

ICACC21 Speaker Schedule.xlsx

CONTROL ID	PRESENTATION TITLE	PRESENTER	PRESENTER INSTITUTION	TRACK	VIRTUAL SESSION TITLE	DATE	START TIME	END TIME	PRESENTATION TYPE
3486902	Electric Field Effects in the Processing of Materials	Zuhair Munir	University of California, Davis	Plenary	James L. Mueller Award Lecture and Plenary Speaker I	Monday, February 08, 2021	9:00 AM	9:40 AM	Award
3487625	Materials by Design: Three-Dimensional (3D) Nano-Architected Meta-Materials	Julia R. Greer	California Institute of Technology	Plenary	James L. Mueller Award Lecture and Plenary Speaker I	Monday, February 08, 2021	9:40 AM	10:20 AM	Award
3491697	Understanding the Durability of SiC based Ceramic Matrix Composites (CMCs) for Gas Turbine Engine Hot Section Components	Amjad S Almansour	NASA Glenn Research Center	GYIF	10th Global Young Investigator Award Lecture	Monday, February 08, 2021	10:45 AM	11:15 AM	Award
3485099	Rare-Earth-Based Opto-Magnetic Nanoparticles – Current Trends and Challenges	Eva Hemmer	University of Ottawa	Diversity	Jubilee Global Diversity Award Lectures	Monday, February 08, 2021	1:40 PM	2:10 PM	Award
3487512	Dynamic, radiation tolerant ceramics: Understanding defect mobility and microstructural evolution in ceramics subject to ion irradiation	Jessica A Krogstad	University of Illinois at Urbana-Champaign	Diversity	Jubilee Global Diversity Award Lectures	Monday, February 08, 2021	2:10 PM	2:40 PM	Award
3491853	Microwave effect on the synthesis of metal oxide particles by hydrothermal method	Miki Inada	Kyushu University	Diversity	Jubilee Global Diversity Award Lectures	Monday, February 08, 2021	2:40 PM	3:10 PM	Award
3479343	Bioinspired freeze casting with extrinsic control techniques	Steven E. Naleway	University of Utah	FS1	Bio-inspired, Green Processing, and Related Technologies of Advanced Materials	Monday, February 08, 2021	10:40 AM	11:00 AM	Contributed
3503036	Water mediated densification of calcium carbonate at room temperature	Zhaoyong Zou	Wuhan University of Technology	FS1	Bio-inspired, Green Processing, and Related Technologies of Advanced Materials	Monday, February 08, 2021	11:00 AM	11:20 AM	Contributed
3491771	Therapeutic and Bio activities of Stabilized Amorphous Calcium Carbonate	Yigal D Blum	Amorphical LTD	FS1	Bio-inspired, Green Processing, and Related Technologies of Advanced Materials	Monday, February 08, 2021	11:20 AM	11:40 AM	Contributed
3481276	Thermoelectric cell setup for heat recovery in a Flameless Combustion Furnace	Henry A. Colorado L.	Universidad de Antioquia	FS1	Bio-inspired, Green Processing, and Related Technologies of Advanced Materials	Monday, February 08, 2021	11:40 AM	12:00 PM	Contributed
3487528	Aqueous phase layer-by-layer deposition of crystalline hematite thin films without post-growth annealing	Asako Taniguchi	University of Tsukuba	FS1	Bio-inspired, Green Processing, and Related Technologies of Advanced Materials	Monday, February 08, 2021	12:00 PM	12:20 PM	Contributed

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3500703	The Perilous Path to Production: Starting up and transitioning research into a commercially relevant technology and business	Michael Schmitt	HAMR Industries LLC	Diversity	Diversity, Entrepreneurship, and Commercialization	Monday, February 08, 2021	3:15 PM	3:45 PM	Invited
3516696	How to manage a company as an entrepreneur and graduate student?	Sara Catto	University of North Dakota	Diversity	Diversity, Entrepreneurship, and Commercialization	Monday, February 08, 2021	3:45 PM	4:05 PM	Contributed
3478400	Composition Dependent Oxidation Resistance in High Entropy UHTCs	Lavina Backman	U.S. Naval Research Laboratory	GYIF	Frontiers in Ceramic Chemistry and Physics: New Precursors for Functional Ceramics, Ceramics and Catalysis, Functional Surfaces	Monday, February 08, 2021	11:15 AM	11:45 AM	Invited
3480933	Sub-Solidus Phase Development in the ZrB ₂ -TaB ₂ Pseudobinary System	Anna N Dorner	Missouri University of Science & Technology	GYIF	Frontiers in Ceramic Chemistry and Physics: New Precursors for Functional Ceramics, Ceramics and Catalysis, Functional Surfaces	Monday, February 08, 2021	11:45 AM	12:15 PM	Invited
3481352	Alkali treatment approach for preparation of porous diatomite ceramics	Yuki Nakashima	National Institute of Advanced Industrial Science and Technology (AIST)	GYIF	Frontiers in Ceramic Chemistry and Physics: New Precursors for Functional Ceramics, Ceramics and Catalysis, Functional Surfaces	Monday, February 08, 2021	12:15 PM	12:35 PM	Contributed
3479076	Oxidation of BN coatings in SiC/SiC Minicomposites at Intermediate Temperatures	Victoria Christensen	UC Santa Barbara	GYIF	Advanced Ceramics and Coatings for Structural, Environmental and Functional Applications	Monday, February 08, 2021	1:30 PM	2:00 PM	Invited
3478101	Using Impedance Engineering to Design Better Ceramic Composites for Armour	Jia Hui Teo	Imperial College London	GYIF	Advanced Ceramics and Coatings for Structural, Environmental and Functional Applications	Monday, February 08, 2021	2:00 PM	2:30 PM	Invited
3479014	Heterogeneous Carbide Materials Produced via Additive Manufacturing	Joshua Pelz	University of California, San Diego	GYIF	Advanced Ceramics and Coatings for Structural, Environmental and Functional Applications	Monday, February 08, 2021	2:30 PM	3:00 PM	Invited
3479104	Evaluating a critical resolved shear stress criterion for domain nucleation in ferroelastic ceramics	Charles Sheridan Smith	3M Corporate Research Materials Lab	GYIF	Advanced Ceramics and Coatings for Structural, Environmental and Functional Applications	Monday, February 08, 2021	3:00 PM	3:30 PM	Invited

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3478587	Microvoiding phenomenon and its kinetics in rare-earth disilicates exposed to flowing water-vapor atmosphere	Julin Wan	GE Research	S2	Environmental and Thermal Barrier Coatings I	Monday, February 08, 2021	11:00 AM	11:20 AM	Contributed
3478589	Water permeability in glasses versus composition: Potential impact on environmental barrier coatings (EBCs)	Anant Setlur	GE Global Research	S2	Environmental and Thermal Barrier Coatings I	Monday, February 08, 2021	11:20 AM	11:40 AM	Contributed
3479039	Cyclic steam oxidation of single and multilayer ytterbium disilicate environmental barrier coatings	Ken Kane	ORNL	S2	Environmental and Thermal Barrier Coatings I	Monday, February 08, 2021	11:40 AM	12:00 PM	Contributed
3476823	Zircon Ceramic Pigments synthesized by utilization of agro-waste	Irena Markovska	Assen Zlatarov University	S2	Advanced Multifunctional Coatings	Monday, February 08, 2021	1:50 PM	2:10 PM	Contributed
3503115	Thermal Stability of Zinc Oxide doped Aluminophosphate Glass with Ternary Mixed Alkali Effect	Yi-Huei Chen	National United University	S2	Advanced Multifunctional Coatings	Monday, February 08, 2021	2:10 PM	2:30 PM	Contributed
3490717	Millisecond photonic sintering of iron oxide-doped alumina ceramic coatings	Evgeniia Gilshtein	Empa, Swiss Federal Laboratories for Materials Science and Technology	S2	Advanced Multifunctional Coatings	Monday, February 08, 2021	2:30 PM	2:50 PM	Contributed
3490951	Simulation of C-SiOC coatings on zirconia microspheres in a fluidized bed coater based on Multiphase Flow with Interface Exchange	Kathy Lu	Virginia Tech	S2	Advanced Multifunctional Coatings	Monday, February 08, 2021	3:10 PM	3:30 PM	Contributed
3503437	Molecularly Programmed Properties of Vanadium Oxides Coatings for Smart Windows	David Graf	University of Cologne	S2	Advanced Multifunctional Coatings	Monday, February 08, 2021	3:30 PM	3:50 PM	Contributed
3503019	High Thermal and Robust Hydrophobic Coatings: Fabrication of Lanthanum based thin Films via Single-Source Precursor	Anna Kathrin Schmidt-Verma	University of Cologne	S2	Advanced Multifunctional Coatings	Monday, February 08, 2021	3:50 PM	4:10 PM	Contributed
3480891	Large plastic deformation of inorganic materials for depositing dense ceramic coatings at room temperature	Kentaro Shinoda	National Institute of Advanced Industrial Science and Technology (AIST)	S2	Advanced Multifunctional Coatings	Monday, February 08, 2021	4:10 PM	4:40 PM	Invited
3485184	Overview of DOE Office of Fossil Energy's Solid Oxide Fuel Cell (SOFC) Program	Patcharin Burke	U.S. Department of Energy	S3	Overview Technology Status	Monday, February 08, 2021	10:40 AM	11:10 AM	Invited
3504734	The Status of SOFC and SOEC R&D in the European Fuel Cell and Hydrogen Joint Undertaking Programme	Mirela Atanasiu	Fuel Cell and Hydrogen Joint Undertaking	S3	Overview Technology Status	Monday, February 08, 2021	11:40 AM	12:10 PM	Invited

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3506487	Development, Manufacturing and Deployment of SOC-Based Products at SOLIDpower	Olivier F Bucheli	SOLIDpower	S3	Overview Status Industry	Monday, February 08, 2021	1:30 PM	2:00 PM	Invited
3503396	Evolution of Solid Oxide Fuel Cell Technology from Power Generation to Energy Storage	Hossein Ghezel-Ayagh	FuelCell Energy, Inc.	S3	Overview Status Industry	Monday, February 08, 2021	2:00 PM	2:30 PM	Invited
3487484	Performance characteristics of solid oxide electrolysis technology from Elcogen	Timo Lehtinen	Elcogen Oy	S3	Overview Status Industry	Monday, February 08, 2021	2:30 PM	3:00 PM	Invited
3489125	SOFC Stack and System Development at Redox Power Systems, LLC	Bryan M. Blackburn	Redox Power Systems, LLC	S3	Overview Status Industry	Monday, February 08, 2021	3:00 PM	3:30 PM	Invited
3491361	Modeling Tool Development for SOFC Stack Analysis	Brian J Koeppel	Pacific Northwest National Lab	S3	Overview Status Industry	Monday, February 08, 2021	3:30 PM	4:00 PM	Invited
3488063	Reactive sintering of Boron carbide composites thorough spark plasma sintering route using milled Ti-B as a sintering aid	Gorle Revathi	Indian Institute of Technology Madras	S4	Synthesis and Processing: I	Monday, February 08, 2021	10:40 AM	11:00 AM	Contributed
3485178	Correlation of microstructural design of super hard SiC-bonded diamond materials with its outstanding properties	Björn Matthey	Fraunhofer IKTS	S4	Synthesis and Processing: I	Monday, February 08, 2021	11:00 AM	11:30 AM	Invited
3485345	Studying the densification of B4C-TiB2 composites by hot pressing and pressureless sintering method	Simone Failla	National Research Council of Italy - Institute of Science and Technology for Ceramics	S4	Synthesis and Processing: I	Monday, February 08, 2021	11:30 AM	12:00 PM	Invited
3499044	Producing of B4C- SiC- TiB2 Composites by Spark Plasma Sintering Method	Zeynep Ayguzer Yasar	Hitit University	S4	Synthesis and Processing: I	Monday, February 08, 2021	12:00 PM	12:20 PM	Contributed
3477923	Properties of high pressure sintered ZrB2, HfB2 and ZrB2- TiB2, ZrB2-SiC composite materials	Tetiana Prikhna	V. Bakul Institute for Superhard Materials of the National Academy of Sciences of Ukraine	S4	Synthesis and Processing: II	Monday, February 08, 2021	1:30 PM	1:50 PM	Contributed
3478968	Tuning Grain Boundary Chemistry of Boron Carbide (B4C) with Silicon through a Sol-Gel Approach	Jun Du	Rutgers University	S4	Synthesis and Processing: II	Monday, February 08, 2021	1:50 PM	2:20 PM	Invited
3479245	Amorphization Resistant Boron Carbide Produced by Low Cost Pre-Reacted Powder	Kent Christian	Rutgers University	S4	Synthesis and Processing: II	Monday, February 08, 2021	2:20 PM	2:40 PM	Contributed
3527973	Theoretical Limit for the Content of Rigid Spherical Inclusions in a Hot-Pressed Ceramic	Jerry LaSalvia	U.S. Army Research Laboratory	S4	Synthesis and Processing: II	Monday, February 08, 2021	2:40 PM	3:00 PM	Contributed

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3476782	Interface stability of nanocrystalline ZnAl ₂ O ₄ doped with rare earths (RE)	Luis Enrique Sotelo Martin	University of California, Davis	S4	Synthesis and Processing: II	Monday, February 08, 2021	3:00 PM	3:20 PM	Contributed
3478034	Dopant designed to increase thermal stability in nanocrystalline magnesium aluminate	Isabella Loureiro Muller Costa	University of California, Davis	S4	Synthesis and Processing: II	Monday, February 08, 2021	3:20 PM	3:40 PM	Contributed
3478764	In-Situ Monitoring of Synthetic Pathways During Ceramic Oxide Synthesis Under Electromagnetic Excitation	B. Reeja Jayan	Carnegie Mellon University	S4	Synthesis and Processing: II	Monday, February 08, 2021	3:40 PM	4:00 PM	Contributed
3477254	Highly Porous Bioactive Glass-Ceramics from Silicone Polymers and Engineered Fillers: Opportunities for Advanced Manufacturing and Phase Design	Enrico Bernardo	University of Padova	S5	Bioceramics I	Monday, February 08, 2021	10:40 AM	11:10 AM	Invited
3484989	5D Printing in Tissue Engineering	Min Wang	The University of Hong Kong	S5	Bioceramics I	Monday, February 08, 2021	11:10 AM	11:40 AM	Invited
3500725	Synthesis and optimization of iron oxide nanoparticles for selective separation of biomolecules	Christina Derichsweiler	University of Cologne	S5	Bioceramics I	Monday, February 08, 2021	11:40 AM	12:00 PM	Contributed
3481396	Novel Si ₃ N ₄ /Si ₃ N ₄ -graphene/hydroxyapatite layered gradient composites	Katalin Balazsi	Centre for Energy Research HAS	S5	Bioceramics I	Monday, February 08, 2021	12:00 PM	12:30 PM	Invited
3491331	Melt-derived, sol-gel and mesoporous bioactive glasses for bone tissue applications: A comparative study focusing on the effect of synthesis process	Carla Migneco	Politecnico di Torino	S5	Bioceramics II	Monday, February 08, 2021	1:30 PM	1:50 PM	Contributed
3502766	Synthesis of Luminescent Eu(III)-doped Octacalcium Phosphate Hybridized with Succinate Ion and Their Reactive Behavior in Biological Solution	Iori Yamada	Nagaoka University of Technology	S5	Bioceramics II	Monday, February 08, 2021	1:50 PM	2:10 PM	Contributed
3485031	Processing and Characterisation of Multifunctional Pressureless Sintered Al ₂ O ₃ -CaTiO ₃ Nanocomposites	Prafulla Kumar Mallik	Indira Gandhi Institute of Technology Sarang	S5	Bioceramics II	Monday, February 08, 2021	2:10 PM	2:40 PM	Invited
3484991	Growth Factor Release from 3D Printed PLGA Nanofiber Reinforced Alginate Tissue Engineering Scaffolds	Min Wang	The University of Hong Kong	S5	Bioceramics II	Monday, February 08, 2021	2:40 PM	3:00 PM	Contributed
3491644	In vitro activity of magnesium-containing silicate glasses for bone regeneration	Marcela Arango-Ospina	University of Erlangen-Nuremberg	S5	Bioceramics II	Monday, February 08, 2021	3:00 PM	3:20 PM	Contributed

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3485399	Effect of crystallinity on the T1-shortening behaviour of NaGdF4 nanoparticles as MRI contrast agents	Nan Liu	University of Ottawa	S5	Bioceramics II	Monday, February 08, 2021	3:20 PM	3:40 PM	Contributed
3501178	Engineering Si-on-Graphite High-Capacity Anodes for Lithium-Ion Batteries	Nae-Lih Wu	National Taiwan University	S6	Advanced Anode and Cathode Materials for Lithium Batteries	Monday, February 08, 2021	10:40 AM	11:10 AM	Invited
3503954	Nanohybridized freestanding electrodes with increased total energy density for lithium ions batteries	Dina Fattakhova-Rohlfing	Forschungszentrum Jülich	S6	Advanced Anode and Cathode Materials for Lithium Batteries	Monday, February 08, 2021	11:10 AM	11:40 AM	Invited
3506917	Solid-State Lithium Batteries: Engineered Electrolyte, Electrodes and Interfaces with Enhanced Thermal Safety	Vilas Pol	Purdue University	S6	Advanced Anode and Cathode Materials for Lithium Batteries	Monday, February 08, 2021	11:40 AM	12:00 PM	Contributed
3503343	$\text{Na}_x\text{Cr}_x\text{Ti}_{(8-x)}\text{O}_{16}$ ($x=1.7$) Priderite: A New Ti-Based Anode for M-Ion Batteries and Capacitors (M = Li, Na)	Anshuman Chaupatnaik	Indian Institute of Science	S6	Advanced Anode and Cathode Materials for Lithium Batteries	Monday, February 08, 2021	12:00 PM	12:20 PM	Contributed
3494392	Computational and Experimental Doping Study of Nanoscale Lithium Cobalt Oxide Interfaces	Spencer Dahl	University of California, Davis	S6	Advanced Anode and Cathode Materials for Lithium Batteries	Monday, February 08, 2021	12:20 PM	12:40 PM	Contributed
3505248	Binary Metal-Substitution in O3-type $\text{NaNi}_{1/2}\text{Mn}_{1/2}\text{O}_2$ Cathodes for Na-Ion Batteries	Kei Kubota	Tokyo University of Science	S6	Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries	Monday, February 08, 2021	1:30 PM	2:00 PM	Invited
3501269	Mixed phosphate polyanionic insertion materials: Few case studies	Prabeer Barpanda	Indian Institute of Science	S6	Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries	Monday, February 08, 2021	2:00 PM	2:30 PM	Invited
3477594	The working mechanism of a calcium-sulfur battery	Lorenzo Stievano	Université de Montpellier	S6	Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries	Monday, February 08, 2021	2:30 PM	3:00 PM	Invited
3488115	Oxides/oxyfluorides-based Electrode Materials for Na Storage Applications	Naoaki Yabuuchi	Yokohama National University	S6	Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries	Monday, February 08, 2021	3:00 PM	3:30 PM	Invited
3479338	Layered tungsten-based dichalcogenides as potassium-ion battery electrodes	Davi Marcelo Soares	Kansas State University	S6	Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries	Monday, February 08, 2021	3:30 PM	3:50 PM	Contributed
3479215	Multifunctional materials with clean environment applications	Daniel Chua	National University of Singapore	S7	2D Nanomaterials and Thin Films	Monday, February 08, 2021	1:30 PM	2:00 PM	Invited

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3474497	Fabrication of Dense Ceramic Nanocomposites via Atomic Layer Deposition Infill of Nanocrystal Thin Films	AJ Cendejas	Washington University in St. Louis	S7	2D Nanomaterials and Thin Films	Monday, February 08, 2021	2:00 PM	2:20 PM	Contributed
3491185	Water soluble epitaxial Sr ₃ Al ₂ O ₆ thin films prepared by solution chemistry for free-standing oxides	Pol Sallés Perramon	ICMAB-CSIC	S7	2D Nanomaterials and Thin Films	Monday, February 08, 2021	2:20 PM	2:40 PM	Contributed
3479383	Novel Transrotational Solid State Order Discovered by TEM in Crystallized Amorphous Films and Corresponding Novel Model for Amorphous State	Vladimir Yu. Kolosov	Ural Federal University	S7	2D Nanomaterials and Thin Films	Monday, February 08, 2021	2:40 PM	3:00 PM	Contributed
3479166	Development and Stability Studies of nano-MoO _x contrast agents for XFCT bio-imaging	Muhammet S Toprak	KTH Royal Institute of Technology	S7	Nanomaterials for Biological Applications	Monday, February 08, 2021	3:00 PM	3:30 PM	Invited
3476817	Dye-doped Core-Shell Composite Ceramic Nanoprobes as bi-functional X-ray and Optical Fluorescence Contrast Agents	Giovanni Marco Saladino	KTH Royal Institute of Technology	S7	Nanomaterials for Biological Applications	Monday, February 08, 2021	3:30 PM	3:50 PM	Contributed
3493669	Surface functionalization of bioactive glasses and hydroxyapatite with polyphenols from organic red grape pomace	Giacomo Riccucci	Politecnico di Torino	S7	Nanomaterials for Biological Applications	Monday, February 08, 2021	3:50 PM	4:10 PM	Contributed
3472325	Direct Ink Writing of Sphene Bioceramics from Silicones and Reactive Oxide Fillers: Synthesis and Topological Optimization	Enrico Bernardo	University of Padova	S8	Green Manufacturing	Monday, February 08, 2021	10:40 AM	11:10 AM	Invited
3479208	Growth of KCl-NaCl crystals and their point defects induced by pulsed electron beam	Hisayuki Suematsu	Nagaoka University of Technology	S8	Green Manufacturing	Monday, February 08, 2021	11:10 AM	11:40 AM	Invited
3486353	Design of Novel Materials by Using Green Manufacturing Practices	Surojit Gupta	University of North Dakota	S8	Green Manufacturing	Monday, February 08, 2021	11:40 AM	12:10 PM	Invited
3481203	Pore Formation Process in the Early Dehydration Stage of Potassium and Metakaolin Based Geopolymer	Yaru Yang	Nagaoka University of Technology	S8	Green Manufacturing	Monday, February 08, 2021	12:10 PM	12:30 PM	Contributed
3478735	Development of crystal-oriented ceramics by UV curing shaping method in strong magnetic field	Satoshi Tanaka	Nagaoka University of Technology	S8	Design-oriented Manufacturing and Processing	Monday, February 08, 2021	2:00 PM	2:30 PM	Invited
3479178	Control of pore orientation in textured boron carbide by colloidal processing in strong magnetic field	Tohru S. Suzuki	National Institute for Materials Science	S8	Design-oriented Manufacturing and Processing	Monday, February 08, 2021	2:30 PM	3:00 PM	Invited
3492045	Asymmetric SiOC membranes by phase-inversion tape casting	Natália Cristina Fontao	Universität Bremen	S8	Design-oriented Manufacturing and Processing	Monday, February 08, 2021	3:00 PM	3:20 PM	Contributed

3466562	Extremely stable zeolites developed via liquid-mediated self-defect-healing	Toru Wakihara	The University of Tokyo	S9	Structure and Properties of Porous Ceramics	Monday, February 08, 2021	10:40 AM	11:10 AM	Invited
3475482	Decoupling of electrical and thermal conductivity in porous SiC-nitride composites	Shalini Rajpoot	University of Seoul	S9	Structure and Properties of Porous Ceramics	Monday, February 08, 2021	11:10 AM	11:30 AM	Contributed
3476652	Sintering of SiC Ceramics with Boron or Aluminum Additives using Polycarbosilane	Ying Chung	Tokyo Institute of Technology	S9	Structure and Properties of Porous Ceramics	Monday, February 08, 2021	11:30 AM	11:50 AM	Contributed
3480738	Porous alumina ceramics with multimodal pore size distributions - processing, characterization and simulation	Tobias Fey	Friedrich-Alexander University Erlangen-Nürnberg	S9	Structure and Properties of Porous Ceramics	Monday, February 08, 2021	11:50 AM	12:10 PM	Contributed
3472055	Thermal conductivity and strength of porous mullite with dense skeleton	Manabu Fukushima	National Institute of Advanced Industrial Science and Technology (AIST)	S9	Structure and Properties of Porous Ceramics	Monday, February 08, 2021	12:10 PM	12:30 PM	Contributed
3480267	Multiple thermal resistance induced extremely low thermal conductivity in porous SiC-based ceramics	Young-Wook Kim	University of Seoul	S9	Porous Ceramics for Engineering Applications	Monday, February 08, 2021	1:30 PM	2:00 PM	Invited
3490844	Operational aspects and Fouling Reduction in Submerged SiC Ceramic Membrane Bioreactor employed for waste water purification	Sowmya S R	M S Ramaiah Institute of Technology	S9	Porous Ceramics for Engineering Applications	Monday, February 08, 2021	2:00 PM	2:30 PM	Invited
3478835	Uncalcined Porous Hydroxyapatite for Crippling Fluorosis Mitigation	Ravi Sankannavar	Ramaiah Institute of Technology	S9	Porous Ceramics for Engineering Applications	Monday, February 08, 2021	2:30 PM	2:50 PM	Contributed
3499850	Preparation and microstructure control of porous MgAl ₂ O ₄ multilayer ceramics for filtration applications	Zhiyuan Ma	University of Tsukuba	S9	Porous Ceramics for Engineering Applications	Monday, February 08, 2021	2:50 PM	3:10 PM	Contributed
3485260	Porous Lanthanum Strontium Manganite for Solar Thermochemical Hydrogen Production	Elizabeth Gager	University of Florida	S9	Porous Ceramics for Engineering Applications	Monday, February 08, 2021	3:10 PM	3:30 PM	Contributed
3478565	From design to application of porous TiC(N)/SiC(N) Nanocomposites derived from preceramic polymers	Maxime Balestrat	CNRS	S9	Porous Ceramics for Engineering Applications	Monday, February 08, 2021	3:30 PM	3:50 PM	Contributed
3483114	Comprehensive assessment of the microstructural properties of glass and glass-ceramic porous scaffolds for regenerating bone	Elisa Fiume	Politecnico di Torino	S9	Porous Ceramics for Engineering Applications	Monday, February 08, 2021	3:50 PM	4:10 PM	Contributed

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3501606	Subcritical Crack Growth Models for Static Fatigue of SiC Fiber in Air and Steam	Randall Hay	Air Force Research Laboratory	S10	Modeling of Structure and Property of Ceramics and Composites I	Monday, February 08, 2021	10:40 AM	11:10 AM	Invited
3484844	Integrated study on the structure and properties of NiFeCoCrX (X = Cu, Mn, Pd, and Ø) high entropy alloys	Saro San	University of Missouri, Kansas City	S10	Modeling of Structure and Property of Ceramics and Composites I	Monday, February 08, 2021	11:10 AM	11:30 AM	Contributed
3485219	Study of electronic structure and optical properties of Kaolinite, Muscovite, and Montmorillonite	Layla Ali Shafei	University of Missouri, Kansas City	S10	Modeling of Structure and Property of Ceramics and Composites I	Monday, February 08, 2021	11:30 AM	11:50 AM	Contributed
3499890	Zn _{0.1} Ca _{0.1} Sr _{0.4} Ba _{0.4} ZrO ₃ : A non-equimolar multicomponent perovskite ceramic with low thermal conductivity	Yuchen Liu	Harbin Institute of Technology	S10	Modeling of Structure and Property of Ceramics and Composites I	Monday, February 08, 2021	11:50 AM	12:10 PM	Contributed
3499934	Prediction of failure in ceramic matrix composites using damage-based failure criterion	Neraj Jain	DLR - German Aerospace Center	S10	Modeling of Structure and Property of Ceramics and Composites I	Monday, February 08, 2021	12:10 PM	12:30 PM	Contributed
3470653	Quantitative Phase-field Modeling for Corrosion of Engine Materials at High Temperature	Xueyang Wu	University of Florida	S10	Multi-scale Modeling of Processing, Microstructure and Performance	Monday, February 08, 2021	1:30 PM	1:50 PM	Contributed
3478561	A Micro-scale based Numerical Modelling Approach for the Calculation of the Effective Thermal and Electrical properties for Ceramic Matrix Composites	Riccardo Manno	University of Bristol	S10	Multi-scale Modeling of Processing, Microstructure and Performance	Monday, February 08, 2021	1:50 PM	2:10 PM	Contributed
3478843	An Experimental and Numerical Study of Boron Carbide for Quasi-static Uniaxial Compression	Jie Zheng	University of Alberta, Edmonton	S10	Multi-scale Modeling of Processing, Microstructure and Performance	Monday, February 08, 2021	2:10 PM	2:30 PM	Contributed
3479007	Modeling Thermal Debinding in Green Ceramics	Eoin G McAleer	Rutgers University	S10	Multi-scale Modeling of Processing, Microstructure and Performance	Monday, February 08, 2021	2:30 PM	2:50 PM	Contributed
3479289	Reactive Force-Field Simulations of Pyrolysis of Polysiloxanes into SiCO Ceramics	Peter Kroll	University of Texas, Arlington	S10	Multi-scale Modeling of Processing, Microstructure and Performance	Monday, February 08, 2021	2:50 PM	3:10 PM	Contributed
3499899	Influences of the Orientations of CH ₃ NH ₃ Molecules on Physical Properties of Organo-inorganic Hybrid Perovskite CH ₃ NH ₃ PbI ₃	Juanli Zhao	Shanghai University	S10	Multi-scale Modeling of Processing, Microstructure and Performance	Monday, February 08, 2021	3:10 PM	3:30 PM	Contributed

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3522171	Rippllocations: A Universal Deformation Mechanism in Layered Solids	Michel Barsoum	Drexel University	S12	Recent Progress in MAX Phases I	Monday, February 08, 2021	10:40 AM	11:20 AM	Keynote
3517003	Alumina-Forming MAX Phases: High Temperature Oxidation Update (2015-2020)	James L. Smialek	NASA Glenn Research Center, retired	S12	Recent Progress in MAX Phases I	Monday, February 08, 2021	11:20 AM	11:50 AM	Invited
3476801	Additive Manufacturing of MAX phase feedstocks	Eduardo Tabares	Universidad Carlos III de Madrid	S12	Recent Progress in MAX Phases I	Monday, February 08, 2021	11:50 AM	12:10 PM	Contributed
3477211	Frank partial dislocation in Ti2AlC-MAX phase induced by matrix-Cu diffusion	Antoine Guitton	Université de Lorraine – CNRS – Arts et Métiers ParisTech – LEM3	S12	Recent Progress in MAX Phases I	Monday, February 08, 2021	12:10 PM	12:30 PM	Contributed
3479156	Effect of magnetic doping on paramagnetic properties of V2AlC MAX phase	Zeyi Tan	Texas A&M University	S12	Recent Progress in MAX Phases II	Monday, February 08, 2021	1:30 PM	1:50 PM	Contributed
3486366	Synthesis and Characterization of Engineered PEEK Matrix Composites	Sabah Javaid	University of North Dakota	S12	Recent Progress in MAX Phases II	Monday, February 08, 2021	1:50 PM	2:10 PM	Contributed
3491570	Rheological behavior of printable MAX phase feedstocks	Sophia A Tsipas	Universidad Carlos III de Madrid	S12	Recent Progress in MAX Phases II	Monday, February 08, 2021	2:10 PM	2:30 PM	Contributed
3478971	Non-classical crystallographic slip in ternary carbides	Zhiqiang Zhan	Texas A&M University	S12	Recent Progress in MAX Phases II	Monday, February 08, 2021	2:30 PM	2:50 PM	Contributed
3478980	Crack Healing by Kinking in Nanolayered Crystals	Hemant Rathod	Texas A&M University	S12	Recent Progress in MAX Phases II	Monday, February 08, 2021	2:50 PM	3:10 PM	Contributed
3485371	On the Isothermal oxidation of the Ti3Al0.6Ga0.4C2 MAX Phase Solid-solution in Air in the 1000-1300°C temperature range	Tarek Ali Elmeligy	Drexel University	S12	Recent Progress in MAX Phases II	Monday, February 08, 2021	3:10 PM	3:30 PM	Contributed
3490109	Near net shaping and runaway oxidation of Ti2AlC MAX phase	Jesus Gonzalez-Julian	Forschungszentrum Juelich	S12	Recent Progress in MAX Phases II	Monday, February 08, 2021	3:30 PM	3:50 PM	Contributed
3504053	Composite moderators: Zirconium hydrides entrained and encapsulated by MgO	Caen Ang	University of Tennessee	S13	Graphite and Moderator Materials	Monday, February 08, 2021	11:10 AM	11:30 AM	Contributed
3490048	Low Temperature Sintering of BeO-MgO Two-Phase Composite Moderator for Fission Energy System	Bin Cheng	Stony Brook University	S13	Graphite and Moderator Materials	Monday, February 08, 2021	11:30 AM	11:50 AM	Contributed
3484539	Non-destructive Characterization of Composite Moderators for Advanced Nuclear Systems	David Sproutster	Stony Brook University	S13	Graphite and Moderator Materials	Monday, February 08, 2021	11:50 AM	12:10 PM	Contributed
3477681	Development of yttrium hydride for high temperature moderator application	Xunxiang Hu	Oak Ridge National Lab	S13	Graphite and Moderator Materials	Monday, February 08, 2021	12:10 PM	12:30 PM	Contributed

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3493219	The Effect of Cesium Content on the Thermodynamic and Chemical Stability of $Bax2+Csy1+(Al3+2x+yTi4+)8O16$ ($0 < x + y < 2$) Hollandite	Jake Amoroso	Savannah River National Laboratory	S13	Novel Ceramics and Composites for Nuclear Systems	Monday, February 08, 2021	1:30 PM	2:00 PM	Invited
3479332	Thermodynamic Modeling of Complex/Hierarchical Nuclear Waste Forms: Predicting Stability	Theodore Martin Besmann	University of South Carolina	S13	Novel Ceramics and Composites for Nuclear Systems	Monday, February 08, 2021	2:00 PM	2:30 PM	Invited
3476959	Design and strategy of tungsten based refractory material composite for fusion applications	Hanns Gietl	Oak Ridge National Laboratory	S13	Novel Ceramics and Composites for Nuclear Systems	Monday, February 08, 2021	2:30 PM	2:50 PM	Contributed
3479075	Low-temperature solid state synthesis of apatite based ceramic by high-energy ball milling technique for conditioning of radioactive waste	Md Imdadul Islam	Louisiana State University	S13	Novel Ceramics and Composites for Nuclear Systems	Monday, February 08, 2021	2:50 PM	3:10 PM	Contributed
3479378	Ion-irradiation-induced Microstructural Evolution and Phase Transformation of HfNbTaTiVZr High Entropy Alloy under 1 MeV Kr ²⁺	Md Imdadul Islam	Louisiana State University	S13	Novel Ceramics and Composites for Nuclear Systems	Monday, February 08, 2021	3:10 PM	3:30 PM	Contributed
3485242	In situ characterization of ceramic AM and cold sintering by small-angle scattering	Andrew John Allen	NIST	S15	Materials and Process Characterization Tools	Monday, February 08, 2021	11:30 AM	11:50 AM	Contributed
3491675	Fractography of 3D-printed alumina ceramics tested in different printing directions	Josef Schlacher	Montanuniversitaet Leoben	S15	Materials and Process Characterization Tools	Monday, February 08, 2021	11:50 AM	12:10 PM	Contributed
3491996	Characterization method for real mechanical behavior of ceramic AM components	Uwe Scheithauer	Fraunhofer IKTS	S15	Materials and Process Characterization Tools	Monday, February 08, 2021	12:10 PM	12:30 PM	Contributed
3490852	An Early Characterization of the Structural and Dynamic Mechanisms of Additive Manufactured Silicon Carbide for Body Armor Applications	Tyrone Jones	Hawai'i Nanotechnology Labs	S15	Applications of AM Materials and Components	Monday, February 08, 2021	1:30 PM	1:50 PM	Contributed
3484908	Stereolithographic Additive Manufacturing of Ceramic Components with Modulated Structural Dimensions	Soshu Kiriara	Osaka University	S15	Applications of AM Materials and Components	Monday, February 08, 2021	1:50 PM	2:10 PM	Contributed
3477615	Hybrid additive/subtractive manufacturing system to prepare dense and complicated ceramic parts	Qirong Chen	Belgian Ceramic Resaerch Centre	S15	Binder Jetting and Powder Bed Fusion	Monday, February 08, 2021	2:50 PM	3:10 PM	Contributed

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3480490	Large Scale Additive Manufacturing of Inorganic Geopolymer Components Using Binder Jetting	Hamada Elsayed	University of Padova	S15	Binder Jetting and Powder Bed Fusion	Monday, February 08, 2021	3:10 PM	3:30 PM	Contributed
3484862	Effect of sintering temperature and thickness on phase formation, porosity, and pressure drop with alumina made via binder jet 3D printing and reactive binder	Corson L. Cramer	Oak Ridge National Lab	S15	Binder Jetting and Powder Bed Fusion	Monday, February 08, 2021	3:30 PM	3:50 PM	Contributed
3503231	Processing of SiC Ceramics by Binder-Jet Printing and Polymer Precursor Infiltration	Chuyuan Zheng	University of Pittsburgh	S15	Binder Jetting and Powder Bed Fusion	Monday, February 08, 2021	3:50 PM	4:10 PM	Contributed
3483446	Design for Ceramic Additive Manufacturing	Nicolas Rousselet	3DCeram Sinto	S15	Design with/for Additive Manufacturing	Monday, February 08, 2021	10:40 AM	11:10 AM	Invited
3477799	Surface strengthening of single-crystal alumina by high-temperature laser shock peening	Fei Wang	University of Nebraska-Lincoln	S15	Design with/for Additive Manufacturing	Monday, February 08, 2021	11:10 AM	11:30 AM	Contributed
3491357	Selective Laser Sintering of Hexagonal Barium Titanate Ceramics	Bai Cui	University of Nebraska-Lincoln	S15	Selective Laser Melting and Sintering	Monday, February 08, 2021	2:10 PM	2:30 PM	Contributed
3479371	Morphological and Structural Characterizations of Metakaolin-based Geopolymer Mortar	Oscar Dc Huang	Texas A&M University	S16	Synthesis and Process of Metakaolin-based Geopolymers I	Monday, February 08, 2021	10:40 AM	11:00 AM	Contributed
3503445	Sustainable Production of High-Surface Area Organo Silane-Modified Geopolymer	Dong-Kyun Seo	Arizona State University	S16	Synthesis and Process of Metakaolin-based Geopolymers I	Monday, February 08, 2021	11:00 AM	11:30 AM	Invited
3501279	Granular geopolymer skeleton studies to control the shrinkage and the ageing	Sylvie Rossignol	IRCER	S16	Synthesis and Process of Metakaolin-based Geopolymers I	Monday, February 08, 2021	11:30 AM	12:00 PM	Invited
3502905	Sucrose Retards Reaction of Non-calcium Geopolymers: an Implication for Developing Kinetics-Controlling Admixtures	Xu Chen	University of Colorado	S16	Synthesis and Process of Metakaolin-based Geopolymers I	Monday, February 08, 2021	12:00 PM	12:30 PM	Invited
3501206	Thermal Analysis of Geopolymer Pastes Synthesised from Fluidized Bed Fly Ash	Temuujin Jadamba	Institute of Chemistry and Chemical Technology, Mongolian Academy of Sciences	S16	Synthesis and Process of Metakaolin-based Geopolymers II, Mechanical Properties of Metakaolin-based Geopolymers I	Monday, February 08, 2021	1:30 PM	2:00 PM	Invited
3480462	Additive Manufacturing with Geopolymers	Paolo Colombo	University of Padova	S16	Synthesis and Process of Metakaolin-based Geopolymers II, Mechanical Properties of Metakaolin-based Geopolymers I	Monday, February 08, 2021	2:00 PM	2:30 PM	Invited

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3503467	Metakaolin-Based Potassium Geopolymer Nanocomposites: Lessons Learned	Ange-Therese Akono	Northwestern University	S16	Synthesis and Process of Metakaolin-based Geopolymers II, Mechanical Properties of Metakaolin-based Geopolymers I	Monday, February 08, 2021	2:30 PM	3:00 PM	Invited
3479358	Impact of Graphene Oxide Nanoplatelets on the Microstructure and Mechanical Characteristics of Inorganic Polysialates	Ange-Therese Akono	Northwestern University	S16	Synthesis and Process of Metakaolin-based Geopolymers II, Mechanical Properties of Metakaolin-based Geopolymers I	Monday, February 08, 2021	3:00 PM	3:20 PM	Contributed
3479319	Influence of Carbon Nanofibers and Multiwalled Carbon Nanotubes on the Elastic and Creep Properties of Metakaolin-Based Geopolymers	Ange-Therese Akono	Northwestern University	S16	Synthesis and Process of Metakaolin-based Geopolymers II, Mechanical Properties of Metakaolin-based Geopolymers I	Monday, February 08, 2021	3:20 PM	3:40 PM	Contributed
3478591	Influence of Multi-walled Carbon Nanotubes Reinforced Metakaolin Geopolymer at Microscopic Lengthscale	Jiaxin Chen	Northwestern University	S16	Synthesis and Process of Metakaolin-based Geopolymers II, Mechanical Properties of Metakaolin-based Geopolymers I	Monday, February 08, 2021	3:40 PM	4:00 PM	Contributed
3478770	Synthesis, Densification, and Properties of High Entropy Ultra-High Temperature Ceramics	William Fahrenholtz	Missouri University of Science & Technology	S18	Entropy Stabilized Compositionally Complex UHTCs I	Monday, February 08, 2021	10:40 AM	11:10 AM	Invited
3491352	Irradiation Resistance of High-Entropy Carbide Ceramics in Extreme Environments	Bai Cui	University of Nebraska-Lincoln	S18	Entropy Stabilized Compositionally Complex UHTCs I	Monday, February 08, 2021	11:30 AM	11:50 AM	Contributed
3479218	C3HARME: Next Generation Ceramic Composites for Combustion Harsh Environments and Space	Luca Zoli	CNR ISTECC	S18	UHTCs: Processing-Microstructure-Property Relationship I	Monday, February 08, 2021	1:30 PM	2:00 PM	Invited
3479360	Powder Synthesis, Flash Sintering, and Characterization of Multi-component High Temperature Ceramics	Zhe Cheng	Florida International University	S18	UHTCs: Processing-Microstructure-Property Relationship I	Monday, February 08, 2021	2:00 PM	2:30 PM	Invited
3478981	Anisotropic plasticity and fracture of ZrB ₂ grains during various micro/nanomechanical testing	Tamás Csanádi	Institute of Materials Research, Slovak Academy of Sciences	S18	UHTCs: Processing-Microstructure-Property Relationship I	Monday, February 08, 2021	2:30 PM	3:00 PM	Invited
3490661	Microstructure and local properties of (Zr,TM)B ₂ solid solutions	nicola Gilli	ISTEC-CNR	S18	UHTCs: Processing-Microstructure-Property Relationship I	Monday, February 08, 2021	3:00 PM	3:20 PM	Contributed

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3479397	Preparation and high-temperature oxidation behavior of dense monolithic ZrB ₂ -based UHTCs using polymer-derived Si(Zr,B)CN as sintering aid	Emanuel Ionescu	Technical University Darmstadt	S18	UHTCs: Processing-Microstructure-Property Relationship I	Monday, February 08, 2021	3:20 PM	3:40 PM	Contributed
3485315	Role of CNTs in solid solutioning of ZrB ₂ and HfB ₂	Rubia Hassan	IIT Kanpur	S18	UHTCs: Processing-Microstructure-Property Relationship I	Monday, February 08, 2021	3:40 PM	4:00 PM	Contributed

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CONTROL ID	PRESENTATION TITLE	PRESENTER	PRESENTER INSTITUTION	TRACK	VIRTUAL SESSION TITLE	DATE	START TIME	END TIME	PRESENTATION TYPE
3488253	Joining and Integration: Building bridges between materials	Monica Ferraris	Politecnico di Torino	Plenary	Bridge Building Award Lecture and Plenary Speaker II	Tuesday, February 09, 2021	9:00 AM	9:40 AM	Plenary
3490138	Ceramics for Fuel Cells and Hydrogen Energy	Kazunari Sasaki	Kyushu University	Plenary	Bridge Building Award Lecture and Plenary Speaker II	Tuesday, February 09, 2021	9:40 AM	10:20 AM	Plenary
3479025	Dopant effect on thermodynamic stability of nano-LiMn2O4 for Li-ion battery cathode	Kimiko Nakajima	University of California, Davis	GYIF	Advanced and Nanostructured Materials	Tuesday, February 09, 2021	10:40 AM	11:10 AM	Invited
3500670	A versatile, coking-tolerant composite electrode material for Reversible Solid Oxide Cells (RSOCs)	Leonardo Duranti	University di Roma Tor Vergata	GYIF	Advanced and Nanostructured Materials	Tuesday, February 09, 2021	11:10 AM	11:30 AM	Contributed
3478743	Solid Oxide Fuel Cells with Red-Ox durable anode containing regenerative spinel oxides	Shimpei Yamaguchi	Osaka Research Institute of Industrial Science and Technology Izumi Center	GYIF	Advanced and Nanostructured Materials	Tuesday, February 09, 2021	11:30 AM	11:50 AM	Contributed
3479172	Atomic Layer Deposition for the Synthesis of Tailor-Made Ternary Ceramics	Robert Zierold	Universität Hamburg	GYIF	Advanced and Nanostructured Materials	Tuesday, February 09, 2021	11:50 AM	12:20 PM	Invited
3478077	Cl2 plasma exposure behavior of yttrium oxyfluoride ceramics	Kenji Miyashita	Tokyo Institute of Technology	GYIF	Advanced and Nanostructured Materials	Tuesday, February 09, 2021	12:20 PM	12:40 PM	Contributed
3476560	Bioinspired Glass-reinforced Composites: Transparent, Strong and Fracture Resistant	Tommaso Magrini	ETH Zürich	GYIF	Advanced and Nanostructured Materials: Bioceramics	Tuesday, February 09, 2021	1:30 PM	2:00 PM	Invited
3485132	Cerium oxide nanoparticles prevent acquisition of resistance to chemotherapy via non-redox mechanisms	Francesca Corsi	University of Rome Tor Vergata	GYIF	Advanced and Nanostructured Materials: Bioceramics	Tuesday, February 09, 2021	2:00 PM	2:20 PM	Contributed
3476843	Atomistic modelling of the structural and dynamical behaviour of Interfaces between biomolecules and magnetite	Robert Horst Meißner	TU Hamburg	GYIF	Advanced and Nanostructured Materials: Bioceramics	Tuesday, February 09, 2021	2:20 PM	2:50 PM	Invited
3478109	Ceramic nanocomposite structural materials: From colloidal-assembly to 3D-printing	Berta Domènech	Hamburg University of Technology	GYIF	Advanced Ceramics and Coatings	Tuesday, February 09, 2021	2:50 PM	3:20 PM	Invited
3478186	Reactive binder infiltration to mitigate distortion in sintering binder jet 3D printed ceramics	Lynnora O Grant	Rice University	GYIF	Advanced Ceramics and Coatings	Tuesday, February 09, 2021	3:20 PM	3:50 PM	Invited
3484725	Embedded Printing of Ceramic Composites	Shitong Zhou	Imperial College London	GYIF	Advanced Ceramics and Coatings	Tuesday, February 09, 2021	3:50 PM	4:10 PM	Contributed

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3479088	Influence of Boria on the Oxidation of Aluminum Nitride Ceramics	Celia S. Chari	California Institute of Technology	S1	Environmental Effects on Fibers and Matrices	Tuesday, February 09, 2021	11:00 AM	11:20 AM	Contributed
3491305	Influence of Plain Weave Ply Architecture on a CMC Structure	Derek King	Air Force Research Laboratory	S1	Environmental Effects on Fibers and Matrices	Tuesday, February 09, 2021	11:20 AM	11:40 AM	Contributed
3503248	The Use of Electrical Resistance in Life Prediction of Carbon-Reinforced CMCs in an Oxidizing Environment	Rabih Mansour	Teledyne Scientific Company	S1	Environmental Effects on Fibers and Matrices	Tuesday, February 09, 2021	11:40 AM	12:00 PM	Contributed
3478993	Mechanical behaviour of dielectric thin films for microelectronic applications under accelerated hydrothermal aging conditions	Sarah Rubeck	STMicroelectronics	S1	Environmental Effects on Fibers and Matrices	Tuesday, February 09, 2021	12:00 PM	12:20 PM	Contributed
3476868	New Approaches to Study Oxygen Transport in SiC-based Ceramic Composites	Koen JH Verrijt	University of Minnesota	S1	Environmental Effects on Fibers and Matrices	Tuesday, February 09, 2021	12:20 PM	12:40 PM	Contributed
3476934	Analytical Simulation of the Effects of Local Mechanisms on the Tensile Response of Ceramic Matrix Minicomposites	Robert Keith Goldberg	NASA Glenn Research Center	S1	Composite Mechanics, Design, and Material Selection	Tuesday, February 09, 2021	1:30 PM	1:50 PM	Contributed
3478855	Multi-scale modeling for damage evolution behavior of an orthogonal 3-D woven SiC fiber/SiC matrix composite under tensile loading	Koji Hachisu	Tokyo University of Agriculture and Technology	S1	Composite Mechanics, Design, and Material Selection	Tuesday, February 09, 2021	1:50 PM	2:10 PM	Contributed
3477810	Effect of unloading on crack propagation behavior of an orthogonal 3-D woven SiC fiber/SiC matrix composite under tensile load at elevated temperature in air	Yoshito Ikarashi	Tokyo University of Agriculture and Technology	S1	Composite Mechanics, Design, and Material Selection	Tuesday, February 09, 2021	2:10 PM	2:30 PM	Contributed
3485377	Dislocations and nanomechanics in α -Al ₂ O ₃ using atomic simulation	Qinqin XU	LGCIÉ - INSA Lyon	S1	Composite Mechanics, Design, and Material Selection	Tuesday, February 09, 2021	2:30 PM	2:50 PM	Contributed
3484958	Material Selection of Composite Materials for use in Prosthetic Socket and Pylon Tube using Multi-criteria Decision Analyses	Eduardo dela Rosa Magdaluyo	University of the Philippines	S1	Composite Mechanics, Design, and Material Selection	Tuesday, February 09, 2021	2:50 PM	3:10 PM	Contributed
3491587	Tailoring the Spring Constant of Ceramic Helical Compression Springs	Björn Mieller	Bundesanstalt für Materialforschung und -prüfung BAM	S1	Composite Mechanics, Design, and Material Selection	Tuesday, February 09, 2021	3:10 PM	3:30 PM	Contributed
3479292	Residual Strength of Hypervelocity Impacted Silica	Jonathan Salem	NASA Glenn Research Center	S1	Composite Mechanics, Design, and Material Selection	Tuesday, February 09, 2021	3:30 PM	3:50 PM	Contributed
3479097	Effects of Boria on Rare Earth Silicate Environmental Barrier Coatings	Rachel Guarriello	University of Virginia	S2	Environmantal and Thermal Barrier Coatings II	Tuesday, February 09, 2021	11:00 AM	11:20 AM	Contributed

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3479299	Multi-component rare-earth disilicates: An approach to tunable properties of environmental barrier coatings	Jeroen Deijkers	University of Virginia	S2	Environmantal and Thermal Barrier Coatings II	Tuesday, February 09, 2021	11:20 AM	11:40 AM	Contributed
3483989	Oxidation kinetics of environmental barrier coatings	Nicholas Antolino	GE Research	S2	Environmantal and Thermal Barrier Coatings II	Tuesday, February 09, 2021	11:40 AM	12:00 PM	Contributed
3485620	Excellent performance of thermal barrier coatings made of yttria stabilized zirconia at extreme temperatures (> 1500°C)	Robert Vassen	Forschungszentrum Juelich	S2	Environmantal and Thermal Barrier Coatings II	Tuesday, February 09, 2021	12:00 PM	12:20 PM	Contributed

3479048	TBC Damage Under Non-Constant Temperature or not Constant CMAS Dose Rates	Eric Hopkins Jordan	University of Connecticut	S2	CMAS Corrosion and Mitigation Strategies	Tuesday, February 09, 2021	1:50 PM	2:10 PM	Contributed
3486585	Garnet phase stability in rare earth-CMAS systems and implications on CMAS interactions with multiphase T/EBCs	Eeshani Paresh Godbole	University of Minnesota	S2	CMAS Corrosion and Mitigation Strategies	Tuesday, February 09, 2021	2:10 PM	2:30 PM	Contributed
3479177	Corrosion behavior of Gd ₂ SiO ₅ by CMAS under isothermal heat treatment for environmental barrier coatings	Seung-Hyeon Kim	Kyushu University	S2	CMAS Corrosion and Mitigation Strategies	Tuesday, February 09, 2021	2:30 PM	2:50 PM	Contributed
3479029	Hot Corrosion of Rare Earth Silicate Environmental Barrier Coatings	Kristyn Diane Ardrey	University of Virginia	S2	CMAS Corrosion and Mitigation Strategies	Tuesday, February 09, 2021	2:50 PM	3:10 PM	Contributed
3520404	Next-generation thermal barrier coatings for enhanced CMAS resistance and mechanical durability	Douglas E. Wolfe	Pennsylvania State University	S2	CMAS Corrosion and Mitigation Strategies	Tuesday, February 09, 2021	3:10 PM	3:30 PM	Contributed

3501759	Prospects of Emerging Electrochemical Energy Systems for Energy Storage & Conversion	Robert J Braun	Colorado School of Mines	S3	High Temperature Electrolysis	Tuesday, February 09, 2021	10:40 AM	11:10 AM	Invited
3506967	Highly Efficient PtX Systems – Update on AVL's activities	Richard Schauerl	AVL List GmbH	S3	High Temperature Electrolysis	Tuesday, February 09, 2021	11:10 AM	11:40 AM	Invited
3479340	Progress of Solid Oxide Fuel Cell Electrolysis Technology at Nexceris, LLC	Emir Dogdibegovic	Nexceris, LLC	S3	High Temperature Electrolysis	Tuesday, February 09, 2021	11:40 AM	12:00 PM	Contributed
3487203	Redox Tolerant Cathode for Solid Oxide Electrolysis Cells	S. Elangovan	OxEon Energy, LLC	S3	High Temperature Electrolysis	Tuesday, February 09, 2021	12:00 PM	12:20 PM	Contributed

3490647	Novel nanostructure anode functional layers of thin-film-based solid oxide fuel cells possessing much improved performance and stability	Ji-Won Son	Korea Institute of Science and Technology	S3	Novel Processing & Sealants	Tuesday, February 09, 2021	1:30 PM	2:00 PM	Invited
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3484721	Recent advances on 3D printing for Solid Oxide Fuel and Electrolysis Systems	Albert Tarancón	ICREA	S3	Novel Processing & Sealants	Tuesday, February 09, 2021	2:00 PM	2:30 PM	Invited
3491654	3D printed nanocomposite electrolyte for low-temperature ceramic fuel cell	Muhammad Imran Asghar	Aalto University	S3	Novel Processing & Sealants	Tuesday, February 09, 2021	2:30 PM	2:50 PM	Contributed
3484319	Enhanced gas diffusivity in the electrode to increase the performance behavior of the anode-supported solid oxide fuel cell	Tai-Nan Lin	Institute of Nuclear Energy Research	S3	Novel Processing & Sealants	Tuesday, February 09, 2021	2:50 PM	3:10 PM	Contributed
3487535	An overview of relevant aspects of the development of glass-ceramic seals for SOC	Jochen Schilm	Fraunhofer IKTS	S3	Novel Processing & Sealants	Tuesday, February 09, 2021	3:10 PM	3:40 PM	Invited
3491544	Integration of glass-ceramic components and interfacial issues with metallic interconnects in solid oxide cells	Federico Smeacetto	Politecnico di Torino	S3	Novel Processing & Sealants	Tuesday, February 09, 2021	3:40 PM	4:00 PM	Contributed
3485025	Glass-zirconia composites as sealing for solid oxide cells: Preparation and properties	Magdalena Kosiorek	Institute of Power Engineering – Research Institute	S3	Novel Processing & Sealants	Tuesday, February 09, 2021	4:00 PM	4:20 PM	Contributed
3502967	Evaluation and characterization of SiC-Al-MMCs and SiC-Mg-MMCs with high ceramic reinforcement for ballistic protection under different conditions	Michael Schuch	WIWeB	S4	Material Response to Quasi-Static, Dynamic, and Ballistic Loading Conditions: I	Tuesday, February 09, 2021	10:40 AM	11:00 AM	Contributed
3469291	Onset Conditions to Induce Amorphization of Doped Boron Carbides in a Diamond Anvil Cell	Chawon Hwang	Rutgers University	S4	Material Response to Quasi-Static, Dynamic, and Ballistic Loading Conditions: I	Tuesday, February 09, 2021	11:00 AM	11:20 AM	Contributed
3500839	Influence of Crystal Orientation on Shock Response of Boron Carbide	Amith Adoor Cheenady	University of Florida	S4	Material Response to Quasi-Static, Dynamic, and Ballistic Loading Conditions: I	Tuesday, February 09, 2021	11:20 AM	11:40 AM	Contributed
3478710	A Nanoindentation Study of Anisotropic Mechanical Properties of Boron Carbide Single Crystals	Arezoo Zare	Johns Hopkins University	S4	Material Response to Quasi-Static, Dynamic, and Ballistic Loading Conditions: I	Tuesday, February 09, 2021	11:40 AM	12:00 PM	Contributed
3493339	The Importance of Single Grain Crystal Physics Anisotropy and Nano-cleavage on the Dynamic Quasi-plasticity of Hard Brittle Ceramics	James W. McCauley	Johns Hopkins University	S4	Material Response to Quasi-Static, Dynamic, and Ballistic Loading Conditions: I	Tuesday, February 09, 2021	12:00 PM	12:20 PM	Contributed

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3478278	Sensitivity analysis of armor ceramics: Sphere indentation simulations	Amartya Bhattacharjee	Johns Hopkins University	S4	Material Response to Quasi-Static, Dynamic, and Ballistic Loading Conditions: II	Tuesday, February 09, 2021	1:30 PM	1:50 PM	Contributed
3478657	Surfing boundary condition to characterize effective fracture-toughness of brittle composites	Zubaer Hossain	University of Delaware	S4	Material Response to Quasi-Static, Dynamic, and Ballistic Loading Conditions: II	Tuesday, February 09, 2021	1:50 PM	2:10 PM	Contributed
3478658	Emergence of order from disorder under extreme deformation in fracture of amorphous silica	Zubaer Hossain	University of Delaware	S4	Material Response to Quasi-Static, Dynamic, and Ballistic Loading Conditions: II	Tuesday, February 09, 2021	2:10 PM	2:30 PM	Contributed

3539692	Sustainable luminescent strontium-graphene based bio-ceramic composites for implantation	Sudipta Seal	University of Central Florida	S5	Bioceramics III	Tuesday, February 09, 2021	10:40 AM	11:00 AM	Contributed
3479305	Structure / property relationships in Biomaterials at the nanoscale	Federico Rosei	INRS	S5	Bioceramics III	Tuesday, February 09, 2021	11:00 AM	11:30 AM	Invited
3478036	Loading of silver nanoparticles on hydroxyapatite/collagen bone-like nanocomposite for antimicrobial bone void fillers	Masanori Kikuchi	National Institute for Materials Science (NIMS)	S5	Bioceramics III	Tuesday, February 09, 2021	11:30 AM	12:00 PM	Invited
3503449	Harvesting Luminescence for Light-Controlled Theranostics	Fiorenzo Vetrone	Institut National de la Recherche Scientifique, Université du Québec	S5	Bioceramics III	Tuesday, February 09, 2021	12:00 PM	12:30 PM	Invited

3478755	The new generation of macroporous bioceramics fabricated via additive technologies for tissue-engineering	Pavel Evdokimov	Lomonosov Moscow State University/Kurnakov Institute of General and Inorganic Chemistry	S5	Bioceramics IV	Tuesday, February 09, 2021	1:30 PM	2:00 PM	Invited
3484990	Bijels-derived Cell-encapsulated Bicontinuous Structures for Skin Tissue Regeneration	Min Wang	The University of Hong Kong	S5	Bioceramics IV	Tuesday, February 09, 2021	2:00 PM	2:20 PM	Contributed
3476938	Bacteria-Templated Ceramic Structures - From Synthetic Biology to Ceramics	Maria Parvulescu	AFRL/UES Inc	S5	Bioceramics IV	Tuesday, February 09, 2021	2:20 PM	2:40 PM	Contributed
3474013	Effect of Chemical Bioactivation Treatment on Mechanical Properties for ZrO2 and Al2O3/ZrO2 Composites	Riku Kojima	Tokyo Metropolitan University	S5	Bioceramics IV	Tuesday, February 09, 2021	2:40 PM	3:00 PM	Contributed
3479317	Hydrophilic Diamond-Like Carbon Films as Antifogging Coatings for Laparoscope Lenses	Russell Lee Leonard	University of Tennessee Space Institute	S5	Bioceramics IV	Tuesday, February 09, 2021	3:00 PM	3:30 PM	Invited
3490887	In vitro Inactivation of the SARS-CoV-2 Virus by Silicon Nitride	Bryan J McEntire	SINTX TECHNOLOGIES, INC.	S5	Bioceramics IV	Tuesday, February 09, 2021	3:30 PM	3:50 PM	Contributed

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3484717	Innovative nanostructured composite coatings for antimicrobial air filters	Angelica Luceri	Politecnico di Torino	S5	Bioceramics IV	Tuesday, February 09, 2021	3:50 PM	4:10 PM	Contributed
3502892	Ceramic Matrix Composite Sheet Electrolyte for Li Metal Batteries	Kiyoshi Kanamura	Tokyo Metropolitan University	S6	All-solid-state Batteries I	Tuesday, February 09, 2021	10:40 AM	11:10 AM	Invited
3488803	Preparation of anti-perovskite structured Li ₂ HOB _r and its application to all-solid-state batteries	Yasutoshi Iriyama	Nagoya University	S6	All-solid-state Batteries I	Tuesday, February 09, 2021	11:10 AM	11:40 AM	Invited
3489949	Direct Observation of Lithium Diffusion in Insertion Electrodes by Isotope Exchange and Secondary Ion Mass Spectrometry	Naoaki Kuwata	National Institute for Materials Science (NIMS)	S6	All-solid-state Batteries I	Tuesday, February 09, 2021	11:40 AM	12:10 PM	Invited
3494253	Understanding interfaces and interphases in all solid state batteries	Kelsey B Hatzell	Vanderbilt University	S6	All-solid-state Batteries I	Tuesday, February 09, 2021	12:10 PM	12:40 PM	Invited
3489697	10 Seconds Ultrafast High Temperature Sintering (UHS) for High Performance Solid State Electrolytes and Batteries	Liangbing Hu	University of Maryland	S6	Solid Electrolytes for Batteries	Tuesday, February 09, 2021	1:30 PM	2:00 PM	Invited
3488034	Machine learning-assisted exploration of glassy organic electrolytes for solid-state lithium-ion batteries	Kan Hatakeyama-Sato	Waseda University	S6	Solid Electrolytes for Batteries	Tuesday, February 09, 2021	2:00 PM	2:30 PM	Invited
3501366	Solid Polymer Electrolytes for Lithium Metal Batteries Operated at Room Temperature	Hsisheng Teng	National Cheng Kung University	S6	Solid Electrolytes for Batteries	Tuesday, February 09, 2021	2:30 PM	3:00 PM	Invited
3498504	Temperature dependent structure and ionic conductivity of LiTa ₂ PO ₈ ceramics	Stefan Adams	National University of Singapore	S6	Solid Electrolytes for Batteries	Tuesday, February 09, 2021	3:00 PM	3:30 PM	Invited
3492174	Polymer blends based on PEO and an elastomer as solid electrolytes for lithium-Ion Batteries	Léa Caradant	université de montréal	S6	Solid Electrolytes for Batteries	Tuesday, February 09, 2021	3:30 PM	3:50 PM	Contributed
3484839	Novel Coating for Enhanced Dielectric Properties of Barium Titanate Nanoparticles	Vojislav Mitic	Serbian Academy of Sciences	S7	Piezo-, Pyro and Ferroelectric Nanomaterials for Energy Conversion	Tuesday, February 09, 2021	10:40 AM	11:10 AM	Invited
3478513	Development and Crystallographic Analysis on BaTiO ₃ System Ferroelectrics for Electro-thermodynamic Cycle Power Generation	Tomomi Nagatani	Kwansei Gakuin University	S7	Piezo-, Pyro and Ferroelectric Nanomaterials for Energy Conversion	Tuesday, February 09, 2021	11:10 AM	11:30 AM	Contributed

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3478527	Electro-Thermodynamic Cycle Power Generation using low-grade waste heat below 200 °C	Hirohisa Tanaka	Kwansei Gakuin University	S7	Piezo-, Pyro and Ferroelectric Nanomaterials for Energy Conversion	Tuesday, February 09, 2021	11:30 AM	11:50 AM	Contributed
3479171	A comparative study on the thermoelectric properties of bismuth chalcogenide alloys synthesized through mechanochemical alloying and microwave-assisted solution synthesis routes	Muhammet S Toprak	KTH Royal Institute of Technology	S7	Piezo-, Pyro and Ferroelectric Nanomaterials for Energy Conversion	Tuesday, February 09, 2021	11:50 AM	12:10 PM	Contributed
3502869	Piezoelectric Energy Harvesting of Inorganic Halide Perovskite Thin Films	Da Bin Kim	Yonsei University	S7	Piezo-, Pyro and Ferroelectric Nanomaterials for Energy Conversion	Tuesday, February 09, 2021	12:10 PM	12:30 PM	Contributed
3484480	'Bottom-up' synthesis of inorganic nanomaterials for catalytic applications	Shashank Mishra	University of Lyon1	S7	Nanomaterials for Photo- and Electrocatalysis	Tuesday, February 09, 2021	1:30 PM	2:00 PM	Invited
3479356	Interface engineering of nanoceramic hematite photoelectrode for solar energy conversion	Flavio Leandro de Souza	Brazilian Nanotechnology National Laboratory	S7	Nanomaterials for Photo- and Electrocatalysis	Tuesday, February 09, 2021	2:00 PM	2:30 PM	Invited
3502962	Systematic and Detailed Investigation of the Broadband Enhanced Energy-Transfer in Ag-Tb3+-Yb3+ Doped Glasses and Glass-Ceramics	Francesco Enrichi	CNR-ISP, Institute of Polar Sciences, National Research Council	S7	Nanomaterials for Photo- and Electrocatalysis	Tuesday, February 09, 2021	2:30 PM	2:50 PM	Contributed
3479149	Oxidation State of Transition Metals is Electrocatalytic Activity Descriptor for Oxygen Evolution Reaction	Ravi Sankannavar	Ramaiah Institute of Technology	S7	Nanomaterials for Photo- and Electrocatalysis	Tuesday, February 09, 2021	2:50 PM	3:10 PM	Contributed
3485194	The use of mesoporous NiWO ₄ , Pt/NiWO ₄ and their composites with graphene nanoplatelets as bifunctional electrocatalysts for ORR and HOR	Mihaela Florea	National Institute of Materials Physics	S7	Nanomaterials for Photo- and Electrocatalysis	Tuesday, February 09, 2021	3:10 PM	3:30 PM	Contributed
3503388	Growth of rutile titanium oxide nanotubes by sol-gel electrophoresis	Abolghasem Nourmohammadi Abadchi	University of Isfahan	S7	Nanomaterials for Photo- and Electrocatalysis	Tuesday, February 09, 2021	3:30 PM	3:50 PM	Contributed
3483684	Microwave Chemical Vapour Infiltration of Silicon Carbide Fibre Reinforced Composites	James Wade-Zhu	University of Birmingham	S8	Advanced Composite Technologies I	Tuesday, February 09, 2021	10:40 AM	11:00 AM	Contributed
3479264	Vapor Mediated Melt Infiltration for Synthesizing Robust SiC Matrices for CMCs	Ravit Silverstein	University of California at Santa Barbara	S8	Advanced Composite Technologies I	Tuesday, February 09, 2021	11:00 AM	11:20 AM	Contributed

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3479103	Basic Studies on Joinability of Zircaloy and SiC/SiC Composite with Titanium Powder and Brazing Material	Hisashi Serizawa	Osaka University	S8	Advanced Composite Technologies I	Tuesday, February 09, 2021	11:40 AM	12:00 PM	Contributed
3479180	Direct Cutting and Drilling of Ceramic Matrix Composites (CMC) Utilizing DUV Laser at 193 nm	Yasuhiro Kamba	Gigaphoton Inc.,	S8	Advanced Composite Technologies I	Tuesday, February 09, 2021	12:00 PM	12:20 PM	Contributed
3485152	Impact of electric fields on microstructure evolution in functional oxides	Wolfgang Rheinheimer	Juelich Research Centre	S8	Novel Sintering Technologies I	Tuesday, February 09, 2021	1:30 PM	1:50 PM	Contributed
3499031	Low-temperature and High-speed Plastic Flow of TZP Enhanced by Flash Event	Hidehiro Yoshida	The University of Tokyo	S8	Novel Sintering Technologies I	Tuesday, February 09, 2021	1:50 PM	2:10 PM	Contributed
3479207	Multiple Electrode Flash Sintering of Solid Electrolytes	Gareth M Jones	University of Warwick	S8	Novel Sintering Technologies I	Tuesday, February 09, 2021	2:10 PM	2:30 PM	Contributed
3504311	Effect of DC current on creep behavior of 8Y-ZrO2	Koji Morita	National Institute for Materials Science (NIMS)	S8	Novel Sintering Technologies I	Tuesday, February 09, 2021	2:30 PM	2:50 PM	Contributed
3489642	Application of cold sintering process for soda-lime glass	Levent Karacasulu	Izmir Institute of Technology	S8	Novel Sintering Technologies I	Tuesday, February 09, 2021	2:50 PM	3:10 PM	Contributed
3484637	Characteristics of crystalline and amorphous cesium silicate Cs2Si4O9	Thi Mai Dung Do	Nagaoka University of Technology	S8	Novel Sintering Technologies I	Tuesday, February 09, 2021	3:10 PM	3:30 PM	Contributed
3478734	Micro-X-ray computed tomography of failure regions of porous alumina ceramics with spherical pores	Satoshi Tanaka	Nagaoka University of Technology	S9	Properties and Processing of Porous Ceramics	Tuesday, February 09, 2021	10:40 AM	11:10 AM	Invited
3479121	Shape Memory Effects in Porous Zirconia-Based Ceramics	Laura Quinn	California Institute of Technology	S9	Properties and Processing of Porous Ceramics	Tuesday, February 09, 2021	11:10 AM	11:30 AM	Contributed
3475263	Effect of pore size on mechanical properties for hydroxyapatite porous body coated with poly(lactic acid)	Yu Zusho	Tokyo Metropolitan University	S9	Properties and Processing of Porous Ceramics	Tuesday, February 09, 2021	11:30 AM	11:50 AM	Contributed
3491303	Formulation of Yttria-Stabilized Zirconia Aerogels for High Temperature Applications	Rebecca C Walker	Virginia Commonwealth University	S9	Properties and Processing of Porous Ceramics	Tuesday, February 09, 2021	11:50 AM	12:10 PM	Contributed
3478576	Improving the thermal stability of zirconia macroporous structures by nanostructured doping via atomic layer deposition	Kaline Pagnan Furlan	Hamburg University of Technology	S9	Properties and Processing of Porous Ceramics	Tuesday, February 09, 2021	12:10 PM	12:30 PM	Contributed
3491922	Freeze-Casting Fundamentals for Pore Network Design	Katherine Faber	California Institute of Technology	S9	Novel processing of Porous Ceramics	Tuesday, February 09, 2021	1:30 PM	2:00 PM	Invited

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3480739	Direct Ink Writing of Polymer-Derived SiOC with Tunable and Hierarchical Porosity	Kai Huang	University of Padova	S9	Novel processing of Porous Ceramics	Tuesday, February 09, 2021	2:00 PM	2:20 PM	Contributed
3491720	Hierarchical Silicon Oxycarbide via Direct Ink Writing	John Bowen	Air Force Research Lab	S9	Novel processing of Porous Ceramics	Tuesday, February 09, 2021	2:20 PM	2:40 PM	Contributed
3484654	Controlling pore size and porosity of porous ceramic via direct foaming process with using ceramic powder having different particle size	Akihiro Shimamura	National Institute of Advanced Industrial Science and Technology (AIST)	S9	Novel processing of Porous Ceramics	Tuesday, February 09, 2021	2:40 PM	3:00 PM	Contributed
3491182	Extension of the pore morphology of SiOC freeze-casted structures using solvent mixtures	Pedro Henrique da Rosa Braun	University of Bremen	S9	Novel processing of Porous Ceramics	Tuesday, February 09, 2021	3:00 PM	3:20 PM	Contributed
3482976	Supercritical Fluid Extraction of Frozen Pore Liquid and Quantifying the Effect of the Pore Architecture	Poroshat Taheri	University of Texas Arlington	S9	Novel processing of Porous Ceramics	Tuesday, February 09, 2021	3:20 PM	3:40 PM	Contributed
3484994	How Can We Explain Lattice and Valence Stability of Perovskite Oxide Lattices by Re-Visiting of Madelung Lattice Energy and Lattice Site Potentials ?	Masahiro Yoshimura	National Cheng Kung University	S10	Modeling of Structure and Property of Ceramics and Composites II	Tuesday, February 09, 2021	10:40 AM	11:10 AM	Invited
3479353	A reactive force field (ReaxFF) for select Si-based polymer-derived ceramics	Shariq Haseen	University of Texas, Arlington	S10	Modeling of Structure and Property of Ceramics and Composites II	Tuesday, February 09, 2021	11:10 AM	11:30 AM	Contributed
3484586	Stress Analysis of a Fiber Reinforced Composite Prosthesis Socket using Finite Element Simulation	Jennifer Callanga	University of the Philippines Diliman	S10	Modeling of Structure and Property of Ceramics and Composites II	Tuesday, February 09, 2021	11:30 AM	11:50 AM	Contributed
3484610	Buckling Analysis for Prosthetic Pylon Tubes using Finite Element Method	Hannah Erika Macaspac	University of the Philippines Diliman	S10	Modeling of Structure and Property of Ceramics and Composites II	Tuesday, February 09, 2021	11:50 AM	12:10 PM	Contributed
3503400	Comparison of core level chemical shift in perovskite solar cell due to structural disorder and surfaces	Alisha Adhikari	University of Missouri - Kansas City	S10	Modeling of Structure and Property of Ceramics and Composites II	Tuesday, February 09, 2021	12:10 PM	12:30 PM	Contributed
3479273	Ab-Initio Molecular Dynamic Simulations of Polymer Pyrolysis	Peter Kroll	University of Texas, Arlington	S10	Modeling Defects and Amorphous Matter / Informatics and Machine Learning	Tuesday, February 09, 2021	1:30 PM	2:00 PM	Invited
3482492	Building Models of Amorphous Molecular Solids via Molecular Templates	Paul Rulis	University of Missouri - Kansas City	S10	Modeling Defects and Amorphous Matter / Informatics and Machine Learning	Tuesday, February 09, 2021	2:00 PM	2:30 PM	Invited

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3478659	Size-dependent strength and toughness in defective SiC and diamond nanowires	Zubaer Hossain	University of Delaware	S10	Modeling Defects and Amorphous Matter / Informatics and Machine Learning	Tuesday, February 09, 2021	2:30 PM	2:50 PM	Contributed
3503419	Disordered Solids by Design: A global optimization problem in materials physics	Mohammed Belhadj Larbi	University of Missouri, Kansas City	S10	Modeling Defects and Amorphous Matter / Informatics and Machine Learning	Tuesday, February 09, 2021	2:50 PM	3:10 PM	Contributed
3481294	Towards large-scale modeling of materials with orbital free DFT with the help of machine learning: Gaussian process regression of kinetic energy densities	Sergei Manzhos	Institut National de la Recherche Scientifique	S10	Modeling Defects and Amorphous Matter / Informatics and Machine Learning	Tuesday, February 09, 2021	3:10 PM	3:40 PM	Invited
3490696	Synthesis and Properties of Orthorhombic MoAlB Coatings	Jochen M. Schneider	RWTH Aachen University	S12	Future Outlook for MAB Phases I	Tuesday, February 09, 2021	10:40 AM	11:10 AM	Invited
3498966	Correlating composition and anti-site disorder effects in AlFe ₂ B ₂	Radhika Barua	Virginia Commonwealth University	S12	Future Outlook for MAB Phases I	Tuesday, February 09, 2021	11:10 AM	11:40 AM	Invited
3489551	Discovering Atomically Laminated Transition Metal Borides with Diverse Properties	Deniz Cakir	University of North Dakota	S12	Future Outlook for MAB Phases I	Tuesday, February 09, 2021	11:40 AM	12:10 PM	Invited
3476539	Elastic and thermal properties of MAB phases based on first principles	Yuelel Bai	Harbin Institute of Technology	S12	Future Outlook for MAB Phases I	Tuesday, February 09, 2021	12:10 PM	12:30 PM	Contributed
3486354	Development of salt infiltration and encapsulation method for manufacturing MAB phases	Maharshi Dey	University of North Dakota	S12	Future Outlook for MAB Phases II	Tuesday, February 09, 2021	1:30 PM	1:50 PM	Contributed
3478819	Theoretically and experimentally understanding the mechanical and physical properties of the damage-tolerant MAB phases	Yuelel Bai	Harbin Institute of Technology	S12	Future Outlook for MAB Phases II	Tuesday, February 09, 2021	1:50 PM	2:20 PM	Invited
3502959	Tribological behavior of novel PEEK-MAX or PEEK-MAB Composites during Fuel- lubricated Sliding	Caleb Matzke	University of North Dakota	S12	Future Outlook for MAB Phases II	Tuesday, February 09, 2021	2:20 PM	2:40 PM	Contributed
3499204	Effects of Neutron Irradiation in Titanium-based MAX phases – Critical Questions	Yutai Katoh	Oak Ridge National Laboratory	S12	Nuclear Applications of MAX Phases I	Tuesday, February 09, 2021	2:40 PM	3:10 PM	Invited
3477730	Radiation Effects in Mn+1AX _n Phases	Chenxu Wang	Stanford University	S12	Nuclear Applications of MAX Phases I	Tuesday, February 09, 2021	3:10 PM	3:40 PM	Invited
3490692	Thermal stability enhancement of Cr ₂ AlC coatings on Zr by utilizing a double layer diffusion barrier	Jochen M. Schneider	RWTH Aachen University	S12	Nuclear Applications of MAX Phases I	Tuesday, February 09, 2021	3:40 PM	4:10 PM	Invited

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3476032	Development of Joining Process Technology for CVI-SiC/SiC Core Materials	Shoko Suyama	Toshiba Energy Systems & Solutions Corporation	S13	Joining and Coating Technologies for Reactor Components	Tuesday, February 09, 2021	9:20 AM	9:40 AM	Contributed
3484422	Hydrothermal Corrosion of Nitride-Based Environmental Barrier Coatings and Interaction with SiC at High Temperatures	Daejong Kim	Korea Atomic Energy Research Institute	S13	Joining and Coating Technologies for Reactor Components	Tuesday, February 09, 2021	9:40 AM	10:00 AM	Contributed
3484487	Pressure-less glass-ceramic joining of SiC/SiC nuclear fuel clads for LWR	Monica Ferraris	Politecnico di Torino	S13	Joining and Coating Technologies for Reactor Components	Tuesday, February 09, 2021	10:00 AM	10:20 AM	Contributed
3507118	An Update on the Development of FCM fuels for Micro-Modular Reactors (MMR)	Mark Davies	USNC	S13	Advanced Manufacturing of Nuclear Ceramics	Tuesday, February 09, 2021	10:40 AM	11:10 AM	Invited
3484868	Laser 3D Printing of SiC and Refractory Materials	Jian Liu	PolarOnyx Inc	S13	Advanced Manufacturing of Nuclear Ceramics	Tuesday, February 09, 2021	11:10 AM	11:40 AM	Invited
3487143	Development of Rapid-Laser Chemical Vapor Deposition Nuclear Material Technologies	Shay Harrison	Free Form Fibers	S13	Advanced Manufacturing of Nuclear Ceramics	Tuesday, February 09, 2021	11:40 AM	12:00 PM	Contributed
3484752	Exploring Oxidation-Resistant Interphase Options for SiC/SiC Composites for Nuclear Applications	Yutai Katoh	Oak Ridge National Laboratory	S13	Chemical Compatibility and Corrosion	Tuesday, February 09, 2021	1:30 PM	1:50 PM	Contributed
3477955	Hot hydrogen testing of carbides developed for nuclear thermal propulsion	Martin Volz	NASA Marshall Space Flight Center	S13	Chemical Compatibility and Corrosion	Tuesday, February 09, 2021	1:50 PM	2:10 PM	Contributed
3490498	Corrosion Studies at MIT on CVD SiC and Additive Manufactured SiC fibers	Arunkumar Seshadri	Massachusetts Institute of Technology	S13	Chemical Compatibility and Corrosion	Tuesday, February 09, 2021	2:10 PM	2:30 PM	Contributed
3490959	Water vapor oxidation behaviors of SiC layer in surrogate TRISO fuel particles	Kathy Lu	Virginia Tech	S13	Chemical Compatibility and Corrosion	Tuesday, February 09, 2021	2:30 PM	2:50 PM	Contributed
3478191	Short-term corrosion of pre-cracked metal coatings on SiC	Peter Mouche	Oak Ridge National Lab	S13	Chemical Compatibility and Corrosion	Tuesday, February 09, 2021	2:50 PM	3:10 PM	Contributed
3480302	Stress Corrosion Cracking of SiC Composite Tubes under High-Temperature Steam: Test Method Development	Takaaki Koyanagi	Oak Ridge National Laboratory	S13	Chemical Compatibility and Corrosion	Tuesday, February 09, 2021	3:10 PM	3:30 PM	Contributed
3478774	Rapid processing of ceramics by SLA using microwave sintering, comparison with ceramics obtained by a classical route	Francis J Cambier	Belgian Ceramic Research Centre	S15	Vat Photopolymerization and Stereolithography I	Tuesday, February 09, 2021	10:40 AM	11:10 AM	Invited

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3479098	Cure Depth of Photocurable Ceramic and Metal Suspensions	Mustafa Kanaan Alazzawi	Rutgers University	S15	Vat Photopolymerization and Stereolithography I	Tuesday, February 09, 2021	11:10 AM	11:30 AM	Contributed
3504833	Photosensitive mullite suspension for vat photopolymerization	Italo Leite de Camargo	IFSP - Federal Institute of Education, Science and Technology of São Paulo	S15	Vat Photopolymerization and Stereolithography I	Tuesday, February 09, 2021	11:30 AM	11:50 AM	Contributed
3491186	Design of Interparticle Photo-cross-linkable Alumina Slurries and Application to Fiber-based Stereolithography	Motoyuki Iijima	Yokohama National University	S15	Vat Photopolymerization and Stereolithography I	Tuesday, February 09, 2021	11:50 AM	12:10 PM	Contributed
3479108	Stereolithographic Additive Manufacturing of Silicon Carbide Components Based on Layer Bonding Simulations	Tomoya Shimizu	Osaka University	S15	Vat Photopolymerization and Stereolithography I	Tuesday, February 09, 2021	12:10 PM	12:30 PM	Contributed
3480475	Engineered cellular ceramics produced by stereolithography as substrates for automotive catalysts	Alberto Ortona	SUPSI	S15	Vat Photopolymerization and Stereolithography II	Tuesday, February 09, 2021	1:30 PM	2:00 PM	Invited
3476364	Optical Metrology for Near-Net-Shaped Additively Manufactured Ceramic Components	Tim McKinley	Oak Ridge Institute for Science and Education	S15	Vat Photopolymerization and Stereolithography II	Tuesday, February 09, 2021	2:00 PM	2:20 PM	Contributed
3484473	Aluminum nitride systems suitable for lithography-based additive manufacturing	Johannes Rauchenecker	TU Wien - Vienna University of Technology	S15	Vat Photopolymerization and Stereolithography II	Tuesday, February 09, 2021	2:20 PM	2:40 PM	Contributed
3484808	Grain-Boundary Control in Additive Manufactured Textured Alumina	Andrew Thomas Rosenberger	US Army Research Laboratory	S15	Vat Photopolymerization and Stereolithography II	Tuesday, February 09, 2021	2:40 PM	3:00 PM	Contributed
3482362	A novel device to 3D print ceramic bulk components by Stereolithography employing viscous slurries with high powder loadings	Oscar Santoliquido	SUPSI	S15	Vat Photopolymerization and Stereolithography II	Tuesday, February 09, 2021	3:00 PM	3:20 PM	Contributed
3478678	Stereolithographic Additive Manufacturing of Thermoacoustic Converters with Ceramic Vascular Bundles	Tatsuya Ito	Osaka University	S15	Vat Photopolymerization and Stereolithography II	Tuesday, February 09, 2021	3:20 PM	3:40 PM	Contributed
3479128	Stereolithographic Additive Manufacturing of Piezoelectric Prisms for Ultrasonic Beam Oscillations	Yasuhiro Uemura	Osaka University	S15	Vat Photopolymerization and Stereolithography II	Tuesday, February 09, 2021	3:40 PM	4:00 PM	Contributed
3500354	Development of geopolymetric composites for extreme conditions	Ana Carolina Constância Trindade	Pontifical Catholic University of Rio de Janeiro (PUC-Rio)	S16	Novel Applications of Metakaolin-based Geopolymers I	Tuesday, February 09, 2021	10:40 AM	11:10 AM	Invited

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3478973	Solid solutions as precursors for high strength geopolymer composites: Effects of particles on the microstructure and mechanical properties	Elie Kamseu	MIPROMALO	S16	Novel Applications of Metakaolin-based Geopolymers I	Tuesday, February 09, 2021	11:10 AM	11:40 AM	Invited
3501153	Geopolymers- much more than alternatives to OPC	Kenneth John MacKenzie	MacDiarmid Institute for Advanced Materials and Nanotechnology	S16	Novel Applications of Metakaolin-based Geopolymers I	Tuesday, February 09, 2021	11:40 AM	12:10 PM	Invited
3503387	Tailorable thermal expansion in geopolymer-derived leucite-pollucite materials for EBCs	Waltraud M. Kriven	University of Illinois at Urbana-Champaign	S16	Novel Applications of Metakaolin-based Geopolymers I	Tuesday, February 09, 2021	12:10 PM	12:40 PM	Invited
3500489	Water disinfection with bentonite-geopolymer composite foam containing silver nanoparticles	Tero Luukkonen	University of Oulu	S16	Novel Applications of Metakaolin-based Geopolymers II	Tuesday, February 09, 2021	1:30 PM	2:00 PM	Invited
3500538	Geopolymer-based adsorbents for pollutants removal	Elettra Papa	CNR ISTEC	S16	Novel Applications of Metakaolin-based Geopolymers II	Tuesday, February 09, 2021	2:00 PM	2:30 PM	Invited
3485001	Geopolymer catalysts fabricated via direct ink writing	Renata Botti	University of Padova	S16	Novel Applications of Metakaolin-based Geopolymers II	Tuesday, February 09, 2021	2:30 PM	3:00 PM	Invited
3479077	Novel metakaolin-based geopolymer composites exhibiting ductile tensile strain-hardening behavior	Gabriel Arce	Louisiana State University	S16	Novel Applications of Metakaolin-based Geopolymers II	Tuesday, February 09, 2021	3:00 PM	3:30 PM	Invited
3491489	Thermal Stability of a Waste-based Alkali-activated Material for Thermal Energy Storage	Patrick Franz Keane	University of South Australia	S16	Novel Applications of Metakaolin-based Geopolymers II	Tuesday, February 09, 2021	3:30 PM	4:00 PM	Invited
3478717	The Role of Liquid Oxide Formation in Oxidation Resistance of High-Entropy Ultra-High Temperature Carbides and Borides	Elizabeth J Opila	University of Virginia	S18	Entropy Stabilized Compositionally Complex UHTCs II	Tuesday, February 09, 2021	10:40 AM	11:10 AM	Invited
3480656	Yttrium solubility in high entropy boride ceramics	William Fahrenholtz	Missouri University of Science & Technology	S18	Entropy Stabilized Compositionally Complex UHTCs II	Tuesday, February 09, 2021	11:10 AM	11:30 AM	Contributed
3478604	Synthesis, densification, and characterization of high-entropy boride ceramics	Lun Feng	Missouri University of Science & Technology	S18	Entropy Stabilized Compositionally Complex UHTCs II	Tuesday, February 09, 2021	11:30 AM	11:50 AM	Contributed
3477794	Thermal Stability and Mechanical Properties of High-Entropy Carbide Ceramics with Submicron Grain Size Fabricated by Spark Plasma Sintering	Fei Wang	University of Nebraska-Lincoln	S18	Entropy Stabilized Compositionally Complex UHTCs II	Tuesday, February 09, 2021	11:50 AM	12:10 PM	Contributed
3503216	Bi-polar High-Power Impulse Magnetron Sputtering (HiPIMS) Synthesis of High Entropy Carbides	Mohammad Delower Hossain	Pennsylvania State University	S18	Entropy Stabilized Compositionally Complex UHTCs II	Tuesday, February 09, 2021	12:10 PM	12:30 PM	Contributed

3477121	Hybrid Porous Structures for Transpiration Cooling of Components for Hypersonic Flight	Luc Jean Vandeperre	Imperial College London	S18	UHTCs: Performance in Extreme Environments	Tuesday, February 09, 2021	1:30 PM	2:00 PM	Invited
3500288	Evaluation of ceria- and hafnia-based MHD electrode materials	Michael S Bowen	Oregon State Univ	S18	UHTCs: Performance in Extreme Environments	Tuesday, February 09, 2021	2:00 PM	2:20 PM	Contributed
3488541	Environmental barrier ability and safety aspects of UHTCMCs above 2273 K	Pietro Galizia	CNR ISTEC	S18	UHTCs: Performance in Extreme Environments	Tuesday, February 09, 2021	2:20 PM	2:40 PM	Contributed
3485293	Mechanical and Thermal Properties of Zeta Phase Tantalum Carbide at Elevated Temperature	Evan C Schwind	Missouri University of Science & Technology	S18	UHTCs: Performance in Extreme Environments	Tuesday, February 09, 2021	2:40 PM	3:00 PM	Contributed
3473018	Creep Performance and Microstructural Mechanisms of Hafnium Diboride + 20 vol% Silicon Carbide at 1600 °C	Michael Wilkinson	Air Force Institute of Technology	S18	UHTCs: Performance in Extreme Environments	Tuesday, February 09, 2021	3:00 PM	3:20 PM	Contributed
3476818	Fabrication of thick films of n- and p-type chalcogenide based thermoelectric materials	Hazal Batili	KTH Royal Institute of Technology		Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3478012	Nanofibrous zirconia highly porous ceramic structures	Riley Ann Yager	University of Alabama at Birmingham		Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3478095	ASTM International Standards for Properties and Performance of Advanced Ceramics – Helping Our World Work Better	Michael G. Jenkins	Bothell Engineering and Science Technologies		Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3478111	Transition of Mechanical Properties for CFRP Adhesive Joints under Salt Spray Environment	Satoshi Kobayashi	Tokyo Metropolitan University		Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3478472	Fabrication of nanofibrous porous ceramic materials from alkoxide-based precursors using alternating field electrospinning	Sarah Louise Nealy	University of Alabama at Birmingham		Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3478558	Highly-porous nanofibrous ceramic machinable shapes: Fabrication and mechanical properties	Courtney Severino	University of Alabama at Birmingham		Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3478747	Morphological influence of bio pore-former characteristics during ceramic membrane fabrication	Sushma Chakraborty	Indian Institute of Technology Guwahati		Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3479246	Thermal Property Optimization of Reaction Bonded SiC/Si Composites	Jiwen Wang	M Cubed Technology, Inc.		Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3479275	Hydrogen effect on the optical and mechanical properties of SiN thin films on Si wafers and glass	Csaba Balazsi	Centre for Energy Research, ELKH		Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3479345	Summary of Various R&D Efforts and Technologies Being Pursued at Nexceris, LLC	Emir Dogdibegovic	Nexceris, LLC		Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster

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3479363	COMSOL Multiphysics Modelling of Electrical Resistance for Laminate type SiCf /SiCm CMC	Ankita Gupta	University Of Akron	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3479995	Transition Metal Monochalcogenides for Rechargeable Metal-ion Battery Anodes	Shakir Bin Mujib	Kansas State University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3481329	Semi-analytic finite element method applied to short fiber-reinforced piezoelectric composite	Lorenzo Efrain Barraza	Universidad Autonoma de Ciudad Juarez	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3484367	Construction and demolition waste (CDW) used for the development of alkali-activated cements	Angelica Maria Cardoza Herrera	Universidad de Antioquia	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3484373	Impact of Sol-Gel Processing on Polymorph Stability in Mixed and High Entropy Rare Earth Disilicates for Environmental Barrier Coatings	Alejandro Salanova	University of Virginia	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3484528	Preparation of Silicon Nitride Suspensions for Additive Manufacturing by Stereolithography	Victoria Tsarkova	Rutgers University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3484649	Two-steps reactive cold sintering of geopolymers	Useche dos Santos Inchauspe	University of Padova	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3484677	Resistance of geopolymers to acid attack	Cristina Leonelli	University of Modena and Reggio Emilia	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3484792	In Situ Synchrotron Diffraction of DyPO4 Pressure-Induced Phase Transformation under Variable Hydrostaticity	Jai Sharma	Colorado School of Mines	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3484875	In-situ synthesis, mechanical and microstructural properties of TiB2/Al-Si composites	Jimmy Karloopia	Indian Institute of Technology	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3484988	A Study of Kapatagan Diatomaceous Earth in Lanao del Norte Philippines as a Silica Replacement to the Ceramic Stoneware Wall Tile	Raymond VRivera Virtudazo	Mindanao State University-Iligan Institute of Technology	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3485014	Stability of Colloidal Silt of Philippine Nickel Laterite Ore Waste in Aqueous Media	Ivyleen Constantino Bernardo-Arugay	Mindanao State University - Iligan Institute of Technology	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3485079	Multimaterial 3D printing of Solid Oxide Fuel Cells	Natalia Kostretsova	IREC, Catalonia Institute for Energy Research	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3485223	Neural networks and applied graph theory approaches for intergranular properties measurements investigation	Vojislav Mitic	Serbian Academy of Sciences	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster

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3486722	Impact of Carbon Coating and Particle Size on the Electrochemical Reversibility of Li _{1.25} Nb _{0.25} V _{0.5} O ₂ as High Capacity Positive Electrode Materials	RUIJIE QI	Yokohama National University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3486786	Eco-friendly AlON processing	Csaba Balazsi	Centre for Energy Research, ELKH	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3487684	Enhanced electrocaloric effect and energy storage performance of PLZT relaxor ferroelectric system for practical applications	Jose de los Santos Guerra	Federal University of Uberlandia	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3487717	Investigation of the electrical and optical properties in KNbO ₃ -based electroceramics - Oxygen vacancies effect	Jose de los Santos Guerra	Federal University of Uberlandia	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3487739	Self-polarizing semiconductor BVO thin films for solar fuels production	Wayler Silva dos Santos	Federal University of Uberlandia	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3488750	A Feasibility Study for Electrochemical Toluene Oxidation over Solid Oxide Cells	Shimpei Yamaguchi	Osaka Research Institute of Industrial Science and Technology	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3490626	Lithium-Excess Ruthenium Oxides with Reversible Anionic Redox at Elevated Temperatures	Kaito Matsuzaki	Yokohama National University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3490642	The Positive Electrode Materials with Dimensionally Invariable Character	Itsuki Konuma	Yokohama National University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3490751	Electrical Properties of 8YSZ-ScCeSZ Composite	Talita Gishitomi Fujimoto	IPEN	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3491084	Li-excess Titanium Sulfides as High Capacity Positive Electrode Material with Reversible Anionic Redox	Miyuki Shinoda	Yokohama National University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3491151	Durable and high-energy aqueous Li-ion batteries with nanosized molybdenum oxides	Yoshihiko Sato	Yokohama National University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3491395	Evidence of Strontium and Cobalt Vapor-Phase Transport from LSCF Cathodes	Brent Kirby	Pacific Northwest National Lab	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3491611	Red Clay-based Ceramic Coating on Stainless Steel Fistula Needle by Electrophoretic Deposition	Ivyleen Constantino Bernardo-Arugay	MINDANAO STATE UNIVERSITY - Iligan Institute of Technology	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3492618	Effect of Matrix Crystallinity on Mechanical Properties in Carbon Fiber Reinforced Polypropylene and Poly(lactic acid)	Masato Sakaguchi	Salesian Polytechnic	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster

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3493665	Synthesis of nanocomposites based on NiCu/LaNb _{0,8} Mo _{0,2} O ₄ for proton-conducting membranes	Sofiya Kharina	Novosibirsk State University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3495825	Stress Analysis in Composite Laminates with Alternating Materials in the Longitudinal Direction: A Variational Approach	Shinji Ogihara	Tokyo University of Science	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3498381	Development of Powder Injection Molded Carbon Fiber Reinforced Composites	Satoshi Kobayashi	Tokyo Metropolitan University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3501382	Effect of Mesh Interlayer on Interlaminar Shear Strength in Unidirectional CFRP Laminates	Hayato Nakatani	Osaka City University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3502965	Scaffolds used in tissue engineering - an overview	Erica Eades	University of North Dakota	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3502971	Microstructure Design of Multicomponent Hydrogels	Taylor Riedl	University of North Dakota	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3503014	Synthesis and Characterization of Steel-MAX Composites	Abdulrahman Aldossary	University of North Dakota	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3503272	3D printed carbon fiber reinforced plastic with shape morphing ability	Masahito Ueda	Nihon University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3503296	PEG 400 - Assisted Plasticity of Red Clay with Placer Mining Waste and Quarry Waste Formulation for Ceramic Sculpture Application	Shem Quiawan Saldia	Mindanao State University - Iligan Institute of Technology	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3503369	Evaluation of mechanical characteristics of GFRP with titanium coating for preventing the ultraviolet degradation	Takenobu Sakai	Saitama University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3518041	Antibacterial coatings for silicate-based materials	Elisa Rambaldi	Centro Ceramico	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3518537	Development of Software to Master Sintering Curve using Python	Mayara Eid Orlandini	Federal Institute of São Paulo (IFSP)	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3521254	Microstructural Examination of the 3D Printed SiC/C Hybrid Composites	Saja M. Nabat Al-ajrash	University of Dayton	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3521410	Porous corundum items from novel sol-gel processes	Simon Carstens	Leipzig University	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3529872	Preparation and characterization of calcium phosphates by homogeneous precipitation method	Piotr Szterner	Lukasiewicz Research Network - Institute of Ceramics and Building Materials	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3539709	Study of Shape Dependent Conjugation of MicroRNA(miRNA) Loaded on Cerium Oxide Nanocube/rod/sphere	Sudipta Seal	University of Central Florida	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster
3541973	Sintering Effects of Lunar Simulants Using Plasma Jets	Aadithya Jeyaranjan	University of Central Florida	Poster Session	Tuesday, February 09, 2021	4:00 PM	5:30 PM	Poster



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CONTROL ID	PRESENTATION TITLE	PRESENTER	PRESENTER INSTITUTION	TRACK	VIRTUAL SESSION TITLE	DATE	START TIME	END TIME	PRESENTATION TYPE
3479310	Why mentoring is so important: 10 things about careers in science I wish I had known before	Kaline Pagnan Furlan	Hamburg University of Technology	GYIF	Careers in Science, Technology, Engineering and Mathematics (STEM)	Wednesday, February 10, 2021	9:20 AM	9:50 AM	Invited
3479091	Navigating Higher Education and Beyond	Tulsi Patel	AFRL	GYIF	Careers in Science, Technology, Engineering and Mathematics (STEM)	Wednesday, February 10, 2021	9:50 AM	10:20 AM	Invited
3490563	High-Performance Thermoelectric Polymers and Ionogels	Jianyong Ouyang	National University of Singapore	FS2	Novel Thermoelectric Materials with High Power Factor and/or High Figure of Merit	Wednesday, February 10, 2021	10:40 AM	11:10 AM	Invited
3494078	Recent developments in thermoelectric pnictides	Kirill Kovnir	Iowa State University	FS2	Novel Thermoelectric Materials with High Power Factor and/or High Figure of Merit	Wednesday, February 10, 2021	11:40 AM	12:10 PM	Invited
3503278	Influence of Stoichiometry and High-Temperature Aging on Higher Manganese Silicides synthesized by magnesio-reduction	Sylvain Le Tonquesse	National Institute for Materials Sciences	FS2	Novel Thermoelectric Materials with High Power Factor and/or High Figure of Merit	Wednesday, February 10, 2021	12:10 PM	12:30 PM	Contributed
3501876	Synthesis and thermoelectric properties of high-entropy half-Heusler $MFe_{1-x}Co_xSb$ (M = equimolar Ti, Zr, Hf, V, Nb, Ta)	Michael Reece	Queen Mary University of London	FS2	Experimental and Theoretical Approaches to Novel Thermoelectric Materials and Devices	Wednesday, February 10, 2021	1:30 PM	2:00 PM	Invited
3511081	High performance bulk and thin film full Heusler alloys based on Fe_2VAI	Ernst Bauer	Technische Universität Wien	FS2	Experimental and Theoretical Approaches to Novel Thermoelectric Materials and Devices	Wednesday, February 10, 2021	2:00 PM	2:30 PM	Invited
3515068	Thermoelectric materials near lattice instabilities: lattice vibrations in the strongly anharmonic regime beyond the phonon gas model.	Olivier Delaire	Duke University	FS2	Experimental and Theoretical Approaches to Novel Thermoelectric Materials and Devices	Wednesday, February 10, 2021	2:30 PM	3:00 PM	Invited
3504408	Structure and thermoelectric properties of synthetic copper-based minerals	Emmanuel Guilmeau	CNRS CRISMAT	FS2	Experimental and Theoretical Approaches to Novel Thermoelectric Materials and Devices	Wednesday, February 10, 2021	3:00 PM	3:30 PM	Invited
3479151	Comparing the Properties of Polymer Derived SiOC glasses pyrolyzed in inert (Ar) and reactive (CO ₂) atmosphere	Gian-Domenico Soraru	University of Trento	FS3	Precursor Chemistry: Structural and Thermal Transformation	Wednesday, February 10, 2021	10:40 AM	11:20 AM	Keynote
3485026	Bottom-up Design and Properties of OD Nanocarbon-Containing Ceramic Composites	Gabriela Mera	TU Darmstadt	FS3	Precursor Chemistry: Structural and Thermal Transformation	Wednesday, February 10, 2021	11:20 AM	11:50 AM	Invited
3485192	Silicon oxycarbide/graphite composites – influence of precursor type on mixed bonds creation in the presence of graphite	Monika Wilamowska-Zawlocka	Gdansk University of Technology	FS3	Precursor Chemistry: Structural and Thermal Transformation	Wednesday, February 10, 2021	11:50 AM	12:20 PM	Invited

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3484753	Polymer-derived ceramic fibers for energy storage applications	Gurpreet Singh	Kansas State University	FS3	Chemically Processed Nanostructures	Wednesday, February 10, 2021	1:30 PM	2:00 PM	Invited
3485248	Polycarbosilane Grafted Nanoparticles: Free-Flowing Hairy Nanoparticle Liquids that Convert to Ceramic	Matthew B. Dickerson	Air Force Research Laboratory	FS3	Chemically Processed Nanostructures	Wednesday, February 10, 2021	2:00 PM	2:20 PM	Contributed
3494688	Superhard Conductive Rhenium Nitride Thin Films via Magnetic Field-Assisted CVD from Volatile Rhenium Precursors	Michael Frank	University of Cologne	FS3	Chemically Processed Nanostructures	Wednesday, February 10, 2021	2:20 PM	2:40 PM	Contributed
3490884	Adjusted freeze cast processing of preceramic polymers	Michaela Wilhelm	University of Bremen	FS3	Chemically Processed Nanostructures	Wednesday, February 10, 2021	2:40 PM	3:10 PM	Invited
3472697	Durability of Unidirectional PITCH-based Carbon Fiber Reinforced Plastics under Fatigue Loading	Satoshi Kobayashi	Tokyo Metropolitan University	FS4	Durability	Wednesday, February 10, 2021	9:20 AM	9:40 AM	Contributed
3474017	Effect of Carbon Fiber Type on Fatigue Damage Behavior in Unidirectional Carbon Fiber Reinforced Plastic Laminates	Akihiro Kudou	Tokyo Metropolitan University	FS4	Durability	Wednesday, February 10, 2021	9:40 AM	10:00 AM	Contributed
3477814	Predicting Internal Damage of BVID and the Impactor Shape Using Indentation Shape in CFRP Laminates	Saki Hasebe	University of Tokyo	FS4	Durability	Wednesday, February 10, 2021	10:00 AM	10:20 AM	Contributed
3468007	3D compaction printing of a continuous carbon fiber reinforced thermoplastic	Masahito Ueda	Nihon University	FS4	Processing	Wednesday, February 10, 2021	10:40 AM	11:10 AM	Invited
3474465	Effect of β -TCP Content on Molecular Orientation in Tensile Drawn β -TCP/PLA Composite Plate	Masato Sakaguchi	Salesian Polytechnic	FS4	Processing	Wednesday, February 10, 2021	11:10 AM	11:40 AM	Invited
3479330	Improvement of Molding Speed for Pultrusion Molding of CFRTP	Asami Nakai	Gifu University	FS4	Processing	Wednesday, February 10, 2021	11:40 AM	12:10 PM	Invited
3476173	Characterization of Mechanical Properties for V-shaped Continuous Carbon Fiber Reinforced PA6	Satoshi Takemura	Tokyo Metropolitan University	FS4	Processing	Wednesday, February 10, 2021	12:10 PM	12:30 PM	Contributed
3475640	Damage characterization of cross-ply CFRP laminates using Talbot-Lau interferometry	Tomohiro Yokozeki	University of Tokyo	FS4	Fracture and Interface	Wednesday, February 10, 2021	1:30 PM	2:00 PM	Invited
3476655	Interlaminar Fracture Behaviour of UD-CFRP Laminates with Mesh Interlayer	Hayato Nakatani	Osaka City University	FS4	Fracture and Interface	Wednesday, February 10, 2021	2:00 PM	2:30 PM	Invited
3477698	Effect of Crystallization on Transverse Crack Formation of Crossply CFRPA6	Takenobu Sakai	Saitama University	FS4	Fracture and Interface	Wednesday, February 10, 2021	2:30 PM	3:00 PM	Invited

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3471362	Quantitative Interfacial Adhesion between Glass Fiber and Epoxy Matrix with Dopamine using Microdroplet Pull-out Test and AE Measurements	Joung-Man Park	Gyeongsang Natl University	FS4	Fracture and Interface	Wednesday, February 10, 2021	3:00 PM	3:20 PM	Contributed
3472045	Effect of the number of electrically conductive CF/PANI layers on lightning strike protection of layer-wise hybrid laminates	Siwat Manomaisantiphap	University of Tokyo	FS4	Fracture and Interface	Wednesday, February 10, 2021	3:20 PM	3:40 PM	Contributed
3476798	Filled-Hole Compression Strength of Thin-Ply CFRP Laminates	Tomoisa Mikami	Tokyo University of Agriculture and Technology	FS4	Fracture and Interface	Wednesday, February 10, 2021	3:40 PM	4:00 PM	Contributed
3478940	SEM in-situ mechanical testing of NextelTM610 / porous alumina matrix composite	Antoine Débarre	ONERA	S1	Small Scale Characterization	Wednesday, February 10, 2021	9:20 AM	9:40 AM	Contributed
3478696	Damage and Phase analysis of SiC-SiC Ceramic Matrix Composites using Micro-CT	Aly Badran	University of Colorado Boulder	S1	Small Scale Characterization	Wednesday, February 10, 2021	9:40 AM	10:00 AM	Contributed
3502921	Pseudo-single crystal micropillar compression study of nontransformable tetragonal zirconia	Hiroshi Masuda	The University of Tokyo	S1	Small Scale Characterization	Wednesday, February 10, 2021	10:00 AM	10:20 AM	Contributed
3485063	Progress and Plans for CMC Research at NASA Glenn in 2021	Joseph E. Grady	NASA Glenn Research Center	S1	Mechanical Characterization Methods I	Wednesday, February 10, 2021	10:40 AM	11:00 AM	Contributed
3509089	Updated Composite Materials Handbook-17 (CMH-17) Volume 5 — Ceramic Matrix Composites	Rachael Andrulonis	Wichita State University	S1	Mechanical Characterization Methods I	Wednesday, February 10, 2021	11:00 AM	11:20 AM	Contributed
3479217	Failure Envelope of SiC Composite Tubing under Uniaxial and Multiaxial Loading	Colton Spencer Corley	University of South Carolina	S1	Mechanical Characterization Methods I	Wednesday, February 10, 2021	11:20 AM	11:40 AM	Contributed
3478098	Flexural Strength of CMC Tubes Used as Components in High-Temperature Reactor Applications: ASTM Standard Using Transverse Loading	Michael G. Jenkins	Bothell Engineering and Science Technologies	S1	Mechanical Characterization Methods I	Wednesday, February 10, 2021	11:40 AM	12:00 PM	Contributed
3479157	Microstructures of SiC matrix fabricated by film-boiling process in SiC-fiber preforms	Takuya Aoki	Japan Aerospace Exploration Agency	S1	Processing - Microstructure - Mechanical Properties Correlation	Wednesday, February 10, 2021	1:30 PM	1:50 PM	Contributed
3485100	Influence of Magnesia Dopant on Microstructure Evolution and Mechanical Performance of Oxide Ceramic Matrix Mini-Composites	Hedieh Farhandi	University of Bremen	S1	Processing - Microstructure - Mechanical Properties Correlation	Wednesday, February 10, 2021	1:50 PM	2:10 PM	Contributed

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3477021	In situ full-field characterisation of oxide/oxide ceramic matrix composites using digital volume correlation	Joachim-Paul Fornakreutzer	University of Bristol	S1	Processing - Microstructure - Mechanical Properties Correlation	Wednesday, February 10, 2021	2:10 PM	2:30 PM	Contributed
3484739	Insights on the Deformation of Layered Crystalline Solids by Ripplifications	Hussein O. Badr	Drexel University	S1	Processing - Microstructure - Mechanical Properties Correlation	Wednesday, February 10, 2021	2:30 PM	2:50 PM	Contributed
3479285	Suppression of Second Phases in Boron-Doped SiAlON Ceramics	Kade A. McGarrity	Alfred University	S1	Processing - Microstructure - Mechanical Properties Correlation	Wednesday, February 10, 2021	2:50 PM	3:10 PM	Contributed
3466175	Maximum limit of compressive strength and hardness of nanocrystalline magnesium aluminate spinel	Jessica Maita	University of Connecticut	S1	Processing - Microstructure - Mechanical Properties Correlation	Wednesday, February 10, 2021	3:10 PM	3:30 PM	Contributed
3485005	Shear properties of oxide ceramic composites joined by ionotropic gelation	Renato Saint Martin Almeida	University of Bremen	S1	Processing - Microstructure - Mechanical Properties Correlation	Wednesday, February 10, 2021	3:30 PM	3:50 PM	Contributed
3483665	Plasma-based surface modification of CMCs to improve joint strength through interlocking mechanism	Alessandro De Zanet	Politecnico di Torino	S1	Processing - Microstructure - Mechanical Properties Correlation	Wednesday, February 10, 2021	3:50 PM	4:10 PM	Contributed
3490690	Overcoming the challenges of the value chain readiness, promoting the rapid industrialization of Solid Oxide Cells	Carlos Bernuy-Lopez	Sandvik Materials Technology	S3	Interconnects & Coatings: Part I	Wednesday, February 10, 2021	9:10 AM	9:40 AM	Invited
3486782	Composite protective/contacting coatings for SOFC interconnect material with high chromium content	Viktar Sauchuk	Fraunhofer IKTS	S3	Interconnects & Coatings: Part I	Wednesday, February 10, 2021	9:40 AM	10:00 AM	Contributed
3503338	On-Board Strontium Getters for Improved Nano-Composite SOFC Cathode Performance and Stability	Jason D. Nicholas	Michigan State University	S3	Interconnects & Coatings: Part I	Wednesday, February 10, 2021	10:00 AM	10:20 AM	Contributed
3503339	Advanced Ceramic Catalyst for High-Performance on Hydrogen Production by Electrolysis	Guntae Kim	Ulsan National Institute of Science and Technology	S3	Proton Conducting Oxide Cells	Wednesday, February 10, 2021	10:40 AM	11:10 AM	Invited
3489589	Development of electrochemical device using protonic ceramics	Yuji Okuyama	University of Miyazaki	S3	Proton Conducting Oxide Cells	Wednesday, February 10, 2021	11:10 AM	11:40 AM	Invited
3479283	Understanding of A-site deficiency in layered perovskites: Promotion of dual reaction kinetics for water oxidation and oxygen reduction in protonic ceramic electrochemical cells	Wei Tang	New Mexico State University	S3	Proton Conducting Oxide Cells	Wednesday, February 10, 2021	11:40 AM	12:00 PM	Contributed

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3479369	Synthesis, Processing, and Characterizations of Ba(Zr _{0.4} Ce _{0.4} Y _{0.1} Yb _{0.1})O _{3-δ} and Related Proton Conducting Electrolytes	Zhe Cheng	Florida International University	S3	Proton Conducting Oxide Cells	Wednesday, February 10, 2021	12:00 PM	12:20 PM	Contributed
3485484	Deconvolution of Water-Splitting on Triple-Conducting Ruddlesden-Popper Phase Anode for Protonic Ceramic Electrolysis Cells	Hanchen Tian	West Virginia University	S3	Proton Conducting Oxide Cells	Wednesday, February 10, 2021	12:20 PM	12:40 PM	Contributed
3509931	Mitigation Strategies of Chromium Evaporation and Air Electrode Chromium Poisoning in SOC Materials Processing and System Design	Jan Gustav Grolig	Hexis AG	S3	Interconnects & Coatings: Part II	Wednesday, February 10, 2021	1:30 PM	1:50 PM	Contributed
3499959	High-temperature corrosion of porous Fe ₂₂ Cr steel	Damian Koszelow	Gdansk University of Technology	S3	Interconnects & Coatings: Part II	Wednesday, February 10, 2021	1:50 PM	2:10 PM	Contributed
3485021	Spinel ceramics as protective layers on SOFC components obtained by EPD	Leszek Ajdys	Institute of Power Engineering - Research Institute	S3	Interconnects & Coatings: Part II	Wednesday, February 10, 2021	2:10 PM	2:30 PM	Contributed
3500581	Electrophoretically deposited iron substituted manganese- copper spinel coatings for prevention of chromium poisoning in Solid Oxide Fuel Cells	Justyna Ignaczak	Gdansk University of Technology	S3	Interconnects & Coatings: Part II	Wednesday, February 10, 2021	2:30 PM	2:50 PM	Contributed
3499962	High-temperature oxidation of steel particles	Agnieszka Drewniak	Gdansk University of Technology	S3	Interconnects & Coatings: Part II	Wednesday, February 10, 2021	2:50 PM	3:10 PM	Contributed
3485235	Alumina Fiber Reinforced LSCo Composite Contact Material for Solid Oxide Fuel Cells	Yeong-Shyung Chou	Pacific Northwest National Lab	S3	Interconnects & Coatings: Part II	Wednesday, February 10, 2021	3:10 PM	3:30 PM	Contributed
3478668	Oxidation resistance and surface electrical conductivity of Ti-Al-C MAX phases based coatings deposited on Ti foil for interconnects of SOFC	Tetiana Prikhna	V. Bakul Institute for Superhard Materials of the National Academy of Sciences of Ukraine	S3	Interconnects & Coatings: Part II	Wednesday, February 10, 2021	3:30 PM	3:50 PM	Contributed
3485240	Composite LSCo/LSCF Material as Cr-Gettering Materials for Solid Oxide Fuel Cells	Yeong-Shyung Chou	Pacific Northwest National Lab	S3	Interconnects & Coatings: Part II	Wednesday, February 10, 2021	3:50 PM	4:10 PM	Contributed
3502968	Cross-linked gel polymer electrolyte for lithium metal anode	Nobuyuki Imanishi	Mie University	S6	All-solid-state Batteries II	Wednesday, February 10, 2021	10:40 AM	11:10 AM	Invited
3502484	LISICON-based All Solid-State Battery by Powder Process	Toyoki Okumura	National Institute of Advanced Industrial and Technology (AIST)	S6	All-solid-state Batteries II	Wednesday, February 10, 2021	11:10 AM	11:40 AM	Invited

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3507010	Long Life Operation of All-Solid-State Lithium–Sulfur Batteries Using Interconnected Mesoporous Carbon	Atsushi Sakuda	Osaka Prefecture University	S6	All-solid-state Batteries II	Wednesday, February 10, 2021	11:40 AM	12:10 PM	Invited
3492434	Dynamical Li-ion observation in all-solid-state batteries by operando electron energy-loss spectroscopy	Kazuo Yamamoto	Japan Fine Ceramics Center	S6	All-solid-state Batteries II	Wednesday, February 10, 2021	12:10 PM	12:40 PM	Invited
3503006	Mixed polyanionic NaFe ₂ PO ₄ (SO ₄) ₂ insertion material for rechargeable metal-ion batteries	Shubham Lohchab	Indian Institute of Science	S6	Materials for Lithium Batteries, Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries II / Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries I	Wednesday, February 10, 2021	1:30 PM	1:50 PM	Contributed
3480750	Ionic and Thermal Transport in the NASICON System Na _{1+x} Al _x Ti _{2-x} (PO ₄) ₃ (NATP)	Magnus Rohde	Karlsruhe Institute of Technology	S6	Materials for Lithium Batteries, Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries II / Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries I	Wednesday, February 10, 2021	1:50 PM	2:10 PM	Contributed
3479347	Polymer-derived ceramics functionalization of molybdenum disulfide towards electrochemical stability of sodium-ion battery electrode	Davi Marcelo Soares	Kansas State University	S6	Materials for Lithium Batteries, Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries II / Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries I	Wednesday, February 10, 2021	2:10 PM	2:30 PM	Contributed
3488498	Exploration of Li-P-S-O system for discovery of new solid electrolyte	Audric Neveu	CNRS ENSICAEN	S6	Materials for Lithium Batteries, Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries II / Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries I	Wednesday, February 10, 2021	2:30 PM	2:50 PM	Contributed
3503329	A Versatile 3-D tunnel Insertion Cathode Materials for Lithium, Sodium, and Potassium-Ion Batteries	Sai Pranav Vanam	Indian Institute of Science	S6	Materials for Lithium Batteries, Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries II / Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries I	Wednesday, February 10, 2021	2:50 PM	3:10 PM	Contributed
3484735	Na ion Dynamics in P ₂ -Na _x [Ni _{1/3} Ti _{2/3}]O ₂ : A Combination of Quasi-Elastic Neutron Scattering and First-Principles Molecular Dynamics Study	Wei Lai	Michigan State University	S6	Materials for Lithium Batteries, Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries II / Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries I	Wednesday, February 10, 2021	3:10 PM	3:30 PM	Contributed

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3502987	Vanadium-based Eldfellite Cathode Insertion Material for Li/Na-Ion Battery	Shashwat Singh	Indian Institute of Science	S6	Materials for Lithium Batteries, Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries II / Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries I	Wednesday, February 10, 2021	3:30 PM	3:50 PM	Contributed
3468092	Probing Mechanical Properties of Doped Li ₇ La ₃ Zr ₂ O ₁₂ Garnet Thin Electrolyte for Solid-State Batteries	Zhezhen Fu	University of Wisconsin-Platteville	S6	Materials for Lithium Batteries, Sodium Batteries, Potassium Batteries, Magnesium Batteries and Calcium Batteries II / Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries I	Wednesday, February 10, 2021	3:50 PM	4:10 PM	Contributed
3501357	Electrical Resistance Flash Sintering of Tungsten Carbide	Vincenzo M. Sglavo	University of Trento	S8	Novel Sintering Technologies II	Wednesday, February 10, 2021	9:20 AM	9:50 AM	Invited
3478648	Densification, microstructure tailoring and properties of Ta _{1-x} Hf _x C based ceramics	Jie Yin	Shanghai Institute of Ceramics	S8	Novel Sintering Technologies II	Wednesday, February 10, 2021	9:50 AM	10:20 AM	Invited
3478107	Continuous Flow Synthesis of Zeolites on The Order of Seconds	Toru Wakihara	The University of Tokyo	S8	Advanced Powder Synthesis	Wednesday, February 10, 2021	10:40 AM	11:10 AM	Invited
3502542	Preparation of Sn nanoparticles by Pulsed Wire Discharge and their Size Control by Changing Gas Pressure	Soma Yamamoto	Nagaoka University of Technology	S8	Advanced Powder Synthesis	Wednesday, February 10, 2021	11:10 AM	11:30 AM	Contributed
3482700	Understanding particle formation in Pulsed Wire Discharge by Colored High-speed Photographs	Hieu Duy Nguyen	Nagaoka University of Technology	S8	Advanced Powder Synthesis	Wednesday, February 10, 2021	11:30 AM	11:50 AM	Contributed
3476858	Synthesis of Superhard Bulk Nanocrystalline Cubic Boron Nitride through a Novel Route	Chawon Hwang	Rutgers University	S8	Advanced Powder Synthesis	Wednesday, February 10, 2021	11:50 AM	12:10 PM	Contributed
3478484	Phase transformation of molybdenum trioxide by a thermal evaporation method	Chu Minh Ngo	Extreme Energy-Density Research Institute	S8	Advanced Powder Synthesis	Wednesday, February 10, 2021	12:10 PM	12:30 PM	Contributed
3479270	Novel silicon nitride-zirconia-graphene based sandwich composite thick coatings	Csaba Balazsi	Centre for Energy Research, ELKH	S8	Advanced Composite Technologies II	Wednesday, February 10, 2021	1:30 PM	2:00 PM	Invited
3475481	Pressureless sintering of SiC-AlN ceramics and their properties	Shynar Kultayeva	University of Seoul	S8	Advanced Composite Technologies II	Wednesday, February 10, 2021	2:00 PM	2:20 PM	Contributed
3475454	Hot-forged SiC-TiC composite with improved mechanical and thermal properties	Rohit Malik	University of Seoul	S8	Advanced Composite Technologies II	Wednesday, February 10, 2021	2:20 PM	2:40 PM	Contributed
3479080	Development and Characterization of Composite for Lightweight Durable Conductor Cables	Dagny Sacksteder	The Ohio State University	S8	Advanced Composite Technologies II	Wednesday, February 10, 2021	2:40 PM	3:00 PM	Contributed
3503451	Shaping Caloric Regenerators for Magnetic Cooling Applications	Anthony Duong	Virginia Commonwealth University	S8	Advanced Composite Technologies II	Wednesday, February 10, 2021	3:00 PM	3:20 PM	Contributed

3501667	Bridging the Nano- to Meso-scales for Microstructural Modeling of Ceramic Composites	Matthew Guziewski	US Army Research Laboratory	S10	Microstructure and Performance II	Wednesday, February 10, 2021	9:20 AM	9:40 AM	Contributed
3503394	Numerical characteristics of plasma arc welding of SiC-ZrB ₂ -ZrC ceramics using multi-phase field modeling	Arezo Emdadi	Missouri University of Science & Technology	S10	Microstructure and Performance II	Wednesday, February 10, 2021	9:40 AM	10:00 AM	Contributed
3503414	Angular dependent potential for elemental boron and its application to model amorphous hydrogenated boron carbide	Prakash Khanal	University of Missouri - Kansas City	S10	Microstructure and Performance II	Wednesday, February 10, 2021	10:00 AM	10:20 AM	Contributed
3491586	A Study on Tribological Properties of Multi-Layered MoS ₂ Thin Film	Chisung Ahn	Korea Institute of Industrial Technology	S11	Forming and Shaping Processes for Advanced Materials	Wednesday, February 10, 2021	9:40 AM	10:00 AM	Contributed
3478766	Preparation of Superhydrophobic Coating Films with i-pp/CNT and SiO ₂ /CNT	Ahrong Jeong	Kyushu University	S11	Forming and Shaping Processes for Advanced Materials	Wednesday, February 10, 2021	10:00 AM	10:20 AM	Contributed
3479202	Preparation of iron nanosized powder by pulsed wire discharge	Hisayuki Suematsu	Nagaoka University of Technology	S11	Starting Materials: Mining, Particles, Bulk, and Functional Materials and Precursors	Wednesday, February 10, 2021	10:40 AM	11:10 AM	Invited
3479135	The rheological characterization of carbonyl iron particles-based under magnetic field-dependent dynamic viscoelastic properties	Narongdet Sulatchaneenopdon	Nagaoka University of Technology	S11	Starting Materials: Mining, Particles, Bulk, and Functional Materials and Precursors	Wednesday, February 10, 2021	11:10 AM	11:30 AM	Contributed
3479162	Contamination of carbon and carbonate phases during spark plasma sintering in non-uniformly sintered Y ₂ O ₃ ceramics	Lee Ji Hwoan	Kyushu University	S11	Starting Materials: Mining, Particles, Bulk, and Functional Materials and Precursors	Wednesday, February 10, 2021	11:30 AM	11:50 AM	Contributed
3484612	Enhancing the Multiple Self-Healing Performance of Ytterbium Silicate/Silicon Carbide Nanocomposites by Steam Treatment	Son Thanh Nguyen	National Institute of Technology Koshiro College	S11	Starting Materials: Mining, Particles, Bulk, and Functional Materials and Precursors	Wednesday, February 10, 2021	11:50 AM	12:10 PM	Contributed
3484326	Highly Improved Growth and Electrical Properties of Pt Thin Films by Atomic Layer Deposition using Dimethyl(N,N-Dimethyl-3-Buten-1-Amine-N) Platinum and O ₂	Woo-Jae Lee	Materials Technology Institute	S11	Starting Materials: Mining, Particles, Bulk, and Functional Materials and Precursors	Wednesday, February 10, 2021	12:10 PM	12:30 PM	Contributed
3482165	Morphology control of spinel type oxides for glucose detection	Sungwook Mhin	Kyonggi university	S11	New Concepts and Emerging Technologies for Enhanced Product Performance	Wednesday, February 10, 2021	2:00 PM	2:20 PM	Contributed
3478934	Fabrication of aligned silver nanowire composite film by nanosecond pulsed electric field	Zhiming Shen	Nagaoka University of Technology	S11	New Concepts and Emerging Technologies for Enhanced Product Performance	Wednesday, February 10, 2021	2:20 PM	2:40 PM	Contributed

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3503245	Visualization of density distribution of alumina ceramics during sintering estimated by optical coherence tomography	Junichi Tatami	Yokohama National University	S11	New Concepts and Emerging Technologies for Enhanced Product Performance	Wednesday, February 10, 2021	2:40 PM	3:10 PM	Invited
3496161	The mechanical properties of nanocomposite Al-Cr-Fe-Ti-N coatings fabricated by magnetron sputtering process with multicomponent single alloy target	Kyoung Il Moon	KITECH	S11	New Concepts and Emerging Technologies for Enhanced Product Performance	Wednesday, February 10, 2021	3:10 PM	3:30 PM	Contributed
3491524	Alloying of AlCrFeX (X = Ti, Si) powder by Planetary Ball Milling process	Hyun Jun Park	KITECH	S11	New Concepts and Emerging Technologies for Enhanced Product Performance	Wednesday, February 10, 2021	3:30 PM	3:50 PM	Contributed
3479173	Development of a ceramic processing method using a human collaborative robot	Takeru Katagiri	Nagaoka University of Technology	S11	New Concepts and Emerging Technologies for Enhanced Product Performance	Wednesday, February 10, 2021	3:50 PM	4:10 PM	Contributed
3503336	Nanostructured ternary carbide coatings for accident tolerant fuel in LWRs	Jie Zhang	Institute of Metal Research, Chinese Academy of Sciences	S12	Nuclear Applications of MAX Phases II	Wednesday, February 10, 2021	9:20 AM	9:50 AM	Invited
3491065	MAX Phases for Nuclear Applications	Konstantina Lambrinou	SCK-CEN	S12	Nuclear Applications of MAX Phases II	Wednesday, February 10, 2021	9:50 AM	10:20 AM	Invited
3491172	Using transmission electron microscopy with in-situ ion irradiation to study radiation swelling in MAX phase ceramics	Jonathan A Hinks	University of Huddersfield	S12	Nuclear Applications of MAX Phases III	Wednesday, February 10, 2021	10:40 AM	11:10 AM	Invited
3491187	Compatibility of MAX phases with liquid lead-bismuth eutectic (LBE) and lead (Pb)	Bensu Tunca	KU Leuven	S12	Nuclear Applications of MAX Phases III	Wednesday, February 10, 2021	11:10 AM	11:40 AM	Invited
3491206	Ta ₄ AlC ₃ -derived tantalum carbide for radioisotope production at ISOL facilities	Matteo Griseri	KU Leuven	S12	Nuclear Applications of MAX Phases III	Wednesday, February 10, 2021	11:40 AM	12:10 PM	Invited
3491849	Oxidation behaviour of MAX phase solid solutions for advanced nuclear systems	Koba Van Loo	KU Leuven	S12	Nuclear Applications of MAX Phases III	Wednesday, February 10, 2021	12:10 PM	12:40 PM	Invited
3499026	Corrosion and wear performance of Cr ₂ AlC coating on Zircaloy-4 alloys in high temperature pressurized water	Yiming Lei	Institute of Metal Research, Chinese Academy of Sciences	S12	Nuclear Applications of MAX Phases III	Wednesday, February 10, 2021	12:40 PM	1:00 PM	Contributed
3499052	MAX phase-based coatings for Zr-based alloy and high-temperature oxidation behavior	Michel L Schlegel	Université Paris-Saclay, CEA	S12	Nuclear Applications of MAX Phases III	Wednesday, February 10, 2021	1:00 PM	1:30 PM	Invited
3488318	Current Status of Framatome's Revolutionary ATF Solution for Light Water Reactors: PROtect SiC	Kiran Nimishakavi	Framatome	S13	Material Technologies for Enhanced Accident Tolerance LWR Fuels and Core	Wednesday, February 10, 2021	10:40 AM	11:10 AM	Invited

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3479261	Modeling of Lifetime Distribution of SiC/SiC Composite Claddings	Jia-Liang Le	University of Minnesota	S13	Material Technologies for Enhanced Accident Tolerance LWR Fuels and Core	Wednesday, February 10, 2021	11:10 AM	11:30 AM	Contributed
3491273	Modeling Studies at MIT on the Performance of SiC-based Nuclear Fuel and Cladding Designs	Koroush Shirvan	Massachusetts Institute of Technology	S13	Material Technologies for Enhanced Accident Tolerance LWR Fuels and Core	Wednesday, February 10, 2021	11:30 AM	11:50 AM	Contributed
3490759	Modeling Fission Gas Release in UO ₂ Polycrystals Using a Coupled Phase Field/Cluster Dynamics Model	Michael R Tonks	University of Florida	S13	Material Technologies for Enhanced Accident Tolerance LWR Fuels and Core	Wednesday, February 10, 2021	11:50 AM	12:10 PM	Contributed
3499368	Radiation Tolerance of Candidate MAX Phase Ceramics for Accident-Tolerant Fuels	Trevor Parker	Texas A&M University	S13	Material Technologies for Enhanced Accident Tolerance LWR Fuels and Core	Wednesday, February 10, 2021	12:10 PM	12:30 PM	Contributed
3478780	Development of Novel Leak Detection during Flexure Test Method for Nuclear SiC/SiC Composite Tubes	Omari D Adams	University of South Carolina	S13	Test Methods, Codes and Standards, and Design Methodology	Wednesday, February 10, 2021	1:30 PM	1:50 PM	Contributed
3477193	SiC-SiC CMCs and Graphite for Nuclear Applications: Update on Published Design and Construction Rules in the ASME BPV Code Section III, Division 5	Michael G. Jenkins	Bothell Engineering and Science Technologies	S13	Test Methods, Codes and Standards, and Design Methodology	Wednesday, February 10, 2021	1:50 PM	2:10 PM	Contributed
3478097	Compressive Strength of CMC Tubular Components in High-Temperature Reactor (HTR) Applications: ASTM Draft Standard Using Axial Loading in Compression	Michael G. Jenkins	Bothell Engineering and Science Technologies	S13	Test Methods, Codes and Standards, and Design Methodology	Wednesday, February 10, 2021	2:10 PM	2:30 PM	Contributed
3479247	Interface Properties Evaluation of SiCf/SiC Composites by Nano-indentation Technique	Omer Karakoc	Oak Ridge National Laboratory	S13	Test Methods, Codes and Standards, and Design Methodology	Wednesday, February 10, 2021	2:30 PM	2:50 PM	Contributed
3483958	In situ high temperature X-ray tomography of SiC/SiC composites under C-ring compression test	Guanjie Yuan	University of Bristol	S13	Advanced Characterization Techniques and Methods	Wednesday, February 10, 2021	3:00 PM	3:20 PM	Contributed
3480681	Multi-scale x-ray scattering investigation of nuclear graphite	David Sproutster	Stony Brook University	S13	Advanced Characterization Techniques and Methods	Wednesday, February 10, 2021	3:20 PM	3:40 PM	Contributed
3473731	Characterisation of local residual stresses and micromechanical properties in TRISO coatings	Alexander Leide	University of Bristol	S13	Advanced Characterization Techniques and Methods	Wednesday, February 10, 2021	3:40 PM	4:00 PM	Contributed
3514621	Detection of grain reorientation with in-situ energy-resolved neutron radiography	Thomas Zillhardt	University of Oxford	S13	Advanced Characterization Techniques and Methods	Wednesday, February 10, 2021	4:00 PM	4:20 PM	Contributed
3488070	Fabrication and Characterization of Nanomaterial-based Sensor Devices using Metal Organic Solution Printing Method	Tohru Sugahara	Osaka University	S14	Electric and Piezoelectric Materials I	Wednesday, February 10, 2021	9:20 AM	9:50 AM	Invited

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3490652	Study of electron transfer paths that contribute to photocatalytic activity	Masami Nishikawa	Nagaoka University of Technology	S14	Electric and Piezoelectric Materials I	Wednesday, February 10, 2021	9:50 AM	10:20 AM	Invited
3491275	Construction of resource-recycling manufacturing using advanced coating technology	Tetsuo Tsuchiya	National Institute of Advanced Industrial Science and Technology (AIST)	S14	Electric and Piezoelectric Materials II	Wednesday, February 10, 2021	10:40 AM	11:10 AM	Invited
3485003	Secondary phases in zinc oxide ceramics: The role of dopants for crystal chemistry and properties	Ulf Betke	Otto-von-Guericke-University Magdeburg	S14	Electric and Piezoelectric Materials II	Wednesday, February 10, 2021	11:40 AM	12:00 PM	Contributed
3487599	Ultra-Long Cycle Life and Binder-free Manganese-Cobalt Oxides Supercapacitor Electrodes Through Photonic Nanostructuring	Douglas B. Chrisey	Tulane University	S14	Electric and Piezoelectric Materials II	Wednesday, February 10, 2021	12:00 PM	12:30 PM	Invited
3476525	Strength measurement of BaTiO ₃ single crystal using microcantilever specimens	Junichi Tatami	Yokohama National University	S14	Electric and Piezoelectric Materials III	Wednesday, February 10, 2021	1:30 PM	1:50 PM	Contributed
3503353	Polyol-based synthesis of well crystalline PZT nanoparticles	Abolghasem Nourmohammadi Abadchi	University of Isfahan	S14	Electric and Piezoelectric Materials III	Wednesday, February 10, 2021	1:50 PM	2:10 PM	Contributed
3503372	A new insight into the crystallization of tetragonal PbTiO ₃ nanoparticles	Abolghasem Nourmohammadi Abadchi	University of Isfahan	S14	Electric and Piezoelectric Materials III	Wednesday, February 10, 2021	2:10 PM	2:30 PM	Contributed
3489925	Radiation response properties of rare-earth ion doped tellurite glasses	Naoki Kawano	Akita University	S14	Optical Material I	Wednesday, February 10, 2021	2:40 PM	3:10 PM	Invited
3491431	Nanocrystallization of fluoroborate glasses and their structure, photoluminescence, and scintillation properties	Kenji Shinozaki	AIST	S14	Optical Material I	Wednesday, February 10, 2021	3:10 PM	3:40 PM	Invited
3475732	Lu-based Transparent Sesquioxide Ceramic Scintillators	Yimin Wang	Radiation Monitoring Devices, Inc.	S14	Optical Material I	Wednesday, February 10, 2021	3:40 PM	4:00 PM	Contributed
3499186	Scalable Additive Manufacturing of SOERs	Matthew Dawson	Utility Global	S15	Direct Writing and Ink Jet Printing I	Wednesday, February 10, 2021	9:20 AM	9:50 AM	Invited
3502073	Additive Manufacturing (AM) of Polymer-derived Ceramic Composites by Extrusion in a Thixotropic Bath	Majid Minary	University of Texas at Dallas	S15	Direct Writing and Ink Jet Printing I	Wednesday, February 10, 2021	9:50 AM	10:20 AM	Invited
3491535	Synthesis of nanocomposite particles and colloidal additive manufacturing for SOFC	Hiroya Abe	Osaka University	S15	Direct Writing and Ink Jet Printing II	Wednesday, February 10, 2021	10:40 AM	11:10 AM	Invited

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3483982	Direct Ink Writing of zeolitic adsorbent monoliths with hierarchical porosity	Marco D'Agostini	University of Padova	S15	Direct Writing and Ink Jet Printing II	Wednesday, February 10, 2021	11:10 AM	11:30 AM	Contributed
3488569	Pathways to Additively Manufacture Ultra-High Temperature Ceramic Composites	James William Kemp	University of Tennessee	S15	Direct Writing and Ink Jet Printing II	Wednesday, February 10, 2021	11:30 AM	11:50 AM	Contributed
3479240	Direct Writing and Cure Depth of Photocurable Materials	Satya Sweta Kondapalli	Rutgers University	S15	Direct Writing and Ink Jet Printing II	Wednesday, February 10, 2021	11:50 AM	12:10 PM	Contributed
3479044	Ceramic On-Demand Extrusion (CODE) of Zirconium Diboride	Austin J. Martin	Missouri University of Science & Technology	S15	Direct Writing and Ink Jet Printing II	Wednesday, February 10, 2021	12:10 PM	12:30 PM	Contributed
3482724	Hybrid Ceramic Additive Manufacturing	Kenna Ritter	3DCeram Sinto Inc	S15	Multi-Material and Hybrid Printing I	Wednesday, February 10, 2021	1:30 PM	2:00 PM	Invited
3480504	Hybrid additive manufacturing for the fabrication of free-form ceramic components	Anna De Marzi	Università degli Studi di Padova	S15	Multi-Material and Hybrid Printing I	Wednesday, February 10, 2021	2:00 PM	2:20 PM	Contributed
3485127	Manufacturing of ceramic components with internal channels by a novel additive/subtractive hybridization process	Giorgia Franchin	University of Padova	S15	Multi-Material and Hybrid Printing I	Wednesday, February 10, 2021	2:20 PM	2:40 PM	Contributed
3483947	Multi-material ceramic components by lithography-based additive manufacturing	Martin Schwentenwein	Lithoz GmbH	S15	Multi-Material and Hybrid Printing I	Wednesday, February 10, 2021	2:40 PM	3:00 PM	Contributed
3491595	Additive manufacturing (AM) of ceramic-based Functionally Graded Materials (FGM)	Uwe Scheithauer	Fraunhofer IKTS	S15	Multi-Material and Hybrid Printing I	Wednesday, February 10, 2021	3:00 PM	3:20 PM	Contributed
3477130	Integrating polymer derived ceramics with fused filament fabrication 3-D printing	Apoorv Kulkarni	University of Trento	S15	Multi-Material and Hybrid Printing I	Wednesday, February 10, 2021	3:20 PM	3:40 PM	Contributed
3502942	3D structures of Si (B) C polymer derived ceramics by fused deposition modeling	Ghenwa El Chawich	European Membrane Institute	S15	Multi-Material and Hybrid Printing I	Wednesday, February 10, 2021	3:40 PM	4:00 PM	Contributed
3501285	Influence of precursors to acid-based geopolymer properties	Sylvie Rossignol	IRCER	S16	Phosphates and Laterite Materials I	Wednesday, February 10, 2021	9:20 AM	9:50 AM	Invited
3503318	Geopolymers, Inorganic Polymers and Sustainable Materials	Mary Bosede Ogundiran	University of Ibadan	S16	Phosphates and Laterite Materials I	Wednesday, February 10, 2021	9:50 AM	10:20 AM	Invited
3483642	Slip Casting of Silt from Philippine Nickel Laterite Ore for Thick Tile Production	Ivyleen Constantino Bernardo-Arugay	MINDANAO STATE UNIVERSITY - Iligan Institute of Technology	S16	Phosphates and Laterite Materials II	Wednesday, February 10, 2021	10:40 AM	11:00 AM	Contributed
3503259	Calcium phosphate cement composites for structural and waste stabilization	Henry A. Colorado L.	Universidad de Antioquia	S16	Phosphates and Laterite Materials II	Wednesday, February 10, 2021	11:00 AM	11:30 AM	Invited

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3503075	Characterization of Lateritic Soil Geopolymer Composites for Engineering Construction Applications	Ruy Alexandre Sa Ribeiro	INPA-National Institute for Amazonian Research	S16	Phosphates and Laterite Materials II	Wednesday, February 10, 2021	11:30 AM	12:00 PM	Invited
3479170	Ferrisilicates formation during the geopolymerization of laterites: Impact on some structural and functional applications	Elie Kamseu	MIPROMALO	S16	Phosphates and Laterite Materials II	Wednesday, February 10, 2021	12:00 PM	12:30 PM	Invited
3518657	Shockwave Reactors for the Production of Cement with Low-CO2 Emissions	Jannie Van Deventer	Zeobond Group	S16	Alkali Activated Cementitious Materials	Wednesday, February 10, 2021	1:30 PM	2:00 PM	Invited
3518427	The effect of amorphous contributions in ancient and fresh lime-sand bricks, alkali-activated slags and CEM pastes and concretes	Claus Rüscher	Leibniz University Hannover	S16	Alkali Activated Cementitious Materials	Wednesday, February 10, 2021	2:00 PM	2:30 PM	Invited
3503204	The influence of calcium on the pore structure of sustainable cement	Claire E White	Princeton University	S16	Alkali Activated Cementitious Materials	Wednesday, February 10, 2021	2:30 PM	3:00 PM	Invited
3484751	ANN- Artificial neural networks and conventional mathematical approach (MLR) applied to the investigation of chemical stability of pyroclastic deposits-based AAMs	Marcello Romagnoli	University of Modena and Reggio Emilia	S16	Alkali Activated Cementitious Materials	Wednesday, February 10, 2021	3:30 PM	4:00 PM	Invited
3503476	Progress in the Development of 1D Semiconducting Ceramics for Photoelectrochemical Water Oxidation	Oomman K Varghese	University of Houston	S17	Energy & Environment I	Wednesday, February 10, 2021	9:20 AM	9:50 AM	Invited
3479205	Flexible Supercapacitors Enabled by Surface-Fucntionalized 2D "White Graphene"	Hadis Zarrin	Ryerson Univeristy	S17	Energy & Environment I	Wednesday, February 10, 2021	9:50 AM	10:20 AM	Invited
3499304	Nanostructured Ce-Ti mixed oxides as efficient photocatalysts for energy and environmental applications	Elisa Moretti	Ca' Foscari University of Venice	S17	Energy & Environment I	Wednesday, February 10, 2021	10:40 AM	11:10 AM	Invited
3477236	Strategies to boost the performance of catalysts in Water splitting: 2D layered materials and transition metal phosphides	Tofik Ahmed Shifa	Luleå University of Technology	S17	Energy & Environment I	Wednesday, February 10, 2021	11:10 AM	11:40 AM	Invited
3478555	Carbon Nanomaterials in Clean Energy Applications	Rafik Naccache	Concordia University	S17	Energy & Environment I	Wednesday, February 10, 2021	11:40 AM	12:10 PM	Invited
3479252	Effective chalcogenide/phosphide composite catalyst for water splitting	Daniel Chua	National University of Singapore	S17	Energy & Environment II	Wednesday, February 10, 2021	2:00 PM	2:30 PM	Invited

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3484702	Key roles of point defects and nm-scale synthesis in 2-D transition metal oxides	Scott T Misture	Alfred University	S17	Energy & Environment II	Wednesday, February 10, 2021	2:30 PM	3:00 PM	Invited
3498976	Ferroelectric epitaxial oxides towards flexible photovoltaics	Mariona Coll	ICMAB-CSIC	S17	Energy & Environment II	Wednesday, February 10, 2021	3:00 PM	3:30 PM	Invited
3491204	Microstructure and mechanical properties of ZrB ₂ /SiC based UHTCMCs for brakes applications	Matteo Mor	ISTEC-CNR	S18	UHTCs: Processing-Microstructure-Property Relationship II	Wednesday, February 10, 2021	9:20 AM	9:40 AM	Contributed
3486846	Effect of group IIIb rare earth oxides on the microstructure and thermo-mechanical properties of carbon fibre reinforced ZrB ₂ /SiC composites	Antonio Vinci	ISTEC-CNR	S18	UHTCs: Processing-Microstructure-Property Relationship II	Wednesday, February 10, 2021	9:40 AM	10:00 AM	Contributed
3479368	Characterization and Weldability of Refractory Metal-Ceramic Joints	Jecee Jarman	Missouri University of Science & Technology	S18	UHTCs: Processing-Microstructure-Property Relationship II	Wednesday, February 10, 2021	10:00 AM	10:20 AM	Contributed
3476797	Effect of oxygen impurities on the stability of vacancy-ordered ZrCx	Theresa Davey	Tohoku University	S18	UHTCs: Simulation and Theory	Wednesday, February 10, 2021	10:40 AM	11:00 AM	Contributed
3479141	Thermal Properties of Zirconium Carbide Ceramics with different concentrations of carbon vacancies, hafnium, and oxygen	Yue Zhou	Missouri University of Science & Technology	S18	UHTCs: Simulation and Theory	Wednesday, February 10, 2021	11:00 AM	11:20 AM	Contributed
3491927	EAM and RF-MEAM potentials for thermal properties of zirconium diboride	Bikash Timalina	Missouri State University	S18	UHTCs: Simulation and Theory	Wednesday, February 10, 2021	11:20 AM	11:40 AM	Contributed
3503291	Multiscale Modeling of Mass Transport in Transition Metal Carbides	Christopher R. Weinberger	Colorado State University	S18	UHTCs: Simulation and Theory	Wednesday, February 10, 2021	11:40 AM	12:00 PM	Contributed
3504005	Transport properties of binary and entropy-stabilized diborides	Alin Babu Niraula	Missouri State University	S18	UHTCs: Simulation and Theory	Wednesday, February 10, 2021	12:00 PM	12:20 PM	Contributed
3489645	Tuning the combustion process during reactive sintering of high-performance Ultra-high Temperature ceramics by employing solid solutions as reactants	Ji Zou	Wuhan University of Technology	S18	UHTCs: Synthesis and Processing	Wednesday, February 10, 2021	1:30 PM	2:00 PM	Invited
3478744	Coatings of zirconium-based non-oxides and composites by laser chemical vapor deposition	Hirokazu Katsui	National Institute of Advanced Industrial Science and Technology (AIST)	S18	UHTCs: Synthesis and Processing	Wednesday, February 10, 2021	2:00 PM	2:30 PM	Invited
3503448	Development and Evaluation of Carbon Fiber Coatings for Ultra High Temperature Ceramic Matrix Composites (UHTCMCs)	Amber Powell	Air Force Research Lab	S18	UHTCs: Synthesis and Processing	Wednesday, February 10, 2021	2:30 PM	2:50 PM	Contributed

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3469323	Additive Manufacturing of Hybrid Silicon Carbide/Carbon Fiber Nanocomposites	Saja M. Nabat Al-ajrash	University of Dayton	S18	UHTCs: Synthesis and Processing	Wednesday, February 10, 2021	2:50 PM	3:10 PM	Contributed
3465574	Joining Similar and Dissimilar Ultra-High Temperature Ceramics by Spark Plasma Sintering	Ambreen Nisar	Florida International University	S18	UHTCs: Synthesis and Processing	Wednesday, February 10, 2021	3:10 PM	3:30 PM	Contributed
3490677	Development of UHTCMCs via Water-based Powder Slurry Infiltration and Polymer Infiltration and Pyrolysis for Extreme Environments	Francesca Servadei	ISTEC-CNR	S18	UHTCs: Synthesis and Processing	Wednesday, February 10, 2021	3:30 PM	3:50 PM	Contributed

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CONTROL ID	PRESENTATION TITLE	PRESENTER	PRESENTER INSTITUTION	TRACK	VIRTUAL SESSION TITLE	DATE	START TIME	END TIME	PRESENTATION TYPE
3515033	Role of Defect and Reduced Graphene Oxide for Charge and Phonon Transport Engineering in Oxides	Soonil Lee	Changwon National University	FS2	Oxide Thermoelectrics I	Thursday, February 11, 2021	8:30 AM	9:00 AM	Invited
3491994	Thermoelectric Properties of Amorphous ZnOxNy Thin Films Fabricated at Room Temperature	Yasushi Hirose	The University of Tokyo	FS2	Oxide Thermoelectrics I	Thursday, February 11, 2021	9:00 AM	9:30 AM	Invited
3491625	Spark Plasma Sintering contribution to the development of efficient thermoelectric	Fabien Giovannelli	University of Tours	FS2	Oxide Thermoelectrics I	Thursday, February 11, 2021	9:30 AM	10:00 AM	Invited
3491714	Microstructural aspects affecting the performance of thermoelectric oxides: Selected examples	Andrei Kovalevsky	CICECO, University of Aveiro	FS2	Oxide Thermoelectrics II	Thursday, February 11, 2021	10:40 AM	11:10 AM	Invited
3491630	Enhanced Charge Transport in Ca ₂ MnO ₄ Layered Perovskites by Point Defect Engineering	Yaron Amouyal	Technion - Israel Institute of Technology	FS2	Oxide Thermoelectrics II	Thursday, February 11, 2021	11:10 AM	11:40 AM	Invited
3486752	Combination of Ca ₃ Co ₄ O ₉ with anisotropic oxides in thermoelectric composite ceramics	Richard Hinterding	Leibniz University Hannover	FS2	Oxide Thermoelectrics II	Thursday, February 11, 2021	11:40 AM	12:00 PM	Contributed
3502247	Flexible composite design strategies to effectively enhance thermoelectric powerfactor	Jaeyun Moon	University of Nevada, Las Vegas	FS2	Advanced Manufacturing Technologies for Thermoelectric Devices and Modules	Thursday, February 11, 2021	1:30 PM	2:00 PM	Invited
3501243	Time-enhanced performance of oxide thermoelectric module based on hybrid p-n junction	Mari-Ann Einarsrud	NTNU Norwegian University of Science and Technology	FS2	Advanced Manufacturing Technologies for Thermoelectric Devices and Modules	Thursday, February 11, 2021	2:00 PM	2:30 PM	Invited
3491195	Material development for oxide multilayer generators	Sophie Bresch	BAM Federal Institute for Materials Research and Testing	FS2	Advanced Manufacturing Technologies for Thermoelectric Devices and Modules	Thursday, February 11, 2021	2:30 PM	2:50 PM	Contributed
3491292	Fine-grained CaMnO ₃ -based ceramics for transverse multilayer TEG	Romy Loehnert	Ernst-Abbe-Hochschule Jena	FS2	Advanced Manufacturing Technologies for Thermoelectric Devices and Modules	Thursday, February 11, 2021	2:50 PM	3:10 PM	Contributed
3486778	Combining Spray-Coating and Laser Structuring: A New Approach for Processing of Thermoelectric Generators	Mario Wolf	Institute of Physical Chemistry and Electrochemistry, Leibniz University Hannover	FS2	Advanced Manufacturing Technologies for Thermoelectric Devices and Modules	Thursday, February 11, 2021	3:10 PM	3:30 PM	Contributed
3479096	Polymer-derived ternary SiCH inorganic-organic hybrid membranes for purification of solar hydrogen	Yuji Iwamoto	Nagoya Institute of Technology	FS3	Solution Processing of Functional Nanoceramics I	Thursday, February 11, 2021	9:00 AM	9:30 AM	Invited

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3503256	Preparation of Surface-Modified Metal Oxide Nanosheets from Layered Metal Oxides	Yoshiyuki Sugahara	Waseda University	FS3	Solution Processing of Functional Nanoceramics I	Thursday, February 11, 2021	9:30 AM	10:00 AM	Invited
3485215	Ceramic Nanocomposites via Bioinspired, Metal-Coordinating Preceramic Polymers	Matthew B. Dickerson	Air Force Research Laboratory	FS3	Solution Processing of Functional Nanoceramics I	Thursday, February 11, 2021	10:00 AM	10:20 AM	Contributed
3490944	Electrically conductive SiOC and TiC-SiOC nanocomposites via flash pyrolysis	Kathy Lu	Virginia Tech	FS3	Solution Processing of Functional Nanoceramics II	Thursday, February 11, 2021	10:40 AM	11:10 AM	Invited
3484795	Micro-Mesoporous carbide derived carbon as electrodes in sweat-based supercapacitors for electronic textiles	Aitana Tamayo	Institute of Ceramics and Glass, CSIC	FS3	Solution Processing of Functional Nanoceramics II	Thursday, February 11, 2021	11:10 AM	11:40 AM	Invited
3484727	Large specific surface area in highly crystalline SiC from templated polymeric precursors	Julien Cambedouzou	IEM	FS3	Solution Processing of Functional Nanoceramics II	Thursday, February 11, 2021	11:40 AM	12:10 PM	Invited
3478108	Silicon nitride-based catalysts derived from preceramic polymers for clean energy	Samuel Bernard	CNRS	FS3	Precursor-Based Ceramics for Energy-Related Applications	Thursday, February 11, 2021	1:30 PM	2:10 PM	Keynote
3485041	Ceramic fibers, functional coatings and catalytically active ceramics based on tailored commercial oligosilazanes	Günter Motz	University of Bayreuth	FS3	Precursor-Based Ceramics for Energy-Related Applications	Thursday, February 11, 2021	2:10 PM	2:40 PM	Invited
3479398	Silicide-Containing Polymer-Derived Ceramic Nanocomposites – Single-Source-Precursor Synthesis, Structure and Properties	Emanuel Ionescu	Technical University Darmstadt	FS3	Precursor-Based Ceramics for Energy-Related Applications	Thursday, February 11, 2021	2:40 PM	3:00 PM	Contributed
3477575	Analysis of Nonlinear Mechanical Behavior in Fiber Reinforced Laminated Composites	Shinji Ogihara	Tokyo University of Science	FS4	Analysis and Characterization	Thursday, February 11, 2021	9:00 AM	9:30 AM	Invited
3502441	Improvement in thermal conductivity of epoxy composite by loading with β -Si ₃ N ₄ filler	Akihiro Shimamura	National Institute of Advanced Industrial Science and Technology (AIST)	FS4	Analysis and Characterization	Thursday, February 11, 2021	9:30 AM	10:00 AM	Invited
3477832	Wave propagation analysis of two-dimensional composite lattice structure by FEM using the periodicity	Yoshimasa Iwata	The University of Tokyo	FS4	Analysis and Characterization	Thursday, February 11, 2021	10:00 AM	10:20 AM	Contributed
3509126	The effects of carbon nanofiber on the properties of carbon fiber reinforced plastics	Toshihira Irisawa	Nagoya University	FS4	Nanocomposites and New Application	Thursday, February 11, 2021	10:40 AM	11:10 AM	Invited

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3479095	Mechanical Performance of Ceramic Nanostructures and Nanocomposites through In Situ SEM and MD Simulations	Tulsi Patel	AFRL	FS4	Nanocomposites and New Application	Thursday, February 11, 2021	11:10 AM	11:30 AM	Contributed
3479187	Optimized design of novel airframe structure based on Voronoi tessellation using Genetic Algorithm	Kenji Asakawa	Tokyo university of Agriculture and Technology	FS4	Nanocomposites and New Application	Thursday, February 11, 2021	11:30 AM	11:50 AM	Contributed
3485488	Microstructural Effects on Residual Stress Measured by Photoluminescence Spectroscopy in Glass-to-Metal Seals	Noah Weyrauch	Sandia National Laboratories	S1	Mechanical Characterization Methods II	Thursday, February 11, 2021	9:20 AM	9:40 AM	Contributed
3491412	Biaxial Flexural Strength Testing of Ceramics	Adrianna Elizabeth Lupercio	Boise State University	S1	Mechanical Characterization Methods II	Thursday, February 11, 2021	9:40 AM	10:00 AM	Contributed
3501428	The B3B-Test: Comparison with other Biaxial Strength Tests for Ceramics	Maximilian Staudacher	Montanuniversitaet Leoben	S1	Mechanical Characterization Methods II	Thursday, February 11, 2021	10:00 AM	10:20 AM	Contributed
3491580	A Redox-Robust Ceramic Anode-Supported Low-Temperature Solid Oxide Fuel Cell	Eric D. Wachsman	University of Maryland	S3	Electrode Materials: Fuel / Steam Electrode	Thursday, February 11, 2021	9:00 AM	9:30 AM	Invited
3490987	Redox-Stable, High-Performance Ceramic anode for SOFCs	Xingbo Liu	West Virginia University	S3	Electrode Materials: Fuel / Steam Electrode	Thursday, February 11, 2021	9:30 AM	10:00 AM	Invited
3513238	Quantifying the Role of Nanoparticle Infiltrants in the Catalytic Activity of Solid Oxide Fuel Cell Anodes Using Quantitative Microstructural Characterization and Distribution of Relaxation Times Analysis	Jillian Rix	Boston University	S3	Electrode Materials: Fuel / Steam Electrode	Thursday, February 11, 2021	10:00 AM	10:20 AM	Contributed
3490586	Degradation phenomena at heterointerfaces of solid oxide fuel cells	Katherine Develos-Bagarinao	National Institute of Advanced Industrial Science and Technology (AIST)	S3	Surfaces and Interfaces	Thursday, February 11, 2021	10:30 AM	11:00 AM	Invited
3490748	Degradation mechanisms of solid oxide cell air electrodes: The role of cation segregation and contaminants	Edith Bucher	Montanuniversitaet Leoben	S3	Surfaces and Interfaces	Thursday, February 11, 2021	11:00 AM	11:30 AM	Invited
3484708	Effects of current density and H ₂ /H ₂ O ratio on the electrolytic performance of anode-supported and metal-supported solid oxide electrolysis cell stacks	Chien-Kuo Liu	Institute of Nuclear Energy Research	S3	Surfaces and Interfaces	Thursday, February 11, 2021	11:30 AM	11:50 AM	Contributed

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3490674	Nano CeO ₂ into NiO-YSZ Tubular Substrate for Solid Oxide Reversible Cell Using LSGM Film	Tatsumi Ishihara	Kyushu University	S3	Surfaces and Interfaces	Thursday, February 11, 2021	11:50 AM	12:10 PM	Contributed
3484986	Low Temperature Metal-Supported Solid Oxide Fuel Cell Fabricated by Atmospheric Plasma Spraying	Chun-Liang Chang	Institute of Nuclear Energy Research	S3	Surfaces and Interfaces	Thursday, February 11, 2021	12:10 PM	12:30 PM	Contributed
3492044	Ensuring durability of the SOC technology	Henrik Lund Frandsen	Technical University of Denmark	S3	Predictive Simulation	Thursday, February 11, 2021	1:30 PM	2:00 PM	Invited
3499129	Predictive Degradation Modelling of Solid Oxide Fuel Cells	Andre Weber	Karlsruhe Institute of Technology (KIT)	S3	Predictive Simulation	Thursday, February 11, 2021	2:00 PM	2:20 PM	Contributed
3484672	Stack-Scale Modeling of Degradation of Solid Oxide Fuel Cell	Omid Babaie Rizvandi	Technical University of Denmark (DTU)	S3	Predictive Simulation	Thursday, February 11, 2021	2:20 PM	2:40 PM	Contributed
3485288	Experimental and computational investigations of the multiple impurities effect on the SOFC cathode materials	Yu (Michael) Zhong	Worcester Polytechnic Institute	S3	Predictive Simulation	Thursday, February 11, 2021	2:40 PM	3:00 PM	Contributed
3493066	Performances and Durability of Solid Oxide Cells: a coupled modelling and experimental approach	Maxime Hubert	CEA	S3	Predictive Simulation	Thursday, February 11, 2021	3:00 PM	3:30 PM	Invited
3485004	Modelling of local mechanical failures in solid oxide cell stacks	Xing-Yuan Miao	Technical University of Denmark	S3	Predictive Simulation	Thursday, February 11, 2021	3:30 PM	3:50 PM	Contributed
3485263	Computationally guided investigations on LSM/YSZ Triple-phase boundaries	Rui Wang	Worcester Polytechnic Institute	S3	Predictive Simulation	Thursday, February 11, 2021	3:50 PM	4:10 PM	Contributed
3503146	Infiltration of SOFC Cathodes: Experimental and Numerical Approaches	Harry Abernathy	National Energy Technology Laboratory	S3	Air Electrode Materials	Thursday, February 11, 2021	1:30 PM	2:00 PM	Invited
3491499	Enhancement of solid oxide oxygen electrodes under pressurization: The role of PrOx nanoparticle infiltration	Jerren Grimes	Northwestern University	S3	Air Electrode Materials	Thursday, February 11, 2021	2:00 PM	2:20 PM	Contributed
3479304	Phase Evolution and Thermochemical Stability of High Surface Area LSCF Prepared via In Situ Carbon Templating	Sixbert Picard Muhoza	Wake Forest University	S3	Air Electrode Materials	Thursday, February 11, 2021	2:20 PM	2:40 PM	Contributed
3490510	Electrochemical Behaviors of Bilayer Oxygen Electrode	Kevin Huang	University of South Carolina	S3	Air Electrode Materials	Thursday, February 11, 2021	2:40 PM	3:00 PM	Contributed
3482572	Effects of Oxidizing Processes on ALD Coated Solid Oxide Fuel Cell Cathodes	Yevgeniy Ostrovskiy	University of Maryland	S3	Air Electrode Materials	Thursday, February 11, 2021	3:00 PM	3:20 PM	Contributed
3491523	Fundamental material properties of the strontium-free SOC air electrode material La ₂ Ni _{0.9} Co _{0.1} O _{4+δ}	Sarah Eisbacher-Lubensky	Montanuniversitaet Leoben	S3	Air Electrode Materials	Thursday, February 11, 2021	3:20 PM	3:40 PM	Contributed

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3491740	Synthesis, sintering and electronic conductivity of Medium entropy perovskite oxides for SOFC application	Sai Ram Gajjala	Southern Illinois University Carbondale	S3	Air Electrode Materials	Thursday, February 11, 2021	3:40 PM	4:00 PM	Contributed
3502489	Analysis and optimization for Li conductive NASICON-type LiZr ₂ (PO ₃) ₄ solid electrolytes	Masanobu Nakayama	Nagoya Institute of Technology	S6	Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries II	Thursday, February 11, 2021	8:30 AM	9:00 AM	Invited
3503377	Electrochemical Performance of Engineered Porosity Li ion Battery Cathodes: An Experimental and Computational Investigation	Rajendra Bordia	Clemson University	S6	Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries II	Thursday, February 11, 2021	9:00 AM	9:30 AM	Invited
3503952	Towards High Energy Density Batteries: Ultrathick Electrodes with controlled Architectures by Spark Plasma Sintering and Hard Templating Approach	Arina Nadeina	UPJV (LRCS)	S6	Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries II	Thursday, February 11, 2021	9:30 AM	10:00 AM	Invited
3503081	Controlling mechanical stresses in cathode materials of lithium ion batteries	Robert Muecke	Forschungszentrum Juelich	S6	Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries II	Thursday, February 11, 2021	10:00 AM	10:20 AM	Contributed
3481346	The ubiquitous occurrence of oxygen redox in battery cathodes	Daniel Koch	National University of Singapore	S6	Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries II	Thursday, February 11, 2021	10:20 AM	10:40 AM	Contributed
3503363	Cryptomelane (K _{1.33} Mn ₈ O ₁₆): An Earth Abundant Cathode for Rechargeable Aqueous Zn-ion Battery	Krishnakanth Sada	Indian Institute of Science	S6	Materials Design, Screening, and Electrode Architectures for Li, K and Oxygen Redox Batteries II	Thursday, February 11, 2021	10:40 AM	11:00 AM	Contributed
3467473	Importance of Fermi level control in photochemical reaction and solar energy conversion efficiency of semiconductors: A theoretical study	Heechae Choi	University of Cologne	S11	Sustainable Energy Concepts and Applications	Thursday, February 11, 2021	9:00 AM	9:20 AM	Contributed
3491893	Advanced Recycling Technology of Used Li-ion Batteries using Li Separation Method by Ionic Conductor; LiSMIC	Tsuyoshi Hoshino	National Institutes for Quantum and Radiological Science and Technology (QST)	S11	Sustainable Energy Concepts and Applications	Thursday, February 11, 2021	9:20 AM	9:50 AM	Invited
3478530	Er-doped (Pb, Ba, La)(Zr, Sn, Ti)O ₃ lead based pyroelectric materials for low-grade waste heat harvesting	Ngo Nguyen Chi Trung	Nagaoka University of Technology	S11	Sustainable Energy Concepts and Applications	Thursday, February 11, 2021	9:50 AM	10:10 AM	Contributed
3478516	Investigation of pyroelectric power generation by external environment such as frequency and temperature difference using PLZST	Hironari Sugiyama	Nagaoka University of Technology	S11	Sustainable Energy Concepts and Applications	Thursday, February 11, 2021	10:10 AM	10:30 AM	Contributed

3489621	2D Carbides and Nitrides (MXenes) in High-Tech Applications	Yury Gogotsi	Drexel University	S12	Design and Characterization of Mxenes for Functional Application I	Thursday, February 11, 2021	9:00 AM	9:40 AM	Keynote
3503447	Effect of Pre-Intercalation on the Electrochemical Performance of Multi-Layer MXene Electrodes in Electrochemical Energy Storage Systems	Michael Naguib	Tulane University	S12	Design and Characterization of Mxenes for Functional Application I	Thursday, February 11, 2021	9:40 AM	10:10 AM	Invited
3485540	Synthesis of two-dimensional carbide Mo ₂ CTx MXene by hydrothermal etching with fluorides and its thermal stability	Aiguo Zhou	Henan Polytechnic University	S12	Design and Characterization of Mxenes for Functional Application II	Thursday, February 11, 2021	10:40 AM	11:10 AM	Invited
3479139	Core-Shell Mechanism of Etching V ₂ AIC MAX Phase to V ₂ CTx MXenes	Vrushali Kotasthane	Texas A&M University	S12	Design and Characterization of Mxenes for Functional Application II	Thursday, February 11, 2021	11:10 AM	11:30 AM	Contributed
3490803	2D Ti ₃ C ₂ Tz MXene synthesized by water-free etching of Ti ₃ AIC ₂ in polar organic solvents	Varun Natu	Drexel University	S12	Design and Characterization of Mxenes for Functional Application II	Thursday, February 11, 2021	11:30 AM	11:50 AM	Contributed
3485071	Different strategies for supporting Pd on MAX phases - efficient catalysts in chemoselective hydrogenation reactions	Maria-Iuliana Chirica	National Institute of Materials Physics	S12	Design and Characterization of Mxenes for Functional Application II	Thursday, February 11, 2021	11:50 AM	12:10 PM	Contributed
3500855	Recent Advances in NRL Optical Ceramics	Shyam Bayya	US Naval Research Laboratory	S14	Optical Material II	Thursday, February 11, 2021	9:00 AM	9:30 AM	Invited
3476443	Study on Tool Motion during Magnetic Field-Assisted Finishing on Fused Silica Laser Optics	Julian T Long	University of Florida	S14	Optical Material II	Thursday, February 11, 2021	9:30 AM	9:50 AM	Contributed
3485036	Transparent ceramics for photonic applications fabricated by high-pressure spark plasma sintering	Barak Ratzker	Ben-Gurion University of the Negev	S14	Optical Material II	Thursday, February 11, 2021	9:50 AM	10:10 AM	Contributed
3501749	Effect of Y ₂ O ₃ Concentration on Thermal and Mechanical Properties of Bulk Nanocrystalline YSZ	Kevin Anderson	US Naval Research Laboratory	S14	Optical Material III	Thursday, February 11, 2021	10:40 AM	11:10 AM	Invited
3493831	Residual Scattering Centers in Magneto-optical Crystal CeF ₃	Dongsheng Yuan	National Institute for Materials Science (NIMS)	S14	Optical Material III	Thursday, February 11, 2021	11:10 AM	11:30 AM	Contributed
3484694	Controlling nonlinear interactions in solid state platform by periodical arrays of plasmonic chains	Mariola Ramirez	Universidad Autonoma de Madrid	S14	Optical Material III	Thursday, February 11, 2021	11:30 AM	12:00 PM	Invited

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3485110	Manipulating the emission of rare earth quantum emitters by plasmonic chains	Luisa E Bausa	Universidad Autonoma de Madrid	S14	Optical Material III	Thursday, February 11, 2021	12:00 PM	12:30 PM	Invited
3481174	Long Persistent Luminescence Property of SrAl ₂ O ₄ :Eu ²⁺ ,Dy ³⁺ Synthesized by the Melt Quenching Technique	Kenji Toda	Niigata University	S14	Optical Material IV	Thursday, February 11, 2021	1:30 PM	2:00 PM	Invited
3493614	Stabilization of Olivine Structure by Rapid Cooling from Molten-phase in Red-emitting NaMgPO ₄ :Eu ²⁺ Phosphor	Takuya Hasegawa	Tohoku University	S14	Optical Material IV	Thursday, February 11, 2021	2:00 PM	2:30 PM	Invited
3501077	Site-selective optical properties of double perovskite-type phosphors Sr ₂ CaWO ₆ :x(Eu ³⁺ , Na ⁺)	Takahito Otsuka	Nagoya Institute of Technology	S14	Optical Material IV	Thursday, February 11, 2021	2:30 PM	2:50 PM	Contributed
3487471	Synthesis and characterization of rare-earth doped lithium silicate phosphor via reversible CO ₂ absorption	Mizuki Watanabe	Chuo University	S14	Optical Material IV	Thursday, February 11, 2021	2:50 PM	3:10 PM	Contributed
3515400	Durability of alkali-activated materials based on carbon fly-ash	Maria Chiara Bignozzi	University of Bologna	S16	Alkali Activated Materials from Waste Materials I	Thursday, February 11, 2021	9:20 AM	9:50 AM	Invited
3478753	Microstructural and biological characterization of metakaolin-based geopolymers binders containing waste glass	Giovanni Dal Poggetto	University of Modena and Reggio Emilia	S16	Alkali Activated Materials from Waste Materials II	Thursday, February 11, 2021	10:40 AM	11:00 AM	Contributed
3503030	Sustainable Glass-based Binders from Engineered Activation and Formulation	Enrico Bernardo	University of Padova	S16	Alkali Activated Materials from Waste Materials II	Thursday, February 11, 2021	11:00 AM	11:30 AM	Invited
3520122	Strategies to produce geopolymers with superior mechanical strength from coal-fired fly ash	Sujeong Lee	Korea Institute of Geoscience and Mineral Resources	S16	Alkali Activated Materials from Waste Materials II	Thursday, February 11, 2021	11:30 AM	12:00 PM	Invited
3515475	Municipal Solid Waste Incineration Ashes – A Precursor for Sustainable Ceramics	Nishant Garg	University of Illinois Urbana-Champaign	S16	Alkali Activated Materials from Waste Materials II	Thursday, February 11, 2021	12:00 PM	12:30 PM	Invited
3486763	Synthesis and characterization of gold mine tailings-based geopolymer mixed with palm oil fuel ash and Ca-based activator	Einstine Opiso	Central Mindanao University	S16	Alkali Activated Materials from Waste Materials III / Waste Encapsulation / Inorganic Polymers	Thursday, February 11, 2021	1:30 PM	2:00 PM	Invited
3484719	The reactivity, chemical behaviour and environmental evaluation of different slags pre and post alkali-activation	Isabella Lancellotti	University of Modena and Reggio Emilia	S16	Alkali Activated Materials from Waste Materials III / Waste Encapsulation / Inorganic Polymers	Thursday, February 11, 2021	2:00 PM	2:30 PM	Invited

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3503314	Geopolymer Materials for Mining Waste Encapsulation	Minna Sarkkinen	Tapojärvi Oy	S16	Alkali Activated Materials from Waste Materials III / Waste Encapsulation / Inorganic Polymers	Thursday, February 11, 2021	2:30 PM	3:00 PM	Invited
3501458	Si(B)CN/ rGO composites as an electrocatalyst for Hydrogen Evolution Reaction (HER)	Quentin Hanniet	European Membrane Institute	S16	Alkali Activated Materials from Waste Materials III / Waste Encapsulation / Inorganic Polymers	Thursday, February 11, 2021	3:00 PM	3:30 PM	Contributed
3468039	3D Printing of Inorganic-Organic Hybrid Materials for Transdermal Biosensor Applications	Roger Narayan	NC State University	S17	Hybrid Composites I	Thursday, February 11, 2021	9:00 AM	9:30 AM	Invited
3479281	Silk-titanate nanosheets composites for biophotonic and plasmonic devices	Alessandro Martucci	University of Padova	S17	Hybrid Composites I	Thursday, February 11, 2021	9:30 AM	10:00 AM	Invited
3500125	Enhancement of phase stability and optoelectronic performance on (Bi,La)(Fe,Co)O ₃ thin films via cation co-substitution	Pamela Machado	Institute of Materials Science of Barcelona, ICMA-B-CSIC	S17	Hybrid Composites I	Thursday, February 11, 2021	10:00 AM	10:20 AM	Contributed
3478401	Formation of Nanostructured Graphene Oxide during the Synthesis of Metal Chalcogenide Nanocrystals	Christine Luscombe	University of Washington	S17	Hybrid Composites II	Thursday, February 11, 2021	10:40 AM	11:10 AM	Invited
3479349	Understanding Dynamic Disorder in Organic Crystals	Emanuele Orgiu	Institut National de la Recherche Scientifique (INRS)	S17	Hybrid Composites II	Thursday, February 11, 2021	11:10 AM	11:40 AM	Invited
3479049	Sensing properties of geopolymer based on their composition	Claudiane M Ouellet-Plamondon	Ecole de Technologie Supérieure	S17	Hybrid Composites II	Thursday, February 11, 2021	11:40 AM	12:10 PM	Invited
3479307	Nanomaterials and alternative binders for self-sensing cements and structural health monitoring	Michael John Di Mare	Ecole de Technologie Supérieure	S17	Hybrid Composites II	Thursday, February 11, 2021	12:10 PM	12:30 PM	Contributed
3503454	Rare Earth Doped Nanoparticles with Controlled Architecture	Fiorenzo Vetrone	Institut National de la Recherche Scientifique, Université du Québec	S17	Multifunctional Materials	Thursday, February 11, 2021	1:30 PM	2:00 PM	Invited
3483221	Coupling Electrochemiluminescence and Surface Plasmon Resonance: A Powerful Tool for Cancer Diagnostics	Federico Polo	Ca' Foscari University of Venice	S17	Multifunctional Materials	Thursday, February 11, 2021	2:00 PM	2:30 PM	Invited
3479335	Hybrid Colloidal Nanoparticles for Monitoring Communicable and Non-communicable Diseases	Laura Fabris	Rutgers University	S17	Multifunctional Materials	Thursday, February 11, 2021	2:30 PM	3:00 PM	Invited
3477331	Controlling size and phase of multifunctional rare-earth based nanoparticles	Eva Hemmer	University of Ottawa	S17	Multifunctional Materials	Thursday, February 11, 2021	3:00 PM	3:30 PM	Invited

3477128	Hierarchical Chemical Patterning of Amorphous Surfaces from sub-10-nm to Macroscopic Scales	Shelley A. Claridge	Purdue University	S17	Multifunctional Materials	Thursday, February 11, 2021	3:30 PM	4:00 PM	Invited
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