

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3491344	Electronic band tuning under pressure in MoTe ₂ topological semimetal	Despina Louca University of Virginia	Plenary I	Tues., Jan. 19	9:10 – 10:10 AM	Plenary Lecture
			Live Networking Session Symposium 8	Tues., Jan. 19	12:30 – 1:00 PM	
			Live Networking Session Symposium 10	Tues., Jan. 19	12:30 – 1:00 PM	
			Live Networking Session Symposium 12	Tues., Jan. 19	12:30 – 1:00 PM	
3484859	Quasi-1D Hexagonal Chalcogenides: From Giant Optical Anisotropy to Ultralow Glassy Thermal Conductivity	Jayakanth Ravichandran University of Southern California	Chalcogenide Semiconductors	Tues., Jan. 19	10:45 – 11:15 AM	Invited
3488891	Deep learning assisted quantification of atomic defects in two-dimensional TMD materials	Sang-Hyeok Yang SungKyunKwan University	Chalcogenide Semiconductors	Tues., Jan. 19	11:15 – 11:30 AM	Contributed
3490050	Stabilization of metastable TiS ₂ via alloying	Phuong Lien Nguyen Pusan National University	Chalcogenide Semiconductors	Tues., Jan. 19	11:30 – 11:45 AM	Contributed
3487445	First-principles studies of flexoelectric effect in corrugated two-dimensional materials	Yeongrok Jin Pusan National University	Chalcogenide Semiconductors	Tues., Jan. 19	11:45 AM– 12:00 PM	Contributed
3490608	Origins of giant optical anisotropy in quasi-one-dimensional transition metal chalcogenides	Guodong Ren Washington University in St.Louis	Chalcogenide Semiconductors	Tues., Jan. 19	12:00 – 12:15 PM	Contributed
3488798	Epitaxial Growth of BaZrS ₃ and BaTiS ₃ thin films by Pulsed Laser Deposition	Mythili Surendran University of Southern California	Chalcogenide Semiconductors	Tues., Jan. 19	12:15 – 12:30 PM	Contributed
3503321	The Zeeman, Spin-Orbit, and Quantum Spin Hall Interactions in Anisotropic and Low-Dimensional Conductors	Aiyang Zhao University of Science and Technology Beijing	Superconducting and Strongly Correlated Materials I	Tues., Jan. 19	10:45 – 11:00 AM	Contributed
3479958	Incoherent Cooper pairing and pseudogap behavior in monolayer FeSe/SrTiO ₃	Kyle Shen Cornell University	Superconducting and Strongly Correlated Materials I	Tues., Jan. 19	11:00 – 11:30 AM	Invited
3479966	Navigating through disorder spaces of superconductors using atomic-scale imaging	Petro Maksymovych Oak Ridge National Laboratory	Superconducting and Strongly Correlated Materials I	Tues., Jan. 19	11:30 AM – 12:00 PM	Invited
3503265	The effects of charge carriers and organic solvents on the superconductivity of doped 1T-SnSe ₂	Hanlin Wu University of Texas at Dallas	Superconducting and Strongly Correlated Materials I	Tues., Jan. 19	12:00 – 12:15 PM	Contributed
3503235	The adiabatic approximation for magnetic resonance of spin 1 and 3/2 nuclei	Sunghyun Kim University of Central Florida	Superconducting and Strongly Correlated Materials I	Tues., Jan. 19	12:15 – 12:30 PM	Contributed
3490662	Direct visualization of polar nanoclusters in the paraelectric phase of BaTiO ₃ based ceramics	Andreja Bencan Golob Jozef Stefan Institute	Advanced Nano- and Microscale Characterization Methods for Relaxors	Tues., Jan. 19	10:45 – 11:15 AM	Invited
3490418	Macroscopic Polarization in the Nominally Ergodic Relaxor State of Lead Magnesium Niobate	Lukas M. Riemer EPFL	Advanced Nano- and Microscale Characterization Methods for Relaxors	Tues., Jan. 19	11:15 – 11:45 AM	Invited
3503084	Broadband dielectric properties of Ba(ZrTi)O ₃ ceramics	Martin Kempa Institute of Physics of the Czech Academy of Sciences	Advanced Nano- and Microscale Characterization Methods for Relaxors	Tues., Jan. 19	11:45 AM – 12:00 PM	Contributed
3498907	Controlling Properties of Perovskite Oxides via Turning Oxygen Defect Chemistry	Qiyang Lu Westlake University	Point Defects and Defect Chemistry	Tues., Jan. 19	10:45 – 11:15 AM	Invited
3519460	Photochromism of Fe-Doped SrTiO ₃ from Multiphysics Simulation	Yifeng Wu North Carolina State University	Point Defects and Defect Chemistry	Tues., Jan. 19	11:15 – 11:30 AM	Contributed
3490664	UV Irradiation of Undoped and Fe Doped SrTiO ₃ and its Impact on the Defect Chemistry	Alexander Viernstein TU Wien	Point Defects and Defect Chemistry	Tues., Jan. 19	11:30 – 11:45 AM	Contributed
3503389	First Principle Studies of Charged Vacancy and Transition Metal Dopants and their Complexes in Phosphorene	Biswas Rijal University of Florida	Point Defects and Defect Chemistry	Tues., Jan. 19	11:45 AM – 12:00 PM	Contributed
3487525	Is densification during sintering diffusion limited?	Shen J Dillon University of Illinois Urbana-Champaign	Fundamentals and Applications of Sintering	Tues., Jan. 19	10:45 – 11:15 AM	Invited
3490530	Staged microstructural study of flash sintered titania	Han Wang Purdue University	Fundamentals and Applications of Sintering	Tues., Jan. 19	11:15 – 11:45 AM	Invited
3503297	βYb ₂ Si ₂ O ₇ Environmental Barrier Coatings and Their Interaction with Molten Silicates	Hadas Sternlicht Brown University	Fundamentals and Applications of Sintering	Tues., Jan. 19	11:45 AM – 12:00 PM	Contributed
3488192	Influence of Processing Route on Performance of Solid State Battery with LCO/LLZ Composite Cathode Sintered by High-Pressure FAST/SPS	Martin Ihrig Forschungszentrum Juelich	Fundamentals and Applications of Sintering	Tues., Jan. 19	12:00 – 12:15 PM	Contributed

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3490346	Freestanding Crystalline Oxide Membranes and Heterostructures	Harold Hwang Stanford University	Controlled Synthesis of Functional Oxide Heterostructures I	Tues., Jan. 19	1:00 – 1:30 PM	Invited
3500162	Giant strain gradient elasticity in thin freestanding SrTiO ₃ membranes	Varun Harbola Stanford University	Controlled Synthesis of Functional Oxide Heterostructures I	Tues., Jan. 19	1:30 – 1:45 PM	Contributed
3490896	Oxygen sponge effects on epitaxial manganite thin film growth	Kyeong Tae Kang Los Alamos National Laboratory	Controlled Synthesis of Functional Oxide Heterostructures I	Tues., Jan. 19	1:45 – 2:00 PM	Contributed
3489587	Origin of the 2D electron gas at the SrTiO ₃ surface	Xi Yan Argonne National Laboratory	Controlled Synthesis of Functional Oxide Heterostructures I	Tues., Jan. 19	2:00 – 2:15 PM	Contributed
3500779	Formation mechanism of surface features in (Nd,Li)TiO ₃ epitaxial thin films	Elahe Farghadany Case Western Reserve University	Controlled Synthesis of Functional Oxide Heterostructures I	Tues., Jan. 19	2:15 – 2:30 PM	Contributed
3488079	Solid-state Electrochemical Protonation/Oxidation of SrCoO _x Films	Qian Yang IST, Hokkaido University	Controlled Synthesis of Functional Oxide Heterostructures I	Tues., Jan. 19	2:30 – 2:45 PM	Contributed
3476691	Machine learning based analysis of kinetics of film growth by PLD	Kimberly Gliebe Case Western Reserve University	Controlled Synthesis of Functional Oxide Heterostructures I	Tues., Jan. 19	2:45 – 3:00 PM	Contributed
3489442	Understanding, Controlling, and Using Relaxor Ferroelectric Thin Films	Lane W. Martin University of California, Berkeley	Ferroelectricity in Oxide Thin Films I	Tues., Jan. 19	3:15 – 3:45 PM	Invited
3490222	Ferroelectric structure in thin epitaxial film of NaNbO ₃	Mikhail Vladimirov Peter the Great St.Petersburg Polytechnic University (SPbPU)	Ferroelectricity in Oxide Thin Films I	Tues., Jan. 19	3:45 – 4:00 PM	Contributed
3492560	Influence of Graded Doping on the Reliability of Nb-doped Lead Zirconate Titanate Films	Susan Trolier-McKinstry Penn State	Ferroelectricity in Oxide Thin Films I	Tues., Jan. 19	4:00 – 4:15 PM	Contributed
3489748	Domain structure and strain engineering in epitaxial relaxor ferroelectric thin films grown by pulsed laser deposition	Jamal Belhadi Jozef Stefan Institute	Ferroelectricity in Oxide Thin Films I	Tues., Jan. 19	4:15 – 4:30 PM	Contributed
3489389	Metal-ferroelectric supercrystals with periodically curved metallic layers	Marios Hadjimichael University of Geneva	Ferroelectricity in Oxide Thin Films I	Tues., Jan. 19	4:30 – 4:45 PM	Contributed
3488135	Emergence of ferromagnetic three-dimensional nanocups in perovskite ferroelectric films via co-exsolution of transition metals	Hyunji An Gwangju Institute of Science and Technology	Ferroelectricity in Oxide Thin Films I	Tues., Jan. 19	4:45 – 5:00 PM	Contributed
3499012	Multilevel strain accommodation in a single-crystalline BiFeO ₃ thin film at multiple length scales	Wooseon Choi SungKyunKwan University	Ferroelectricity in Oxide Thin Films I	Tues., Jan. 19	5:00 – 5:15 PM	Contributed
3490159	New Developments in Gallium-Oxide-Based Ultrawide-Bandgap Devices and Materials	Man Hoi Wong University of Massachusetts Lowell	Ultrawide Band Gap Semiconductors I	Tues., Jan. 19	1:00 – 1:30 PM	Invited
3490437	Ultra-Low Resistance Ohmic Contacts to (010) -Ga ₂ O ₃ enabled by Low-Temperature Metalorganic Vapor Phase Epitaxy	Arkka Bhattacharyya University of Utah	Ultrawide Band Gap Semiconductors I	Tues., Jan. 19	1:30 – 1:45 PM	Contributed
3490422	Thickness and epitaxial strain modulation of stability and polarization of Ga ₂ O ₃ films	Tengfei Cao Washington University in St. Louis	Ultrawide Band Gap Semiconductors I	Tues., Jan. 19	1:45 – 2:00 PM	Contributed
3503453	High-density 2DEG induced by polarization engineering of ε-(AlGa)2O ₃ /ε-Ga ₂ O ₃ Heterostructures	Praneeth Ranga University of Utah	Ultrawide Band Gap Semiconductors I	Tues., Jan. 19	2:00 – 2:15 PM	Contributed
3503425	Study of 2DEGs at the interface of Hybrid MBE Grown SrNbO ₃ on BaSnO ₃	Suresh Thapa Auburn University	Ultrawide Band Gap Semiconductors I	Tues., Jan. 19	2:15 – 2:30 PM	Contributed
3498117	Integrating machine learning in atom probe tomography data to investigate the local structural and chemical analysis of (Al _x Ga _{1-x}) ₂ O ₃	Baishakhi Mazumder University at Buffalo	Ultrawide Band Gap Semiconductors I	Tues., Jan. 19	2:30 – 3:00 PM	Invited
3503316	Electro-Thermal Co-Design of Ultra-Wide Bandgap Gallium Oxide Electronics	Sukwon Choi Pennsylvania State University	Ultrawide Band Gap Semiconductors II	Tues., Jan. 19	3:15 – 3:45 PM	Invited
3490542	Metalorganic Vapor-Phase Epitaxy Growth and Characterization of low sheet resistance -(Al _x Ga _{1-x}) ₂ O ₃ / -Ga ₂ O ₃ Heterostructure Channels	Praneeth Ranga University of Utah	Ultrawide Band Gap Semiconductors II	Tues., Jan. 19	3:45 – 4:00 PM	Contributed
3491079	Oxygen annealing induced changes in defects within (010) beta-Ga ₂ O ₃ epitaxial films measured using photoluminescence	Rujun Sun University of Utah	Ultrawide Band Gap Semiconductors II	Tues., Jan. 19	4:00 – 4:15 PM	Contributed
3477291	Rutile GeO ₂ : An ultrawide-band-gap semiconductor for power electronics	Sieun Chae University of Michigan	Ultrawide Band Gap Semiconductors II	Tues., Jan. 19	4:15 – 4:30 PM	Contributed
3482033	Local structural and chemical analysis of wurtzite BAIN films using atom probe tomography	Jith Sarker University at Buffalo	Ultrawide Band Gap Semiconductors II	Tues., Jan. 19	4:30 – 4:45 PM	Contributed
3489881	Acceptors in gallium oxide	Matthew McCluskey Washington State University	Ultrawide Band Gap Semiconductors II	Tues., Jan. 19	4:45 – 5:00 PM	Contributed
3489352	Phase transition and instability in dimensionality-controlled artificial oxide crystals	Taewon Min Pusan National University	Ultrawide Band Gap Semiconductors II	Tues., Jan. 19	5:00 – 5:15 PM	Contributed

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3477353	Developing new probes of the Topological Properties of Fe Chalcogenides	Kenneth Burch Boston College	Superconducting and Strongly Correlated Materials II	Tues., Jan. 19	1:00 – 1:30 PM	Invited
3479546	Pressure induced characteristics of Jc and Tc in doped BaFe2As2	Shen Yun Chong Victoria University of Wellington	Superconducting and Strongly Correlated Materials II	Tues., Jan. 19	1:30 – 2:00 PM	Invited
3503441	Enhanced Superconductivity in Dirac semimetal 1T-PdTe2	Wenhao Liu University of Texas at Dallas	Superconducting and Strongly Correlated Materials II	Tues., Jan. 19	2:00 – 2:15 PM	Contributed
3479831	Magnetism in MnBi2Te4 and related compounds	Jiaqiang Yan Oak Ridge National Lab	Superconducting and Strongly Correlated Materials II	Tues., Jan. 19	2:15 – 2:45 PM	Invited
3477722 WITHDRAWN	Possible itinerant excitations and quantum spin state transitions in the effective spin-1/2 triangular lattice antiferromagnet Na2BaCo(PO4)2	Haidong Zhou University of Tennessee	Superconducting and Strongly Correlated Materials II	Tues., Jan. 19	2:45 – 3:15 PM	Invited
3502995	Search for Advanced Electric Conductors – an Emerging Grand Challenge	Timothy J Haugan U.S. Air Force Research Laboratory	Applications of Superconducting and Magnetic Materials I	Tues., Jan. 19	3:45 – 4:15 PM	Invited
3503155	Meta-analysis of Conductive and Strong Carbon Conductors	John Bulmer Air Force Research Lab	Applications of Superconducting and Magnetic Materials I	Tues., Jan. 19	4:15 – 4:45 PM	Invited
3491036	MgB2 magnet winding with High rate gas Cooling for electric propulsion aircraft applications	Michael D Sumption Ohio State University	Applications of Superconducting and Magnetic Materials I	Tues., Jan. 19	4:45 – 5:15 PM	Invited
3480333	Cryogenic/Superconducting Considerations for Electric Aircraft Drivetrains	Mary Ann Sebastian UDRI	Applications of Superconducting and Magnetic Materials I	Tues., Jan. 19	5:15 – 5:30 PM	Contributed
3487058	Relaxor ferroelectric polymers: New molecular understanding and recent developments	Yang Liu Pennsylvania State University	Local Structure of Relaxors	Tues., Jan. 19	1:00 – 1:30 PM	Invited
3480856	Local structure and macroscopic properties: Origin of relaxor behavior in homovalent-substituted BaTiO3	Giovanna Canu National Research Council of Italy	Local Structure of Relaxors	Tues., Jan. 19	1:30 – 2:00 PM	Invited
3488126	Polarized nanoclusters in charge disproportionated systems probed by fluctuation (noise) spectroscopy	Jens Mueller Goethe-University Frankfurt	Local Structure of Relaxors	Tues., Jan. 19	2:00 – 2:30 PM	Invited
3498073	What do we know about relaxor's nanoregions ?	Jiri Hlinka Institute of Physics of the Czech Academy of Sciences	Local Structure of Relaxors	Tues., Jan. 19	2:30 – 2:45 PM	Contributed
3503375	Quantitative STEM analysis of short and medium range order in incommensurately modulated tetragonal tungsten bronze	Stephen Funni North Carolina State University	Local Structure of Relaxors	Tues., Jan. 19	2:45 – 3:00 PM	Contributed
3496654	Dielectric response of PMN-PT single crystals	Petr Bednyakov FZU - Institute of Physics of the Czech Academy of Sciences	Local Structure of Relaxors	Tues., Jan. 19	3:15 – 3:30 PM	Contributed
3491022 WITHDRAWN	Experimental and theoretical investigation of the effect of rare-earth doping on the physical properties of Na0.5Bi0.5TiO3 system	Manal Benyoussef University of picardie Jules Verne - LPMC	Applications of Relaxors	Tues., Jan. 19	3:30 – 3:45 PM	Contributed
3481344	High Performance Lead-free Relaxor Antiferroelectrics for Energy Storage Applications	Shujun Zhang University of Wollongong	Applications of Relaxors	Tues., Jan. 19	3:45 – 4:15 PM	Invited
3480197	Bismuth Ferrite-Based Relaxor Ceramics and Multilayers for Energy Storage	Dawei Wang The University of Sheffield	Applications of Relaxors	Tues., Jan. 19	4:15 – 4:45 PM	Invited
3491537	Improper ferroelectricity and the short-range-ordered state in aluminate-sodalite-type compounds	Hiroki Taniguchi Nagoya University	Applications of Relaxors	Tues., Jan. 19	4:45 – 5:15 PM	Invited
3519453	Co-doping Strategies for Controlling Electrical Conductivity of BaTiO3 Ceramics	Elizabeth C Dickey Carnegie Mellon University	Design of Materials for Electrical Applications	Tues., Jan. 19	1:00 – 1:30 PM	Invited
3501305	Field-driven Ion Transport in (hybrid) Perovskites	Dennis Kemp RWTH Aachen University	Design of Materials for Electrical Applications	Tues., Jan. 19	1:30 – 1:45 PM	Contributed
3503370	Moisture Incorporation and Degradation in Dielectrics and Piezoelectrics	John McGarrahan North Carolina State University	Design of Materials for Electrical Applications	Tues., Jan. 19	1:45 – 2:00 PM	Contributed
3488580	Computational Discovery of Ultra-Wide-Band-Gap Semiconductors	Emmanouil Kioupakis University of Michigan	Design of Materials for Electrical Applications	Tues., Jan. 19	2:00 – 2:30 PM	Invited
3488486	High field induced stoichiometry polarization in sodium bismuth titanate	Maximilian Gehringer Technical University of Darmstadt	Design of Materials for Electrical Applications	Tues., Jan. 19	2:30 – 2:45 PM	Contributed

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and
Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3490673	Model-type thin films as a tool for characterization of electrochemical elementary processes	Alexander K. Opitz TU Wien	Electrochemistry and Transport	Tues., Jan. 19	3:15 – 3:45 PM	Invited
3488615	Defect chemistry of La _{0.6} Sr _{0.4} CoO ₃ -upon anodic polarization	Martin Krammer TU Wien	Electrochemistry and Transport	Tues., Jan. 19	3:45 – 4:00 PM	Contributed
3518221	“Lithionics” – On the Design of Lithium Oxide Films for Solid State Batteries and Novel Neuromorphic Computing Functions	Jennifer Rupp Massachusetts Institute of Technology	Electrochemistry and Transport	Tues., Jan. 19	4:00 – 4:30 PM	Invited
3503098	Grain-boundary diffusion of cations in fluorite-type oxides is faster but not always easier	Jana P. Parras RWTH Aachen University	Electrochemistry and Transport	Tues., Jan. 19	4:30 – 4:45 PM	Contributed
3491448	Operando evaluation of oxygen chemical potential distribution in solid oxide fuel cell electrolyte	Koji Amezawa Tohoku University	Electrochemistry and Transport	Tues., Jan. 19	4:45 – 5:15 PM	Invited
3490587	In situ studies on mechanical behavior of flash-sintered TiO ₂	Xinghang Zhang Purdue University	Structural and Mechanical Properties	Tues., Jan. 19	1:00 – 1:30 PM	Invited
3482766	On the importance of dislocation climb to deform minerals in the Earth	Patrick Cordier University of Lille	Structural and Mechanical Properties	Tues., Jan. 19	1:30 – 2:00 PM	Invited
3490648	Atomic structure analysis of dissociated dislocations in alumina	Eita Tochigi The University of Tokyo	Structural and Mechanical Properties	Tues., Jan. 19	2:00 – 2:30 PM	Invited
3489387	Nanoscale to microscale reversal in room-temperature plasticity in SrTiO ₃ by defect chemistry engineering	Kuan Ding Technische Universität Darmstadt	Structural and Mechanical Properties	Tues., Jan. 19	2:30 – 2:45 PM	Contributed
3489554	The effect of light illumination on the room-temperature creep behavior of cubic zinc sulfide single crystals	Yu Oshima Nagoya University	Light-mediated Plasticity	Tues., Jan. 19	3:00 – 3:15 PM	Contributed
3482677	The effect of light on the nanoindentation behavior of cubic zinc sulfide	Atsutomo Nakamura Nagoya University	Light-mediated Plasticity	Tues., Jan. 19	3:15 – 3:30 PM	Contributed
3490698	Light Effect on the Fracture Toughness of Single Crystal ZnS	Xufei Fang Technische Universität Darmstadt	Light-mediated Plasticity	Tues., Jan. 19	3:30 – 3:45 PM	Contributed
3483436	Phonon Interactions at Interfacial Dislocation Arrays	Ramya L Gurunathan Northwestern University	Thermal and Electrical Conductivity	Tues., Jan. 19	3:45 – 4:15 PM	Invited
3489613	Drastic decrease of thermal conductivity via strong dislocation-phonon interaction in single crystal strontium titanate	Houfu Song Tsinghua University	Thermal and Electrical Conductivity	Tues., Jan. 19	4:15 – 4:30 PM	Contributed
3490659	Conceptual framework for dislocation tuned conductivity in ceramics	Lukas Porz Technical University of Darmstadt	Thermal and Electrical Conductivity	Tues., Jan. 19	4:30 – 4:45 PM	Contributed
3488961	Mechanically induced dislocations as self dopant in bulk TiO ₂	Qaisar Khushi Muhammad Technical University of Darmstadt	Thermal and Electrical Conductivity	Tues., Jan. 19	4:45 – 5:00 PM	Contributed

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITTLE	DATE	TIME
3482690	Aqueous chemical solution deposition of $Sr_xBa_{1-x}Nb_2O_6$ thin films	Viviann Hole Pedersen Norwegian University of Science and Technology	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3486715	Oxygen transport at the heterogeneous oxide-interfaces	Joonhyuk Lee Pusan National University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3488410	Topographic Image Analysis of Surface Morphology as a Function of Cooling Rate in (Nd,Li)TiO ₃ Thin Films	Bridget Powers Beggs Case Western Reserve University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3489131	Substrate Effects on Spin Lattice Relaxation in the Molecular Qubit CuPc	Kathleen Mullin Northwestern University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3487740	Composite magnetoelectric scaffolds for tissue regeneration	Noah David Ferson University of Florida	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490174	Oxygen Exchange Kinetics and Nonstoichiometry of Pristine La _{0.6} Sr _{0.4} CoO _{3-δ} Thin Films Unaltered by Degradation	Matthäus Siebenhofer Vienna University of Technology	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3487760	Local electrical characterization and nanoscale electro-mechanical response of lead-free ferroelectric (Bi _{0.5} Na _{0.5}) _{0.92} Ba _{0.08} -3x/2LaxTiO ₃ thin films	Jose de los Santos Guerra Federal University of Uberlandia	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3494447	Hybrid Perovskite Oxide and Halide Layered Device fabrication: For potential application in Wearable Flexible Health Monitoring Devices	Mandeep Singh California State University, Fresno	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3488332	tr-KPFM Measurements on the Surface LaAlO ₃ /SrTiO ₃ Heterostructures	Hugh B Smith Case Western Reserve University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3499766	Visualization of Ionic Movement in Electrochemical Intercalation of van der Waals materials using Electrochemical Strain Microscopy	Jaewoon Kim Korea Advanced Institute of Science and Engineering (KAIST)	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490029	Inherently deformable piezoelectric ZnO ceramic nanostructure	Hoon Kim Korea Advanced Institute of Science and Engineering (KAIST)	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3499901	Fabrication of high output power piezoelectric energy harvester module for low frequency vibration environments	Eunnuri Cho Korea Advanced Institute of Science and Technology (KAIST)	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490127	Investigating the oxygen exchange on multilayered LSC LSM thin film electrodes using in-situ impedance spectroscopy during pulsed laser deposition	Christin Böhme TU Wien	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3499953	Substitution Dependence of Residual Stress in BaNbxTi(1-x)O ₃ Thin Films by Chemical Solution Deposition	Federica Benes Materials Center Leoben Forschung GmbH	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490358	Microstructural Feature Engineering for Machine Learning Enabled Discovery of Microstructure-Property Relationships in Composites	Matthew Michael Hoffman Case Western Reserve University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3502188	3D graph theory application on modified nano BaTiO ₃ electronic ceramics	Vojislav Mitic Serbian Academy of Sciences	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490369	Effects of rare-earth ions on the physical properties of Bi ₅ FeTi ₃ O ₁₅ -based multiferroic ceramics	Jose de los Santos Guerra Federal University of Uberlandia	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3503230	Macroscopic Lamellar Heterophase Pattern in Pb(Mg _{1/3} Nb _{2/3})O ₃ -PbTiO ₃ Single Crystals	Igor Rafalovskyi Institute of Physics of the Czech Academy of Sciences	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490429	Photoelectrochemical properties of BVO-based heterostructures for water splitting applications	Wayler Silva dos Santos Federal University of Uberlandia	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3503279	The Effects of CaF ₂ doping on the Structure and Dielectric Properties of Bismuth Zinc Niobates	Xiukai Cai Shandong Jianzhu University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490554	Multifunctional self-assembled BaTiO ₃ -Au nanocomposite thin films on flexible mica substrates with tunable optical properties	Juncheng Liu Purdue University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3503282	Dielectric Relaxations in CaF ₂ -doped Bismuth Niobates	Zinc Xiukai Cai Shandong Jianzhu University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490593	Nanoscale Effect of Silver Diamine Fluoride as a Protective Layer on Enamel Surface of Human Teeth	Aditi Saha Korea Advanced Institute of Science and Engineering (KAIST)	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490610	Improvement of Adhesion and Osteointegration of Nanocomposite Biomembranes for Medical Implants	Soyeon Kim Korea Advanced Institute of Science and Engineering (KAIST)	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3503287	The Role of CdO in Low Fired Bismuth Zinc Niobate Microwave Dielectrics	Xiukai Cai Shandong Jianzhu University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490630	Structure and property relationships in lead-free piezoelectric solid solution (x)NaNbO ₃ – (1-x)BaZrO ₃	Thomas Rowe University of Calgary	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3503409	Synthesis and Characterization of Novel Antiferroelectric Materials for Energy Storage Applications	Vidhi Chauhan Simon Fraser University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and
Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITTLE	DATE	TIME
3490656	Visualization of polarization fatigue in piezoelectric energy harvester using piezoresponse force microscopy	Seongmun Eom Korea Advanced Institute of Science and Technology (KAIST)	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3503415	Electrical Properties of Eu-Modified Lead-free BCZT Ceramics with Crossover from Ferroelectric to Relaxor	Neha Claire Simon Fraser University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490710	Fabrication and Characterization of PbTiO ₃ hollow nanostructure	HyunJi Kim Korea Advanced Institute of Science and Engineering (KAIST)	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3504813	Structure-Property Relationships of Calcium Gallate Garnets	Bryan Zanca University of Calgary	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3490750	Correlating structural changes to the volume fraction of polar nanoregions in quenched Na _{1/2} Bi _{1/2} TiO ₃ - BaTiO ₃ ceramics	Andreas Wahninland Technical University of Darmstadt	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3491043	Characterization of HfxZr _{1-x} O ₂ nanoparticles for Ferroelectric Applications	Evan Anguish University of Florida	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3491056	The Structure and Dielectric Properties of Bismuth Nickel Niobate	Xiukai Cai Shandong Jianzhu University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3491057	The Phase Evolution of Bismuth-based Oxide Pyrochlore	Xiukai Cai Shandong Jianzhu University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3503124	Spin-Orbit Coupled 2-Dimensional Electron Gases in SrTaO ₃ Heterostructures	Patrick T Gemperline Auburn University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3503126	High Speed Visualization of Ferroelectric Domains by Friction Asymmetry	Seongwoo Cho Korea Advanced Institute of Science and Engineering (KAIST)	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM
3503129	Porosity Interconnectivity Studies for Three-Dimensional Hierarchical Material Design	Anand Patel Rutgers University	Poster Session	Tues., Jan. 19	5:30 – 6:30 PM

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3483627	Field induced mass transport phenomena in flash sintered high temperature ceramics and their unique properties	Haiyan Wang Purdue University	Plenary II	Wed., Jan. 20	9:10 – 10:10 AM	Plenary Lecture
			Live Networking Session Symposium 3	Wed., Jan. 20	10:15 – 10:45 AM	
			Live Networking Session Symposium 6	Wed., Jan. 20	10:15 – 10:45 AM	
			Live Networking Session Symposium 7	Wed., Jan. 20	10:15 – 10:45 AM	
			Live Networking Session Symposium 11	Wed., Jan. 20	10:15 – 10:45 AM	
3479910	Emergent phenomena of polar topologies	Sujit Das University of California, Berkeley	Polarization Evolution in Domains and Domain Walls	Wed., Jan. 20	10:45 – 11:15 AM	Invited
3485353	Tracking ferroelectric domain formation during epitaxial growth of PbTiO ₃ films	Martin Sarott ETH Zürich	Polarization Evolution in Domains and Domain Walls	Wed., Jan. 20	11:15 – 11:30 AM	Contributed
3490065	In-situ monitoring of polarization dynamics in ultrathin ferroelectrics	Nives Strkalj ETH Zurich	Polarization Evolution in Domains and Domain Walls	Wed., Jan. 20	11:30 AM – 12:00 PM	Invited
3491640	3D Tomography of Domain Walls in Multiferroics	Bryan Huey University of Connecticut	Polarization Evolution in Domains and Domain Walls	Wed., Jan. 20	12:00 – 12:15 PM	Contributed
3503358	Dynamic Manipulation in Piezoresponse Force Microscopy: Creating Non-Equilibrium Phases with Large Electromechanical Response	Kyle Kelley Oak Ridge National Lab	Polarization Evolution in Domains and Domain Walls	Wed., Jan. 20	12:15 – 12:30 PM	Contributed
3488520	Disorder as an order parameter in strongly correlated high entropy oxides	Thomas Zac Ward Oak Ridge National Lab	Synthesis and Properties of Complex Oxide Thin Films	Wed., Jan. 20	10:45 – 11:15 AM	Invited
3500185	La _{0.2} Ce _{0.2} Pr _{0.2} Sm _{0.2} Y _{0.2} O ₂ - Thin Film Growth and Electrical Characterization	George Nick Kotsonis The Pennsylvania State University	Synthesis and Properties of Complex Oxide Thin Films	Wed., Jan. 20	11:15 – 11:30 AM	Contributed
3489501	Low-Temperature Solid-Phase Epitaxy of ScAlMgO ₄ on Al ₂ O ₃ with Reduction of Interface Reactions	Peng Zuo University of Wisconsin-Madison	Synthesis and Properties of Complex Oxide Thin Films	Wed., Jan. 20	11:30 AM – 11:45 AM	Contributed
3490310	Structural and electrical properties of SrTiO ₃ films grown by MOVPE: Influence of Sr deficiency	Aykut Baki Leibniz Institute for Crystal Growth	Synthesis and Properties of Complex Oxide Thin Films	Wed., Jan. 20	11:45 AM – 12:00 PM	Contributed
3490176	Illumination of SrTiO ₃ by the UV-Radiation of the Plasma Plume during Pulsed Laser Deposition	Matthäus Siebenhofer Vienna University of Technology	Synthesis and Properties of Complex Oxide Thin Films	Wed., Jan. 20	12:00 – 12:15 PM	Contributed
3486311	Atomic-scale energy dispersive X-ray spectroscopy mapping of cation vacancies at an oxide homointerface	Young-Min Kim SungKyunKwan University	Defects in Semiconductors	Wed., Jan. 20	10:45 – 11:15 AM	Invited
3500146	Broad Infrared Spectrum Accessibility through Plasmonic Coupling in Doped CdO Thin Films	Angela Cleri Pennsylvania State University	Defects in Semiconductors	Wed., Jan. 20	11:15 – 11:30 AM	Contributed
3484564	Observing Dopant Defect Complexes in Semiconductors Using Atomic Resolution STEM and Cathodoluminescence	Matthew Hauwiler Massachusetts Institute of Technology	Defects in Semiconductors	Wed., Jan. 20	11:30 – 11:45 AM	Contributed
3487390	Giant Nonlinearity in HfO ₂ -based Anti-Ferroelectric Tunnel Junction	Jinho Byun Pusan National University	Defects in Semiconductors	Wed., Jan. 20	11:45 AM – 12:00 PM	Contributed
3483657	Review of defect chemistry in fluorite-structure ferroelectrics for future nano-electronic devices	Min Hyuk Park Pusan National University	Defects in Semiconductors	Wed., Jan. 20	12:00 – 12:30 PM	Invited
3479449	Light-matter interactions and topological spin defects in two-dimensional magnetic structures	Li Yang Washington University in St Louis	Magnetic and 2D Correlated Materials I	Wed., Jan. 20	10:45 – 11:15 AM	Invited
3478192	Symmetry-resolved two magnon excitations in a strong spin-orbit-coupled bilayer antiferromagnet	Liuyan Zhao University of Michigan	Magnetic and 2D Correlated Materials I	Wed., Jan. 20	11:15 – 11:45 AM	Invited
3480226	Magnon-Phonon Hybridization in 2D Antiferromagnet MnPSe ₃	Thuc T. Mai National Institute of Standards and Technology	Magnetic and 2D Correlated Materials I	Wed., Jan. 20	11:45 AM – 12:15 PM	Invited
3478915	Temperature-Dependent Raman Scattering and X-Ray Diffraction Study of Phase Transitions in Layered Multiferroic CuCrP ₂ S ₆	Michael A Susner UES, Inc.	Magnetic and 2D Correlated Materials I	Wed., Jan. 20	12:15 – 12:30 PM	Contributed
3483711	Higgs-Boson Modes, Ultrafast Neomorphic Dynamics and Hidden Phases in Relaxor Ferroelectrics	Laurent Bellaiche University of Arkansas	Multiscale Modelling of Relaxors	Wed., Jan. 20	10:45 – 11:15 AM	Invited
3490454	Atomistic simulations in BaTiO ₃ -based ferroelectric relaxors	Marek Pasciak Institute of Physics of the Czech Academy of Sciences	Multiscale Modelling of Relaxors	Wed., Jan. 20	11:15 – 11:45 AM	Invited
3490213	Data- Approaches for Understanding and Designing Ferroic Materials	Rama Krishnan Vasudevan Oak Ridge National Lab	Computational materials design for relaxors	Wed., Jan. 20	11:45 AM – 12:15 PM	Invited

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3490594	Electro-chemo-mechanical coupling in rare-earth substituted ceria: The effects of grain boundaries, interfaces, strain, and defect-interactions	George Harrington Kyushu University	Influence of Transport with Extended Defects	Wed., Jan. 20	10:45 – 11:15 AM	Invited
3503057	How an ion conductor's thermal history affects its grain-boundary impedance: A numerical study of space-charge layers	Adrian Leonhard Usler RWTH Aachen University	Influence of Transport with Extended Defects	Wed., Jan. 20	11:15 – 11:30 AM	Contributed
3488896	Outstanding oxygen reduction kinetics of La _{0.6} Sr _{0.4} FeO _{3-δ} surfaces decorated with platinum nanoparticles	Christoph Riedl Vienna University of Technology	Influence of Transport with Extended Defects	Wed., Jan. 20	11:30 – 11:45 AM	Contributed
3503413	Correlating changes in oxygen surface exchange kinetics and defect chemistry during crystallization of mixed ionic/electronic conductor Sr(Ti,Fe)O _{3-d}	Emily Skiba University of Illinois at Urbana-Champaign	Influence of Transport with Extended Defects	Wed., Jan. 20	11:45 AM – 12:00 PM	Contributed
3488918	Bulk and short-circuit anion diffusion in epitaxial Fe ₂ O ₃ films quantified using buried isotopic tracer layers	Tiffany Kaspar Pacific Northwest National Lab	Influence of Transport with Extended Defects	Wed., Jan. 20	12:00 – 12:15 PM	Contributed
3503107	Oxygen diffusion along dislocations in Sr-doped LaMnO ₃	Jacqueline Marie Boergers RWTH Aachen University	Influence of Transport with Extended Defects	Wed., Jan. 20	12:15 – 12:30 PM	Contributed
3480184	Defects in A- and B-site substituted BaTiO ₃ perovskites: Implications for energy storage	Marco Deluca Materials Center Leoben Forschung GmbH	Magnetism, Ferroelectricity, and Multiferroicity in Oxides	Wed., Jan. 20	1:30 – 2:00 PM	Invited
3488089	Tuning the multiferroic properties of Bismuth Ferrite nanoparticles by Mn and Ba codoping	Astita Dubey University Duisburg Essen	Magnetism, Ferroelectricity, and Multiferroicity in Oxides	Wed., Jan. 20	2:00 – 2:15 PM	Contributed
3488637	Thickness and composition dependences of epitaxial ferroelectric HfO ₂ based films	Takanori Mimura Tokyo Institute of Technology	Magnetism, Ferroelectricity, and Multiferroicity in Oxides	Wed., Jan. 20	2:15 – 2:30 PM	Contributed
3488907	Integration of In-plane Polarized Epitaxial Aurivillius Films into Perovskite Heterostructures	Elzbieta Gradauskaite ETH Zurich	Magnetism, Ferroelectricity, and Multiferroicity in Oxides	Wed., Jan. 20	2:30 – 2:45 PM	Contributed
3488229	Impact of Oxygen Content on Ferroelectric Behavior of HfO ₂ Thin Films Deposited by High Power Impulse Magnetron Sputtering	Samantha Jaszewski University of Virginia	Magnetism, Ferroelectricity, and Multiferroicity in Oxides	Wed., Jan. 20	2:45 – 3:00 PM	Contributed
3479722	Conductivity control via minimally invasive anti-Frenkel defects in a functional oxide	Donald Malcolm Evans Norwegian University of Science and Technology	Magnetism, Ferroelectricity, and Multiferroicity in Oxides	Wed., Jan. 20	3:15 – 3:45 PM	Invited
3490643	Antiferromagnetic Insulatronics: Spintronics in oxides	Mathias Klau Universität Mainz	Magnetism, Ferroelectricity, and Multiferroicity in Oxides	Wed., Jan. 20	3:45 – 4:15 PM	Invited
3478815	Morphologically Cubic BiFeO ₃ for Improved Electrical Properties	Jenna M Metera University of California, San Diego	Magnetism, Ferroelectricity, and Multiferroicity in Oxides	Wed., Jan. 20	4:15 – 4:30 PM	Contributed
3490721	Dielectric and magnetic properties of thin single crystal Cr ₂ O ₃ films	Nguyen Minh Vu University of Michigan	Magnetism, Ferroelectricity, and Multiferroicity in Oxides	Wed., Jan. 20	4:30 – 4:45 PM	Contributed
3489001	Hafnium Zirconium Oxide Ferroelectric Performance: From Processing and Structural Sensitivity to Optical Properties	Jon Ihlefeld University of Virginia	Ferroelectricity in Oxide Thin Films II	Wed., Jan. 20	1:30 – 2:00 PM	Invited
3490150	Elastic Properties of Mixed Phase Ferroelectric Hf _{1-x} Zr _x O ₂ Thin Films	Shelby S. Fields University of Virginia	Ferroelectricity in Oxide Thin Films II	Wed., Jan. 20	2:00 – 2:15 PM	Contributed
3489808	WSe ₂ Growth on Hafnium Zirconium Oxide by Molecular Beam Deposition: The Effect of Growth Conditions on the Substrate Properties	Maria Gabriela Sales University of Virginia	Ferroelectricity in Oxide Thin Films II	Wed., Jan. 20	2:15 – 2:30 PM	Contributed
3503325	Periodic wrinkle-patterned single-crystalline ferroelectric oxide membranes with enhanced piezoelectricity	Guohua Dong Xi'an Jiaotong University	Ferroelectricity in Oxide Thin Films II	Wed., Jan. 20	2:30 – 2:45 PM	Contributed
3490543	Suppressing The Ferroelectric Switching Barrier in Epitaxial Thin Films	Shutong Li University of Minnesota	Ferroelectricity in Oxide Thin Films II	Wed., Jan. 20	2:45 – 3:00 PM	Contributed
3488344	A Window into Order-Disorder Processes at Oxide Interfaces	Steven R. Spurgeon Pacific Northwest National Laboratory	Atomic-scale Characterization in Oxide Interfaces	Wed., Jan. 20	3:15 – 3:45 PM	Invited
3488747	Multi-modal STEM Characterization of Defects in the Catalytic Perovskite System LaFeO ₃	Bethany Matthews Pacific Northwest National Laboratory	Atomic-scale Characterization in Oxide Interfaces	Wed., Jan. 20	3:45 – 4:00 PM	Contributed
3499267	Mapping electronic phases in nickelate superlattices by STEM-EELS	Bernat Mundet University of Geneva	Atomic-scale Characterization in Oxide Interfaces	Wed., Jan. 20	4:00 – 4:15 PM	Contributed
3490336	Dimensional stacking enhanced dimensional reduction in ToF-SIMS analysis of hetero-structures	Alp Sehrioglu Case Western Reserve University	Atomic-scale Characterization in Oxide Interfaces	Wed., Jan. 20	4:15 – 4:30 PM	Contributed
3500972	Emergent Structural and Vibrational Properties in SrTiO ₃ -CaTiO ₃ Superlattices Versus Layer Thickness using Atomic-resolution Microscopy and Theory	Eric R Hoglund University of Virginia	Atomic-scale Characterization in Oxide Interfaces	Wed., Jan. 20	4:30 – 4:45 PM	Contributed
3490660	The impact of the interface in formation of the epitaxial relationship between LaInO ₃ and BaSnO ₃	Martina Zupancic Leibniz-Institut für Kristallzüchtung	Atomic-scale Characterization in Oxide Interfaces	Wed., Jan. 20	4:45 – 5:00 PM	Contributed

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3477655	Prediction and Manipulation of Magnetic Phase in Entropy Stabilized Oxides	Alessandro R. Mazza Oak Ridge National Laboratory	Establishing Structure-property Correlations I	Wed., Jan. 20	1:30 – 2:00 PM	Invited
3492964	Structure and Properties of Chemical Treated Lithium Cobalt Oxide and Cobalt Oxide Nanosheets	Kevin Pachuta Case Western Reserve University	Establishing Structure-property Correlations I	Wed., Jan. 20	2:00 – 2:15 PM	Contributed
3503418	Characterization of Cobalt-Manganese Spinel Thin Films (CoMn ₂ O ₄ and MnCo ₂ O ₄)	Miles Blanchet Auburn University	Establishing Structure-property Correlations I	Wed., Jan. 20	2:15 – 2:30 PM	Contributed
3490398	Phase-Dependent Band Gap Engineering in Alloys of Metal-Semiconductor Transition Metal Dichalcogenides	John Douglas Cavin Washington University in St. Louis	Establishing Structure-property Correlations I	Wed., Jan. 20	2:30 – 2:45 PM	Contributed
3490811	Temperature Dependent Current Matching and Efficiency in Tandem Photovoltaic Cells	Warren Ross Rucker Rutgers University	Establishing Structure-property Correlations I	Wed., Jan. 20	2:45 – 3:00 PM	Contributed
3479924	Heterogeneity and anisotropy on the nanoscale: What do we learn from 'imperfect' materials?	Yue Cao Argonne National Lab	Establishing Structure-property Correlations II	Wed., Jan. 20	3:15 – 3:45 PM	Invited
3479921	Giant MWIR to LWIR Optical Anisotropy in Quasi-1D Hexagonal Perovskite-derived Chalcogenide A _{1+x} TiS ₃ (A=Sr, Ba)	Boyang Zhao University of Southern California	Establishing Structure-property Correlations II	Wed., Jan. 20	3:45 – 4:00 PM	Contributed
3490345	Anisotropic and CDW-like Electrical Transport in Quasi-1D Perovskite Chalcogenide BaTiS ₃	Huandong Chen University of Southern California	Establishing Structure-property Correlations II	Wed., Jan. 20	4:00 – 4:15 PM	Contributed
3490631	The Defect Tolerance of Chalcogenide Perovskites BaZrS ₃ and Ba ₃ Zr ₂ S ₇	Jiang Luo Washington University in St. Louis	Establishing Structure-property Correlations II	Wed., Jan. 20	4:15 – 4:30 PM	Contributed
3489135	Designing better materials to enable room temperature topological devices	Matthew Brahlek Oak Ridge National Laboratory	Establishing Structure-property Correlations II	Wed., Jan. 20	4:30 – 4:45 PM	Contributed
3492343	Investigating structure-property relationships in chalcogenide perovskite semiconductors with theoretical and experimental studies of dielectric response, X-ray absorption, and electronic transport	Kevin Ye Massachusetts Institute of Technology	Establishing Structure-property Correlations II	Wed., Jan. 20	4:45 – 5:00 PM	Contributed
3479658	Controllable antiferromagnetic fluctuations of pseudospin-half square lattice in artificial layered iridate	Jian Liu University of Tennessee	Magnetic and 2D Correlated Materials II	Wed., Jan. 20	1:30 – 2:00 PM	Invited
3503241	An alternate way to calculate magnetic resonance for nuclei of arbitrary spin values	Zhichen Liu University of Central Florida	Magnetic and 2D Correlated Materials II	Wed., Jan. 20	2:00 – 2:15 PM	Contributed
3490165	Recent advances in alternatives to dysprosium doping in Nd ₂ Fe ₁₄ B (Neo) permanent magnets	Benjamin Scott Conner AFRL	Magnetic and 2D Correlated Materials II	Wed., Jan. 20	2:15 – 2:45 PM	Invited
3481772	Magnetocaloric Heusler Compounds and Composites for High Efficiency Thermal Management	Devin Grant Central State University	Magnetic and 2D Correlated	Wed., Jan. 20	2:45 – 3:00 PM	Contributed
3503347	AC losses in superconductors and normal-state cryo-conductors at high frequencies; influence of various skin depth regimes and loss intercomparisons for aircraft propulsion applications	Michael D Sumption Ohio State University	Applications of Superconducting and Magnetic Materials II	Wed., Jan. 20	3:30 – 3:45 PM	Contributed
3484247	DC and AC-Injection Active Quench Protection Schemes for a Conduction Cooled, React-and-Wind, MgB ₂ MRI Coil	Danlu Zhang Ohio State University	Applications of Superconducting and Magnetic Materials II	Wed., Jan. 20	3:45 – 4:00 PM	Contributed
3490936	Role of Grain Boundary Refinement and Nano-Precipitates in Enhancing the Flux Pinning of Superconducting Nb ₃ Sn	Jacob Rochester Ohio State University	Applications of Superconducting and Magnetic Materials II	Wed., Jan. 20	4:00 – 4:15 PM	Contributed
3485289	Effect of pressure, heat-treatment, and surface-metallization on current sharing between YBCO tapes	Shengchen Xue Ohio State University	Applications of Superconducting and Magnetic Materials II	Wed., Jan. 20	4:15 – 4:30 PM	Contributed
3491070	YBCO-based superconducting magnetic energy storage magnets – FEM modeling	Milan Majoros The Ohio State University	Applications of Superconducting and Magnetic Materials II	Wed., Jan. 20	4:30 – 4:45 PM	Contributed
3503334	Progress in the development of an immediate cancer detector using a superconducting device	Richard Klemm University of Central Florida	Applications of Superconducting and Magnetic Materials II	Wed., Jan. 20	4:45 – 5:15 PM	Invited
3503270	Design of a high-power terahertz emitter array using a high-temperature superconductor	Ruqayyah Shouk UCF	Applications of Superconducting and Magnetic Materials II	Wed., Jan. 20	5:15 – 5:30 PM	Contributed

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3528591	Unusual aspects of ion transport in hybrid perovskites	Roger A. De Souza RWTH Aachen University	Ionic Conducting Materials for Energy Conversion and Storage: Synthesis, Processing, and Theoretical Studies I	Wed., Jan. 20	1:30 – 2:00 PM	Invited
3503406	Oxygen diffusion in sub-stoichiometric oxides	Peter Sushko Pacific Northwest National Lab	Ionic Conducting Materials for Energy Conversion and Storage: Synthesis, Processing, and Theoretical Studies I	Wed., Jan. 20	2:00 – 2:30 PM	Invited
3515024	Insights into the surface exchange kinetics of proton conducting ceramics	Kyle Brinkman Clemson University	Ionic Conducting Materials for Energy Conversion and Storage: Synthesis, Processing, and Theoretical Studies I	Wed., Jan. 20	2:30 – 3:00 PM	Invited
3503275	Proton-conducting oxides for power generation and hydrogen production	Chuancheng Duan Kansas State University	Ionic Conducting Materials for Energy Conversion and Storage: Synthesis, Processing, and Theoretical Studies II	Wed., Jan. 20	3:15 – 3:45 PM	Invited
3490581	Designing Perovskite Na ⁺ Conductor via Chemo-Mechanical and Defect Engineering: Lessons from Li ₃ xLa _{2/3} -xTiO ₃ (LLTO) Analog	Yu-Ying Lin University of Illinois at Urbana-Champaign	Ionic Conducting Materials for Energy Conversion and Storage: Synthesis, Processing, and Theoretical Studies II	Wed., Jan. 20	3:45 – 4:00 PM	Contributed
3488968	Temperature and Processing Effects on Lithium Ion Conductivity of Solution-Deposited Lithium Zirconium Phosphate (LiZr ₂ P ₃ O ₁₂) Thin Films	Ian A Brummel University of Virginia	Ionic Conducting Materials for Energy Conversion and Storage: Synthesis, Processing, and Theoretical Studies II	Wed., Jan. 20	4:00 – 4:15 PM	Contributed
3476573	Li ₂ MnO ₃ Thin Films with Tilted Structures as Cathode for Li-Ion Batteries	Zhimin Qi Purdue University	Ionic Conducting Materials for Energy Conversion and Storage: Synthesis, Processing, and Theoretical Studies II	Wed., Jan. 20	4:15 – 4:30 PM	Contributed
3479268	Layered Electrides as Fluoride Intercalation Anodes	Steven Timothy Hartman Los Alamos National Lab	Ionic Conducting Materials for Energy Conversion and Storage: Synthesis, Processing, and Theoretical Studies II	Wed., Jan. 20	4:30 – 4:45 PM	Contributed
3503367	Origins of Irreversibility in O ₃ -Layered Na _{0.44} Ni _{0.56} FeyMnzO ₂ Cathode Materials for Sodium Ion Batteries	Eric Gabriel Boise State University	Ionic Conducting Materials for Energy Conversion and Storage: Synthesis, Processing, and Theoretical Studies II	Wed., Jan. 20	4:45 – 5:00 PM	Contributed
3490004	Cold sintering solid electrolytes and electrode composites for solid-state sodium ion batteries	Zane Grady Pennsylvania State University	Ionic Conducting Materials for Energy Conversion and Storage: Synthesis, Processing, and Theoretical Studies II	Wed., Jan. 20	5:00 – 5:15 PM	Contributed
3503346	Impedance spectroscopy analysis of electric field-assisted sintered gadolinia-doped ceria/alkali salts membranes	Sabrina G M Carvalho Energy and Nuclear Research Institute	Ionic Conducting Materials for Energy Conversion and Storage: Synthesis, Processing, and Theoretical Studies II	Wed., Jan. 20	5:15 – 5:30 PM	Contributed
3490663	3D printing of piezoelectric and bioactive barium titanate composites for bone applications	Hermann Seitz University of Rostock	Synthesis and Applications of Piezoelectric Biomaterials	Wed., Jan. 20	1:30 – 2:00 PM	Invited
3502972	The impact of sterilization routines on the piezoelectric properties of BaTiO ₃ and (K,Na)NbO ₃ ceramics	Magnus Rotan Norwegian University of Science and Technology (NTNU)	Synthesis and Applications of Piezoelectric Biomaterials	Wed., Jan. 20	2:00 – 2:15 PM	Contributed
3490681	Piezoelectric composite scaffolds for Neural Stem Cell transplantation	Hamideh Khanbareh University of Bath	Synthesis and Applications of Piezoelectric Biomaterials	Wed., Jan. 20	2:15 – 2:45 PM	Invited
3483104	Pseudo-piezoelectricity in calcium titanate and its potential as an active bone implant material	Abdullah Riaz University of Rostock	Synthesis and Applications of Piezoelectric Biomaterials	Wed., Jan. 20	2:45 – 3:00 PM	Contributed
3490644	The pyroelectric effect in ferroelectric materials: A new tool for biological applications	Simonetta Grilli CNR	Functional Biomaterials and their Applications	Wed., Jan. 20	3:15 – 3:45 PM	Invited
3480844	Biodegradable Piezoelectric Polymers at Nano- and Micro-scales for Medical Applications	Thanh Duc Nguyen University of Connecticut	Functional Biomaterials and their Applications	Wed., Jan. 20	3:45 – 4:15 PM	Invited
3502330	Functionalising Nanoceria for Enhanced Cellular Uptake: Targeting the Epidermal Growth Factor Receptor in Cancer	Kochurani Kandamkulathy Johnson UNSW Sydney	Functional Biomaterials and their Applications	Wed., Jan. 20	4:15 – 4:45 PM	Invited

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
			Live Networking Session Symposium 5	Thurs., January 21	10:15 – 10:45 AM	
			Live Networking Session Symposium 9	Thurs., January 21	10:15 – 10:45 AM	
			Live Networking Session Symposium 14	Thurs., January 21	10:15 – 10:45 AM	
			Live Networking Session Symposium 15	Thurs., January 21	10:15 – 10:45 AM	
3490561	Structure-property relationships in layered perovskites	Kevin Co University of Connecticut	Addressing Open Questions in Functional Ceramics	Thurs., January 21	10:45 – 11:15 AM	Invited (by Invitation Only)
3490136	Design of New Lead-Free Antiferroelectric (1-x)NaNbO ₃ -xSrSnO ₃ Compositions Guided by First-Principles Calculations	Mao-Hua Zhang Technische University of Darmstadt	Addressing Open Questions in Functional Ceramics	Thurs., January 21	11:15 – 11:30 AM	Contributed (Oral)
3497213	Characterization of the Cold Sintering Process of Compositions Guided by First-Principles	Clive Randall Penn State University Darmstadt	Addressing Open Questions in Functional Ceramics	Thurs., January 21	11:30 – 12:00 PM	Invited (by Invitation Only)
3503271	Quenching Na _{1/2} Bi _{1/2} TiO ₃ -BaTiO ₃ : current status and prospects	Lalitha Kodumudi Venkataraman Technical University of Darmstadt	Addressing Open Questions in Functional Ceramics	Thurs., January 21	12:00 – 12:15 PM	Contributed (Oral)
3490085	Screening Mechanisms at Complex Oxide Thin Films and Heterostructures	Seungbum Hong Korea Advanced Institute of Science and Technology	Characterizations of Strain, Defects, and Interfaces	Thurs., January 21	9:00 – 9:30 AM	Invited (by Invitation Only)
3483960	Phonon-Glass and Electron-Crystal Behavior of WO _x Films containing 1D Atomic Defect Tunnels	Gwoon Kim Hokkaido university	Characterizations of Strain, Defects, and Interfaces	Thurs., January 21	9:30 – 9:45 AM	Contributed (Oral)
3490978	Sources of conductivity in Sr doped LaTiO ₃ epitaxial thin films	Zachary J Corey Los Alamos National Lab	Characterizations of Strain, Defects, and Interfaces	Thurs., January 21	9:45 – 10:00 AM	Contributed (Oral)
3479982 WITHDRAWN	Vertically-aligned nanocomposites of plasmonic Au and Ag _x Au _{1-x} pillars embedded in ZnO with highly correlated metamaterial properties	Robynne Paldi Purdue University	Characterizations of Strain, Defects, and Interfaces	Thurs., January 21	10:00 – 10:15 AM	Contributed (Oral)
3490920	Letting go of the epitaxial growth in functional oxides (just enough)	Beatriz Noheda Zernike Institute for Advanced Materials	Controlled Synthesis of Functional Oxide Heterostructures II	Thurs., January 21	10:45 – 11:15 AM	Invited (by Invitation Only)
3490800	High mobility SrSnO ₃ thin films for complex oxide heterostructures	Ruben Hamming-Green University of Groningen	Controlled Synthesis of Functional Oxide Heterostructures II	Thurs., January 21	11:15 – 11:30 AM	Contributed (Oral)
3490133	Structure and magnetism of multi-domain CaFe ₂ O ₄ thin films	Silvia Damerio University of Groningen	Controlled Synthesis of Functional Oxide Heterostructures II	Thurs., January 21	11:30 – 11:45 AM	Contributed (Oral)
3487927	Epitaxial growth of CuBi ₂ O ₄ /NiO heterostructure thin films using pulsed laser deposition	Jongmin Lee Gwangju Institute of Science and Technology	Controlled Synthesis of Functional Oxide Heterostructures II	Thurs., January 21	11:45 AM – 12:00 PM	Contributed (Oral)
3490890	Atomically controlled micrometer growth of SrMoO ₃ : A highly conducting perovskite enabling agile and energy efficient all-oxide high frequency devices	Lambert Alff Technical University Darmstadt	Controlled Synthesis of Functional Oxide Heterostructures II	Thurs., January 21	12:00 – 12:15 PM	Contributed (Oral)
3476591	Bidirectional tuning of phase transition properties in Pt: VO ₂ nanocomposite thin films	Zihao He Purdue University	Controlled Synthesis of Functional Oxide Heterostructures II	Thurs., January 21	12:15 – 12:30 PM	Contributed (Oral)
3490725	Direct and fast probing of polarization charge at the nanoscale	Yunseok Kim Sungkyunkwan University (SKKU)	Structure, Dynamics, and Stability of Ferroic Domains	Thurs., January 21	10:45 – 11:15 AM	Invited (by Invitation Only)
3489089	(Auto) Encoding ferroelectric dynamics and structure-property relationships	Sergei V. Kalinin Oak Ridge National Lab	Structure, Dynamics, and Stability of Ferroic Domains	Thurs., January 21	11:15 – 11:30 AM	Contributed (Oral)
3489097	Ionic control of ferroelectric switching in 2D layered van der Waals capacitors	Sabine Neumayer Oak Ridge National Laboratory	Structure, Dynamics, and Stability of Ferroic Domains	Thurs., January 21	11:30 – 11:45 AM	Contributed (Oral)
3505668	How mesoscale structures influences functionalities microwave materials	Nate Orloff NIST	Structure, Dynamics, and Stability of Ferroic Domains	Thurs., January 21	11:45 AM– 12:15 PM	Invited (by Invitation Only)
3492527	Microscale Domain Formation and Evolution at the Ferroic Phase Transition	Asaf Hershkovitz Technion Israel Institute of Technology	Structure, Dynamics, and Stability of Ferroic Domains	Thurs., January 21	12:15 – 12:30 PM	Contributed (Oral)
3488158	First-principles design of polar materials for the applications in photovoltaics and electronics	Hanghui Chen New York University Shanghai	Semiconductors for Photovoltaics	Thurs., January 21	9:00 – 9:30 AM	Invited (by Invitation Only)
3479266	Polar Oxynitrides with Band Gaps in the Visible Spectrum	Steven Timothy Hartman Los Alamos National Lab	Semiconductors for Photovoltaics	Thurs., January 21	9:30 – 10:00 AM	Invited (by Invitation Only)
3482245	Material innovation by freestanding films for mixed dimensional heterostructure	Sanghoon Bae Massachusetts Institute of Technology	Semiconductors for Photovoltaics	Thurs., January 21	10:00 – 10:30 AM	Invited (by Invitation Only)
3531337 WITHDRAWN	Enhanced low-temperature proton conductivity in hydrogenated brownmillerite oxide	Pu Yu Tsinghua University and Frontier Science Center for Quantum Information	Ionic Conducting Materials	Thurs., January 21	9:00 – 9:30 AM	Invited (by Invitation Only)
3531342 WITHDRAWN	Chemical Stability of Garnet Electrolytes	Zonghai Chen Argonne National Lab	Ionic Conducting Materials	Thurs., January 21	9:30 – 10:00 AM	Invited (by Invitation Only)

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3517204	Thin film oxides for solid state ionics and iontronics devices	Albert Tarancón IREC-ICREA	Ionic-conducting Ceramics I	Thurs., January 21	9:00 – 9:30 AM	Invited (by Invitation Only)
3504337	Accelerated computational design of ion conducting solids for energy storage applications	Stefan Adams National University of Singapore	Ionic-conducting Ceramics I	Thurs., January 21	9:30 – 10:00 AM	Invited (by Invitation Only)
3503042	Development of nanostructured ceramic thin films for micro solid oxide cell applications	Juan de Dios Sirvent IREC (Catalonia Institute for Energy Research)	Ionic-conducting Ceramics I	Thurs., January 21	10:00 – 10:15 AM	Contributed (Oral)
3500709	Ionic conducting oxides for neuro-morphic computing and neural links	Shriram Ramanathan Purdue University	Ionic-conducting Ceramics II	Thurs., January 21	10:45 – 11:15 AM	Invited (by Invitation Only)
3488646	Low-frequency Noise and Impedance Analysis of Core-shell Nanowires for Neuromorphic Architectures	Shangradhanva Eswara Vasisth University of Florida	Ionic-conducting Ceramics II	Thurs., January 21	11:15 – 11:30 AM	Contributed (Oral)
3490487	Influence of Yttria Segregation and Strain on the Ionic Conductivity of Yttria-Stabilized Zirconia Films Deposited on Langasite Substrates	Firas Mahyob University of Maine	Ionic-conducting Ceramics II	Thurs., January 21	11:30 – 11:45 AM	Contributed (Oral)
3491030	Realization of electron antidoping by modulating the breathing distortion in BaBiO ₃	Hui Cao Argonne National Lab	Ionic-conducting Ceramics II	Thurs., January 21	11:45 AM – 12:00 PM	Contributed (Oral)
3503205	Quantification of Point Defects in La _{1-x} Sr _x FeO ₃ - Thin Films by In-situ Ellipsometry	Yunqing Tang Catalonia Institute for Energy Research (IREC)	Ionic-conducting Ceramics II	Thurs., January 21	12:00 – 12:15 PM	Contributed (Oral)
3500293	Phase Controlled Synthesis of AB ₂ O ₄ Spinel Oxides using Molecular Beam Epitaxy	Linda Wangoh Pacific Northwest National Laboratory	Ionic-conducting Ceramics II	Thurs., January 21	12:15 – 12:30 PM	Contributed (Oral)
3489585	Mapping charge state, polarization, and multiscale electric field at interfaces in ferroelectric oxides	Wenpei Gao NC State University	Advances in Connecting Local and Global Structure to Properties	Thurs., January 21	1:30 – 2:00 PM	Invited (by Invitation Only)
3485901	Anti-site defects in orthoferrites thin films	Abinash Kumar Massachusetts Institute of Technology	Advances in Connecting Local and Global Structure to Properties	Thurs., January 21	2:00 – 2:15 PM	Contributed (Oral)
3485856	Precursors to frustration in the lattice dynamics of ferroic materials	Michael E. Manley Oak Ridge National Lab	Advances in Connecting Local and Global Structure to Properties	Thurs., January 21	2:15 – 2:45 PM	Invited (by Invitation Only)
3490098	The structural evolution and atomic origin of polarization in mixed oxide K _{0.5} Na _{0.5} NbO ₃	Abhijit Pramanick City University of Hong Kong	Advances in Connecting Local and Global Structure to Properties	Thurs., January 21	2:45 – 3:00 PM	Contributed (Oral)
3490998	Scattering experiments and ab-initio calculations in materials with competing short-range distortions	Marek Pasciak Institute of Physics of the Czech Academy of Sciences	Advances in Connecting Local and Global Structure to Properties	Thurs., January 21	3:15 – 3:45 PM	Invited (by Invitation Only)
3486182	Stochastic models of switching processes in tetragonal, rhombohedral and orthorhombic ferroelectrics	Yuri Genenko Technical University of Darmstadt	Advances in Connecting Local and Global Structure to Properties	Thurs., January 21	3:45 – 4:15 PM	Invited (by Invitation Only)
3489123	Interfaces in all-oxide thin-film ferroelectric varactors with micrometer-thick SrMoO ₃ electrodes	Patrick Salg Technical University Darmstadt	Structure and Electromechanical Properties of Films and Crystals	Thurs., January 21	1:30 – 2:00 PM	Invited (by Invitation Only)
3503426	Ferroelectricity in B-Substituted AlN Thin Films	John Hayden Pennsylvania State University	Structure and Electromechanical Properties of Films and Crystals	Thurs., January 21	2:00 – 2:15 PM	Contributed (Oral)
3499526	Reactive Sputter Deposition of AlGaN Alloys	Joshua Nordlander Pennsylvania State University	Structure and Electromechanical Properties of Films and Crystals	Thurs., January 21	2:15 – 2:30 PM	Contributed (Oral)
3503041	Oxygen and other impurity effects on electrical properties of (Al,Sc)N thin films	Daniel Edward Drury Colorado School of Mines	Structure and Electromechanical Properties of Films and Crystals	Thurs., January 21	2:30 – 2:45 PM	Contributed (Oral)
3499750	Tailoring switching behavior in ferroelectric Al _{1-x} Sc _x N thin film	Keisuke Yazawa Colorado School of Mines	Structure and Electromechanical Properties of Films and Crystals	Thurs., January 21	2:45 – 3:00 PM	Contributed (Oral)
3510594	Transparent Ferroelectric Crystals with Ultrahigh Piezoelectricity	Fei Li Xi'an Jiaotong University	Structure and Electromechanical Properties of Films and Crystals	Thurs., January 21	3:15 – 3:45 PM	Invited (by Invitation Only)
3488692	0.9Pb(Mg _{1/3} Nb _{2/3})O ₃ -0.1PbTiO ₃ thick films integrated by aerosol deposition on metal and polymer substrates	Matej Sadl Jozef Stefan Institute	Structure and Electromechanical Properties of Films and Crystals	Thurs., January 21	3:45 – 4:00 PM	Contributed (Oral)
3500038	Aerosol Deposition and Characterization of Sodium Niobate	Eric Patterson Naval Research Laboratory	Structure and Electromechanical Properties of Films and Crystals	Thurs., January 21	4:00 – 4:15 PM	Contributed (Oral)
3490378	From liquid metals to nanometric oxide layers - gallium based synthesis of materials for electronics	Alexandra Dobosz Institute of Metallurgy and Materials Science Polish Academy of Sciences	Structure and Electromechanical Properties of Films and Crystals	Thurs., January 21	4:15 – 4:30 PM	Contributed (Oral)
3503298	Why Have We Proposed Polymer Complex Method for Synthesis of Multi-Component Oxides Rather Than Sol-Gel Method?	Masahiro Yoshimura Tokyo Institute of Technology	Structure and Electromechanical Properties of Films and Crystals	Thurs., January 21	4:30 – 4:45 PM	Contributed (Oral)

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3488965	Mapping the structure of epitaxial perovskite oxide films using X-ray diffraction	Matthew Brahlek Oak Ridge National Laboratory	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films I	Thurs., January 21	1:30 – 2:00 PM	Invited (by Invitation Only)
3489556	Stoichiometry-Dependence of Electronic Properties in LaVO ₃ Thin Films	Biwen Zhang Florida State University	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films I	Thurs., January 21	2:00 – 2:15 PM	Contributed (Oral)
3483959	BiFeO ₃ /NdFeO ₃ Superlattices: Strain effects and structural phase transitions investigated by X-ray diffraction	Mohamed Ali Khaled Université de Picardie Jules Verne	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films I	Thurs., January 21	2:15 – 2:30 PM	Contributed (Oral)
3475953 WITHDRAWN	Three-dimensional strain engineering in epitaxial vertically aligned nanocomposite thin films with tunable magnetotransport properties	Xing Sun Purdue University	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films I	Thurs., January 21	2:30 – 2:45 PM	Contributed (Oral)
3490379	In Situ studies of LaNiO ₃ growth by oxide molecular beam epitaxy	Yan Li Argonne National Lab	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films I	Thurs., January 21	2:45 – 3:00 PM	Contributed (Oral)
3474619	Delafossite oxides: A natural heterostructure with a great variety of physical properties	Jong Mok Ok Oak Ridge National Lab	Novel Functionality in Oxide Heterostructures	Thurs., January 21	3:15 – 3:45 PM	Invited (by Invitation Only)
3503378	Component-specific photoinduced polarization change in a strongly coupled BaTiO ₃ /CaTiO ₃ superlattice	Deepankar Sri Gyan University of Wisconsin-Madison	Novel Functionality in Oxide Heterostructures	Thurs., January 21	3:45 – 4:00 PM	Contributed (Oral)
3488493	Symmetry crossover in rare earth nickelate solid solutions	Jennifer Fowlie University of Geneva	Novel Functionality in Oxide Heterostructures	Thurs., January 21	4:00 – 4:15 PM	Contributed (Oral)
3484525	Hole-Trapping-Induced Stabilization of Ni ⁴⁺ in SrNiO ₃ /LaFeO ₃ Superlattices	Le Wang Pacific Northwest National Laboratory	Novel Functionality in Oxide Heterostructures	Thurs., January 21	4:15 – 4:30 PM	Contributed (Oral)
3489979	Propagation Modulation of Octahedral tilt in Atomically Designed SrRuO ₃ /SrTiO ₃ Superlattices	Seung Gyo Jeong SungKyunKwan University	Novel Functionality in Oxide Heterostructures	Thurs., January 21	4:30 – 4:45 PM	Contributed (Oral)
3501307	Watching polarization dynamics during ferroelectric oxide thin film growth	Morgan Trassin ETH Zurich	Synthesis, Properties and Applications of Ferriic Nanostructures I	Thurs., January 21	1:30 – 2:00 PM	Invited (by Invitation Only)
3504602	Reconfiguring functional oxides in atomically controlled thin films	Gertjan Koster University of Twente	Synthesis, Properties and Applications of Ferriic Nanostructures I	Thurs., January 21	2:00 – 2:30 PM	Invited (by Invitation Only)
3499064	Pb- and Mg-rich PLD targets – A straightforward approach for improving the stoichiometry of PMN-PT thin films	Urška Trstenjak Jozef Stefan Institute	Synthesis, Properties and Applications of Ferriic Nanostructures I	Thurs., January 21	2:30 – 2:45 PM	Contributed (Oral)
3491520	Phase Boundaries in Highly Disordered Ba(Ti _{0.2} Sn _{0.2} Zr _{0.2} Hf _{0.2} Nb _{0.2})O ₃ Relaxor Dielectric Thin Films	Yogesh Sharma Los Alamos National Lab	Synthesis, Properties and Applications of Ferriic Nanostructures I	Thurs., January 21	2:45 – 3:00 PM	Contributed (Oral)
3503011	Exploring the chemical landscape of functional oxides: Theory and computation	Valentino R. Cooper Oak Ridge National Laboratory	Synthesis, Properties and Applications of Ferriic Nanostructures II	Thurs., January 21	3:15 – 3:45 PM	Invited (by Invitation Only)
3485038	Local energy landscape in freestanding single-crystal complex oxide ferroelectrics	Saidur Rahman Bakaul Argonne National Laboratory	Synthesis, Properties and Applications of Ferriic Nanostructures II	Thurs., January 21	3:45 – 4:15 PM	Invited (by Invitation Only)
3490668	Unexpected giant domain-assisted electromechanical coupling in BaTiO ₃ from atomic scale to micromanipulators	Hemaprabha Elangovan Technion Israel Institute of Technology	Synthesis, Properties and Applications of Ferriic Nanostructures II	Thurs., January 21	4:15 – 4:30 PM	Contributed (Oral)
3503207	The Polar Order and Dielectric Anomalies in Ag(Nb _{1-x} Ta _x)O ₃ Ceramic System	Matjaz Spreitzer Jozef Stefan Institute	Synthesis, Properties and Applications of Ferriic Nanostructures II	Thurs., January 21	4:30 – 4:45 PM	Contributed (Oral)
3490888	Polarization and Interface Controlled Ferroelectric Memristive Switching	Aiping Chen Los Alamos National Lab	Synthesis, Properties and Applications of Ferriic Nanostructures II	Thurs., January 21	4:45 – 5:15 PM	Invited (by Invitation Only)
3491025	Resistive switching in ferroelectric memristors	Pinku Roy University at Buffalo- The State University of New York	Synthesis, Properties and Applications of Ferriic Nanostructures II	Thurs., January 21	5:15 – 5:30 PM	Contributed (Oral)
3489593	Microstructure and anisotropy controlled magnetisation on epitaxial manganite films on vicinal SrTiO ₃ substrates	Binod Paudel New Mexico State University	Synthesis, Properties and Applications of Ferriic Nanostructures II	Thurs., January 21	5:30 – 5:45 PM	Contributed (Oral)
3503215	Materials, Standards, and Measurements for 5G and beyond	Nate Orloff NIST	Introduction to the Session, Keynote, and Panel	Thurs., January 21	1:20 – 1:30 PM	Contributed
3490859	Novel Ceramic and Magnetic Oxide Ceramics for 5G Wireless Infrastructure Applications	Michael David Hill Trans-Tech, Inc.	Devices and Applications	Thurs., January 21	1:30 – 2:00 PM	Invited (by Invitation Only)
3487456	Al _{1-x} Sc _x N-based BAW filters for mobile communications	Amelie Hagelauer University of Bayreuth	Devices and Applications	Thurs., January 21	2:00 – 2:30 PM	Invited (by Invitation Only)
3463239	Solution-Processed Ti ₃ C ₂ T _x MXene Antennas for Radio-Frequency Communication	Meikang Han Drexel University	Devices and Applications	Thurs., January 21	2:30 – 2:45 PM	Contributed (Oral)
3483907	Extending the Frequency of Piezoelectric Resonators to Microwave Frequencies and Beyond	Christopher D Nordquist Sandia National Laboratories	Devices and Applications	Thurs., January 21	2:45 – 3:15 PM	Invited (by Invitation Only)
3487543	Advanced RF Modeling of Varactors with Thin Oxide Electrodes	Dominik Walk Technische Universität Darmstadt	Devices and Applications	Thurs., January 21	3:30 – 4:00 PM	Invited (by Invitation Only)
3503227	Millimeter-Wave Wireless Interconnects for Heterogeneous Integration to 325 GHz	Nicholas Ryan Jungwirth National Institute of Standards and Technology	Devices and Applications	Thurs., January 21	4:00 – 4:30 PM	Invited (by Invitation Only)
3486991	Enabling Glass-based Devices for 5G Applications	Aric Shorey Mosaic Microsystems	Devices and Applications	Thurs., January 21	4:30 – 5:00 PM	Invited (by Invitation Only)

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and
Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3483403	From big data to smart data: Data-efficient machine learning for materials and energy research	Karsten Reuter Fritz-Haber-Institut der Max-Planck-Gesellschaft	High-throughput Approaches	Thurs., January 21	1:30 – 2:00 PM	Invited (by Invitation Only)
3482297	Single-Atom Alloy Catalysts Designed by First-Principles Calculations and Artificial Intelligence	Sergey Levchenko Skolkovo Institute of Science and Technology	High-throughput Approaches	Thurs., January 21	2:00 – 2:15 PM	Contributed (Oral)
3486468	Accelerated discovery of efficient solar cell materials using quantum and machine-learning methods	Kamal Choudhary National Institute of Standards and Technology	High-throughput Approaches	Thurs., January 21	2:15 – 2:45 PM	Invited (by Invitation Only)
3486521	Finding Descriptors in Materials Data Using Interpretable Machine Learning	Bryan R Goldsmith University of Michigan–Ann Arbor	High-throughput Approaches	Thurs., January 21	2:45 – 3:15 PM	Invited (by Invitation Only)
3486612	Efficient First-Principles Approach for Database Driven Materials Research with a Higher Accuracy	Young-Woo Son Korea Institute for Advanced Study	High-throughput Approaches	Thurs., January 21	3:30 – 4:00 PM	Invited (by Invitation Only)
3488199 WITHDRAWN	Comprehensive scan for nonmagnetic Weyl semimetals with nonlinear optical response	Qiunan Xu Max Planck Institute for Chemical Physics of Solids	High-throughput Approaches	Thurs., January 21	4:00 – 4:30 PM	Invited (by Invitation Only)

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
			Live Networking Session Symposium 1	Fri., Jan. 22	10:15 – 10:45 AM	
			Live Networking Session Symposium 2	Fri., Jan. 22	10:15 – 10:45 AM	
			Live Networking Session Symposium 4	Fri., Jan. 22	10:15 – 10:45 AM	
			Live Networking Session Symposium 13	Fri., Jan. 22	10:15 – 10:45 AM	
3483234	Atomic-scale microstructure of metal halide perovskite	Mathias Uller Rothmann University of Oxford	Advances in Scattering, Imaging, and Analytical Techniques II	Fri., Jan. 22	9:00 – 9:30 AM	Invited
3489121	Unsupervised machine learning of ferroelectric structures from atomically resolved STEM data	Sergei V. Kalinin Oak Ridge National Lab	Advances in Scattering, Imaging, and Analytical Techniques II	Fri., Jan. 22	9:30 – 9:45 AM	Contributed
3490616	Multimodal Correlative Studies Towards Rational Catalyst Design for Carbon Nanotube Carpet Growth	Dmitri N Zakharov Brookhaven National Laboratory	Advances in Scattering, Imaging, and Analytical Techniques II	Fri., Jan. 22	9:45 – 10:15 AM	Invited
3498060	Recognition of domain patterns using high-resolution single crystal X-ray diffraction	Semën Gorfman Tel Aviv University	Advances in Scattering, Imaging, and Analytical Techniques I	Fri., Jan. 22	10:45 – 11:15 AM	Invited
3490672	Unconventional domain switching leading to large electromechanical strains near phase convergence in Sn-doped (Ba,Ca)(Zr,Ti)O ₃ ceramics	Abhijit Pramanick City University of Hong Kong	Advances in Scattering, Imaging, and Analytical Techniques I	Fri., Jan. 22	11:15 – 11:30 AM	Contributed
3491020	Point Defect Metrology: Combining EPR, DFT, and XAS to Determine Concentration-Dependent Dopant Substitution Mechanisms	Russell A Maier National Institute of Standards and Technology	Advances in Scattering, Imaging, and Analytical Techniques I	Fri., Jan. 22	11:30 AM – 12:00 PM	Invited
3489772 WITHDRAWN	Why it's Unfortunate that Machine Learning Works so Well for Electro-mechanical Switching in Ferroelectric Thin Films	Joshua C Agar University of Illinois at Urbana Champaign	Advances in Scattering, Imaging, and Analytical Techniques I	Fri., Jan. 22	12:00 – 12:15 PM	Contributed
3489811	Microstructure quantification and machine learning to assess multi-functional performance of Li ₄ Ti ₅ O ₁₂ – Ni anode composites	William Huddleston Case Western Reserve University	Advances in Scattering, Imaging, and Analytical Techniques I	Fri., Jan. 22	12:15 – 12:30 PM	Contributed
3503376	Strategies to improve the energy storage properties of lead-free relaxors	Vignaswaran Kaliyaperumal Veerapandiyan Materials Center Leoben Forschung GmbH	Applications of Advanced Electronic Materials	Fri., Jan. 22	9:00 – 9:30 AM	Invited
3479758	Thermoelectric Power Generation for Suborbital Vehicles	Christopher Kovacs Air Force Research Lab	Applications of Advanced Electronic Materials	Fri., Jan. 22	9:30 – 9:45 AM	Contributed
3500846	Hydrogen doping of perovskite nickelates: A platform for semiconductor design	Tae Joon Park Purdue University	Applications of Advanced Electronic Materials	Fri., Jan. 22	9:45 – 10:00 AM	Contributed
3489035	Cold Sintering Materials for Magnetic and Optoelectronic Applications	Sarah Lowum Pennsylvania State University	Applications of Advanced Electronic Materials	Fri., Jan. 22	10:00 – 10:15 AM	Contributed
3491312	ZnO _{1-x} Mg _x O and the Concept of Ferroelectrics Everywhere	Kevin Ferri Pennsylvania State University	Applications of Advanced Electronic Materials	Fri., Jan. 22	10:15 – 10:30 AM	Contributed
3500537	Relaxor-ferroelectric and caloric properties of (1-x)Pb(Fe _{0.5} Nb _{0.5})O ₃ -xBiFeO ₃	Hana Urši Jozef Stefan Institute	Synthesis, Properties and the Role of Defects in Relaxor and Lead Free Materials I	Fri., Jan. 22	10:45 – 11:15 AM	Invited
3490189	Soft mode dynamics in PbHfO ₃ -Sn solid solution	Mariia Kniazeva Peter the Great St. Petersburg Polytechnic University	Synthesis, Properties and the Role of Defects in Relaxor and Lead Free Materials I	Fri., Jan. 22	11:15 – 11:30 AM	Contributed
3483574	Dipole Engineering: Properties of High Purity Ba(Mn,W)yTi _{1-2y} O ₃ , 0 ≤ y ≤ 0.01875	Natalia Betancur-Granados Corporación Universitaria Minuto de Dios - UNIMINUTO	Synthesis, Properties and the Role of Defects in Relaxor and Lead Free Materials I	Fri., Jan. 22	11:30 – 11:45 AM	Contributed
3501335 WITHDRAWN	Fractal graph and neural networks theories applied on modified nano BaTiO ₃ electronic ceramics	Vojislav Mitic Serbian Academy of Sciences	Synthesis, Properties and the Role of Defects in Relaxor and Lead Free Materials I	Fri., Jan. 22	11:45 AM – 12:00 PM	Contributed
3490118	Study of the electric-field-induced phase transformation in the anti-ferroelectric NaNbO ₃	Jurij Koruza Technische University of Darmstadt	Synthesis, Properties and the Role of Defects in Relaxor and Lead Free Materials I	Fri., Jan. 22	12:00 – 12:30 PM	Invited
3486856	Strain-driven giant thermal transport regulation at metal/ferroelectric interface	Yuefeng Nie Nanjing University	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films II	Fri., Jan. 22	9:00 – 9:30 AM	Invited
3489971	Role of coherent epitaxy in forming 2-dimensional electron gas at La _{1-x} Ga _x O ₃ /BaSnO ₃ interfaces	Kookrin Char Seoul National University	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films II	Fri., Jan. 22	9:30 – 9:45 AM	Contributed
3491091	Ferroelectricity in hafnia/zirconia nanolaminates and superlattices	Min Hyuk Park Pusan National University	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films II	Fri., Jan. 22	9:45 – 10:00 AM	Contributed
3490154	Improved Epitaxial Growth of BaSnO ₃ Thin Films on NdScO ₃ Substrates	Daniel Pfütznerreuter Leibniz-Institut für Kristallzüchtung	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films II	Fri., Jan. 22	10:00 – 10:15 AM	Contributed

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3484324	Boosting room-temperature magneto-ionics in a non-magnetic oxide semiconductor	Jordi Sort Autonomous University of Barcelona	In-situ Thin Film Characterization for Materials Synthesis and Electrochemical Reactions	Fri., Jan. 22	10:45 – 11:15 AM	Invited
3490100	La _{0.7} Sr _{0.3} MnO ₃ /BaTiO ₃ /La _{0.7} Sr _{0.3} MnO ₃ heterostructures for interface magnetoelectric coupling	Anton Khanas Institut des Nanosciences de Paris	In-situ Thin Film Characterization for Materials Synthesis and Electrochemical Reactions	Fri., Jan. 22	11:15 – 11:30 AM	Contributed
3490911	Resistive Switching in Nb:SrTiO ₃ Based Memristors	Rebecca Lalk Los Alamos National Lab	In-situ Thin Film Characterization for Materials Synthesis and Electrochemical Reactions	Fri., Jan. 22	11:30 – 11:45 AM	Contributed
3500963	Reservoir Gates for Emergent Device Physics in Perovskite Nickelates	Qi Wang Purdue University	In-situ Thin Film Characterization for Materials Synthesis and Electrochemical Reactions	Fri., Jan. 22	11:45 AM – 12:00 PM	Contributed
3479960	Design of 3D oxide-metal hybrid metamaterial for tailorable light-matter interactions	Di Zhang Purdue University	In-situ Thin Film Characterization for Materials Synthesis and Electrochemical Reactions	Fri., Jan. 22	12:00 – 12:15 PM	Contributed
3488068	Investigation of the post-deposition annealing effect on the chemical and electronic structure of TiN/SnO ₂ thin films heterostructure	Ahmed Yousef Mohamed Jeonbuk National University	In-situ Thin Film Characterization for Materials Synthesis and Electrochemical Reactions	Fri., Jan. 22	12:15 – 12:30 PM	Contributed
3503239	Importance of Materials Characteristics on Emerging Technologies	Vince Nguyen Keysight Technologies	Introduction to the Session, Keynote, and Panel	Fri., Jan. 22	9:00 – 9:30 AM	Invited
3505650	Industry Panel A: New technologies and enabling materials	Nate Orloff NIST	Introduction to the Session, Keynote, and Panel	Fri., Jan. 22	9:30 – 10:15 AM	Invited
3493206	Broadband dielectric spectroscopy techniques and ceramics for the 5G future	Eric Marks National Institute of Standards and Technology	Metrology	Fri., Jan. 22	10:45 – 11:15 AM	Invited
3486960	Determining the Complex Dielectrics Properties of 5G Materials using a Machine Learning Approach	Robert Tempke West Virginia University/ NETL/ORISE	Metrology	Fri., Jan. 22	11:15 – 11:30 AM	Contributed
3490295	Broadband Dielectric Characterization in the RF to mm-wave Frequency Range	Steven Perini Pennsylvania State University	Metrology	Fri., Jan. 22	11:30 – 11:45 AM	Contributed
3491041	Nanoscale Charge Injection and Decay for Dielectric Films	Bryan Huey University of Connecticut	Metrology	Fri., Jan. 22	11:45 – 12:15 PM	Invited
3489755	Effects of Free Carriers in Ferroelectric Structures	Turan Birol University of Minnesota	Metrology	Fri., Jan. 22	12:15 – 12:30 PM	Contributed
3503263	Switchable high-Q microwave dielectric materials	Nathan Newman Arizona State University	Metrology	Fri., Jan. 22	12:30 – 1:00 PM	Invited
3490809	Digital Twin for the Acceleration of the Optimization of Lithium Ion Battery Manufacturing	Alejandro A. Franco Université de Picardie Jules Verne	Multiscale-modeling and Novel Phenomena	Fri., Jan. 22	9:00 – 9:30 AM	Invited
3490722 WITHDRAWN	Rational design of bismuth-based oxide double-perovskite semiconductors with large band-gap tunability	Arashdeep Singh Thind Washington University in St. Louis	Multiscale-modeling and Novel Phenomena	Fri., Jan. 22	9:30 – 9:45 AM	Contributed
3490808	Machine learning formation enthalpies of intermetallics	Zhaohan Zhang Washington University in St. Louis	Multiscale-modeling and Novel Phenomena	Fri., Jan. 22	9:45 – 10:00 AM	Contributed
3490646	Active materials exploration and characterization with Bayesian optimization	Patrick Rinke Aalto University	Predictive Modeling and Experiment Combined Approaches	Fri., Jan. 22	10:45 – 11:15 AM	Invited
3490177	DFT, GW, and BSE calculations of charged defects in N-doped monolayer WS ₂	Anne Marie Zhao Hui Tan University of Florida	Predictive Modeling and Experiment Combined Approaches	Fri., Jan. 22	11:15 – 11:30 AM	Contributed
3500556	Predicting layered composites for X9R MLCCs: A flexible approach beyond the Temperature Coefficient of Capacitance (TCC)	George Kerridge University of Sheffield	Predictive Modeling and Experiment Combined Approaches	Fri., Jan. 22	11:30 – 11:45 AM	Contributed
3501190	Predicting the phase stability of high entropy oxides	Krishna Chaitanya Pitike Oak Ridge National Lab	Predictive Modeling and Experiment Combined Approaches	Fri., Jan. 22	11:45 AM – 12:00 PM	Contributed
3501594	Superhydrophobicity induced by CO ₂ plasma treatment of Magnesium	Sinchul Yeom University of Tennessee, Knoxville	Predictive Modeling and Experiment Combined Approaches	Fri., Jan. 22	12:00 – 12:15 PM	Contributed
3503300	Designer transition metal dichalcogenide alloys for electrocatalysis	Rohan Mishra Washington University in St. Louis	Predictive Modeling and Experiment Combined Approaches	Fri., Jan. 22	12:15 – 12:45 PM	Invited

ELECTRONIC MATERIALS AND APPLICATIONS (EMA 2021)

SPEAKERS SCHEDULE

Organized by the ACerS Electronics and Basic Science Divisions



ABSTRACT ID	PRESENTATION TITLE	PRESENTER	VIRTUAL SESSION TITLE	DATE	TIME	PRESENTATION TYPE
3506373	The impact of chemical inhomogeneity on the performance of lead-free potassium sodium niobate ceramic	Ke Wang Tsinghua University	Synthesis, Properties and the Role of Defects in Relaxor and Lead Free Materials II	Fri., Jan. 22	1:30 – 2:00 PM	Invited
3506224	Phase Boundary in Potassium-Sodium Niobate Lead-free Ceramics	Jiagang Wu Sichuan University	Synthesis, Properties and the Role of Defects in Relaxor and Lead Free Materials II	Fri., Jan. 22	2:00 – 2:30 PM	Invited
3503277	High temperature piezoelectric response of polycrystalline Li-doped (K,Na)NbO ₃ ceramics under compressive stress	Alexander Martin Nagoya Institute of Technology	Synthesis, Properties and the Role of Defects in Relaxor and Lead Free Materials II	Fri., Jan. 22	2:30 – 3:00 PM	Invited
3507194	Quenching effect for electrical and mechanical properties on (Bi _{1/2} Na _{1/2})TiO ₃ ceramics	Hijime Nagata Tokyo University of Science	Synthesis, Properties and the Role of Defects in Relaxor and Lead Free Materials II	Fri., Jan. 22	3:15 – 3:45 PM	Invited
3490134 WITHDRAWN	Structure-property correlation in Zn ²⁺ -doped Na _{1/2} Bi _{1/2} TiO ₃ -BaTiO ₃	Lalitha Kodumudi Venkataraman Technische Universität Darmstadt	Synthesis, Properties and the Role of Defects in Relaxor and Lead Free Materials II	Fri., Jan. 22	3:45 – 4:00 PM	Contributed
3490202	High-power stability of (Na _{1/2} Bi _{1/2})TiO ₃ -xBaTiO ₃ and its ceramic-ceramic composites	Mihail Slabki Technical University of Darmstadt	Synthesis, Properties and the Role of Defects in Relaxor and Lead Free Materials II	Fri., Jan. 22	4:00 – 4:15 PM	Contributed
3500093	Interfacial-Strain-Controlled Ferroelectricity in Self-Assembled BiFeO ₃ Nanostructures	Jingfeng Song University of Connecticut	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films III	Fri., Jan. 22	1:30 – 2:00 PM	Invited
3503189	Oxide Heterostructures for Water Splitting: LaFeO ₃ and LaNiO ₃ Films and Interfaces	Rajendra Paudel Auburn University	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films III	Fri., Jan. 22	2:00 – 2:15 PM	Contributed
3487560	Phase Selection and Structure of Low-Defect-Density -Al ₂ O ₃ Created by Epitaxial Crystallization of Amorphous Al ₂ O ₃	Rui Liu University of Wisconsin-Madison	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films III	Fri., Jan. 22	2:15 – 2:30 PM	Contributed
3490686	Field-induced structure in PbZrO ₃ thin films	Alexander Ganzha Peter the Great St.Petersburg Polytechnic University (SPbPU)	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films III	Fri., Jan. 22	2:30 – 2:45 PM	Contributed
3488947	Two-dimensional electron (or hole) gas at nanopolar/polar BaSnO ₃ /LaInO ₃ perovskite interfaces: A first principles study	Wahib Aggoune Humboldt University	Strain, Microstructures, and Functionality Tuning in Epitaxial Oxide Films III	Fri., Jan. 22	2:45 – 3:00 PM	Contributed
3503252	5G/ High Frequency Materials Characterization Challenges and Opportunities	Urmi Ray iNEMI	Standards for 5G and Tutorials	Fri., Jan. 22	1:30 – 1:45 PM	Contributed
3503255	Material characterization for 6G telecommunication - dielectric permittivity and conductivity measurements by balanced-type circular disk resonator	Masahiro Horibe National Institute of Advanced Industrial Science and Technology (AIST)	Standards for 5G and Tutorials	Fri., Jan. 22	1:45 – 2:15 PM	Invited
3503199	5G FR2, Automotive Radar, and other mmWave Materials Characterization with Latest Commercially Available Fixtures	Say Phommakesone Keysight Technologies Inc	Standards for 5G and Tutorials	Fri., Jan. 22	2:15 – 2:30 PM	Contributed
3488525	The novel frontiers for materials in automotive to optimize mmW performances	Nello Li Pira Fiat Research Center - FCA	Standards for 5G and Tutorials	Fri., Jan. 22	2:30 – 2:45 PM	Contributed
3490818	Tutorial: How do you calibrate 5G measurements on-wafer?	Nate Orloff NIST	Standards for 5G and Tutorials	Fri., Jan. 22	2:45 – 3:15 PM	Invited
3503226	How to support 5G materials measurements, antenna designs, and standards developments with QuickWave simulations	Malgorzata Celuch QWED Sp. z o.o.	Standards for 5G and Tutorials	Fri., Jan. 22	3:15 – 3:45 PM	Invited
3490356	An open informatics platform for agile materials discovery	Nicola Marzari EPFL	Materials by Design	Fri., Jan. 22	1:30 – 2:00 PM	Invited
3489997 WITHDRAWN	Manganese-based Cathode Materials for Rechargeable Sodium Batteries	Seung-Taek Myung Sejong University	Materials by Design	Fri., Jan. 22	2:00 – 2:30 PM	Invited
3490627	A Machine-Learning Driven Hierarchical Screening Strategy to Expedite Search of Novel Scintillator Chemistries	Anjana Talapatra Los Alamos National Laboratory	Materials by Design	Fri., Jan. 22	2:30 – 3:00 PM	Invited
3491862	Discovering new materials by (co)evolutionary algorithms and machine learning	Artem R. Oganov Skoltech	Materials by Design	Fri., Jan. 22	3:15 – 3:45 PM	Invited
3493107 WITHDRAWN	Featureless adaptive optimization accelerates functional electronic materials design	Yiqun Wang Northwestern University	Materials by Design	Fri., Jan. 22	3:45 – 4:00 PM	Contributed