn*[1]; G. Rizzi[2]; M. J. Hoffmann[2]; T. Fett[2]; S. Wagner[2]

1. National Institute of Standards and Technology, USA
2. Karlsruhe Institute of Technology, Germany

11:45 AM

(GOMD-S1-115-2017) Modifier-Free Al_2O_3-B_2O_3-P_2O_5-SiO_2 Glasses under Pressure

M. M. Smedskjaer*[1]; S. Kapoor[1]; X. Guo[2]; R. Youngman[2]; C. L. Hogue[2]; J. C. Mauro[2]; S. Rzoska[3]; M. Bockowski[3]; L. R. Jensen[4]

1. Aalborg University, Department of Chemistry and Bioscience, Denmark
2. Corning Incorporated, USA
3. Institute of Physics Polish Academy of Sciences, Poland
4. Aalborg University, Department of Mechanical and Manufacturing Engineering, Denmark

GOMD Symposium 4: Glass Technology and Crosscutting Topics

Challenges in Glass Manufacturing III

Room: Waikoloa 3

Session Chairs: Irene Peterson, Corning Incorporated; Deborah Baker, Corning Incorporated

8:30 AM

(GOMD-S4-062-2017) Latest milestones of Glass Technology Improvements in Sisecam (Invited)

H. Sesigur*[1]

1. Sisecam, Research and Technology Center, Glass Technology Directorate, Turkey

9:00 AM

(GOMD-S4-063-2017) Solubility of CO_2 and structure analysis of Na_2O-(ZnO/RE_2O_3)-SiO_2 glass melts

T. Yano*[1]; T. Naito[1]; T. Kishi[1]; N. Matsushita[1]

1. Tokyo Institute of Technology, Department of Materials Science and Engineering, Japan

9:15 AM

(GOMD-S4-064-2017) Nucleation and growth of bubbles during glass cullet melting

D. Boloré*[1]; F. Pigeonneau[1]

1. Saint-Gobain Recherche, France

9:30 AM

Break

Challenges in Glass Manufacturing IV

Room: Waikoloa 3

Session Chairs: Irene Peterson, Corning Incorporated; Jennifer Rygel, Corning Incorporated

9:45 AM

(GOMD-S4-065-2017) Heat flow from molten glass to glass batch through foam layer (Invited)

P. Hrma*[1]; S. Lee[1]; R. Pokorny[2]; B. McCarthy[1]; D. Dixon[1]; W. Eaton[1]; M. J. Schweiger[1]; A. A. Kruger[3]

1. Pacific Northwest National Laboratory, USA
2. Laboratory of Inorganic Materials, Joint Workplace of the University of Chemistry and Technology Prague and the Institute of Rock Structure and Mechanics of the ASCR, v.v.i., Czech Republic
3. U.S. Department of Energy, Office of River Protection, USA

10:15 AM

(GOMD-S4-066-2017) The rate-controlling step of the industrial batch-to-melt conversion

R. Conradt*[1]

1. RWTH Aachen University, GHI, Germany

10:30 AM

(GOMD-S4-067-2017) Modeling of batch to glass conversion during waste glass melting: Evaluation of feed and foam heat conductivity and prediction of melting rate

R. Pokorny*[1]; M. Hujova[1]; J. Klouzek[1]; D. P. Guillen[2]; M. J. Schweiger[3]; P. Hrma[3]; A. A. Kruger[4]

1. University of Chemistry and Technology Prague, Czech Republic
2. Idaho National Lab, USA
3. Pacific Northwest National Lab, USA
4. US Department of Energy, Office of River Protection, USA

10:45 AM

(GOMD-S4-068-2017) Complete set of spectral characteristics of semi-transparent bodies for accurate description of heat transfer by radiation

O. Prokhorenko*[1]

1. L.G.P. International, USA

PACRIM Symposium 01: Characterization and Modeling of Ceramic Interfaces: Structure, bonding, and Grain Growth

Microstructure Evolution

Room: Kohala 3

Session Chairs: Naoya Shibata, The University of Tokyo; Sung-Yoon Chung, Korea Advanced Institute of Sci. & Tech. (KAIST)

9:00 AM

(PACRIM-S1-019-2017) Diffuse Interface Modeling of Sintering, Grain Growth and Coarsening in Ceramics: Application to Additive Manufacturing

F. Abdeljawad*[1]; D. Bolintineanu[2]; D. Kammler[2]; H. J. Brown-Shaklee[1]; A. W. Cook[1]

1. Sandia National Laboratories, Materials Science & Engineering Center, USA
2. Sandia National Laboratories, USA

9:15 AM

(PACRIM-S1-020-2017) Space-, Time-, and Temperature-Resolved Hyperspectral Raman Imaging of High-Temperature Sintering Reactions in Kaolinite-Based Ceramics

K. Stange*[1]; C. Lenting[1]; T. Geisler[1]

1. Rheinische Friedrich-Wilhelms-Universität Bonn, Steinmann-Institut für Geologie, Mineralogie und Paläontologie, Germany

9:30 AM

Break

9:45 AM

(PACRIM-S1-021-2017) Anti-thermal grain growth in perovskite ceramics (Invited)

W. Rheinheimer*[1]

1. Karlsruhe Institute of Technology, Institute for Applied Materials, Germany

10:15 AM

(PACRIM-S1-022-2017) Electric Field Effects on Grain Boundary Formation and Grain Growth (Invited)

K. van Benthem*[1]

1. University of California, Davis, Materials Science and Engineering, USA

10:45 AM

Final Discussion

PACRIM Symposium 04: Polymer-Derived Ceramics (PDCs) and Composites

Applications of PDCs I

Room: King's 3

Session Chair: Enrico Bernardo, University of Padova

8:30 AM

(PACRIM-S4-025-2017) Applications of preceramic polymers – polysilazanes as high-performance coating binders and beyond (Invited)

I. Zenz*[1]

1. Merck KGaA, Performance Materials - Functional Materials, Germany

9:00 AM

(PACRIM-S4-026-2017) In-situ pyrolyzed polymer derived ceramic composite coatings on ablative substrates

K. Wang*[1]; W. Han[2]; Z. Zhang[2]; S. Kuang[1]

1. Aerospace Research Institute of Materials and Processing Technology, China
2. Institute of Chemistry, Chinese Academy of Sciences, China

9:15 AM

(PACRIM-S4-027-2017) Polymer-derived ceramic corrosion resistant layers with glass fillers

I. Petrikova[1]; M. Parchoviansky[1]; M. Lenz-Leite[2]; G. Motz[2]; D. Galusek*[1]

1. IIC SAS, Joint Glass Centre, Slovakia
2. University of Bayreuth, Germany

9:30 AM

(PACRIM-S4-028-2017) Polymer-derived thermal barrier coating system on steel for application up to 1000 °C

G. Barroso*[1]; W. Krenkel[1]; G. Motz[1]

1. University of Bayreuth, Ceramic Materials Engineering, Germany

9:45 AM

(PACRIM-S4-029-2017) Effect of ion implantation on precursor polymers for synthesis of carbon material with catalytic performance

A. Idesaki*[1]; M. Sugimoto[1]; S. Yamamoto[1]; T. Yamaki[1]

1. National Institutes for Quantum and Radiological Science and Technology (QST), Quantum Beam Science Research Directorate, Japan

10:00 AM

Break

Applications of PDCs II

Room: King's 3

Session Chair: Samuel Bernard, CNRS

10:15 AM

(PACRIM-S4-030-2017) Highly porous silicate bioceramics from preceramic polymers and reactive fillers (Invited)

E. Bernardo*[1]; H. Elsayed[1]; L. Fiocco[1]

1. University of Padova, Dept. of Industrial Engineering, Italy

10:45 AM

(PACRIM-S4-031-2017) Polymer-Derived Ceramic Membranes and Sensors (Invited)

A. Gurlo*[1]

1. Technische Universitaet Berlin, Chair of Advanced Ceramic Materials, Germany

11:15 AM

(PACRIM-S4-032-2017) Boron-modified Silicon Oxycarbide Composite Electrode for Electrochemical Energy Storage (Invited)

M. Abass[1]; G. Singh*[1]

1. Kansas State University, Mechanical and Nuclear, USA

PACRIM Symposium 06: Synthesis and Processing of Materials Using Electric Currents and Pressures

Electric Currents II

Room: King's 1

Session Chairs: Yasuhiro Kodera, University of California, San Diego; Manshi Ohyanagi, Ryukoku University; Claude Estournes, CIRIMAT

8:30 AM

(PACRIM-S6-010-2017) Progress in Spark Plasma Sintering (SPS) Method and Cost-Effective Technology to Produce Functionally Graded Materials (FGMs) on the Large Scale (Invited)

M. Tokita*[1]

1. NJS Co.,Ltd., SPS R&D Center, Japan

9:00 AM

(PACRIM-S6-011-2017) Spark plasma sintering of Diamond/Si_3N_4 composite (Invited)

M. Ohyanagi*[1]; H. Inoue[1]; K. Shirai[1]; Z. Munir[2]

1. Ryukoku University, Japan
2. University of California, Davis, Department of Chemical Engineering and Materials Science, USA

9:30 AM

(PACRIM-S6-012-2017) Development of Electric current activated/assisted sintering (ECAS/SPS) (Invited)

Y. Sakka*[1]

1. National Institute for Materials Science (NIMS), Japan

10:00 AM

Break

10:15 AM

(PACRIM-S6-013-2017) Modification of pulsed electric current sintering conditions for the reduction of processing time

M. Mikami*[1]; K. Kubo[2]; N. Uchiyama[2]; H. Miyazaki[3]; Y. Nishino[3]

1. National Institute of Advanced Industrial Science and Technology, Japan
2. Atsumitec Co., Ltd., Japan
3. Nagoya Institute of Technology, Japan

10:35 AM

(PACRIM-S6-014-2017) Deformable Punch Spark Plasma Sintering for Processing of Fully Dense Nanocrystalline Oxides (Invited)

R. Castro*[1]

1. University of California, Davis, Material Science & Engineering, USA

11:05 AM

(PACRIM-S6-015-2017) Synthesis and processing of magnetic nanocomposites through CAPAD

Y. Kodera*[1]; K. Chan[1]; A. Volodchenkov[2]; J. E. Garay[1]

1. University of California, San Diego, Mechanical and Aerospace Engineering, USA
2. University of California, Riverside, USA

11:25 AM

(PACRIM-S6-016-2017) Nanostructured zinc oxide by FAST/SPS and cold sintering

J. Gonzalez-Julian*[1]; K. Neuhaus[2]; M. Bernemann[2]; M. Bram[1]; O. Guillon[1]

1. Forschungszentrum Juelich, Germany
2. University of Muenster, Germany

PACRIM Symposium 13: Advanced Structural Ceramics for Extreme Environments

New Materials and Properties

Room: Kohala 4

Session Chairs: Stephan Schmidt-Wimmer, Airbus Defence and Space; Hailong Wang, Zhengzhou University

8:30 AM

(PACRIM-S13-029-2017) Oxidation behavior of porous Si_3N_4 ceramics

H. Liang*[1]; Y. Zeng[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

8:45 AM

(PACRIM-S13-030-2017) New Ceramic Material AlB12-AlN: A Combination of High Boron Content, Hardness and Thermal Conductivity

O. Vasiliev*[1]; V. Kartuzov[1]; V. Muratov[1]; P. Mazur[1]; V. Garbuz[1]; Y. Kartuzov[1]

1. Institut for Problems of Materials Sciences NAS of Ukraine, Ukraine

9:00 AM

(PACRIM-S13-031-2017) Processing and Properties of ZrB_2-SiCw Composites Sintered by Spark Plasma Sintering

H. Wang*[1]; G. Shao[1]; B. Fan[1]; H. Lu[1]; R. Zhang[2]

1. Zhengzhou University, Materials Science and Engineering, China
2. Zhengzhou Institute of Aeronautical Industry Management, China

PACRIM Symposium 18: Microwave Dielectric Materials and Their Applications

Microwave Dielectric Materials and Their Applications III

Room: Kohala 2

Session Chair: Chonglin Chen, University of Texas San Antonio

8:30 AM

(PACRIM-S18-015-2017) Defect Engineered Complex Oxide Thin Films with Tunable Multiferroic Properties (Invited)

C. Chen*[1]

1. University of Texas San Antonio, Physics, USA

9:00 AM

(PACRIM-S18-016-2017) Recycled glass foams for high power microwave terminations (Invited)

R. Benzerga*[1]; V. Laur[2]; R. Lebullenger[3]; L. Le Gendre[1]; G. Lanoë[3]; P. Queffelec[2]; A. Sharaiha[1]

1. IETR - University Rennes 1, France
2. LabSTICC - UBO, France
3. ISCR - University Rennes1, France

9:30 AM

(PACRIM-S18-017-2017) High wave absorption properties of $BaFe_{12-x}Zr_xO_{19}$ controlled by Zr^{4+} dependent permittivity and permeability (Invited)

P. Du*[1]; Z. Wang[1]; N. Ma[1]; C. Liu[1]

1. Zhejiang University, Materials Science and Engineering, China

10:00 AM

Break

10:15 AM

(PACRIM-S18-010-2017) Plasma Metamaterials in the Microwave Frequency Range (Invited)

M. Lanagan*[1]; Z. Cohick[1]; S. Antonsson[1]; A. Baker[2]; M. Sarkarat[2]; P. Steve[2]; C. Randall[2]

1. Penn State University, Dept. of Engineering Science and Mechanics, USA
2. Materials Research Institute, USA

10:45 AM

(PACRIM-S18-019-2017) Energy storage properties of niobate-based and Barium strontium titanate glass-ceramics by microwave crystallization

J. Zhai*[1]

1. Tongji University, Functional Materials Research Laboratory, School of Materials Science & Engineering, China

11:10 AM

(PACRIM-S18-020-2017) Dielectric Material Measurement of Hypersonic Electromagnetic Windows for High Temperature

Y. Xu*[1]; J. Zhang[1]

1. Beijing Institute of Space Long March Vehicle, China

11:35 AM

(PACRIM-S18-021-2017) Phase-Chemical Structure and Dielectric Characteristics of A/B-Site Modified Titanate Paraelectric $SrTiO_3$ Ceramics

B. Ullah*[1]; W. Lei[1]; X. Wang[1]; G. Fan[1]; W. Lu[1]

1. Huazhong University of Science and Technology, School of Optical and Electronic Information, China

PACRIM Symposium 21: Solid Oxide Fuel Cells and Hydrogen Technologies

SOFC Interconnect

Room: Queen's 4

Session Chair: Kathy Lu, Virginia Tech

9:00 AM

(PACRIM-S21-010-2017) Solid oxide fuel cell interconnect coatings (Invited)

K. Lu*[1]; K. Shen[1]

1. Virginia Tech, USA

9:30 AM

(PACRIM-S21-011-2017) MAX-phases-based materials as interconnects for hydrogen fuel cells

T. Prikhna*[1]; O. Ostash[2]; A. Ivasyshyn[2]; V. Sverdun[1]; M. Karpets[3]; V. Podhurska[2]; V. Moshchil[1]; T. Cabioch[4]; P. Chartier[4]; L. Jaworska[5]; P. Figiel[5]; T. Zimych[1]; J. Cyboron[5]

1. Institute for Superhard Materials of the National Academy of Sciences of Ukraine, Ukraine
2. Physico-Mechanical Institute of the National Academy of Sciences of Ukraine, Ukraine
3. Institute for Problems in Material Science of the National Academy of Sciences of Ukraine, Ukraine
4. Universite de Poitiers, CNRS/ Laboratoire PHYMAT, France, France
5. The Institute of Advanced Manufacturing Technology, Poland, Poland

9:45 AM

(PACRIM-S21-012-2017) Promising metal matrix composites (TiC/Ni-Cr) for IT-SOFC interconnect applications

Y. Liu*[1]; Q. Qi[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, Structrural Ceramics Engineering Center, China

10:00 AM

Break

Current Collection, Sealing, Hydrogen Generation

Room: Queen's 4

Session Chair: Fatih Dogan, Missouri University of Science and Technology

10:15 AM

(PACRIM-S21-013-2017) Highly Efficient Current Collection in Solid Oxide Fuel Cells (Invited)

F. Dogan*[1]

1. Missouri University of Science and Technology, Dept. of Materials Science and Engineering, USA

10:45 AM

(PACRIM-S21-014-2017) Glass ceramic sealants for CFY based SOFC

A. Rost*[1]; J. Schilm[1]; M. Kusnezoff[1]; A. Michaelis[1]

1. Fraunhofer IKTS, Germany

11:00 AM

(PACRIM-S21-015-2017) Hydrogen formation from biogas using electrochemical cell with gadolinium-doped ceria porous electrolyte

Y. Hirata[1]; T. Shimonosono*[1]; K. Ueda[1]; S. Sameshima[1]; K. Yamaji[2]

1. Kagoshima University, Department of Chemistry, Biotechnology, and Chemical Engineering, Japan
2. National Institute of Advanced Industrial Science and Technology, Japan

11:15 AM

(PACRIM-S21-016-2017) Study of water uptake behavior on yttria-doped barium zirconate solid solutions using water adsorption calorimetry

M. Dancini Goncalves*[3]; P. Maram[1]; R. Muccillo[2]; A. Navrotsky[3]

1. University of California, Davis, NEAT, USA
2. IPEN, CCTM, Brazil
3. University of California, Davis, Peter A. Rock Lab and NEAT ORU, USA

PACRIM Symposium 22: Direct Thermal to Electrical Energy Conversion Materials and Applications

Novel Aspects of Thermal-to-Electrical Direct Energy Conversion

Room: Queen's 6

Session Chairs: Lei Miao, Guilin University of Electronic Technology; Maarit Karppinen, Aalto University

8:30 AM

(PACRIM-S22-022-2017) Enhanced Electron Collection in Perovskite Solar Cells Employing Thermoelectric Coaxial Nanofibers (Invited)

N. Wang*[1]

1. University of Electronic Science and Technology of China, School of Microelectrics and Solid-state Electronics, China

8:50 AM

(PACRIM-S22-023-2017) Anomalous Photo-Thermoelectric Effects in Tungsten Trioxide Loaded with Platinum (Invited)

H. Irie*[1]

1. University of Yamanashi, Clean Energy Research Center, Japan

9:10 AM

(PACRIM-S22-024-2017) Thermoelectrochemical Cells with Molten Carbonate Electrolytes and Gas Electrodes (Invited)

G. Haarberg*[1]

1. Norwegian University of Science and Technology, Norway

9:30 AM

(PACRIM-S22-025-2017) Sodium Ion Expansion Power Block for Distributed CSP

S. Balagopal*[1]; S. Yee[2]

1. Ceramatec, Inc., USA
2. Georgia Institute of Technology, Mechanical Engineering, USA

9:45 AM

Break

Carbon/Organic Materials

Room: Queen's 6

Session Chairs: Hiroshi Irie, University of Yamanashi; Geir Martin Haarberg, Norwegian University of Science and Technology

10:15 AM

(PACRIM-S22-026-2017) Oxide-Graphene Thermoelectric Nanocomposites (Invited)

Y. Lim*[1]; W. Nam[2]; J. Lee[2]; W. Seo[3]

1. Pukyong National University, Department of Materials System Engineering, Republic of Korea
2. Institute for Basic Science (IBS), Center for Nanomaterials and Chemical Reactions, Republic of Korea
3. Korea Institute of Ceramic Engineering and Technology, Energy and Environmental Division, Republic of Korea

10:45 AM

(PACRIM-S22-027-2017) Flexible thermoelectrics of reduced graphene oxide/nanowires hybrid films on paper (Invited)

L. Miao*[1]; X. Wang[1]; J. Gao[1]; Y. Peng[1]; C. Liu[1]; J. Zhou[1]; Y. Cheng[2]

1. Guilin University of Electronic Technology, School of Material Science and Engineering, China
2. East China University of Science and Technology, School of Chemistry and Molecular Engineering, China

11:15 AM

(PACRIM-S22-028-2017) Layer-engineered inorganic-organic hybrid materials for flexible thermoelectrics (Invited)

M. Karppinen*[1]

1. Aalto University, Department of Chemistry, Finland

11:45 AM

(PACRIM-S22-029-2017) Sub-nanoscale inorganic/organic hybridization-new strategy for flexible thermoelectric device

R. Tian*[1]; C. Wan[2]; Y. Wang[3]; Q. Wei[5]; T. Ishida[5]; A. Yamamoto[5]; A. Tsuruta[4]; W. Shin[4]; K. Koumoto[1]

1. Toyota Physical and Chemical Research Institute, Japan
2. Tsinghua University, China
3. Nanjing Technological University, China
4. National Advanced Institute of Science and Technology, Japan
5. National Institute of Advanced Industrial Science and Technology (AIST), Japan

PACRIM Symposium 24: Photovoltaic and Related Materials and Technologies

Photovoltaic Materials and Technologies II

Room: Queen's 5

Session Chairs: Giovanni Fanchini, University of Western Ontario; Kylie Catchpole, Australian National University; Oomman Varghese, University of Houston; Sylvain Cloutier, Ecole de Technologie Supérieure (ETS)

8:30 AM

(PACRIM-S24-011-2017) High-performance printable hybrid device architectures (Invited)

S. G. Cloutier*[1]; I. Ka[1]; R. Nechache[1]; L. Gerlein[1]; X. Guo[1]; J. Benavides[1]; T. Charles[1]

1. Ecole de Technologie Supérieure (ETS), Canada

8:55 AM

(PACRIM-S24-012-2017) Nanoscale Earth Abundant Materials for Emerging Photovoltaic Technologies (Invited)

O. K. Varghese*[1]; M. Paulose[1]; P. Kaur[1]

1. University of Houston, Department of Physics, USA

9:20 AM

(PACRIM-S24-013-2017) Biopolymers for solar energy conversion (Invited)

C. Santato*[1]; E. Di Mauro[1]; D. Boisvert[1]

1. Ecole Polytechnque de Montreal, Canada

9:45 AM

(PACRIM-S24-014-2017) Polyalkylene Carbonate Binders for Cleaner Burning Thick Film Ag Paste: Comparison to Commercially Available Ag Pastes

P. Ferraro*[1]; S. Hanggodo[1]

1. Empower Materials, USA

10:00 AM

Break

10:15 AM

(PACRIM-S24-015-2017) 5 to 20-Junction Photonic Power Converters: Materials, Designs and Performance (Invited)

K. Hinzer*[1]

1. University of Ottawa, Canada

10:40 AM

(PACRIM-S24-016-2017) High efficiency perovskite on silicon tandem solar cells (Invited)

K. Catchpole*[1]

1. Australian National University, Australia

11:05 AM

(PACRIM-S24-017-2017) Eu^{3+}:Ag co-doped zinc-tellurite glass for solar sell applications

J. Amjad*[1]; D. Rajesh[2]; M. R. Dousti[3]; A. de Camargo[2]

1. COMSATS Institute of Information Technology, Lahore, Physics, Pakistan
2. University of Sao Paulo, Brazil
3. Federal University of Alagoas, Maceio, AL, Brazil, Brazil

11:20 AM

(PACRIM-S24-018-2017) Interface engineering of multi-layered ZnS-GaP thin films with high visible-light photoactivity

J. Hart*[1]; F. Kurnia[1]; M. Al-Farsi[1]; Y. Ng[2]; N. Valanoor[1]; N. Allan[3]

1. UNSW Australia, School of Materials Science and Engineering, Australia
2. UNSW Australia, School of Chemical Engineering, Australia
3. University of Bristol, School of Chemistry, United Kingdom

11:35 AM

(PACRIM-S24-019-2017) Photovoltaic solar cells based on Sb_2Se_3 nano-rods obtained by magnetron sputtering deposition

G. Liang[2]; H. Ma[1]; Z. Luo[3]; P. Fan[2]; X. Zhang*[1]

1. Université de Rennes I, Lab. Glasses and Ceramics, France
2. Shenzhen University, College of Physics and Energy, China
3. Shenzhen University, College of Chemistry and Chemical Engineering, China

PACRIM Symposium 30: Glasses and Ceramics for Nuclear and Hazardous Waste Treatment

Geopolymer, Glass-Ceramic, and Composite Waste Forms II

Room: Kona 1

Session Chairs: Kevin Fox, Savannah River National Laboratory; Russell Hand, University of Sheffield

8:30 AM

(PACRIM-S30-036-2017) Geopolymers and alternative cemented waste forms (Invited)

J. Provis*[1]

1. University of Sheffield, United Kingdom

9:00 AM

(PACRIM-S30-037-2017) Nano-Engineering of Cementitious Materials towards Improved Nuclear Wasteforms

B. Wang*[1]; N. Krishnan[1]; G. Sant[1]; M. Bauchy[1]

1. University of California, Los Angeles, Civil and Environmental Engineering, USA

9:15 AM

(PACRIM-S30-038-2017) Influence of Aluminum Cations on the Hydration Process of a Brushite Cement for Nuclear Waste Immobilization

P. M. Laniesse*[1]; C. Cau-Dit-Coumes[1]; A. Pascal[1]; A. Mesbah[2]; G. Le Saout[3]

1. CEA, Treatment and Waste Conditioning Department, France
2. ICSM, France
3. Ecole des Mines d'Alès, France

9:30 AM

(PACRIM-S30-039-2017) Optimum Conditions for Vitrification of Cs-Sorbed Zeolite Waste Generated from Decontamination of Effluents at Fukushima Dai-ichi NPP

Y. Inagaki*[1]; T. Arima[1]; K. Idemitsu[1]; D. Akiyama[2]; N. Sato[2]; A. Kirishima[2]

1. Kyushu University, Department of Applied Quantum Physics & Nuclear Engineering, Japan
2. Tohoku University, Institute of Multidisciplinary Research, Japan

9:45 AM

(PACRIM-S30-040-2017) Vitrification of Clinoptilolite using Low Melting Glass Formulations

J. Clarke*[1]; M. C. Stennett[1]; C. L. Corkhill[1]; R. J. Hand[1]; N. C. Hyatt[1]

1. University of Sheffield, United Kingdom

10:00 AM

Break

10:15 AM

(PACRIM-S30-041-2017) Properties of Glass formed by Vitrification of Radioactive Cs sorbed Zeolite and its Cs Evaporation Behavior

D. Akiyama*[1]; N. Sato[1]; A. Kirishima[1]; Y. Inagaki[2]; T. Arima[2]

1. IMRAM Tohoku University, Japan
2. Kyushu University, Department of Applied Quantum Physics & Nuclear Engineering, Japan

10:30 AM

(PACRIM-S30-042-2017) Zeolites as an immobilisation matrix for chloride waste salt: Occlusion, HIPing and chemical durability

F. Y. Tocino*[1]; N. C. Hyatt[1]; A. Mason[1]

1. University of Sheffield, Material Science and Engineering, United Kingdom

10:45 AM

(PACRIM-S30-043-2017) Vitrification of contaminated soil containing Cs

S. Tan*[1]; R. J. Hand[1]; O. McGann[3]; J. McDonald-Taylor[2]; S. Morgan[4]

1. The University of Sheffield, ISL, Department of Materials Science and Engineering, United Kingdom
2. National Nuclear Laboratory, United Kingdom
3. Glass Technology Service Ltd., United Kingdom
4. Sellafield Ltd., United Kingdom

11:00 AM

(PACRIM-S30-044-2017) Development of Multiphase Ceramic Waste Forms Using a Melt Process

J. Amoroso*[1]; C. Dandeneau[1]; M. Tang[2]; K. Brinkman[3]

1. Savannah River National Laboratory, USA
2. Los Alamos National Lab, USA
3. Clemson University, USA

11:15 AM

(PACRIM-S30-045-2017) Ceramic and glass-ceramic wasteforms for actinide disposition

S. Sun*[1]; M. C. Stennett[1]; C. L. Corkhill[1]; N. C. Hyatt[1]

1. University of Sheffield, United Kingdom

11:30 AM

(PACRIM-S30-046-2017) Structural characterization of (Ba,Cr)-hollandites for Cs immobilization

P. Tumurugoti[1]; S. T. Misture*[1]; S. K. Sundaram[1]; J. Amoroso[2]

1. Alfred University, Materials Science and Engineering, USA
2. Savannah River National Lab, USA

11:45 AM

(PACRIM-S30-047-2017) Cerium Substituted Zirconolite: 2M and 4M Polymorph Transition

B. Clark*[1]; S. K. Sundaram[1]; S. T. Misture[1]; J. Amoroso[2]

1. Alfred University, USA
2. Savannah River National Lab, USA

NOTES

MEETINGS & EXPOSITIONS

2017

JUNE 26 – 28
8TH ADVANCES IN CEMENT-BASED MATERIALS (CEMENTS 2017)
Georgia Tech | Atlanta, Ga. USA

SEPTEMBER 27 – 29
UNITECR 2017
CentroParque Convention & Conference Center
Santiago, Chile

OCTOBER 8 – 12
MATERIALS SCIENCE & TECHNOLOGY 2017, COMBINED WITH ACERS 119TH ANNUAL MEETING (MS&T17)
Pittsburgh, Pa. USA

OCTOBER 22 – 25
2017 ICG ANNUAL MEETING & 32ND SISECAM GLASS SYMPOSIUM
Sisecam Science and Technology Center
Istanbul, Turkey

NOVEMBER 6 – 9
78TH CONFERENCE ON GLASS PROBLEMS (78TH GPC) INCLUDING 11TH ADVANCES IN FUSION AND PROCESSING OF GLASS (AFPG) SYMPOSIUM
Greater Columbus Convention Center
Columbus, Ohio USA

NOVEMBER 12 – 16
INTERNATIONAL CONFERENCE ON SINTERING 2017
Hyatt Regency Mission Bay Spa and Marina
San Diego, Calif. USA

2018

JANUARY 17 – 19
2018 CONFERENCE ON ELECTRONIC AND ADVANCED MATERIALS, ORGANIZED BY THE ACERS ELECTRONICS AND BASIC SCIENCE DIVISIONS (FORMERLY ELECTRONIC MATERIALS AND APPLICATIONS)
DoubleTree by Hilton Orlando at Sea World Conference Hotel | Orlando, Fla. USA

JANUARY 21 – 26
42ND INTERNATIONAL CONFERENCE AND EXPO ON ADVANCED CERAMICS AND COMPOSITES (ICACC'18)
Daytona Beach, Fla. USA

MAY 20 – 24
GLASS AND OPTICAL MATERIALS DIVISION MEETING (GOMD 2018)
Hilton Palacio del Rio | San Antonio, Texas USA

JUNE 26 – 28
4TH CERAMICS EXPO
I-X Center | Cleveland, Ohio USA

JULY 22 – 27
12TH INTERNATIONAL CONFERENCE ON CERAMIC MATERIALS AND COMPONENTS FOR ENERGY AND ENVIRONMENTAL APPLICATIONS (CMCEE2018)
Singapore

AUGUST 20 – 23
MATERIALS CHALLENGES IN ALTERNATIVE & RENEWABLE ENERGY (MCARE 2018)
Vancouver, BC Canada

OCTOBER 14 – 18
MATERIALS SCIENCE & TECHNOLOGY 2018, COMBINED WITH ACERS 120TH ANNUAL MEETING (MS&T18)
Greater Columbus Convention Center
Columbus, Ohio USA

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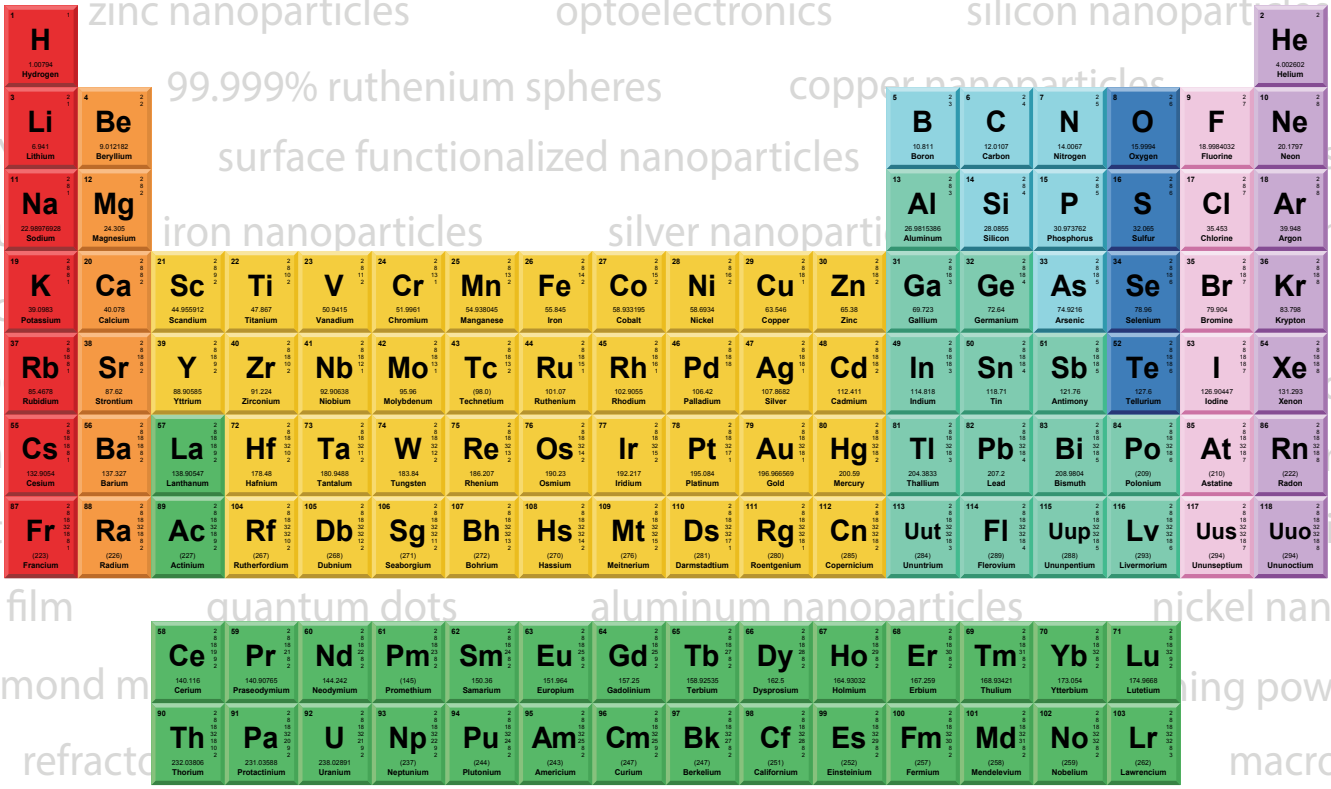

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