



# ACerS SPRING MEETING

**APRIL 12-17, 2026**

**BELLEVUE, WASHINGTON, USA**

Hyatt Regency Bellevue on Seattle's Eastside

## CONFERENCE GUIDE

[ceramics.org/acersspring](https://ceramics.org/acersspring)

Organized by:

The Basic Science, Bioceramics, Electronics, Energy Materials and Systems,  
Glass and Optical Materials, and Manufacturing Divisions  
of The American Ceramic Society

# WELCOME

## SPRING MEETING 2026

### **We are delighted to welcome you to the first-ever ACerS Spring Meeting, April 12-17, 2026, in Bellevue, Washington!**

This milestone event brings together six ACerS Divisions in an exciting and unprecedented collaboration, uniting our community under one roof to share knowledge, spark new ideas, and strengthen the connections that drive our field forward as **we are all connected**. Whether you are a seasoned researcher, an industry professional, or an emerging voice in the ceramics and glass community, this meeting was designed with you in mind.

Each Division has crafted its own distinctive programming, reflecting the depth and breadth of expertise within ACerS. At the same time, collaborative sessions will bridge disciplines and open doors to conversations that simply don't happen at a traditional single-division meeting. Add to that a robust lineup of networking opportunities, student and young professional events, and much more.

Bellevue, WA provides a stunning backdrop for this gathering, offering fantastic amenities and the energy of the vibrant Pacific Northwest. We hope you will take full advantage of everything the meeting and the city has to offer.

We are grateful to everyone who has contributed to making this inaugural event a reality: the Division leadership, session organizers, speakers, sponsors, and volunteers whose dedication made this program possible. Most importantly, thank you for being here. Your participation is what makes this community thrive.

We look forward to a week of discovery, collaboration, and celebration.

### **Welcome to the ACerS 2026 Spring Meeting.**



**Rajendra Bordia**  
**Conference Chair,**  
**ACerS Spring Meeting 2026**



# TABLE OF CONTENTS

## SPRING MEETING 2026

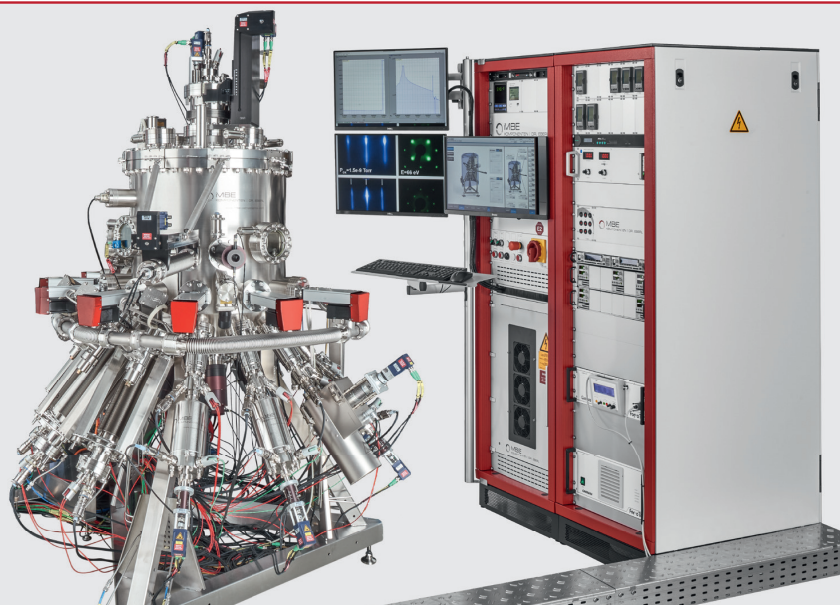
<b>Welcome</b> .....	<b>1</b>
<b>List of Symposia and Supporting Divisions</b> .....	<b>3</b>
<b>Meeting Regulations</b> .....	<b>4</b>
<b>Plenary Speakers</b> .....	<b>5-10</b>
<b>Award Speakers</b> .....	<b>11-13</b>
<b>Schedule at a Glance</b> .....	<b>14</b>
<b>Special Events</b> .....	<b>15-18</b>
<b>Student Activities</b> .....	<b>19</b>
<b>Hotel Floorplan</b> .....	<b>20</b>
<b>Hotel Information</b> .....	<b>21</b>
<b>Thank You Sponsors</b> .....	<b>22</b>
<b>Symposia Organizers</b> .....	<b>i-vi</b>
<b>Tech Sessions by Symposia</b> .....	<b>vii-xxv</b>
<b>Late Contributed Presentations</b> .....	<b>xxvi</b>
<b>Final Program</b> .....	<b>xxvii-lxxxii</b>
<b>ACerS Anti-Harassment Policy</b> .....	<b>lxxxiii</b>



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# LIST OF SYMPOSIA AND SUPPORTING DIVISIONS

## All-Participating-Division Organized Symposia

**SYMPOSIUM 1:** Emerging Frontiers in Glasses and Ceramics

**SYMPOSIUM 2:** Outreach and Engagement: STE(A)M Outreach, Education, Engagement and Retention

**SYMPOSIUM 3:** Sustainable Horizons: A Recurring Symposium on Collective Action for a Resilient Future

## Jointly Organized Symposia

**SYMPOSIUM 4:** Frontiers in Low Dimension Ferroic Oxides | Hosted by BSD & ED

**SYMPOSIUM 5:** Oxide Quantum Materials | Hosted by BSD & ED

**SYMPOSIUM 6:** Complex Oxide Thin Films and Heterostructures | Hosted by BSD & ED

**SYMPOSIUM 7:** In Situ/Operando Characterization of Nanomaterials | Hosted by BSD & ED

**SYMPOSIUM 8:** Nano4Neuro 3: Materials Advances for Analogue, Neuromorphic and Post-Moore Computing Paradigms | Hosted by BSD & ED

**SYMPOSIUM 9:** From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics | Hosted by BSD & ED

**SYMPOSIUM 10:** Extreme Environment Microelectronics Materials and Devices | Hosted by BSD & ED

**SYMPOSIUM 11:** Characterization of Structure-Property Relationships in Functional Ceramics | Hosted by BSD & ED

**SYMPOSIUM 12:** Electronic and Ionic Materials in Energy Storage and Conversion Systems | Hosted by BSD & ED

**SYMPOSIUM 13:** Defects and Transport in Ceramics | Hosted by BSD & ED

**SYMPOSIUM 14:** AI/ML-Driven Discovery, Manufacturing, and Characterizations | Hosted by BSD, ED, and MD

**SYMPOSIUM 15:** Ceramic and Composite Materials and Systems for a Sustainable and Resilient Energy Future | Hosted by BSD, EMSD, and MD

**SYMPOSIUM 16:** Advanced Manufacturing and Processing of Ceramic Materials | Hosted by MD, ED, and GOMD

**SYMPOSIUM 17:** Ceramics for the Hydrogen Economy | Hosted by BSD and ED

**SYMPOSIUM 18:** New Frontiers in Additive Manufacturing of Ceramic Materials | Hosted by MD, BSD, BIO, and GOMD

**SYMPOSIUM 19:** Glass and Interactions with its Environment - Fundamentals and Applications | Hosted by GOMD and EMSD

## Basic Science Division Organized Symposia

**SYMPOSIUM 20:** Symposium to Honor W. Craig Carter

**SYMPOSIUM 21:** Science of Sintering and Grain Growth

**SYMPOSIUM 22:** Robert B. Sosman Award and Lecture

**SYMPOSIUM 23:** High Interfacial Materials - Controlling Grain Boundary Structure, Chemistry, and their Network

## Bioceramics Division Organized Symposia

**SYMPOSIUM 24:** Mechanobiology and Cell-Substrate Interactions at Biointerfaces in Bioceramics: Theory and Experiments

## Electronics Division Organized Symposia

**SYMPOSIUM 25:** Advanced Electronic Materials: Processing Structures, Properties, and Applications

**SYMPOSIUM 26:** Semiconductors and Microelectronics in Metal Halide, Chalcogenide and Oxide Perovskites

**SYMPOSIUM 27:** Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications

**SYMPOSIUM 28:** Advanced Characterization of Functionalized Low-Dimensional Material Surfaces

**SYMPOSIUM 29:** Scale-Bridging Approaches for Electroceramic Design and Performance

**SYMPOSIUM 30:** Quo Vadis, High-Entropy Oxides?

**SYMPOSIUM 31:** Superconducting and 2D Magnetic Materials: From Basic Science to Applications

## Energy Materials and Systems Division Organized Symposia

**SYMPOSIUM 32:** Solid Oxide Cells for Sustainable Energy

**SYMPOSIUM 33:** Advances in Thermoelectrics: Bridging Theory and Application

**SYMPOSIUM 34:** Advances and Current Challenges in Solid-State Battery Technologies

## Glass and Optical Materials Division Organized Symposia

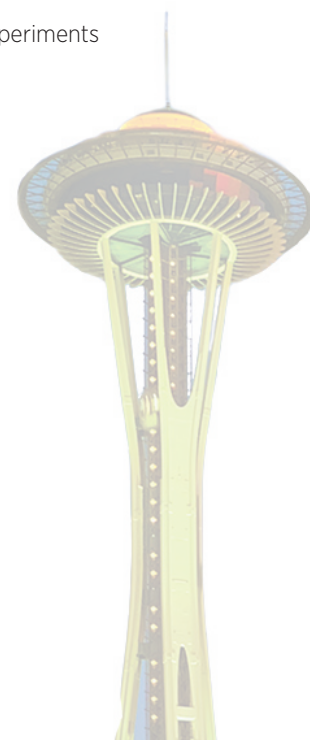
**SYMPOSIUM 35:** Fundamentals of the Glassy State

**SYMPOSIUM 36:** Modeling and Simulations of Glass Structures and Properties

**SYMPOSIUM 37:** Optical and Electronic Materials and Devices

**SYMPOSIUM 38:** Glass Manufacturing

**SYMPOSIUM 39:** Steve Feller Honorary Symposium



# MEETING REGULATIONS

## SPRING MEETING 2026



Cell  
phones  
silent



No  
photography/  
recording

During oral sessions conducted during Society meetings, unauthorized photography, videotaping, and audio recording is strictly prohibited for two reasons:

- (1) conference presentations are the intellectual property of the presenting authors and as such are protected, and
- (2) engaging in photography, videotaping, or audio recording is disruptive to the presenter and the audience. Failure to comply may result in the removal of the offender from the session or from the remainder of the meeting.

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

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**ACerS welcomes all:** The American Ceramic Society values diverse and inclusive participation within the field of ceramic science and engineering. ACerS strives to promote involvement and access to leadership opportunity regardless of race, ethnicity, gender, religion, age, sexual orientation, nationality, disability, appearance, geographic location, career path or academic level. For childcare services, please check with the concierge at individual

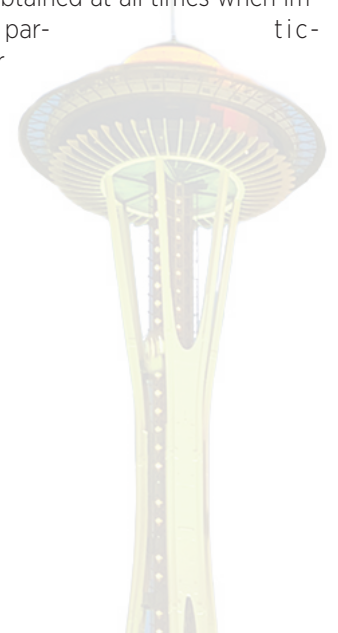
hotels for a listing of licensed and bonded child care options. The American Ceramic Society plans to take photographs and video at the conference and reproduce them in educational, news or promotional materials, whether in print, electronic or other media, including The American Ceramic Society's website. By participating in the conference, you grant The American Ceramic Society the right to use your name and photograph for such purposes. All postings become the property of The American Ceramic Society. During oral sessions conducted during Society meetings, unauthorized photography, videotaping and audio recording is prohibited. Failure to comply may result in the removal of the offender from the session or from the remainder of the meeting.

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

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# PLENARY SPEAKERS

## SPRING MEETING 2026



**Monday,  
April 13, 2026  
8:40 a.m.  
Olympic Tower:  
Grand Ballroom EFGHIJK**

### Basic Science Division

## Elizabeth Dickey

**Carnegie Mellon University**

### *Defect disorder and dynamics in electronic ceramics*

**Abstract:**

The rational design and control of defects in electronic ceramics is critical to property control and optimization. Point defects, in particular, influence properties such as conductivity, electric polarization and, as most recently discovered, the ability to switch polarization, engendering ferroelectricity in wurtzite-structure materials. In polycrystalline materials, the interactions of point defects with higher dimensional defects, such as grain boundaries and interfaces, also influences the macroscopic material response.

Once in device applications, point defect interactions with external fields influence material performance and, in some cases, instigate material degradation and failure. This lecture will review the historical developments in our understanding of defect disorder and defect dynamics in electronic ceramics. It will highlight the role of electron microscopy techniques for assessing local to meso-scale disorder in complex electronic ceramics and for studying their response to electric fields.

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Elizabeth Dickey is the Teddy & Wilton Hawkins Distinguished Professor and Department Head of Materials Science & Engineering at Carnegie Mellon University. She received her B.S. in Materials Engineering from the University of Kentucky and her Ph.D. from Northwestern University. Her research group aims to develop processing-structure-property relationships for materials in which the macroscopic physical properties are governed by point defects, grain boundaries or internal interfaces. She has over 200 peer-reviewed journal publications, which have been cited over twenty-thousand times. Early in her career she received the Presidential Early Career Award for Scientists and Engineers (PECASE) for her work on metal-ceramic interfaces. She was awarded the Fulrath Award and the Sosman Award by the American Ceramic Society in recognition of her research on characterization of functional ceramics and composites. Professor Dickey is a fellow of the American Ceramic Society, the Microscopy Society of America, the Materials Research Society and AAAS, and she is an Academician in the World Academy of Ceramics. She was president of the American Ceramic Society in 2021-2022.



# PLENARY SPEAKERS

## SPRING MEETING 2026



### Electronics Division

## Eric D. Wachsman

**Maryland Energy Innovation Institute,  
University of Maryland, College Park, MD, USA**

### ***Transformative solid-state battery technology, from concept to commercialization***

**Monday,  
April 13, 2026  
9:40 a.m.  
Olympic Tower:  
Grand Ballroom EFGHIJK**

#### **Abstract:**

Solid-state batteries are a transformational and intrinsically safe energy storage solution. However, progress has been limited by high solid-solid interfacial impedance and numerous reports of Li-dendrites. By modifying the electrolyte composition and interface in a rationally designed 3D architecture we

have been able to overcome these limitations achieving both high energy density and cycling rates of 100 mA/cm<sup>2</sup> at room temperature with no applied pressure. The science and engineering of this technology will be described as well as the path to commercialization and lessons learned in that endeavor.

---

Dr. Eric D Wachsman is the Director of the Maryland Energy Innovation Institute, the Crenzt Centennial Chair in Energy Research and a Distinguished University Professor in the Departments of both Materials Science and Engineering, and Chemical Engineering at the University of Maryland. He is Past President of The Electrochemical Society (ECS) and Editor-in-Chief of Ionics. He is a Fellow of ECS, the American Ceramic Society, the National Academy of Inventors, and the World Academy of Ceramics. His research is focused on solid ion-conducting materials and electrocatalysts, and includes the development of solid-state batteries, solid oxide fuel cells, ion-transport membrane reactors, and solid-state gas sensors, using advanced ion conducting materials. He has more than 300 scientific publications and 40 patents/patent applications on ionic and electronic transport in materials, and their catalytic properties, and device performance, and to date four companies have been founded based on these technologies.



# PLENARY SPEAKERS

## SPRING MEETING 2026



### Energy Materials and Systems Division

## Maarit Karppinen

Department of Chemistry and Materials Science, Aalto University, Finland

### ***Novel thin-film materials through ALD/MLD as enablers of next-generation energy applications***

**Tuesday,  
April 14, 2026  
8:40 a.m.  
Olympic Tower:  
Grand Ballroom EFGHIJK**

#### **Abstract:**

By combining the two state-of-the-art gas-phase thin-film techniques, ALD (atomic layer deposition) for atomic-level controlled inorganic layers and MLD (molecular layer deposition) for molecular-level controlled organic layers, it is possible to fabricate novel hybrid materials not readily accessible through any other fabrication route. These new ALD/MLD-enabled thin-film materials include exciting in-situ crystalline metal-organic frameworks (MOFs) as well as inorganic-organic superlattice structures in which ultra-thin organic layers are introduced periodically between nm-scale metal oxide layers to e.g. enhance mechanical flexibility, provide

electrical doping, block phonon conduction, or bring photoactivity. In this presentation, I will highlight exciting examples of the this new hybrid material library. My examples cover (i) lithium-organic thin films for electroactive Li-ion battery components and interface barrier layers in batteries, (ii) luminescent and upconverting lanthanide-organic layers for efficient UV-to-vis and IR-to-vis light converters relevant e.g. for solar-cell application, (iii) ZnO:organic superlattice structures with ultralow thermal conductivity and enhanced mechanical flexibility for wearable thermoelectrics,<sup>10</sup> and (iv)  $\epsilon$ -Fe<sup>2+</sup>O<sup>3</sup>:a-zobenzene superlattice films for photo-responsive magnets.

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Maarit Karppinen received her chemistry PhD from Helsinki University of Technology (now Aalto University, Finland). In 1995 she joined the Materials and Structures Laboratory, Tokyo Institute of Technology (Japan), first as a visiting and then regular associate professor to conduct research on novel functional oxide materials ranging from high-T<sub>c</sub> superconductors and thermoelectrics to exotic magnetic materials. In 2006 she returned back to Finland to her *Alma Mater* as a full professor. Currently she is renowned for her pioneering research on ALD/MLD (atomic/molecular layer deposition) fabricated metal-organic thin films and layer-engineered inorganic-organic coatings, funded by several prestigious European Research Council (ERC) grants. Her group's research scope covers the design and synthesis of new materials as well as their characterization e.g. for various frontier energy applications. She was nominated as Aalto Distinguished Professor in 2017, and invited to join the Scientific Council of ERC in 2025.



# PLENARY SPEAKERS

## SPRING MEETING 2026



### Glass & Optical Materials Division

## Srikanth Sastry

**Jawaharlal Nehru Centre for Advanced Scientific research (JNCASR),  
Bengaluru, India**

#### ***Yielding and fatigue failure in sheared glasses***

**Tuesday,  
April 14, 2026  
9:40 a.m.  
Olympic Tower:  
Grand Ballroom EFGHIJK**

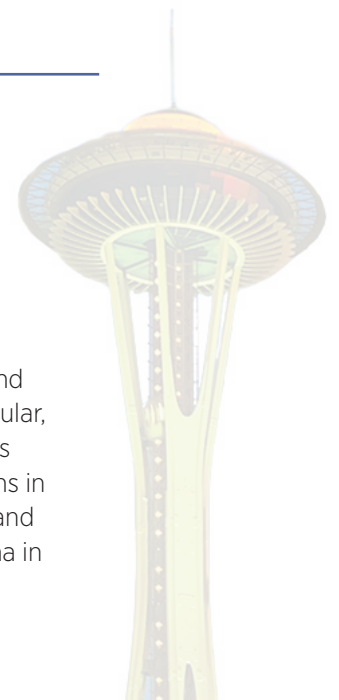
#### **Abstract:**

The mechanical response of glasses, particularly their plasticity and failure, is of extreme practical importance. When glasses are subjected to repeated cycles of stress or deformation, they can fail after several cycles. The microscopic understanding of the initiation of such fatigue failure continues to be of interest, to elucidate further. Glasses exhibit interesting non-monotonic behavior, with deformation induced annealing preceding failure, which cannot be neatly fit into conventional descriptions of fatigue failure, e. g., in metals. The extent to which the description of fatigue failure in amorphous solids may differ from that in crystalline, metallic, solids, is thus an open question of interest. Employ-

ing computer simulations of a model glass, we investigate the failure time for shear amplitudes above the fatigue limit. The failure times exhibit a power law divergence at the fatigue limit, and broad sample-to-sample variation, which we characterize and attempt to rationalize. We explore several measures of damage, based on quantifications of plastic rearrangements and on dissipated energy. Failure times exhibit striking correlations with accumulated plasticity, which surprisingly permit accurate prediction of failure times from the damage accumulated in the initial cycles. These numerical results, as well as approaches to developing a microscopic picture of fatigue failure in amorphous solids, will be discussed.

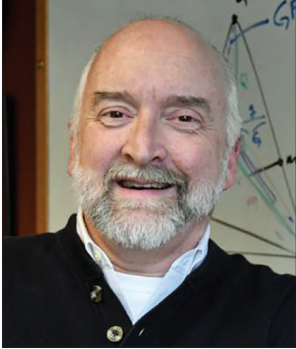
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Srikanth Sastry is a Professor at the Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru, India. His research interests have been in the area of statistical mechanics, with a focus on understanding a range of unusual and interesting properties of liquids and other soft condensed matter, which he addresses with computation as a major tool. Some of the areas of his research activities are: Slow dynamics and the glass transition in supercooled liquids; Mechanical properties of glasses and other amorphous solids and their yielding behavior; Routes to jamming in sphere packings, in particular, shear jamming; Memory formation and adaptable materials; Anomalous thermodynamic and dynamical properties, liquid-liquid phase transitions in water, silicon and other network forming liquids; Self assembly design and addressable self assembly; Glassy behaviour and associated phenomena in biological matter.



# PLENARY SPEAKERS

## SPRING MEETING 2026



### Manufacturing Division

## William M. Carty

**Professor Emeritus of Ceramic Engineering  
at the New York State College of Ceramics at Alfred University**

### *Ceramic processing: Think like a particle?*

**Wednesday,  
April 15, 2026  
8:40 a.m.  
Olympic Tower:  
Grand Ballroom EFGHIJK**

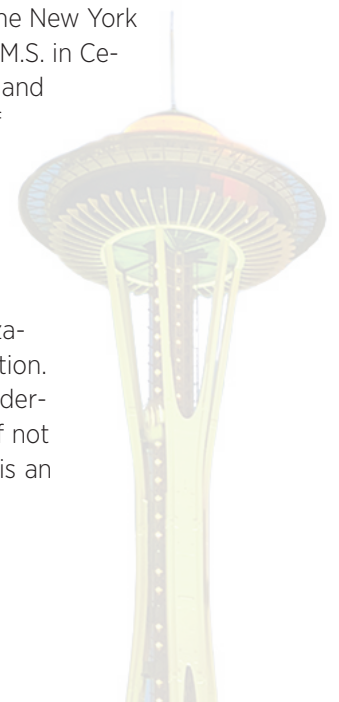
#### **Abstract:**

With few exceptions, ceramics are produced from powders. Understanding how to control the behavior of these powders, including particle size reduction, agglomeration, rheology, and forming behavior, and sintering, is critical the development of robust, well-controlled ceramic manufacturing processes. The application of colloidal processing theory to ceramic materials is relatively new, as DLVO was only published in the 1940s. The role of the suspension medium, the contribution of pH, and the use of dispersants are then

coupled with particle packing, forming and consolidation, and eventually drying and sintering. Each of these steps, while seemingly independent, are, of course, connected. Defects, while often blamed on drying or firing, are usually rooted in the powder processing. The introduction of Additive Manufacturing appears to provide a short-cut that eliminates the need for powder processing, but unfortunately, this is simply untrue – the need for processing is even more critical if AM is to be successful, and even then some approaches are simply not viable for ceramics.

---

William Carty, Ph.D., is Professor Emeritus of Ceramic Engineering at the New York State College of Ceramics at Alfred University. He earned the B.S. and M.S. in Ceramic Engineering from the University of Missouri-Rolla (Missouri S&T) and the Ph.D. in Materials Science and Engineering from the University of Washington (Seattle). He joined the faculty at Alfred University in 1993 after a one-year post-doc with Royal Dutch Shell Research and retired from teaching at the end of 2020. Dr. Carty has likely taught most, if not all, of the ceramic engineering students graduating from Alfred University since the mid-1990s. His primary area of research is the understanding of ceramic processing, including powder characterization, suspension rheology, forming processes, and microstructure evolution. He strongly believes that ceramic manufacturing begins with well-understood ceramic processing and without this process control is difficult if not impossible to develop. Dr. Carty now resides in New Hampshire and is an active consultant for the ceramic manufacturing industry.



# PLENARY SPEAKERS

## SPRING MEETING 2026



### **Bioceramics Division**

## **Candan Tamerler**

**Mechanical Engineering, Institute for Bioengineering Research and KU-Cancer Center, University of Kansas, Lawrence, KS, United States**

***Biomimetic, biohybrid and bioactive functional materials with meta-adaptive solutions enabled by AI-guided multiscale interface engineering industry***

**Wednesday,  
April 15, 2026  
9:40 a.m.  
Olympic Tower:  
Grand Ballroom EFGHIJK**

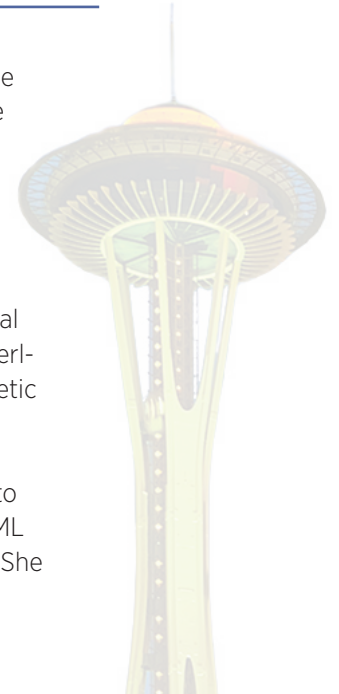
**Abstract:**

Engineering materials continues to expand by integrating approaches that combine structure with function inspired by biological systems. Biological systems incorporated complex adaptive mechanism(s) that feature interactivity across different scale lengths with several levels of complexity in their response to both internal and external environments. Often, the family of proteins known as “intrinsically disordered” play critical roles in adaptive biological mechanisms through diverse mechanism, ranging from affording dynamic binding mechanisms for a variety of partners, to contributing spatial and temporal organization and to offering interac-

tivity across levels of complexity. We have been focusing on enabling intrinsically disordered biological function as adaptive solutions in engineering molecular-to multi-scale interfaces as a path for biomimetic, biohybrid and bioactive materials design. Combining adaptive mechanisms with multi-modal AI/ML in multi-scale interface engineering allowed us to design strategies targeted for interactions that are tailored for conditions and functionally superior biomaterials. These integrated approaches offer fascinating paths for deciphering complex adaptive biological mechanisms, enable engineering biomimetic solutions and revolutionize biomaterials design.

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Dr. Candan Tamerler is the Charles E. & Mary Jane Spahr professor in the department of mechanical engineering and serves as the associate vice chancellor for research at the University of Kansas. She is associate director of the Institute for Bioengineering Research. Dr. Tamerler has received numerous accolades including a fellow of the Turkish Academy of Science, the American Institute of Medical and Biological Engineering and the American Association for the Advancement of Science. She received Distinguished Scientist Award by the Functional Materials Division of the Minerals, Metals and Materials Society. Dr. Tamerler has been notable among the pioneers and early adapters of biomimetic principles at the biomolecular scale for harnessing design strategies to develop innovative approaches in engineering. She developed unique foundational approaches in transferring biological materials principles to biomimetic-, bioactive-, biomaterials-design, adapted multi-modal AI/ML approaches in interface engineering to couple with biological function. She has more than 200 publications with several patent applications.



# BASIC SCIENCE DIVISION AWARD SPEAKER

## SPRING MEETING 2026



### Robert B. Sosman Award and Lecture

## Jon-Paul Maria

The Pennsylvania State University,  
Department of Materials Science and Engineering

### *Ferroelectrics everywhere*

**Monday,  
April 13, 2026  
11 a.m. - 12 p.m.  
Cascade Tower -  
Regency E**

#### **Abstract:**

Ferroelectricity in wurtzite-based crystals was observed in 2019 and immediately introduced exciting opportunities to explore and discover new structure-property relationships in novel formulation spaces. These observations lead one to speculate that ferroelectricity might be found much more broadly, even “everywhere”, by introducing the appropriate disorder in a variety of hosts.

The presentation will begin with a brief history of ferroelectricity with specific attention to the last 10 years where this important property was discovered in new oxide and nitride crystals. The remaining content will focus on the structure-process-property relationships in the B-substituted

AlN and Mg-substituted ZnO wurtzite systems. Materials can be prepared between 100 °C and 350 °C with very little difference in electrical properties. In the best cases, capacitors can be prepared down to 10 nm thickness while still exhibiting ferroelectric switching. Below 25 nm, however, leakage current becomes problematic during low frequency hysteresis measurements. Challenges to thickness scaling will be discussed. The presentation will also include examples where proximity effects in layered ZnO/Zn<sub>(1-x)</sub>Mg<sub>x</sub>O, AlN/Al<sub>(1-x)</sub>B<sub>x</sub>N, and Zn<sub>(1-x)</sub>Mg<sub>x</sub>O/AlN heterostructures can induce switching in pure ZnO and AlN layers, with opportunities for reducing net coercive voltage values.

Jon-Paul Maria is a Professor of Materials Science and Engineering at The Pennsylvania State University. Prior to joining Penn State, Jon-Paul was a faculty member at North Carolina State University where he spent 15 years serving in the Materials Science and Engineering department. Jon-Paul received his BS., MS, and Ph.D. degrees from Penn State in Ceramic Science. Jon-Paul’s research group pursues new materials discovery, property engineering, advances in synthesis science, and new integration strategies to merge diverse materials. Laboratory activities of interest include physical vapor deposition, ceramic synthesis by powder processing, structural characterization by diffraction, and microstructure measurement using scanning probe and scanning electron microscopy. The Maria Group members currently pursue research in the areas of ferroelectric thin films, high permittivity materials, novel semiconductor contacts, oxide epitaxy, infra-red plasmonic materials and entropy engineered/stabilized crystals. With assistance from many collaborators, The Maria group published over 250 manuscripts dealing with structure-property-processing relationships in electronic materials. In 2016 Jon-Paul co-founded Third Floor Materials, a startup company that endeavors to develop novel IR sensor materials and technologies.



# GOMD AWARD SPEAKERS

## SPRING MEETING 2026



**Tuesday,  
April 14, 2026  
12 -1:30 p.m.  
Cascade Tower  
Auditorium**

### Norbert J. Kreidl Award

## Cosmin-Constantin Popescu

MIT

#### ***Phase-change metasurfaces with 2D pixel-level addressability***

**Abstract:**

We report a phase-change-material (PCM) based spatial light modulator that enables the first fully 2D pixel-level addressable metasurface through wafer-scale PCM integration. Metasurfaces are artificial materials composed of dense arrays of subwavelength scatterers whose collective response defines macroscopic wavefront shaping; however, existing active metasurfaces are largely limited to global tuning of the entire surface or, at best, independent control along a single spatial dimension. Achieving true 2D addressability requires simultaneous materials uniformity, thermal confinement, and electrical isolation across dense arrays, which has remained a central bottleneck. By integrating chalcogenide PCMs with

thin-film heaters and metasurface pixels in a foundry backend-compatible architecture, this work demonstrates localized, reversible phase transformations that independently program each pixel across a 2D array. We elucidate how PCM composition, film thickness, crystallization kinetics, and thermal distribution govern optical contrast, switching uniformity, and cycling stability, achieving the highest endurance reported to date for PCM-based metasurfaces. The realization of a truly 2D addressable metasurface is significant because it realizes programmable optical metasurfaces capable of arbitrary spatial modulation, enabling adaptive wavefront control, beam shaping, and large-area reconfigurable photonic systems

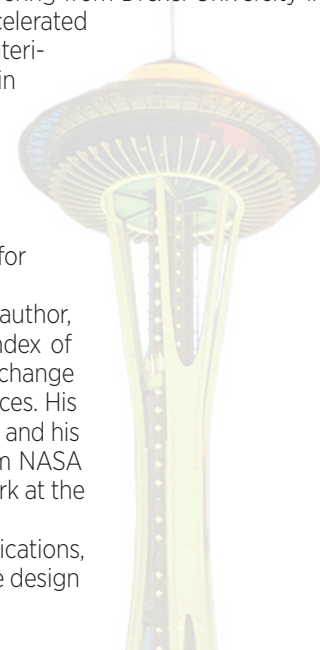
Cosmin-Constantin Popescu is a Senior Staff Engineer at 2 Pi Inc. in Cambridge, Massachusetts, USA, where he works on the development of advanced optical metasurfaces for commercial photonic applications.

Popescu received his B.S. and M.S. degrees in Materials Science and Engineering from Drexel University in Philadelphia, Pennsylvania, completing the degrees in 2020 as part of an accelerated program under the supervision of Prof. Steven May. He earned his Ph.D. in Materials Science and Engineering from the Massachusetts Institute of Technology in 2025, where he conducted research in optical phase change materials-based devices under the guidance of Prof. Juejun Hu.

Prior to joining 2 Pi Inc., Popescu briefly served as a research specialist at MIT during the summer of 2025. Earlier in his career, he participated in the co-op program at Drexel University, including a position at Johnson Matthey in Wayne, Pennsylvania, 2019, where he worked on product development for diesel engine emission catalysts.

He has co-authored 20 peer-reviewed publications, including six as a first author, which have collectively received over 900 citations and resulted in an h-index of 12. He is also an inventor on one patent. His research has focused on phase-change materials, chalcogenide glasses, metasurfaces, and integrated photonic devices. His work published in *Small Science* was recognized as an Editor's Choice article, and his publication in *Advanced Materials* received the 2024 H.J.E. Reid Award from NASA for outstanding scientific research publications. He has also presented his work at the ACerS GOMD in 2022.

Currently, he is focused on developing metasurfaces for commercial applications, combining materials engineering with a focus on reliability and optical device design for advanced optical solutions.



# GOMD AWARD SPEAKERS

## SPRING MEETING 2026



### 2026 Darshana and Arun Varshneya Frontiers of Glass Technology Lecture

## Timothy Gross

Corning Incorporated

#### *Design of damage-resistant glasses*

**Thursday,  
April 16, 2026  
9 - 10 a.m.  
Cascade Tower  
Auditorium**

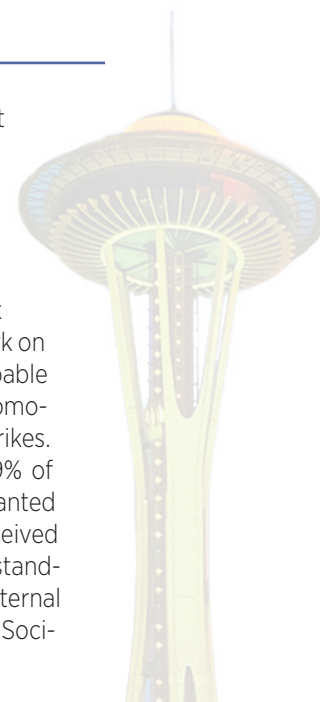
#### **Abstract:**

Theoretical calculations for flaw-free oxide glasses predict remarkable strengths. However, this strength is easily degraded by real-world sharp contact events that can be closely replicated in the laboratory using diamond indentation. The repeatable nature of indentation provides a means to establish the relationships between glass composition and sharp contact response. Historically, indentation deformation and cracking studies were primarily conducted on commercially available soda-lime silicate and silica. Conveniently, these glass types serve as extreme endpoints in the indentation response spectrum. Soda-lime glass, categorized as normal glass, deforms with a significant volume-conserving shear contribution, whereas silica, categorized as anomalous

glass, deforms primarily by volume-reducing densification. In the continuum of indentation response between these two endpoint behaviors, mechanically advantaged indentation responses are identified. Intermediate glasses are designed to deform with shear and densification volumes directly between soda-lime and silica. By further tailoring these glasses to deform with delocalized shear, cracking thresholds above 2 kgf are obtained. On the response continuum between intermediate and anomalous glass, another new family is identified that produces a large annular crack that acts as boundary to radial crack extension. These discoveries have been utilized in Corning® products including Gorilla® Glass for mobile devices and Fusion5® automotive windshield glass.

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Dr. Gross is a Research Fellow and the Director of Inorganic Materials at Corning Incorporated, Corning, NY. Tim has a Ph.D. in Materials Engineering from Rensselaer Polytechnic Institute, an M.S. in Materials Science and Engineering from Rochester Institute of Technology, and a B.S. in Ceramic Engineering from Alfred University. Tim is recognized as an expert in both fracture mechanics and glass formulation. Tim's work on mechanics of ion-exchangeable glass has resulted in the invention of six versions of Corning® Gorilla® Glass for mobile device cover windows. His work on bendable glass resulted in the first demonstration of cover glass plates capable of unlimited bending to radii less than 5 mm. Tim invented Fusion5®, an automotive windshield glass specifically designed to be break-proof against rock strikes. Tim also invented Guardian® antimicrobial glass-ceramic that kills  $\geq 99.9\%$  of bacteria and viruses while maintaining long term efficacy. Tim holds 172 granted United States patents and has 35 peer-reviewed publications. He has received numerous internal awards, including the Corning Stookey Award for outstanding exploratory research and was twice awarded the annual outstanding external publication award. Tim was recently awarded the 2025 American Ceramic Society Stookey Discovery Award for innovative research in new materials.



# SCHEDULE AT A GLANCE

## SPRING MEETING 2026 | APRIL 12 – 17, 2026

SUNDAY	12 – 1:30 p.m.	Ignite MSE Industry Luncheon
	1:30 – 3:30 p.m.	IGNITE MSE: Invited Speaker Sessions and Student Workshop
	2 – 6:30 p.m.	Conference Registration
	2 – 6:30 p.m.	Speaker Ready Room
	3:45 – 5 p.m.	Glass Strengthening Competition
	5 – 6:30 p.m.	Welcome Reception
	5 – 6:30 p.m.	EMSD sponsored event during Welcome Reception
	5 – 6:30 p.m.	Tabletop Exhibit
	6:30 – 7:30 p.m.	Introduction to Neutron Scattering in Materials Science Tutorial taught by Michelle Dolgos

MONDAY	7 – 8:30 a.m.	Fun Run
	7:30 a.m. – 5:30 p.m.	Conference Registration
	8 a.m. – 4 p.m.	Speaker Ready Room
	8:15 – 10:30 a.m.	Spring Meeting Opening Remarks & BSD & EDiv Plenary Presentations
	8:30 a.m. – 5:30 p.m.	Tabletop Exhibit
	11 a.m. – 5:30 p.m.	Technical Programming
	11 a.m. – 12 p.m.	Robert B. Sosman Award Lecture
	12 – 1 p.m.	GOMD General Business Meeting
	12 – 1:30 p.m.	Journal Publishing Workshop
	12 – 1:30 p.m.	Lunch on Own
	12 – 1:30 p.m.	BSD Tutorial: Agentic AI Systems for Autonomous Experimentation in Materials Sciencel (lunch provided)
6 – 7 p.m.	Tutorial: The Manufacturing Capabilities of Blasch Precision Ceramics	

TUESDAY	7:30 a.m. – 5:30 p.m.	Conference Registration
	7:30 – 8:30 a.m.	Manufacturing Division General Business Meeting
	8 a.m. – 4 p.m.	Speaker Ready Room
	8:30 – 10:30 a.m.	GOMD & EMSD Plenary Presentations
	8:30 a.m. – 5:30 p.m.	Tabletop Exhibit
	11 a.m. – 5:30 p.m.	Technical Programming
	11 a.m. – 12 p.m.	SPECIAL EVENT: Roundtable Discussion on Resilience of US Research
	12 – 1:30 p.m.	Lunch on Own
	12 – 1:30 p.m.	Norbert J. Kreidl Award and Luncheon (preregistration required; lunch provided by AGC)
	5:30 – 7 p.m.	Poster Session
	5:30 – 7 p.m.	Poster Bingo
7 – 9 p.m.	Networking by Design: A BSD-Hosted Social	

WEDNESDAY	7:30 a.m. – 5:30 p.m.	Conference Registration
	7:30 – 8:30 a.m.	Organizer Breakfast (Invitation Only)
	8 a.m. – 4 p.m.	Speaker Ready Room
	8:30 – 10:30 a.m.	Manufacturing Division and Bioceramics Division Plenary Presentations
	8:30 a.m. – 5:30 p.m.	Tabletop Exhibit
	11 a.m. – 5:30 p.m.	Technical Programming
	12 – 1:30 p.m.	Lunch on Own
	12 – 1:30 p.m.	Young Professionals Luncheon and Panel Event (Must Be Pre-registered)
	5:30 – 6:30 p.m.	Pre-Banquet Award Celebration
	6:30 – 8:30 p.m.	We are All Connected ACerS Spring Meeting Celebration

THURSDAY	8 a.m. – 5:30 p.m.	Conference Registration
	8 a.m. – 4 p.m.	Speaker Ready Room
	8:30 a.m. – 5:30 p.m.	Technical Programming
	9 – 10 a.m.	Darshana and Arun Varshneya Frontiers of Glass Lecture
	12 – 1:30 p.m.	Lunch on Own

FRIDAY	8 a.m. – 3:30 p.m.	Conference Registration
	8:30 a.m. – 3 p.m.	Technical Programming
	12 – 1:30 p.m.	Lunch on Own
	3:30 – 5 p.m.	SPECIAL EVENT: Failure: The Greatest Teacher

# SPECIAL EVENTS

## SPRING MEETING 2026

### Tutorials

**Sunday, April 12**

**Cascade Tower, 3rd floor – Auditorium**

**6:30 – 7:30 PM Introduction to Neutron Scattering in Materials Science Tutorial**

Please note that you do not need to pre-register for this tutorial and that snacks, soft drinks, and bottled water will be provided.

Many researchers are familiar with X-ray scattering due to its easy accessibility with lab-based instruments at a university campus. However, neutron scattering provides highly compatible data to X-rays, often providing a more complete picture of the structure or dynamics of a system, when used together. Plus, there are some problems that only neutron scattering can solve. For example, neutrons are sensitive to light atoms and can also provide information about magnetic structure and phonons. This tutorial will discuss the fundamentals of neutron scattering, provide examples of how it is used in materials science, and how to access neutron scattering instrumentation at National Labs.

**Instructor Bio:** Michelle Dolgos is the User Outreach Lead for Neutron Sciences at Oak Ridge National Laboratory. She has a PhD in Chemistry from The Ohio State University and did postdoctoral research at the University of Liverpool before leading her own research group at Oregon State University then University of Calgary. After 12 years as a professor, she decided she needed a career change and moved to Oak Ridge National Laboratory to lead the outreach efforts for the Neutron Scattering User Program. She has over 20 years of experience in X-ray and neutron scattering, studying a wide range of materials with a focus on ferroelectric and piezoelectric systems.

**Monday, April 13**

**Cascade Tower, 3rd floor – Auditorium**

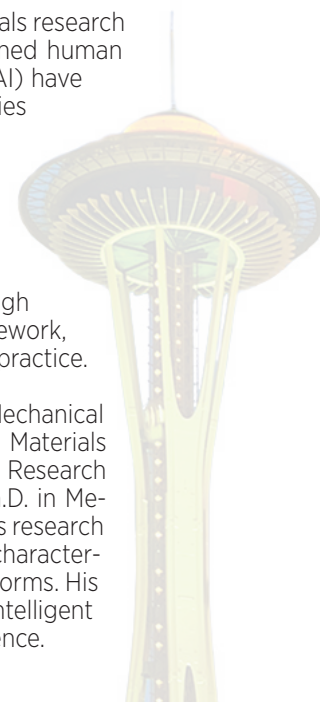
**Noon – 1:30 PM Basic Science Division Tutorial & Lunch: Agentic AI Systems for Autonomous Experimentation in Materials Science**

Please note that you do not need to pre-register for this tutorial, but a lunch of pizza and sodas will be served to guests on a first come, first served basis.

Experimentation in materials synthesis and characterization is a central pillar of materials research and development, yet it remains highly resource-intensive with the need for sustained human supervision and decision-making. Recent advances in agentic artificial intelligence (AI) have demonstrated that large language models (LLMs) equipped with reasoning capabilities and structured tool use can execute complex, multi-step tasks, offering promising pathways to autonomous experimentation in materials research.

We will introduce the basic concepts underlying LLM-based agentic AI systems, with an emphasis on how AI agents with reasoning and tool-use enable closed-loop experimental control. We will then review recent progress in agentic AI-driven autonomous experimentation. Finally, the tutorial will include a hands-on session that walks through the core components required to construct a minimal autonomous laboratory framework, illustrating how AI agents, experimental tools, and feedback loops can be integrated in practice.

**Presenter Bio:** Zhantao Chen is an Assistant Professor in the Walker Department of Mechanical Engineering at The University of Texas at Austin, where he leads the Group for AI in Materials Modeling and Analytics (GAMMA). Prior to joining UT Austin in 2025, Dr. Chen was a Research Associate at SLAC National Accelerator Laboratory (2022–2025). He received his Ph.D. in Mechanical Engineering from the Massachusetts Institute of Technology in 2022. Dr. Chen's research develops artificial intelligence and machine learning methods for materials modeling, characterization, and discovery, with the vision of enabling AI-driven autonomous research platforms. His long-term goal is to integrate design, synthesis, and characterization into closed-loop, intelligent workflows that accelerate materials discovery and advance fundamental materials science.



# SPECIAL EVENTS

## SPRING MEETING 2026

**Monday, April 13**

**Cascade Tower, 3rd floor – Auditorium**

**6-7 PM**

**The Manufacturing Capabilities of Blasch Precision Ceramics**

Please note that you do not need to pre-register for this tutorial. Pizza and soft drinks will be provided to attendees on a first come, first-served basis.

Blasch Precision Ceramics is an industrial ceramic manufacturer that has the capability to cast ceramic in complex geometries. Blasch has over 100 different materials that are used in various applications that range from desulfurization, hydrogen reforming, to molten metal containment and atomization. Molten metal containment, specifically, has advanced from the traditional molten metals (e.g., cast iron, and steel) to include far more advanced alloys (e.g., lithium alloys), which are highly corrosive to traditionally used ceramics due to the alkalinity. Therefore, in order to meet market demands, Blasch Precision Ceramics has developed a novel alkaline resistant material, that can be cast into complex geometries. Compared to the traditionally used alkaline resistant bricks, this novel material provides added value by being engineered to each application to meet demands, improve performance, and reduce costs.

This tutorial will include a power point presentation that will compare what is currently used in the market for molten metal applications (brick refractories) and compare them to the complex engineered solutions that Blasch Precision Ceramics can provide. There will be material samples that will demonstrate the complexity of geometries as well as a corrosion cup brick comparison of the newly developed alkali resistant material to what is currently used in industry.

## Networking and Special Events

**Sunday, April 12**

**Olympic Tower, 2nd floor – Grand Ballroom Foyer**

**5- 6:30 PM**

**Welcome Reception**

Kick off the inaugural ACerS Spring Meeting in style! Pick up your badge, grab a drink and special Spring Meeting merch, and mingle with fellow attendees over light appetizers. Whether you're reconnecting with old colleagues or making new connections, this is the perfect way to start an exciting week ahead. We can't wait to see you there!

**Monday, April 13**

**Meet in the Hotel Lobby**

**7 – 8:30 AM**

**Fun Run and Walk Hosted by GOMD**

Start your morning on the right foot! Lace up your sneakers and join your fellow attendees for a fun, casual run or walk to kick off the conference. No registration required, just show up ready to move at your own pace. Light snacks will be waiting for you at the finish line. It is a great way to get energized, enjoy some fresh air, and connect with colleagues before the day gets started. See you out there!

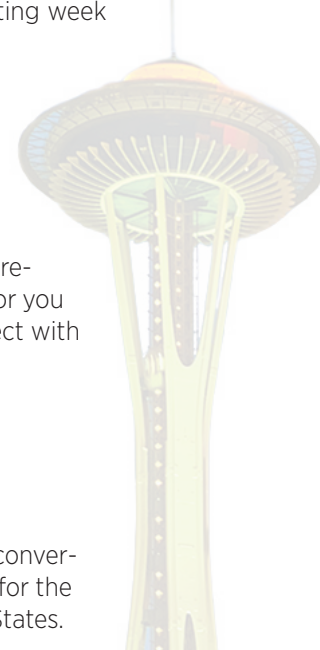
**Tuesday, April 14**

**Cascade Tower, 2nd floor – Regency Ballroom B**

**11 AM – Noon**

**Roundtable Discussion: The Resilience of U.S Research**

Join our distinguished panel of speakers who will lead an open, community wide conversation on the proposed cuts to federal research funding and what they could mean for the future of universities, innovation, and the broader scientific enterprise in the United States.



# SPECIAL EVENTS

## SPRING MEETING 2026

**Tuesday, April 14**

**Olympic Tower, 1st floor – Evergreen Ballroom EFGHI**

**5:30 – 7 PM Poster Session**

Get up close and personal with the latest research at the Spring Meeting Poster Session! With more than 50 presenters representing all six Divisions in one room, this is your chance to explore cutting-edge work, ask the questions you really want answered, and connect directly with the researchers behind the discoveries. Grab a drink and enjoy light snacks courtesy of ACerS while you mingle with colleagues in a relaxed, social atmosphere. It is the perfect way to wrap up your afternoon before heading into the dinner hour.

For our student presenters, there will be several poster prizes given out by Glass and Optical Materials Division and the Electronics Division.

In addition, this will be the first year for the Edwin Fuller Student Poster Award competition. This competition celebrates outstanding student research in ceramic and glass science and engineering while honoring the remarkable career and contributions of Edwin H. Fuller, an ACerS Distinguished Life Member and respected industry leader. Monetary prizes will be awarded to the top three Undergraduate and Graduate Student posters (\$500/\$300/\$200 USD). All poster award winners will be announced at the Pre-Banquet Award Celebration and all students presenting posters at ACerS Spring Meeting are eligible for this competition.

**Tuesday, April 14**

**Olympic Tower, 1st floor – Evergreen Ballroom EFGHI**

**5:30 – 7 PM Poster Bingo**

**Tuesday, April 14**

**Cascade Tower, 2nd floor – Regency Ballroom A**

**7- 9 PM Networking by Design: A BSD-hosted Social**

Join the Basic Science Division for an interactive networking social where you'll grow your professional skills and make meaningful professional connections in a welcoming, low-pressure environment. Snacks and drink provided in addition to great company, conversation, and community building.

Pre-registration is required for this event.

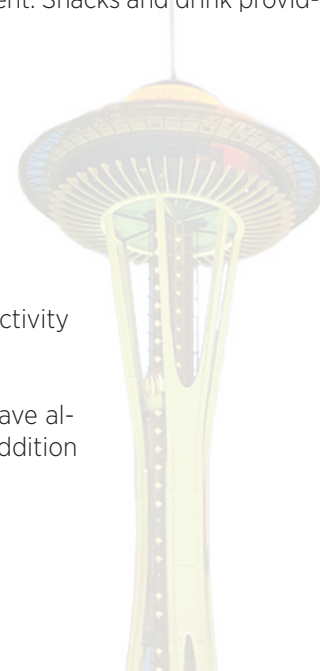
**Wednesday, April 15**

**Cascade Tower, 3rd floor – Auditorium**

**12- 1:30 PM Young Professionals Panel Luncheon: Our Past and Future with Glass and Ceramics**

This luncheon event is for young professionals. The event will begin with a group activity with lunch and a discussion with invited panelists to follow.

The event will be first come, first served with pre-registration requested. If you have already registered for Spring Meeting, please contact Yolanda Natividad to request addition to the luncheon.



# SPECIAL EVENTS

## SPRING MEETING 2026

**Wednesday, April 15**

**Olympic Tower, 2nd floor – Grand Ballroom EFGHIJK**

**5:30 – 6:30 PM Pre-Banquet Award Celebration**

Get ready to celebrate the best and brightest in the ceramics and glass community! The Pre-Banquet Award Celebration is your chance to witness the presentation of some of our most prestigious honors, including lifetime achievement awards, poster awards, and more. It is a dedicated moment to recognize the outstanding individuals who make this community so remarkable. No RSVP required, just show up, cheer on your colleagues, and then stick around for the party that follows.

**Wednesday, April 15**

**Olympic Tower, 1st floor – Evergreen Ballroom EFGHIJK**

**6:30 – 8:30 PM We Are All Connected Spring Meeting Reception**

The awards have been presented and the announcements have been made, so now it is time to celebrate! Join your fellow attendees for the We Are All Connected Spring Meeting Reception, included with your conference registration at no additional cost. Toast to the inaugural ACerS Spring Meeting surrounded by old friends and new ones, with food stations, drinks, and live entertainment in a fun and relaxed atmosphere. You have earned it. See you there!

**Friday, April 17**

**Cascade Tower, 3rd floor – Auditorium**

**3:30 – 5 PM Failure: The Greatest Teacher**

Science does not always go as planned, and that is where some of the best lessons are learned! Join us for one of the most refreshingly honest sessions of the conference, where recognized leaders in the field pull back the curtain on failure, missteps, and the spectacular learning experiences that have shaped their careers. This is your chance to hear candid, unfiltered conversations in a relaxed and welcoming atmosphere where egos are left at the door and real talk takes center stage. A beloved highlight of the former EMA Conference, this fan favorite has found its home at the ACerS Spring Meeting and we think you are going to love it. Drinks will be provided.



# STUDENT ACTIVITIES

## SPRING MEETING 2026

### Student and Young Professional Events

**Sunday, April 12**

**Cascade Tower, 3rd floor – Larch**

**1:30 – 3:30 PM IGNITE MSE**

IGNITE MSE (International Gathering and Networking for Individuals to Explore Materials Science and Engineering) is a professional development program held in conjunction with the 2026 ACerS Spring Meeting.

The program is presented by the Ceramic and Glass Industry Foundation (CGIF) in partnership with the President's Council of Student Affairs of The American Ceramic Society (PCSA/ACerS) and is designed to support students pursuing careers in materials science and engineering. IGNITE MSE offers participants opportunities to engage with industry professionals and academic peers while exploring career pathways within the field.

IGNITE MSE is open to undergraduate and graduate students registered for the 2026 ACerS Spring Meeting. It is free to attend, but requires advanced registration as an add-on through ACerS Spring Meeting registration.

**Sunday, April 12**

**Cascade Tower, 2nd floor – Cedar A**

**3:45 – 5 PM Glass Strengthening Competition**

The Glass Strengthening Competition is a hands-on challenge where students and early-career researchers test ideas for improving the strength of glass. Teams receive identical glass samples, apply their own strengthening methods, and bring their treated samples to the ACerS Spring Meeting for live ball-drop impact testing. The sample that survives the highest drop wins, giving participants a chance to experiment, showcase their work, and connect with others in the materials science community.

**Tuesday, April 14**

**Olympic Tower, 1st floor – Evergreen Ballroom EFGHI**

**5:30 – 7 PM Poster Session**

**Tuesday, April 14**

**Olympic Tower, 1st floor – Evergreen Ballroom EFGHI**

**5:30 – 7 PM Poster Bingo**

**Tuesday, April 14**

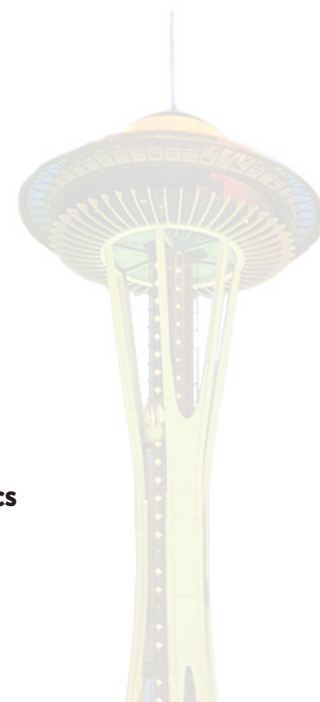
**Cascade Tower, 2nd floor – Regency Ballroom A**

**7- 9 PM Networking by Design: A BSD-hosted Social**

**Wednesday, April 15**

**Cascade Tower, 3rd floor – Auditorium**

**12- 1:30 PM Young Professionals Panel Luncheon: Our Past and Future with Glass and Ceramics**

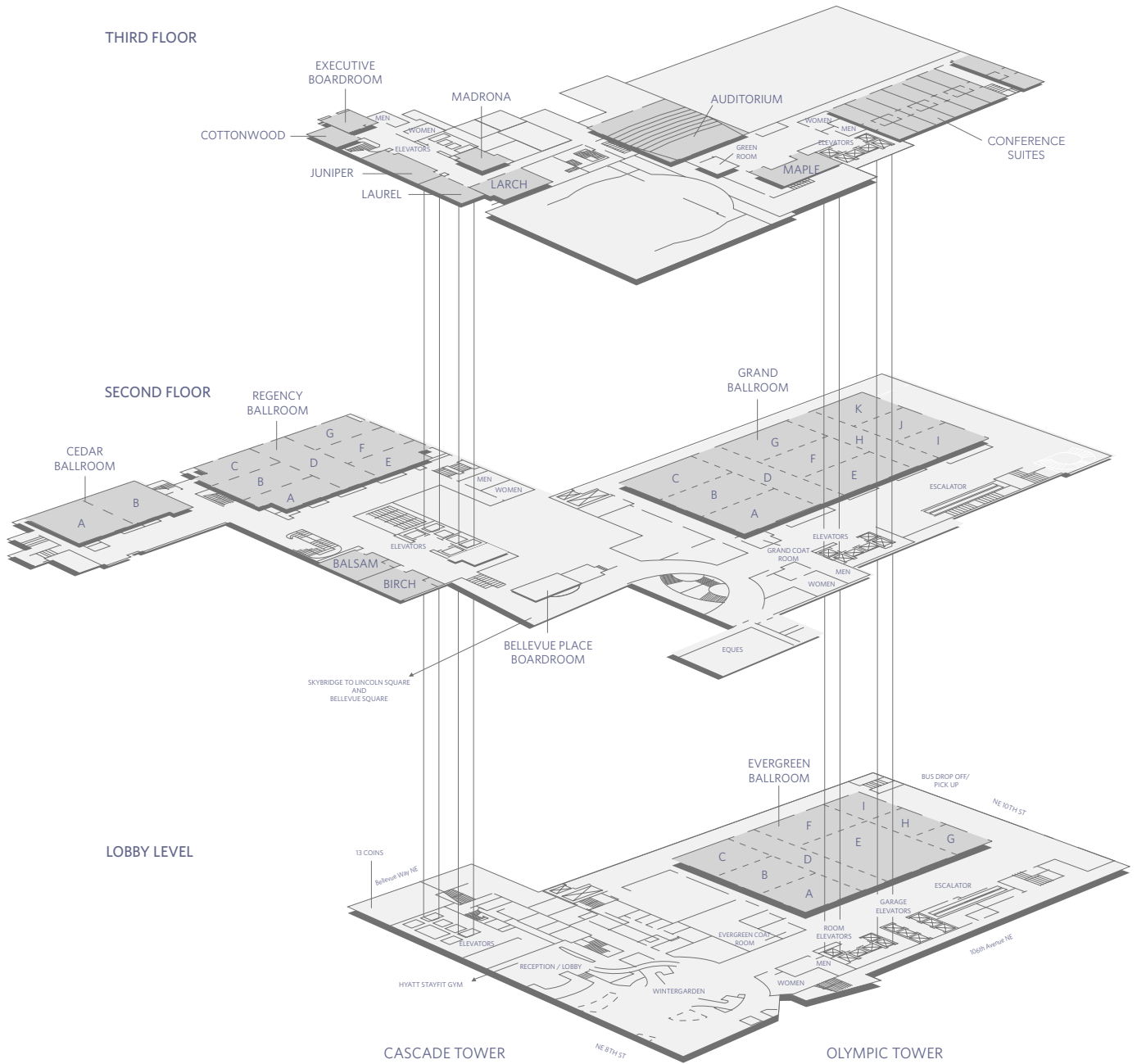


# HOTEL FLOORPLAN

## SPRING MEETING 2026

FLOOR PLAN  
All Meeting Floors

### HYATT REGENCY BELLEVUE ON SEATTLE'S EASTSIDE



# HOTEL INFORMATION

## SPRING MEETING 2026

### WELCOME TO ACERS SPRING MEETING 2026

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#### Registration Hours:

##### Olympic Tower, 2nd Floor - Grand Ballroom Foyer

Sun. 4/12/26 .....	2 p.m. - 6:30 p.m.
Mon. 4/13/26 .....	7:30 a.m. - 5:30 p.m.
Tues. 4/14/26 .....	7:30 a.m. - 5:30 p.m.
Wed. 4/15/26 .....	7:30 a.m. - 5:30 p.m.
Thurs. 4/16/26 .....	8 a.m. - 5:30 p.m.
Fri. 4/17/26 .....	8 a.m. - 3:30 p.m.

#### Speaker Ready Room Hours:

##### Cascade Tower, 2nd Floor - Balsam Room

Sun. 4/12/26 .....	2 p.m. - 6:30 p.m.
Mon. 4/13/26 .....	8 a.m. - 4 p.m.
Tues. 4/14/26 .....	8 a.m. - 4 p.m.
Wed. 4/15/26 .....	8 a.m. - 4 p.m.
Thurs. 4/16/26 .....	8 a.m. - 4 p.m.

#### Programming and Events in Cascade Tower:

##### 2nd Floor:

Basic Science Division Programming

Electronics Division Programming

##### 3rd Floor:

Glass & Optical Materials Division Programming

Bioceramics Division Programming

#### Programming and Events in Olympic Tower:

##### 1st Floor:

Joint Division Programming

Energy Materials and  
Systems Division Programming

Poster Session  
(TUES, 5:30 - 7 p.m.) - Evergreen Ballroom EFGHI

We Are All Connected Spring Meeting Reception  
(WED, 6:30 - 8:30 p.m.) - Evergreen Ballroom EFGHI

##### 2nd Floor:

Joint Division Programming

Plenary Presentations

Tabletop Exhibits

Welcome Reception (SUN, 5 - 6:30 p.m.)

Pre-Banquet Award Celebration (WED, 5:30 - 6:30 p.m.)



# SPONSORS

SPRING MEETING 2026

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# SYMPOSIA ORGANIZERS

## SPRING MEETING 2026

### **SYMPOSIUM 1: Emerging Frontiers in Glasses and Ceramics Organized by All Participating Divisions**

#### **Symposium Organizer(s)**

- Charmayne Lonergan, Missouri University of Science and Technology, USA
- Jessica Rimsza, Sandia National Lab, USA
- Bai Cui, University of Nebraska-Lincoln, USA
- Geoff Brennecka, Colorado School of Mines, USA
- Shiv Prakash Singh, Liaoning Academy of Materials, China

### **SYMPOSIUM 2: Outreach and Engagement: STE(A)M Outreach, Education, Engagement and Retention Organized by All Participating Divisions**

#### **Symposium Organizer(s)**

- Charmayne Lonergan, Missouri University of Science and Technology, USA
- Casey Schwarz, Ursinus College, USA
- Amanda Engen, The American Ceramic Society, USA
- Kathryn Goetschius, Corning Inc., USA

### **SYMPOSIUM 3: Sustainable Horizons: A Recurring Symposium on Collective Action for a Resilient Future Organized by All Participating Divisions**

#### **Symposium Organizer(s)**

- Alp Sehrioglu, Case Western Reserve University, USA
- Jürgen Rödel, Technische Universität Darmstadt, Germany
- Rishabh Kundu, Case Western Reserve University, USA

### **SYMPOSIUM 4: Frontiers in Low Dimension Ferroic Oxides Organized by BSD and ED**

#### **Symposium Organizer(s)**

- Ruijuan Xu, North Carolina State University, USA
- Jian Liu, University of Tennessee, USA
- Yu-Tsun Shao, University of Southern California, USA
- Gang Cao, University of Colorado Boulder, USA

### **SYMPOSIUM 5: Oxide Quantum Materials Organized by BSD and ED**

#### **Symposium Organizer(s)**

- Seung Sae Hong, University of California, Davis, USA
- Jennifer Fowlie, Northwestern University, USA
- Ho Nyung Lee, Oak Ridge National Laboratory, USA
- Elizabeth Nowadnick, University of California, Merced, USA

### **SYMPOSIUM 6: Complex Oxide Thin Films and Heterostructures Organized by BSD and ED**

#### **Symposium Organizer(s)**

- Le Wang, Pacific Northwest National Laboratory, USA
- Sundar Kunwar, Los Alamos National Laboratory, USA
- Jon-Paul Maria, The Pennsylvania State University, USA
- James Rondinelli, Northwestern University, USA
- Judith L. MacManus-Driscoll, University of Cambridge, UK
- Elizabeth Paisley, Sandia National Laboratories, USA
- Hyoungjeen Jeon, Pusan National University, Korea
- Weiwei Li, Nanjing University of Aeronautics and Astronautics, China

# SYMPOSIA ORGANIZERS

## SPRING MEETING 2026

### **SYMPOSIUM 7: In Situ/Operando Characterization of Nanomaterials Organized by BSD and ED**

#### **Symposium Organizer(s)**

- Katherine Harmon, Stanford University, USA
- Di Zhang, University of Texas at Arlington, USA
- Alessandro Mazza, Los Alamos National Laboratory, USA
- Hao Zheng, Argonne National Laboratory, USA

### **SYMPOSIUM 8: Nano4Neuro 3: Materials Advances for Analogue, Neuromorphic and Post-Moore Computing Paradigms Organized by BSD and ED**

#### **Symposium Organizer(s)**

- Petro Maksymovych, Clemson University, USA
- Karsten Beckmann, NY-CREATES, USA
- Aiping Chen, Los Alamos National Laboratory, USA
- Sabine Neumayer, Oak Ridge National Laboratory, USA

### **SYMPOSIUM 9: From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics Organized by BSD and ED**

#### **Symposium Organizer(s)**

- Prashun Gorai, Rensselaer Polytechnic Institute, USA
- Geoff Brenneka, Colorado School of Mines, USA
- Simon Fichtner, Kiel University, Germany

### **SYMPOSIUM 10: Extreme Environment Microelectronics Materials and Devices Organized by BSD and ED**

#### **Symposium Organizer(s)**

- Brooks Tellekamp, National Renewable Energy Laboratory, USA
- Kei Yazawa, Colorado School of Mines, USA
- Alexey Drobizhev, Lawrence Berkeley National Laboratory, USA

### **SYMPOSIUM 11: Characterization of Structure-Property Relationships in Functional Ceramics Organized by BSD and ED**

#### **Symposium Organizer(s)**

- Hadas Sternlicht, The Pennsylvania State University, USA
- Christopher Fancher, Oak Ridge National Laboratory, USA
- James LeBeau, Massachusetts Institute of Technology, USA
- Igor Levin, National Institute of Science and Technology, USA
- Mehmet Gulgun, Sabanci University, Turkey
- Megan Holtz, Colorado School of Mines, USA
- Robert Hovden, University of Michigan, USA
- Steven Spurgeon, National Renewable Energy Laboratory, USA

### **SYMPOSIUM 12: Electronic and Ionic Materials in Energy Storage and Conversion Systems Organized by BSD and ED**

#### **Symposium Organizer(s)**

- Hui (Claire) Xiong, Boise State University, USA
- Hua Zhou, Argonne National Lab, USA
- Nicola Perry, University of Illinois Urbana-Champaign, USA
- Ming Tang, Rice University, USA
- Yiyang Li, University of Michigan, USA
- Liangbing Hu, Yale University, USA

### **SYMPOSIUM 13: Defects and Transport in Ceramics Organized by BSD and ED**

#### **Symposium Organizer(s)**

- Xin Xu, Arizona State University, USA
- Yanhao Dong, Tsinghua University, China
- Till Frömling, Technical University of Darmstadt, Germany
- Tiffany Kaspar, Pacific Northwest National Laboratory, USA
- Nicola Perry, University of Illinois Urbana-Champaign, USA



# SYMPOSIA ORGANIZERS

## SPRING MEETING 2026

### **SYMPOSIUM 14: AI/ML-Driven Discovery, Manufacturing, and Characterizations**

**Organized by BSD, ED, and MD**

#### **Symposium Organizer(s)**

- Yongtao Liu Oak Ridge National Laboratory, USA
- Fei Peng, Clemson University, USA
- Bai Cui, University of Nebraska-Lincoln, USA
- Aiping Chen, Los Alamos National Laboratory, USA
- Davi Febba, National Renewable Energy Laboratory, USA

### **SYMPOSIUM 15: Ceramic and Composite Materials and Systems for a Sustainable and Resilient Energy Future**

**Organized by BSD, EMSD, and MD**

#### **Symposium Organizer(s)**

- Manoj Mahapatra, University of Alabama, Birmingham, USA
- John S. Hardy, Pacific Northwest National Laboratory, USA
- Edgar Lara-Curzio, Oak Ridge National Laboratory, USA
- James G. Hemrick, Oak Ridge National Laboratory, USA
- Jorgen F. Rufner, Idaho National Laboratory, USA
- Sepideh Akhbarifar, The Catholic University of America, USA
- Tianyu Zhu, Clemson University, USA
- Dong Hou, Clemson University, USA

### **SYMPOSIUM 16: Advanced Manufacturing and Processing of Ceramic Materials**

**Organized by MD, ED, and GOMD**

#### **Symposium Organizer(s)**

- Bai Cui, University of Nebraska-Lincoln, USA
- William Headrick, RHI Magnesita, USA
- James Hemrick, Oak Ridge National Laboratory, USA
- Reeja Jayan, Carnegie Mellon University, USA
- Kathryn Goetschius, Corning Inc., USA
- Eric J. Faierson, Iowa State University, USA
- Keith DeCarlo, Blasch Precision Ceramics, Inc., USA
- Max Modugno, Oak Ridge National Lab, USA

### **SYMPOSIUM 17: Ceramics for the Hydrogen Economy Organized by BSD and ED**

#### **Symposium Organizer(s)**

- Till Frömling, Technical University of Darmstadt, Germany
- Ming Li, University of Nottingham, UK

### **SYMPOSIUM 18: New Frontiers in Additive Manufacturing of Ceramic Materials**

**Organized by MD, BSD, BIO, and GOMD**

#### **Symposium Organizer(s)**

- Bai Cui, University of Nebraska-Lincoln, USA
- Fei Peng, Clemson University, USA
- Chao Ma, Arizona State University, USA
- Kalpana S. Katti, North Dakota State University, USA
- Joel Destino, Creighton University, USA

### **SYMPOSIUM 19: Glass and Interactions with its Environment - Fundamentals and Applications**

**Organized by GOMD and EMSD**

#### **Symposium Organizer(s)**

- Nick Smith, Corning Inc., USA
- James Neeway, Pacific Northwest National Laboratory, USA
- Maziar Montazerian, The Pennsylvania State University, USA
- Charmayne Lonergan, Missouri University of Science and Technology, USA

### **SYMPOSIUM 20: Symposium to Honor W. Craig Carter Organized by BSD**

#### **Symposium Organizer(s)**

- Edwin García, Purdue University, USA
- Catherine Bishop, University of Canterbury, New Zealand



# SYMPOSIUM ORGANIZERS

## SPRING MEETING 2026

### **SYMPOSIUM 21: Science of Sintering and Grain Growth Organized by BSD**

#### **Symposium Organizer(s)**

- Ricardo Castro, Lehigh University, USA
- Amanda Krause, Carnegie Mellon University, USA
- Klaus van Benthem, University of Alabama, Tuscaloosa, USA
- Fei Peng, Clemson University, USA

### **SYMPOSIUM 22: Robert B. Sosman Award and Lecture Organized by BSD**

#### **Symposium Organizer(s)**

- Jon Ihlefeld, University of Virginia, USA

### **SYMPOSIUM 23: High Interfacial Materials - Controlling Grain Boundary Structure, Chemistry, and their Network Organized by BSD**

#### **Symposium Organizer(s)**

- James Wollmerhauser, Naval Research Laboratory, USA
- Edward Gorzkowski, U.S. Naval Research Laboratory, USA
- Amanda Krause, Carnegie Mellon University, USA
- Hadas Sternlicht, The Pennsylvania State University, USA

### **SYMPOSIUM 24: Mechanobiology and Cell-Substrate Interactions at Biointerfaces in Bioceramics: Theory and Experiments Organized by BIO**

#### **Symposium Organizer(s)**

- Kalpana S. Katti, North Dakota State University, USA
- Annabel Braem, Leuven, Arenberg, Belgium
- Anamika Prasad, Florida International University, USA
- Hrishikesh Kamat, Glidewell Dental, USA
- Ashutosh Kumar Dubey, Indian Institute of Technology (BHU) Varanasi, India

### **SYMPOSIUM 25: Advanced Electronic Materials: Processing Structures, Properties, and Applications Organized by ED**

#### **Symposium Organizer(s)**

- Eric Patterson, U.S. Naval Research Laboratory, USA
- Hana Uršič, Jozef Stefan Institute, Slovenia
- Satoshi Wada, University of Yamanashi, Japan
- Shujun Zhang, University of Wollongong, Australia

### **SYMPOSIUM 26: Semiconductors and Microelectronics in Metal Halide, Chalcogenide and Oxide Perovskites Organized by ED**

#### **Symposium Organizer(s)**

- Qing Tu, Texas A&M University, USA
- Wanyi Nie, SUNY University at Buffalo, USA
- Mythili Surendran, Lawrence Berkeley National Laboratory, USA
- Aiping Chen, Los Alamos National Laboratory, USA
- Yuxuan Cosmi Lin, Texas A&M University, USA

### **SYMPOSIUM 27: Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications Organized by ED**

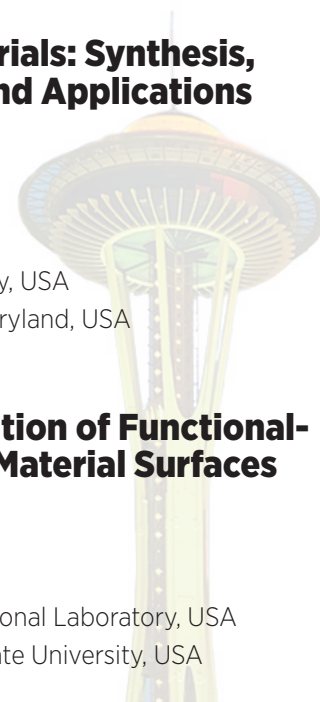
#### **Symposium Organizer(s)**

- Haozhe Wang, Duke University, USA
- Cheng Gong, University of Maryland, USA

### **SYMPOSIUM 28: Advanced Characterization of Functional- ized Low-Dimensional Material Surfaces Organized by ED**

#### **Symposium Organizer(s)**

- Nozomi Shirato, Argonne National Laboratory, USA
- Julius De Rojas, Oklahoma State University, USA



# SYMPOSIA ORGANIZERS

## SPRING MEETING 2026

### **SYMPOSIUM 29: Scale-Bridging Approaches for Electroceramic Design and Performance Organized by ED**

#### **Symposium Organizer(s)**

- Antonio Feteira, Sheffield Hallam University, UK
- Prasanna Balachandran, University of Virginia, USA
- Giovanna Canu, CNR-ICMATE, Italy
- Joaquin Gabriel Miranda Mena, Silicon Austria Labs, Austria

### **SYMPOSIUM 30: Quo Vadis, High-Entropy Oxides? Organized by ED**

#### **Symposium Organizer(s)**

- Alan Farhan, Baylor University, USA
- Katharine Page, University of Tennessee, USA
- Megan Marie Butala, University of Florida, USA

### **SYMPOSIUM 31: Superconducting and 2D Magnetic Materials: From Basic Science to Applications Organized by ED**

#### **Symposium Organizer(s)**

- Lv Bing, University of Texas at Dallas, USA
- Michael A. Susner, Air Force Research Laboratory, USA
- Rosario A. Gerhardt, Georgia Institute of Technology, USA
- Timothy Haugen, U. S. Air Force Research Laboratory, USA
- Jun Xiao, University of Wisconsin, USA

### **SYMPOSIUM 32: Solid Oxide Cells for Sustainable Energy Organized by EMSD**

#### **Symposium Organizer(s)**

- Jianhua (Joshua) Tong, Clemson University, USA
- Kevin Huang, University of South Carolina, USA
- Sandrine Ricote, Colorado School of Mines, USA
- Federico Smeacetto, Politecnico di Torino, Italy

### **SYMPOSIUM 33: Advances in Thermoelectrics: Bridging Theory and Application Organized by EMSD**

#### **Symposium Organizer(s)**

- Sepideh Akhbarifar, The Catholic University of America, USA
- Mona Zebarjadi, University of Virginia, USA
- Je-Hyeong Bahk, University of Cincinnati, USA
- Holger Kleinke, University of Waterloo, Canada

### **SYMPOSIUM 34: Advances and Current Challenges in Solid-State Battery Technologies Organized by EMSD**

#### **Symposium Organizer(s)**

- Bisrat Nigusie Tafese, Northwestern University, USA
- Jianhua (Joshua) Tong, Clemson University, USA
- Megan Burrill, Northwestern University, USA
- Danielle Veigel, Northwestern University, USA
- Elif Pinar Alsac, Georgia Institute of Technology
- Ahmed Biby, University of Colorado Boulder

### **SYMPOSIUM 35: Fundamentals of the Glassy State Organized by GOMD**

#### **Symposium Organizer(s)**

- Yueh-Ting (Tim) Shih, National Taipei University of Technology, Taiwan
- Pierre Lucas, University of Arizona, USA
- Katelyn Kirchner, Celsian, USA

### **SYMPOSIUM 36: Modeling and Simulations of Glass Structures and Properties Organized by GOMD**

#### **Symposium Organizer(s)**

- Jincheng Du, University of North Texas, USA
- Xiaonan Lu, Pacific Northwest National Laboratory, USA



# SYMPOSIA ORGANIZERS

## SPRING MEETING 2026

### **SYMPOSIUM 37: Optical and Electronic Materials and Devices Organized by GOMD**

#### **Symposium Organizer(s)**

- Shiv Prakash Singh, Liaoning Academy of Materials, China
- Myungkoo Kang, Alfred University, USA
- Casey Schwarz, Ursinus College, USA
- Rashi Sharma, University of Central Florida, USA

### **SYMPOSIUM 38: Glass Manufacturing Organized by GOMD**

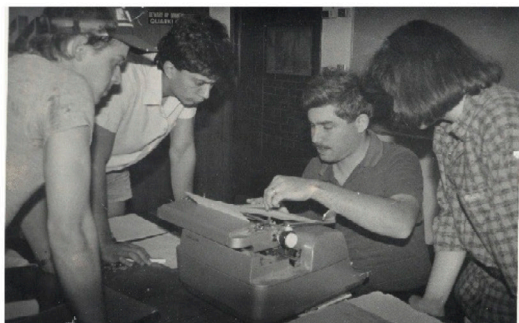
#### **Symposium Organizer(s)**

- Kathryn Goetschius, Corning Inc., USA
- Joel Destino, Creighton University, USA
- Madeleine Schmidlin, Corning Inc., USA
- Alexandra Mitchell, Corning Inc., USA
- Katelyn Kirchner, Celsian, USA

### **SYMPOSIUM 39: Steve Feller Honorary Symposium Organized by GOMD**

#### **Symposium Organizer(s)**

- Mario Affatigato, Coe College, USA
- Collin Wilkinson, Alfred University, USA
- Steve Martin, Iowa State University, USA



# COE COLLEGE

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# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

Due to cancellations and withdraws, the session start and end times might have changed slightly.

Always consult the on-line planner for the most current information.

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
Plenary	Basic Science and Electronics Division Plenary	Monday, April 13, 2026	8:15 AM	10:30 AM	Olympic Tower- Grand EFGHIJK
Plenary	EMSD and GOMD Plenary	Tuesday, April 14, 2026	8:30 AM	10:30 AM	Olympic Tower- Grand EFGHIJK
Plenary	Bioceramics and Manufacturing Plenary	Wednesday, April 15, 2026	8:30 AM	10:30 AM	Olympic Tower- Grand EFGHIJK
	SPECIAL EVENT: Roundtable Discussion on Resilience of US Research	Tuesday, April 14, 2026	11:00 AM	12:00 PM	Cascade Tower- Regency B
Award Talk	Robert B. Sosman Award Lecture	Monday, April 13, 2026	11:00 AM	12:00 PM	Cascade Tower- Regency E
Award Talk	Norbert J. Kreidl Award Lecture	Tuesday, April 14, 2026	12:00 PM	1:30 PM	Cascade Tower- Auditorium
Award Talk	Society's 2026 Darshana and Arun Varshneya Frontiers of Glass Technology Lecture	Thursday, April 16, 2026	9:00 AM	10:00 AM	Cascade Tower- Auditorium
<b>SYMPOSIUM 1</b> - All DIV Emerging Frontiers in Glasses and Ceramics	S1- Emerging Frontiers in Glasses and Ceramics	Monday, April 13, 2026	1:30 PM	4:50 PM	Olympic Tower- Grand EFGHIJK
<b>SYMPOSIUM 2</b> -All DIV: Outreach and Engagement: STE(A)M Outreach, Education, Engagement and Retention	S2- Outreach and Engagement: STE(A)M Outreach, Education, Engagement and Retention	Thursday, April 16, 2026	8:30 AM	11:20 AM	Olympic Tower- Grand EFGHIJK

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 3 -All DIV: Sustainable Horizons: A Recurring Symposium on Collective Action for a Resilient Future</b>	S3- Socio-ecological transformation and the role of individuals and societies: Examining the societal and individual roles in driving socio-ecological transformation towards sustainability	Tuesday, April 14, 2026	11:00 AM	12:05 PM	Olympic Tower- Grand EFGHIJK
<b>SYMPOSIUM 3 -All DIV: Sustainable Horizons: A Recurring Symposium on Collective Action for a Resilient Future</b>	S3- Teaching sustainability	Tuesday, April 14, 2026	1:15 PM	4:15 PM	Olympic Tower- Grand EFGHIJK
<b>SYMPOSIUM 4 -BSD ED: Frontiers in Low Dimension Ferroic Oxides</b>	S4- Oxide membranes and Multiferroics	Wednesday, April 15, 2026	1:30 PM	5:30 PM	Olympic Tower- Grand C
<b>SYMPOSIUM 4 -BSD ED: Frontiers in Low Dimension Ferroic Oxides</b>	S4- Altermagnetism and Spintronics	Thursday, April 16, 2026	8:30 AM	11:20 AM	Olympic Tower- Grand C
<b>SYMPOSIUM 4 -BSD ED: Frontiers in Low Dimension Ferroic Oxides</b>	S4- Ferroelectrics and Multiferroics	Thursday, April 16, 2026	1:30 PM	4:30 PM	Olympic Tower- Grand C
<b>SYMPOSIUM 5 -BSD ED: Oxide Quantum Materials</b>	S5- Oxide thin film synthesis	Monday, April 13, 2026	1:30 PM	3:50 PM	Olympic Tower- Grand A
<b>SYMPOSIUM 5 -BSD ED: Oxide Quantum Materials</b>	S5 - Characterization of oxide quantum materials	Monday, April 13, 2026	3:50 PM	5:20 PM	Olympic Tower- Grand A
<b>SYMPOSIUM 5 -BSD ED: Oxide Quantum Materials</b>	S5 - Oxide superlattices	Tuesday, April 14, 2026	11:00 AM	12:00 PM	Olympic Tower- Grand A
<b>SYMPOSIUM 5 -BSD ED: Oxide Quantum Materials</b>	S5 - Novel design of oxide quantum materials	Tuesday, April 14, 2026	1:30 PM	4:10 PM	Olympic Tower- Grand A
<b>SYMPOSIUM 5 -BSD ED: Oxide Quantum Materials</b>	S5 - Theory of oxide quantum materials	Tuesday, April 14, 2026	4:10 PM	5:30 PM	Olympic Tower- Grand A
<b>SYMPOSIUM 5 -BSD ED: Oxide Quantum Materials</b>	S5- Superconductivity in nickelates	Wednesday, April 15, 2026	11:00 AM	12:00 PM	Olympic Tower- Grand A

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 6</b> <b>-BSD ED: Complex Oxide Thin Films and Heterostructures</b>	S6- Synthesis of complex oxide thin films, superlattices, and nanocomposites I	Tuesday, April 14, 2026	11:00 AM	12:00 PM	Cascade Tower- Regency E
<b>SYMPOSIUM 6</b> <b>-BSD ED: Complex Oxide Thin Films and Heterostructures</b>	S6 - Synthesis of complex oxide thin films, superlattices, and nanocomposites II	Tuesday, April 14, 2026	1:30 PM	3:20 PM	Cascade Tower- Regency E
<b>SYMPOSIUM 6</b> <b>-BSD ED: Complex Oxide Thin Films and Heterostructures</b>	S6- Strain, defect, and interface engineering: experiments and theory I	Tuesday, April 14, 2026	3:20 PM	5:30 PM	Cascade Tower- Regency E
<b>SYMPOSIUM 6</b> <b>-BSD ED: Complex Oxide Thin Films and Heterostructures</b>	S6- Strain, defect, and interface engineering: experiments and theory II	Wednesday, April 15, 2026	11:00 AM	12:00 PM	Cascade Tower- Regency E
<b>SYMPOSIUM 6</b> <b>-BSD ED: Complex Oxide Thin Films and Heterostructures</b>	S6- Strain, defect, and interface engineering: experiments and theory III	Wednesday, April 15, 2026	1:30 PM	3:10 PM	Cascade Tower- Regency E
<b>SYMPOSIUM 6</b> <b>-BSD ED: Complex Oxide Thin Films and Heterostructures</b>	S6- In situ, operando, and advanced characterization	Wednesday, April 15, 2026	3:10 PM	4:20 PM	Cascade Tower- Regency E
<b>SYMPOSIUM 6</b> <b>-BSD ED: Complex Oxide Thin Films and Heterostructures</b>	S6- High-entropy and metastable oxide thin films	Thursday, April 16, 2026	8:30 AM	11:50 AM	Cascade Tower- Regency E
<b>SYMPOSIUM 6</b> <b>-BSD ED: Complex Oxide Thin Films and Heterostructures</b>	S6- AI/ML assisted synthesis	Thursday, April 16, 2026	1:30 PM	3:20 PM	Cascade Tower- Regency E
<b>SYMPOSIUM 7</b> <b>-BSD ED: In Situ/Operando Characterization of Nanomaterials</b>	S7- Advances in operando/in situ characterization methods related to electron, X-ray, and neutron techniques	Thursday, April 16, 2026	1:30 PM	5:50 PM	Olympic Tower- Evergreen B
<b>SYMPOSIUM 7</b> <b>-BSD ED: In Situ/Operando Characterization of Nanomaterials</b>	S7- In situ/operando study of electronic materials such as ferroics, perovskites, ionics, and semiconductors	Friday, April 17, 2026	8:30 AM	11:30 AM	Olympic Tower- Evergreen B

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 7</b> -BSD ED: In Situ/Operando Characterization of Nanomaterials	S7- In situ/operando characterization of metal oxide structure and reactivity in (electro)chemical systems	Friday, April 17, 2026	1:30 PM	3:00 PM	Olympic Tower- Evergreen B
<b>SYMPOSIUM 8</b> -BSD ED: Nano4Neuro 3: Materials Advances for Analogue, Neuromorphic and Post-Moore Computing Paradigms	S8- Frontiers of neuromorphic devices and characterization	Thursday, April 16, 2026	8:30 AM	11:40 AM	Olympic Tower- Evergreen A
<b>SYMPOSIUM 8</b> -BSD ED: Nano4Neuro 3: Materials Advances for Analogue, Neuromorphic and Post-Moore Computing Paradigms	S8- Emerging complex neuromorphic materials	Thursday, April 16, 2026	1:30 PM	5:00 PM	Olympic Tower- Evergreen A
<b>SYMPOSIUM 8</b> -BSD ED: Nano4Neuro 3: Materials Advances for Analogue, Neuromorphic and Post-Moore Computing Paradigms	S8- Redox memory and computing I	Friday, April 17, 2026	8:30 AM	11:40 AM	Olympic Tower- Evergreen A
<b>SYMPOSIUM 8</b> -BSD ED: Nano4Neuro 3: Materials Advances for Analogue, Neuromorphic and Post-Moore Computing Paradigms	S8- Redox memory and computing II	Friday, April 17, 2026	1:30 PM	2:30 PM	Olympic Tower- Evergreen A
<b>SYMPOSIUM 9</b> -BSD ED: From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics	S9- Wurtzite Ferroelectric Devices	Monday, April 13, 2026	11:00 AM	11:50 AM	Cascade Tower- Auditorium
<b>SYMPOSIUM 9</b> -BSD ED: From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics	S9- Switching and Charge Compensation Mechanisms	Monday, April 13, 2026	1:30 PM	2:40 PM	Cascade Tower- Auditorium

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 9 -BSD ED: From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics</b>	S9- Piezoelectric and Ferroelectric Characterization	Monday, April 13, 2026	2:40 PM	4:30 PM	Cascade Tower- Auditorium
<b>SYMPOSIUM 9 -BSD ED: From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics</b>	S9- GaN-based Wurtzite Ferroelectrics	Monday, April 13, 2026	4:30 PM	5:40 PM	Cascade Tower- Auditorium
<b>SYMPOSIUM 9 -BSD ED: From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics</b>	S9- Computational and Data-Driven Studies of Wurtzite Ferroelectrics	Tuesday, April 14, 2026	1:30 PM	2:40 PM	Cascade Tower- Auditorium
<b>SYMPOSIUM 9 -BSD ED: From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics</b>	S9- AlN-based Wurtzite Ferroelectrics	Tuesday, April 14, 2026	2:40 PM	4:10 PM	Cascade Tower- Auditorium
<b>SYMPOSIUM 9 -BSD ED: From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics</b>	S9- Other Emerging Ferroelectrics	Tuesday, April 14, 2026	4:10 PM	5:20 PM	Cascade Tower- Auditorium
<b>SYMPOSIUM 10 -BSD ED: Extreme Environment Microelectronics Materials and Devices</b>	S10- Ferroelectric and memory applications for extreme environment	Thursday, April 16, 2026	1:30 PM	4:10 PM	Olympic Tower- Evergreen C
<b>SYMPOSIUM 10 -BSD ED: Extreme Environment Microelectronics Materials and Devices</b>	S10- Materials for power electronics and devices I	Thursday, April 16, 2026	4:10 PM	5:30 PM	Olympic Tower- Evergreen C
<b>SYMPOSIUM 10 -BSD ED: Extreme Environment Microelectronics Materials and Devices</b>	S10- Materials for power electronics and devices II	Friday, April 17, 2026	8:30 AM	10:10 AM	Olympic Tower- Evergreen C
<b>SYMPOSIUM 10 -BSD ED: Extreme Environment Microelectronics Materials and Devices</b>	S10- Detector materials and devices at harsh environment	Friday, April 17, 2026	10:10 AM	11:40 AM	Olympic Tower- Evergreen C

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 10</b> <b>-BSD ED: Extreme Environment Micro-electronics Materials and Devices</b>	S10- Fundamental and characterization of materials	Friday, April 17, 2026	1:30 PM	2:40 PM	Olympic Tower- Evergreen C
<b>SYMPOSIUM 11</b> <b>-BSD ED : Characterization of Structure-Property Relationships in Functional Ceramics</b>	S11- Advances in connecting local and global structure to properties I	Monday, April 13, 2026	1:30 PM	3:20 PM	Olympic Tower- Evergreen B
<b>SYMPOSIUM 11</b> <b>-BSD ED : Characterization of Structure-Property Relationships in Functional Ceramics</b>	S11-Advances in connecting local and global structure to properties II	Monday, April 13, 2026	3:20 PM	4:50 PM	Olympic Tower- Evergreen B
<b>SYMPOSIUM 11</b> <b>-BSD ED : Characterization of Structure-Property Relationships in Functional Ceramics</b>	S11- Advances in scattering, imaging and analytical techniques I	Tuesday, April 14, 2026	11:00 AM	12:00 PM	Olympic Tower- Evergreen B
<b>SYMPOSIUM 11</b> <b>-BSD ED : Characterization of Structure-Property Relationships in Functional Ceramics</b>	S11- Advances in scattering, imaging and analytical techniques II	Tuesday, April 14, 2026	1:30 PM	3:20 PM	Olympic Tower- Evergreen B
<b>SYMPOSIUM 11</b> <b>-BSD ED : Characterization of Structure-Property Relationships in Functional Ceramics</b>	S11- Integrating computational-imaging techniques and machine-learning into the structural measurement workflow	Tuesday, April 14, 2026	3:20 PM	5:30 PM	Olympic Tower- Evergreen B
<b>SYMPOSIUM 11</b> <b>-BSD ED : Characterization of Structure-Property Relationships in Functional Ceramics</b>	S11- Addressing open questions in functional ceramics	Wednesday, April 15, 2026	11:00 AM	12:00 PM	Olympic Tower- Evergreen B
<b>SYMPOSIUM 12</b> <b>-BSD ED: Electronic and Ionic Materials in Energy Storage and Conversion Systems</b>	S12- Recent advances in cathode materials for lithium ion batteries and beyond	Monday, April 13, 2026	1:30 PM	5:20 PM	Olympic Tower- Grand C

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 12 -BSD ED: Electronic and Ionic Materials in Energy Storage and Conversion Systems</b>	S12- Advanced characterization of energy storage and conversion materials	Tuesday, April 14, 2026	11:00 AM	12:10 PM	Olympic Tower- Grand C
<b>SYMPOSIUM 12 -BSD ED: Electronic and Ionic Materials in Energy Storage and Conversion Systems</b>	S12- Advances in fast charging electrode materials, solid electrolyte, and battery manufacture	Tuesday, April 14, 2026	1:30 PM	5:40 PM	Olympic Tower- Grand C
<b>SYMPOSIUM 32-EMSD: Solid Oxide Cells for Sustainable Energy</b>	S12 and S32- Ionic/Electric Materials (Joint Session between S12 and S32)	Wednesday, April 15, 2026	11:00 AM	12:20 PM	Olympic Tower- Grand C
<b>SYMPOSIUM 13 - BSD ED: Defects and Transport in Ceramics</b>	S13- Bulk Defects and Transport in Ceramics I	Wednesday, April 15, 2026	11:00 AM	12:00 PM	Olympic Tower- Evergreen C
<b>SYMPOSIUM 13 - BSD ED: Defects and Transport in Ceramics</b>	S13- Bulk Defects and Transport in Ceramics II	Wednesday, April 15, 2026	1:30 PM	5:20 PM	Olympic Tower- Evergreen C
<b>SYMPOSIUM 13 - BSD ED: Defects and Transport in Ceramics</b>	S13- Surface and Interfacial Defects and Transport in Ceramics	Thursday, April 16, 2026	8:30 AM	11:20 AM	Olympic Tower- Evergreen C
<b>SYMPOSIUM 14 -BSD ED MD: AI/ML-Driven Discovery, Manufacturing, and Characterizations</b>	S14- AI/ML-Driven Discovery, Manufacturing and Characterizations I	Wednesday, April 15, 2026	11:00 AM	11:50 AM	Olympic Tower- Grand EFGHIJK
<b>SYMPOSIUM 14 -BSD ED MD: AI/ML-Driven Discovery, Manufacturing, and Characterizations</b>	S14- AI/ML-Driven Discovery, Manufacturing and Characterizations II	Wednesday, April 15, 2026	1:30 PM	5:20 PM	Olympic Tower- Grand EFGHIJK
<b>SYMPOSIUM 15 -BSD ED MD: Ceramic and Composite Materials and Systems for a Sustainable and Resilient Energy Future</b>	S15- Manufacturing and Process Control Ceramics and Composites for Energy Applications, and Advances in Characterization tools and Property Evaluation Techniques	Thursday, April 16, 2026	8:30 AM	12:00 PM	Olympic Tower- Grand A

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 15 -BSD ED MD: Ceramic and Composite Materials and Systems for a Sustainable and Resilient Energy Future</b>	S15- Innovation of new ceramic materials systems, novel processing and manufacturing techniques to overcome current technical challenges to enable next generation energy technologies	Thursday, April 16, 2026	1:30 PM	3:40 PM	Olympic Tower- Grand A
<b>SYMPOSIUM 15 -BSD ED MD: Ceramic and Composite Materials and Systems for a Sustainable and Resilient Energy Future</b>	S15- Recycling, sustainability, safety and reliability for energy material and systems	Thursday, April 16, 2026	3:40 PM	5:00 PM	Olympic Tower- Grand A
<b>SYMPOSIUM 15 -BSD ED MD: Ceramic and Composite Materials and Systems for a Sustainable and Resilient Energy Future</b>	S15- Ceramics and composites for energy production, refining, chemical processing, and associated harsh environment survivability improvements	Friday, April 17, 2026	8:30 AM	11:50 AM	Olympic Tower- Grand A
<b>SYMPOSIUM 15 -BSD ED MD: Ceramic and Composite Materials and Systems for a Sustainable and Resilient Energy Future</b>	S15- Advances in manufacturing technologies for energy materials and components for reducing emissions and improving efficiency; Circular economy and their role in resource efficiency and lifecycle extension	Friday, April 17, 2026	1:30 PM	3:00 PM	Olympic Tower- Grand A
<b>SYMPOSIUM 16 -ED MD GOMD: Advanced Manufacturing and Processing of Ceramic Materials</b>	S16- Novel processing of high performance ceramics I	Thursday, April 16, 2026	8:30 AM	10:20 AM	Olympic Tower- Grand B
<b>SYMPOSIUM 16 -ED MD GOMD: Advanced Manufacturing and Processing of Ceramic Materials</b>	S16- Machining of ceramics	Thursday, April 16, 2026	10:20 AM	11:40 AM	Olympic Tower- Grand B

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 16</b> -ED MD GOMD: Advanced Manufacturing and Processing of Ceramic Materials	S16- Sintering I	Thursday, April 16, 2026	1:30 PM	5:00 PM	Olympic Tower- Grand B
<b>SYMPOSIUM 16</b> -ED MD GOMD: Advanced Manufacturing and Processing of Ceramic Materials	S16- Sintering II	Friday, April 17, 2026	8:30 AM	9:10 AM	Olympic Tower- Grand B
<b>SYMPOSIUM 16</b> -ED MD GOMD: Advanced Manufacturing and Processing of Ceramic Materials	S16- Novel processing of ceramics II	Friday, April 17, 2026	9:10 AM	12:00 PM	Olympic Tower- Grand B
<b>SYMPOSIUM 17</b> -BSD ED: Ceramics for the Hydrogen Economy	S17- Ceramics for the Hydrogen Economy	Wednesday, April 15, 2026	1:30 PM	4:30 PM	Olympic Tower- Grand A
<b>SYMPOSIUM 18</b> -MD BSD BIO GOMD: New Frontiers in Additive Manufacturing of Ceramic Materials	S18- Additive manufacturing of glass I	Monday, April 13, 2026	1:30 PM	3:20 PM	Olympic Tower- Grand B
<b>SYMPOSIUM 18</b> -MD BSD BIO GOMD: New Frontiers in Additive Manufacturing of Ceramic Materials	S18- Additive manufacturing of glass II	Monday, April 13, 2026	3:20 PM	4:20 PM	Olympic Tower- Grand B
<b>SYMPOSIUM 18</b> -MD BSD BIO GOMD: New Frontiers in Additive Manufacturing of Ceramic Materials	S18- New applications of additively manufactured ceramics	Monday, April 13, 2026	4:20 PM	5:30 PM	Olympic Tower- Grand B
<b>SYMPOSIUM 18</b> -MD BSD BIO GOMD: New Frontiers in Additive Manufacturing of Ceramic Materials	S18- New approaches for AM processes of ceramics and ceramic-matrix composites I	Tuesday, April 14, 2026	11:00 AM	12:00 PM	Olympic Tower- Grand B
<b>SYMPOSIUM 18</b> -MD BSD BIO GOMD: New Frontiers in Additive Manufacturing of Ceramic Materials	S18- Novel techniques to prepare ceramic powders for AM	Tuesday, April 14, 2026	1:30 PM	3:10 PM	Olympic Tower- Grand B

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 18 -MD BSD BIO GOMD: New Frontiers in Additive Manufacturing of Ceramic Materials</b>	S18- Characterization and modeling for AM	Tuesday, April 14, 2026	3:10 PM	5:50 PM	Olympic Tower- Grand B
<b>SYMPOSIUM 18 -MD BSD BIO GOMD: New Frontiers in Additive Manufacturing of Ceramic Materials</b>	S18- New approaches for AM processes of ceramics and ceramic-matrix composites II	Wednesday, April 15, 2026	11:00 AM	12:00 PM	Olympic Tower- Grand B
<b>SYMPOSIUM 18 -MD BSD BIO GOMD: New Frontiers in Additive Manufacturing of Ceramic Materials</b>	S18- New approaches for AM processes of ceramics and ceramic-matrix composites III	Wednesday, April 15, 2026	1:30 PM	3:20 PM	Olympic Tower- Grand B
<b>SYMPOSIUM 18 -MD BSD BIO GOMD: New Frontiers in Additive Manufacturing of Ceramic Materials</b>	S18- New approaches for AM processes of ceramics and ceramic-matrix composites IV	Wednesday, April 15, 2026	3:20 PM	5:40 PM	Olympic Tower- Grand B
<b>SYMPOSIUM 19 -GOMD EMSD: Glass and Interactions with its Environment - Fundamentals and Applications</b>	S19- Glass and glass-ceramics for waste immobilization I	Thursday, April 16, 2026	1:30 PM	5:20 PM	Cascade Tower- Laurel
<b>SYMPOSIUM 19 -GOMD EMSD: Glass and Interactions with its Environment - Fundamentals and Applications</b>	S19- Glass and glass-ceramics for waste immobilization II	Friday, April 17, 2026	8:30 AM	11:20 AM	Cascade Tower- Laurel
<b>SYMPOSIUM 19 -GOMD EMSD: Glass and Interactions with its Environment - Fundamentals and Applications</b>	S19- Glass and glass-ceramics for biomedical applications	Friday, April 17, 2026	1:30 PM	2:40 PM	Cascade Tower- Laurel
<b>SYMPOSIUM 20 -BSD: Symposium to Honor W. Craig Carter</b>	S20- Grain Growth Fundamentals	Monday, April 13, 2026	1:30 PM	3:20 PM	Cascade Tower- Regency B
<b>SYMPOSIUM 20 -BSD: Symposium to Honor W. Craig Carter</b>	S20- Complexions: Equilibrium and Kinetics	Monday, April 13, 2026	3:20 PM	5:20 PM	Cascade Tower- Regency B

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 20 -BSD: Symposium to Honor W. Craig Carter</b>	S20- Microstructure, Geometry and Modelling of Materials	Tuesday, April 14, 2026	1:30 PM	3:10 PM	Cascade Tower- Regency B
<b>SYMPOSIUM 20 -BSD: Symposium to Honor W. Craig Carter</b>	S20- Materials Science Education	Tuesday, April 14, 2026	3:10 PM	5:10 PM	Cascade Tower- Regency B
<b>SYMPOSIUM 20 -BSD: Symposium to Honor W. Craig Carter</b>	S20- Materials and AI	Wednesday, April 15, 2026	11:00 AM	12:00 PM	Cascade Tower- Regency B
<b>SYMPOSIUM 20 -BSD: Symposium to Honor W. Craig Carter</b>	S20- Electrochemical Materials and Devices I	Wednesday, April 15, 2026	1:30 PM	3:20 PM	Cascade Tower- Regency B
<b>SYMPOSIUM 20 -BSD: Symposium to Honor W. Craig Carter</b>	S20- Electrochemical Materials and Devices II	Wednesday, April 15, 2026	3:20 PM	5:40 PM	Cascade Tower- Regency B
<b>SYMPOSIUM 21 -BSD: Science of Sintering and Grain Growth</b>	S21- Advanced Sintering Techniques: Field-assisted and rapid sintering methods for ultra-fine grain control	Friday, April 17, 2026	8:30 AM	9:30 AM	Cascade Tower- Regency C
<b>SYMPOSIUM 21 -BSD: Science of Sintering and Grain Growth</b>	S21- Grain Boundary Engineering: Measurement, modeling, and control of grain boundary energies; effects of dopants	Friday, April 17, 2026	9:30 AM	10:30 AM	Cascade Tower- Regency C
<b>SYMPOSIUM 21 -BSD: Science of Sintering and Grain Growth</b>	S21- Thermodynamics & Kinetics: Energy landscapes, driving forces, and diffusion mechanisms during sintering	Friday, April 17, 2026	10:30 AM	10:50 AM	Cascade Tower- Regency C
<b>SYMPOSIUM 21 -BSD: Science of Sintering and Grain Growth</b>	S21- Multiscale Modeling & In Situ Characterization: Integration of simulation and real-time experiments to understand microstructural evolution	Friday, April 17, 2026	10:50 AM	11:30 AM	Cascade Tower- Regency C

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 22 -BSD: Robert B. Sosman Award and Lecture</b>	S22- Robert B. Sosman Award and Lecture	Monday, April 13, 2026	1:30 PM	5:10 PM	Cascade Tower- Regency E
<b>SYMPOSIUM 23 -BSD: High Interfacial Materials - Controlling Grain Boundary Structure, Chemistry, and their Network</b>	S23- High Interfacial Materials - Grain Boundary Effects	Thursday, April 16, 2026	1:30 PM	3:10 PM	Cascade Tower- Regency A
<b>SYMPOSIUM 23 -BSD: High Interfacial Materials - Controlling Grain Boundary Structure, Chemistry, and their Network</b>	S23- High Interfacial Materials - Grain Boundary and Size Effects	Thursday, April 16, 2026	3:10 PM	5:20 PM	Cascade Tower- Regency A
<b>SYMPOSIUM 23 -BSD: High Interfacial Materials - Controlling Grain Boundary Structure, Chemistry, and their Network</b>	S23- High Interfacial Materials - UHTCs	Friday, April 17, 2026	8:30 AM	9:50 AM	Cascade Tower- Regency A
<b>SYMPOSIUM 23 -BSD: High Interfacial Materials - Controlling Grain Boundary Structure, Chemistry, and their Network</b>	S23- High Interfacial Materials - Stability	Friday, April 17, 2026	9:50 AM	11:10 AM	Cascade Tower- Regency A
<b>SYMPOSIUM 24 -BIO: Mechanobiology and Cell-Substrate Interactions at Biointerfaces in Bioceramics: Theory and Experiments</b>	S24- Advanced manufacturing using bioceramics for biomedical applications	Tuesday, April 14, 2026	1:30 PM	3:20 PM	Cascade Tower- Laurel
<b>SYMPOSIUM 24 -BIO: Mechanobiology and Cell-Substrate Interactions at Biointerfaces in Bioceramics: Theory and Experiments</b>	S24- Bioceramics based human invitro disease models	Tuesday, April 14, 2026	3:20 PM	4:50 PM	Cascade Tower- Laurel

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 24 -BIO: Mechanobiology and Cell-Substrate Interactions at Biointerfaces in Bioceramics: Theory and Experiments</b>	S24- Experimental evaluation of bio-nanointerfaces of bioceramic composites with substrates	Wednesday, April 15, 2026	1:30 PM	2:20 PM	Cascade Tower- Laurel
<b>SYMPOSIUM 24 -BIO: Mechanobiology and Cell-Substrate Interactions at Biointerfaces in Bioceramics: Theory and Experiments</b>	S24- Mechanobiology and Cell-Substrate Interactions at Biointerfaces in Bioceramics: Theory and Experiments	Wednesday, April 15, 2026	2:20 PM	4:10 PM	Cascade Tower- Laurel
<b>SYMPOSIUM 25 -ED: Advanced Electronic Materials: Processing Structures, Properties, and Applications</b>	S25- Pb-Free Piezoelectrics	Monday, April 13, 2026	11:00 AM	11:50 AM	Cascade Tower- Regency C
<b>SYMPOSIUM 25 -ED: Advanced Electronic Materials: Processing Structures, Properties, and Applications</b>	S25- New Methods and Non-Conventional Processing Methods	Monday, April 13, 2026	1:30 PM	5:20 PM	Cascade Tower- Regency C
<b>SYMPOSIUM 25 -ED: Advanced Electronic Materials: Processing Structures, Properties, and Applications</b>	S25- Sintering and Doping Effects I	Tuesday, April 14, 2026	11:00 AM	11:50 AM	Cascade Tower- Regency C
<b>SYMPOSIUM 25 -ED: Advanced Electronic Materials: Processing Structures, Properties, and Applications</b>	S25- Sintering and Doping Effects II	Tuesday, April 14, 2026	1:30 PM	2:40 PM	Cascade Tower- Regency C
<b>SYMPOSIUM 25 -ED: Advanced Electronic Materials: Processing Structures, Properties, and Applications</b>	S25- Enhanced Measurement Techniques and High Frequency Materials	Tuesday, April 14, 2026	2:40 PM	5:00 PM	Cascade Tower- Regency C
<b>SYMPOSIUM 26 -ED: Semiconductors and Microelectronics in Metal Halide, Chalcogenide and Oxide Perovskites</b>	S26- Metal Halide Perovskite Optoelectronics and Semiconductor Property I	Thursday, April 16, 2026	8:30 AM	12:00 PM	Cascade Tower- Regency B

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 26</b> <b>-ED: Semiconductors and Microelectronics in Metal Halide, Chalcogenide and Oxide Perovskites</b>	S26- Metal Halide Perovskite Optoelectronics and Semiconductor Property II	Thursday, April 16, 2026	1:30 PM	4:50 PM	Cascade Tower- Regency B
<b>SYMPOSIUM 26</b> <b>-ED: Semiconductors and Microelectronics in Metal Halide, Chalcogenide and Oxide Perovskites</b>	S26- Semiconductors and Microelectronics in Metal Oxide and Chalcogenide Perovskites	Friday, April 17, 2026	8:30 AM	10:40 AM	Cascade Tower- Regency B
<b>SYMPOSIUM 27</b> <b>-ED: Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications</b>	S27- Atomic layer processing, fabrication, and applications	Monday, April 13, 2026	11:00 AM	12:00 PM	Cascade Tower- Regency A
<b>SYMPOSIUM 27</b> <b>-ED: Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications</b>	S27- Atomic layer processing, fabrication, and applications II	Monday, April 13, 2026	1:30 PM	3:20 PM	Cascade Tower- Regency A
<b>SYMPOSIUM 27</b> <b>-ED: Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications</b>	S27- Atomic layer processing, fabrication, and applications III	Monday, April 13, 2026	3:20 PM	5:40 PM	Cascade Tower- Regency A
<b>SYMPOSIUM 27</b> <b>-ED: Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications</b>	S27- 2D materials synthesis and applications	Tuesday, April 14, 2026	11:00 AM	11:30 AM	Cascade Tower- Regency A
<b>SYMPOSIUM 27</b> <b>-ED: Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications</b>	S27- 2D materials devices and applications	Tuesday, April 14, 2026	1:30 PM	3:20 PM	Cascade Tower- Regency A
<b>SYMPOSIUM 27</b> <b>-ED: Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications</b>	S27- Fabrication and application of novel 2D materials and MXenes	Tuesday, April 14, 2026	3:20 PM	5:00 PM	Cascade Tower- Regency A

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 27 -ED: Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications</b>	S27- Advanced 2D materials devices and systems	Wednesday, April 15, 2026	11:00 AM	11:30 AM	Cascade Tower- Regency A
<b>SYMPOSIUM 27 -ED: Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications</b>	S27- 2D materials properties, devices and applications I	Wednesday, April 15, 2026	1:30 PM	3:20 PM	Cascade Tower- Regency A
<b>SYMPOSIUM 27 -ED: Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications</b>	S27- 2D materials properties, devices and applications II	Wednesday, April 15, 2026	3:20 PM	5:10 PM	Cascade Tower- Regency A
<b>SYMPOSIUM 27 -ED: Two-Dimensional Materials: Synthesis, Theories, Properties, and Applications</b>	S27- 2D materials fundamentals, properties, and characterizations	Thursday, April 16, 2026	10:20 AM	12:00 PM	Cascade Tower- Regency A
<b>SYMPOSIUM 28 -ED: Advanced Characterization of Functionalized Low-Dimensional Material Surfaces</b>	S28- Advanced Characterization of Functionalized Low-Dimensional Material Surfaces	Wednesday, April 15, 2026	1:30 PM	4:30 PM	Cascade Tower- Regency C
<b>SYMPOSIUM 29 -ED: Scale-Bridging Approaches for Electroceramic Design and Performance</b>	S29- Scale-Bridging Approaches for Electroceramic Design and Performance	Thursday, April 16, 2026	1:30 PM	3:20 PM	Cascade Tower- Regency FG
<b>SYMPOSIUM 30 -ED: Quo Vadis, High-Entropy Oxides?</b>	S30- High-entropy oxides-Engineering fundamental and functional properties	Thursday, April 16, 2026	8:30 AM	11:20 AM	Cascade Tower- Regency C
<b>SYMPOSIUM 30 -ED: Quo Vadis, High-Entropy Oxides?</b>	S30- High-entropy oxides: theory, chemistry and properties	Thursday, April 16, 2026	1:30 PM	5:00 PM	Cascade Tower- Regency C

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 31 -ED: Superconducting and 2D Magnetic Materials: From Basic Science to Applications</b>	S31- 2D magnet heterostructures and devices: From nanoscale to large scale applications	Monday, April 13, 2026	11:00 AM	12:00 PM	Cascade Tower- Regency FG
<b>SYMPOSIUM 31 -ED: Superconducting and 2D Magnetic Materials: From Basic Science to Applications</b>	S31- Superconducting Materials and Devices I	Monday, April 13, 2026	1:30 PM	3:20 PM	Cascade Tower- Regency FG
<b>SYMPOSIUM 31 -ED: Superconducting and 2D Magnetic Materials: From Basic Science to Applications</b>	S31- Superconducting Materials and Devices II	Monday, April 13, 2026	3:20 PM	5:30 PM	Cascade Tower- Regency FG
<b>SYMPOSIUM 31 -ED: Superconducting and 2D Magnetic Materials: From Basic Science to Applications</b>	S31- Novel magnetic materials	Tuesday, April 14, 2026	11:00 AM	12:00 PM	Cascade Tower- Regency FG
<b>SYMPOSIUM 31 -ED: Superconducting and 2D Magnetic Materials: From Basic Science to Applications</b>	S31- Novel magnetic materials and 2D structures I	Tuesday, April 14, 2026	1:30 PM	3:20 PM	Cascade Tower- Regency FG
<b>SYMPOSIUM 31 -ED: Superconducting and 2D Magnetic Materials: From Basic Science to Applications</b>	S31- Novel magnetic materials and 2D structures II	Tuesday, April 14, 2026	3:20 PM	5:20 PM	Cascade Tower- Regency FG
<b>SYMPOSIUM 31 -ED: Superconducting and 2D Magnetic Materials: From Basic Science to Applications</b>	S31- Low dimensional superconductors, flat bands, and Kagome superconductors	Wednesday, April 15, 2026	11:00 AM	12:00 PM	Cascade Tower- Regency FG
<b>SYMPOSIUM 31 -ED: Superconducting and 2D Magnetic Materials: From Basic Science to Applications</b>	S31- Electronic, optical, and magnetic properties I	Wednesday, April 15, 2026	1:30 PM	5:20 PM	Cascade Tower- Regency FG

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 31 -ED: Superconducting and 2D Magnetic Materials: From Basic Science to Applications</b>	S31- Theory and Applications of Novel Magnetic Materials I	Thursday, April 16, 2026	8:30 AM	10:10 AM	Cascade Tower- Regency FG
<b>SYMPOSIUM 31 -ED: Superconducting and 2D Magnetic Materials: From Basic Science to Applications</b>	S31- Theory and Applications of Novel Magnetic Materials II	Thursday, April 16, 2026	10:10 AM	11:40 AM	Cascade Tower- Regency FG
<b>SYMPOSIUM 32 -EMSD: Solid Oxide Cells for Sustainable Energy</b>	S32- Solid Oxide Cells I	Monday, April 13, 2026	11:00 AM	12:00 PM	Olympic Tower- Evergreen A
<b>SYMPOSIUM 32 -EMSD: Solid Oxide Cells for Sustainable Energy</b>	S32- Solid Oxide Cells II	Monday, April 13, 2026	1:30 PM	5:20 PM	Olympic Tower- Evergreen A
<b>SYMPOSIUM 32 -EMSD: Solid Oxide Cells for Sustainable Energy</b>	S32- Protonic Ceramic Cells I	Tuesday, April 14, 2026	11:00 AM	12:00 PM	Olympic Tower- Evergreen A
<b>SYMPOSIUM 32 -EMSD: Solid Oxide Cells for Sustainable Energy</b>	S32- Protonic Ceramic Cells II	Tuesday, April 14, 2026	1:30 PM	5:20 PM	Olympic Tower- Evergreen A
<b>SYMPOSIUM 32 -EMSD: Solid Oxide Cells for Sustainable Energy</b>	S32- Protonic Ceramic Cells III	Wednesday, April 15, 2026	1:30 PM	3:20 PM	Olympic Tower- Evergreen A
<b>SYMPOSIUM 32 -EMSD: Solid Oxide Cells for Sustainable Energy</b>	S32- Modeling/Simulation	Wednesday, April 15, 2026	3:20 PM	5:10 PM	Olympic Tower- Evergreen A
<b>SYMPOSIUM 33 -EMSD: Advances in Thermoelectrics: Bridging Theory and Application</b>	S33- Magnetism, topology, and quantum transport in thermoelectrics	Monday, April 13, 2026	11:00 AM	12:00 PM	Olympic Tower- Evergreen C
<b>SYMPOSIUM 33 -EMSD: Advances in Thermoelectrics: Bridging Theory and Application</b>	S33- Devices and materials for waste heat recovery and thermal management	Monday, April 13, 2026	1:30 PM	5:20 PM	Olympic Tower- Evergreen C

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 33 -EMSD: Advances in Thermoelectrics: Bridging Theory and Application</b>	S33- Modeling and computational approaches for thermoelectric materials	Tuesday, April 14, 2026	11:00 AM	11:30 AM	Olympic Tower- Evergreen C
<b>SYMPOSIUM 33 -EMSD: Advances in Thermoelectrics: Bridging Theory and Application</b>	S33- Design, synthesis, and processing of thermoelectric materials	Tuesday, April 14, 2026	1:30 PM	5:20 PM	Olympic Tower- Evergreen C
<b>SYMPOSIUM 34 -EMSD: Advances and Current Challenges in Solid-State Battery Technologies</b>	S34- Advances in next-generation solid-state battery chemistries	Wednesday, April 15, 2026	1:30 PM	4:20 PM	Olympic Tower- Evergreen B
<b>SYMPOSIUM 34 -EMSD: Advances and Current Challenges in Solid-State Battery Technologies</b>	S34- Electrode engineering and interfaces in solid-state batteries	Thursday, April 16, 2026	8:30 AM	11:40 AM	Olympic Tower- Evergreen B
<b>SYMPOSIUM 35 -GOMD: Fundamentals of the Glassy State</b>	S35- Chalcogenide glasses and amorphous materials	Wednesday, April 15, 2026	1:30 PM	2:20 PM	Cascade Tower- Larch
<b>SYMPOSIUM 35 -GOMD: Fundamentals of the Glassy State</b>	S35- Structural characterizations of glasses and melts	Wednesday, April 15, 2026	2:20 PM	4:00 PM	Cascade Tower- Larch
<b>SYMPOSIUM 35 -GOMD: Fundamentals of the Glassy State</b>	S35- Mechanical properties of glasses and glass crystallization and glass-ceramics	Thursday, April 16, 2026	1:30 PM	4:10 PM	Cascade Tower- Larch
<b>SYMPOSIUM 35 -GOMD: Fundamentals of the Glassy State</b>	S35- Glass formation and structural relaxation	Thursday, April 16, 2026	4:10 PM	5:50 PM	Cascade Tower- Larch
<b>SYMPOSIUM 36 -GOMD: Modeling and Simulations of Glass Structures and Properties</b>	S36- Atomistic simulation and predictive modeling of glasses I	Monday, April 13, 2026	1:30 PM	4:40 PM	Cascade Tower- Larch

# TECH SESSIONS BY SYMPOSIA

## SPRING MEETING 2026

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
<b>SYMPOSIUM 36 -GOMD: Modeling and Simulations of Glass Structures and Properties</b>	S36- Atomistic simulation and predictive modeling of glasses II	Tuesday, April 14, 2026	1:30 PM	3:10 PM	Cascade Tower- Larch
<b>SYMPOSIUM 36 -GOMD: Modeling and Simulations of Glass Structures and Properties</b>	S36- Data-driven modeling and machine learning for glass science	Tuesday, April 14, 2026	3:10 PM	6:10 PM	Cascade Tower- Larch
<b>SYMPOSIUM 37 -GOMD: Optical and Electronic Materials and Devices</b>	S37- Optical and Electronic Materials and Devices I	Monday, April 13, 2026	1:30 PM	4:10 PM	Cascade Tower- Juniper
<b>SYMPOSIUM 37 -GOMD: Optical and Electronic Materials and Devices</b>	S37- Optical and Electronic Materials and Devices - II	Tuesday, April 14, 2026	1:30 PM	5:00 PM	Cascade Tower- Juniper
<b>SYMPOSIUM 38 -GOMD: Glass Manufacturing</b>	S38- Glass Manufacturing	Friday, April 17, 2026	8:30 AM	11:50 AM	Cascade Tower- Larch
<b>SYMPOSIUM 39 -GOMD: Steve Feller Honorary Symposium</b>	S39- Steve Feller Honorary Symposium I	Wednesday, April 15, 2026	1:30 PM	5:30 PM	Cascade Tower- Juniper
<b>SYMPOSIUM 39 -GOMD: Steve Feller Honorary Symposium</b>	S39- Steve Feller Honorary Symposium II	Thursday, April 16, 2026	1:30 PM	4:40 PM	Cascade Tower- Juniper

# LATE CONTRIBUTED PRESENTATIONS

## SPRING MEETING 2026

### SPRING-POSTER-17-2026

#### **Boron coordination in multicomponent borate and borosilicate glasses: analytical models and machine learning with uncertainty**

C. Curry<sup>1\*</sup>; M. Diaz<sup>1</sup>; D. Wang<sup>1</sup>; S. Allec<sup>1</sup>; J. Neeway<sup>1</sup>; J. Vienna<sup>1</sup>; X. Lu

1. Pacific Northwest National Laboratory, United States

### SPRING-POSTER-18-2026

#### **Predicting nepheline formation in nuclear waste glasses using machine learning with uncertainty quantification**

M. Diaz<sup>1\*</sup>; C. Curry<sup>1</sup>; X. Lu<sup>2</sup>; J. Vienna<sup>1</sup>; S. Allec<sup>1</sup>; S. Chong<sup>1</sup>

1. Pacific Northwest National Laboratory, Richland, WA, United States.

2. Energy and Environment Directorate, Pacific Northwest National Lab, United States

### SPRING-POSTER-G21-2026

#### **Ferroelectric relaxor ceramics: From composition design to low-temperature sintering for next-generation MLCCs and memory devices**

V. Sangwan<sup>1\*</sup>; G. Pettis<sup>1</sup>; B. Howe<sup>1</sup>; D. Cann<sup>1</sup>

1. Material Science, Oregon State University, United States

### SPRING-POSTER-G22-2026

#### **Empowering the next generation of ceramic leaders: The mission and impact of the PCSA**

M. Dujovic<sup>2</sup>; J. Barber<sup>1\*</sup>; N. Rios<sup>5</sup>; C. Wang<sup>2</sup>; R. Swanson<sup>6</sup>; S. McCormack<sup>4</sup>; N. McIlwaine<sup>3</sup>

1. Department of Materials Science and Engineering, Virginia Tech, United States

2. Materials Science and Engineering (MSEN), Texas A&M University, United States

3. The American Ceramic Society, United States

4. Materials Science and Engineering, University of California Berkeley, United States

5. The Pennsylvania State University, United States

6. Chemical Engineering, University of California Davis, United States

### SPRING-POSTER-G23-2026

#### **Thermodynamic analysis of ion exchange in mixed-modifier aluminosilicate glasses**

R. Hutchins<sup>1\*</sup>; C. Lonergan<sup>1</sup>

1. Materials Science and Engineering, Missouri University of Science and Technology, United States



## Oral Presenters

Name	Date	Time	Room	Page Number	Name	Date	Time	Room	Page Number
<b>A</b>					<b>C</b>				
Abate, Y.	16-Apr	2:30PM	Olympic Tower- Evergreen A	44	Burch, K.	13-Apr	3:40PM	Cascade Tower- Regency FG	14
Adesanya, A.O.	15-Apr	3:40PM	Cascade Tower- Larch	38	Burns, K.	16-Apr	1:30PM	Cascade Tower- Regency FG	48
Affatigato, M.	15-Apr	1:30PM	Cascade Tower- Juniper	38	Butala, M.M.	13-Apr	3:20PM	Olympic Tower- Grand C	10
Affatigato, M.	16-Apr	10:50AM	Olympic Tower- Grand EFGHIJK	39	<b>C</b>				
Agyekum, K.	13-Apr	4:30PM	Olympic Tower- Evergreen B	10	Cai, Y.	15-Apr	2:20PM	Olympic Tower- Evergreen A	37
Ahmad, Z.	16-Apr	9:10AM	Olympic Tower- Evergreen B	43	Caldwell, J.D.	13-Apr	1:30PM	Cascade Tower- Regency E	12
Ahmad, Z.	16-Apr	11:00AM	Olympic Tower- Evergreen C	40	Callahan, W.	17-Apr	10:40AM	Olympic Tower- Evergreen C	51
Ahn, C.	13-Apr	1:30PM	Cascade Tower- Regency FG	13	Cannillo, V.	15-Apr	4:40PM	Cascade Tower- Regency B	34
Aichele, E.	16-Apr	3:50PM	Cascade Tower- Larch	49	Cao, Q.	14-Apr	1:30PM	Cascade Tower- Regency A	24
Akhbarifar, S.	14-Apr	4:50PM	Olympic Tower- Evergreen C	25	Cao, T.	14-Apr	11:30AM	Cascade Tower- Regency FG	18
Akirmak-Yamac, E.	13-Apr	2:40PM	Cascade Tower- Larch	15	Cao, Y.	15-Apr	2:00PM	Cascade Tower- Regency A	35
Aksay, I.A.	13-Apr	5:10PM	Cascade Tower- Regency A	13	Çapraz, Ö.Ö.	14-Apr	11:50AM	Olympic Tower- Grand C	17
Alamgir, F.M.	15-Apr	4:40PM	Cascade Tower- Juniper	38	Çapraz, Ö.Ö.	16-Apr	10:50AM	Olympic Tower- Evergreen B	43
Alamgir, F.M.	17-Apr	2:20PM	Olympic Tower- Evergreen B	55	Çapraz, Ö.Ö.	17-Apr	2:40PM	Olympic Tower- Evergreen B	55
Allen, A.J.	14-Apr	3:40PM	Olympic Tower- Grand B	22	Caretta, L.M.	16-Apr	2:00PM	Olympic Tower- Grand C	43
Almishal, S.S.	16-Apr	10:20AM	Cascade Tower- Regency E	39	Carter, W.C.	14-Apr	3:10PM	Cascade Tower- Regency B	22
Alsac, E.	16-Apr	4:00AM	Olympic Tower- Evergreen B	43	Carty, W.M.	15-Apr	8:40AM	Olympic Tower- Grand EFGHIJK	29
Altwater, M.	15-Apr	4:20PM	Cascade Tower- Regency FG	36	Carty, W.M.	16-Apr	4:40PM	Olympic Tower- Grand B	46
Amezawa, K.	14-Apr	2:30PM	Olympic Tower- Evergreen A	25	Carty, W.M.	17-Apr	10:50AM	Olympic Tower- Grand B	52
An, Q.	16-Apr	10:50AM	Olympic Tower- Grand B	41	Castro, R.	16-Apr	3:50PM	Olympic Tower- Grand C	46
An, Q.	16-Apr	4:00PM	Cascade Tower- Regency A	47	Cesarano, J.	13-Apr	3:50PM	Olympic Tower- Grand EFGHIJK	8
Angelone, M.	16-Apr	3:50PM	Olympic Tower- Evergreen B	44	Chae, S.	14-Apr	3:20PM	Olympic Tower- Grand A	19
Antonio, R.W.	13-Apr	3:30PM	Cascade Tower- Juniper	16	Chae, S.	16-Apr	4:10PM	Olympic Tower- Evergreen A	45
Arava, H.	15-Apr	3:20PM	Cascade Tower- Regency C	36	Chandra, M.	15-Apr	11:20AM	Olympic Tower- Evergreen B	30
Armstrong, B.L.	16-Apr	11:00AM	Olympic Tower- Grand A	41	Chandrashekar, M.	17-Apr	1:30PM	Olympic Tower- Evergreen C	55
Ashjari, A.	15-Apr	2:20PM	Cascade Tower- Larch	37	Chang, C.S.	15-Apr	3:10PM	Olympic Tower- Grand C	31
Asmussen, M.	16-Apr	2:40PM	Cascade Tower- Laurel	46	Charlton, T.	16-Apr	4:40PM	Olympic Tower- Evergreen B	44
Atnafe, A.E.	13-Apr	3:40PM	Cascade Tower- Larch	15	Checa, M.	16-Apr	2:30PM	Olympic Tower- Grand C	43
<b>B</b>					Cheekatamarla, P.	15-Apr	2:40PM	Olympic Tower- Evergreen A	37
Backman, L.	17-Apr	8:30AM	Cascade Tower- Regency A	53	Chen, A.	15-Apr	2:30PM	Olympic Tower- Grand C	31
Bae, S.	13-Apr	11:30AM	Cascade Tower- Regency A	7	Chen, A.	16-Apr	9:30AM	Cascade Tower- Regency C	42
Bae, S.	14-Apr	5:00PM	Cascade Tower- Regency E	20	Chen, A.	17-Apr	2:10PM	Olympic Tower- Evergreen A	55
Bai, J.	16-Apr	2:00PM	Cascade Tower- Larch	49	Chen, C.	15-Apr	2:30PM	Olympic Tower- Evergreen C	32
Bai, P.	15-Apr	2:10PM	Olympic Tower- Evergreen B	37	Chen, D.	15-Apr	4:10PM	Olympic Tower- Evergreen C	32
Bai, P.	16-Apr	10:30AM	Olympic Tower- Grand A	40	Chen, L.	16-Apr	10:20AM	Olympic Tower- Grand C	39
Bailey, K.	14-Apr	2:20PM	Olympic Tower- Grand EFGHIJK	18	Chen, R.	13-Apr	2:00PM	Olympic Tower- Evergreen C	14
Balicas, L.	15-Apr	11:30AM	Cascade Tower- Regency FG	31	Chen, S.	14-Apr	1:30PM	Olympic Tower- Evergreen C	25
Balog, A.R.	13-Apr	4:10PM	Olympic Tower- Evergreen B	10	Chen, Z.	13-Apr	4:20PM	Olympic Tower- Grand C	10
Balog, A.R.	16-Apr	5:10PM	Olympic Tower- Evergreen B	44	Chiang, Y.	15-Apr	1:30PM	Cascade Tower- Regency B	34
Bandyopadhyay, A.	14-Apr	4:50PM	Olympic Tower- Grand B	22	Chiu, C.	15-Apr	3:40PM	Cascade Tower- Regency E	32
Bang, J.	13-Apr	4:20PM	Olympic Tower- Grand A	9	Choi, B.	13-Apr	5:00PM	Cascade Tower- Regency C	13
Banker, S.	14-Apr	3:30PM	Cascade Tower- Juniper	27	Choi, H.	14-Apr	11:30AM	Cascade Tower- Regency C	17
Barber, J.	14-Apr	2:40PM	Cascade Tower- Regency C	23	Choi, W.	14-Apr	11:30AM	Olympic Tower- Grand A	16
Barraza-Lopez, S.	16-Apr	10:10AM	Cascade Tower- Regency FG	42	Chu, J.	13-Apr	4:40PM	Cascade Tower- Regency FG	14
Bauer, S.	13-Apr	11:30AM	Cascade Tower- Regency C	7	Chu, Y.	16-Apr	2:20PM	Cascade Tower- Regency C	48
Beckmann, K.	17-Apr	10:50AM	Olympic Tower- Evergreen A	50	Chung, S.	16-Apr	10:50AM	Cascade Tower- Regency E	39
Bejger, G.R.	16-Apr	10:10AM	Cascade Tower- Regency C	42	Ciccarella, M.	17-Apr	11:30AM	Olympic Tower- Grand B	52
Belay, N.	16-Apr	4:40PM	Olympic Tower- Grand A	46	Cline, L.	14-Apr	3:50PM	Olympic Tower- Grand A	19
Bencan Golob, A.	16-Apr	2:00PM	Cascade Tower- Regency FG	48	Cobb, C.L.	14-Apr	1:30PM	Olympic Tower- Grand C	21
Benedek, N.	14-Apr	4:10PM	Olympic Tower- Grand A	19	Comes, R.	14-Apr	11:00AM	Olympic Tower- Grand A	16
Bergh, J.	16-Apr	4:40PM	Cascade Tower- Regency C	49	Comes, R.	16-Apr	2:00PM	Cascade Tower- Regency E	44
Bhattacharya, S.	15-Apr	2:30PM	Cascade Tower- Regency E	32	Conroy, S.	14-Apr	2:00PM	Olympic Tower- Evergreen B	20
Bishop, C.	15-Apr	5:10PM	Cascade Tower- Regency B	35	Cotlet, M.	15-Apr	4:50PM	Cascade Tower- Regency A	35
Blennow, P.	13-Apr	11:00AM	Olympic Tower- Evergreen A	8	Cox, H.R.	16-Apr	11:10AM	Olympic Tower- Evergreen A	40
Bohrmann, N.C.	17-Apr	10:30AM	Cascade Tower- Larch	54	Crane, D.	13-Apr	1:30PM	Olympic Tower- Evergreen C	14
Bolluk, M.	15-Apr	2:30PM	Cascade Tower- Regency FG	36	Cui, B.	16-Apr	4:20PM	Olympic Tower- Grand B	46
Bordia, R.	16-Apr	3:20PM	Olympic Tower- Grand B	46	Cui, B.	17-Apr	8:30AM	Olympic Tower- Grand A	51
Bose, S.	14-Apr	1:30PM	Cascade Tower- Laurel	22	Curtarolo, S.	13-Apr	2:10PM	Cascade Tower- Regency E	12
Bosworth, B.	14-Apr	4:20PM	Cascade Tower- Regency C	23	<b>D</b>				
Bouteiller, H.	13-Apr	3:20PM	Olympic Tower- Evergreen C	15	Das, S.	15-Apr	11:00AM	Cascade Tower- Regency A	31
Bowman, W.	16-Apr	9:30AM	Cascade Tower- Regency E	39	De La Uz, E.	15-Apr	2:50PM	Cascade Tower- Laurel	35
Bowman, W.	16-Apr	2:40PM	Cascade Tower- Regency A	47	Deary, W.J.	16-Apr	2:00PM	Cascade Tower- Regency C	48
Bragatto, C.B.	16-Apr	2:40PM	Cascade Tower- Juniper	49	Deb, P.	13-Apr	4:20PM	Olympic Tower- Grand EFGHIJK	8
Brenneka, G.	13-Apr	2:00PM	Cascade Tower- Auditorium	9	Dejneka, M.	13-Apr	1:50PM	Cascade Tower- Juniper	15
Brow, R.	16-Apr	1:30PM	Cascade Tower- Juniper	49	Dejneka, M.	14-Apr	2:30PM	Cascade Tower- Juniper	26
Brown, M.	14-Apr	3:30PM	Cascade Tower- Auditorium	20	Delia, D.J.	17-Apr	8:30AM	Olympic Tower- Grand B	52
Brown, T.D.	16-Apr	9:00AM	Olympic Tower- Evergreen A	40	Deng, Q.	14-Apr	1:30PM	Cascade Tower- Regency C	23
Broyles, C.	15-Apr	4:50PM	Cascade Tower- Regency FG	36	Destino, J.F.	13-Apr	1:30PM	Olympic Tower- Grand B	11
Broyles, C.	16-Apr	2:00PM	Olympic Tower- Evergreen A	44	Devincenti, A.	14-Apr	2:20PM	Cascade Tower- Regency E	19
Bucci, G.	15-Apr	3:50PM	Cascade Tower- Regency B	34	Dickey, E.	13-Apr	8:35AM	Olympic Tower- Grand EFGHIJK	7



## Oral Presenters

Name	Date	Time	Room	Page Number	Name	Date	Time	Room	Page Number
<b>K</b>									
Kaman, J.	13-Apr	3:20PM	Cascade Tower- Larch	15	Li, T.	15-Apr	5:10PM	Olympic Tower- Grand B	34
Kaman, J.	14-Apr	4:10PM	Cascade Tower- Juniper	27	Li, W.	16-Apr	5:00PM	Cascade Tower- Laurel	47
Kamitsos, E.I.	15-Apr	3:50PM	Cascade Tower- Juniper	38	Li, X.	14-Apr	2:20PM	Cascade Tower- Auditorium	20
Kang, K.	16-Apr	1:30PM	Olympic Tower- Evergreen A	44	Li, X.	17-Apr	9:30AM	Olympic Tower- Evergreen B	50
Kaplan, A.J.	14-Apr	2:00PM	Cascade Tower- Regency E	19	Liang, R.	13-Apr	3:50PM	Olympic Tower- Grand B	11
Kaplan, W.D.	13-Apr	4:50PM	Cascade Tower- Regency B	11	Liang, X.	16-Apr	3:20PM	Olympic Tower- Evergreen A	44
Karppinen, M.	14-Apr	8:40AM	Olympic Tower- Grand EFGHIJK	16	Lin, Y.	15-Apr	3:50PM	Olympic Tower- Grand B	34
Kaspar, T.	15-Apr	3:20PM	Olympic Tower- Evergreen C	32	Lin, Y.	16-Apr	10:20AM	Cascade Tower- Regency A	42
Kaspar, T.	16-Apr	1:30PM	Cascade Tower- Regency E	43	Liu, J.	14-Apr	4:00PM	Olympic Tower- Grand C	21
Katti, D.R.	14-Apr	3:50PM	Cascade Tower- Laurel	23	Liu, J.	16-Apr	9:00AM	Olympic Tower- Grand B	41
Kattik, K.	14-Apr	2:40PM	Cascade Tower- Laurel	23	Liu, J.	16-Apr	9:00AM	Olympic Tower- Grand C	39
Kazmirsky, A.R.	17-Apr	10:10AM	Cascade Tower- Regency C	53	Liu, J.	16-Apr	3:10PM	Cascade Tower- Regency B	48
Kelley, K.	14-Apr	3:50PM	Cascade Tower- Auditorium	20	Liu, M.	16-Apr	9:20AM	Cascade Tower- Regency B	41
Kerisit, S.N.	14-Apr	2:00PM	Cascade Tower- Larch	26	Liu, N.	13-Apr	11:00AM	Cascade Tower- Regency A	7
Kerisit, S.N.	16-Apr	3:20PM	Cascade Tower- Laurel	47	Liu, N.	14-Apr	2:30PM	Cascade Tower- Regency A	24
Khansur, N.H.	13-Apr	1:30PM	Cascade Tower- Regency C	12	Liu, N.	17-Apr	8:30AM	Olympic Tower- Evergreen B	50
Kiczanski, T.	15-Apr	3:20PM	Cascade Tower- Juniper	38	Liu, X.	13-Apr	3:20PM	Olympic Tower- Grand EFGHIJK	8
Kieffer, J.	16-Apr	5:30PM	Cascade Tower- Larch	49	Liu, X.	14-Apr	11:30AM	Olympic Tower- Evergreen A	18
Kiem, D.	14-Apr	5:10PM	Olympic Tower- Grand A	19	Liu, X.	17-Apr	2:00PM	Olympic Tower- Grand A	55
Kiff, W.L.	16-Apr	2:20PM	Cascade Tower- Larch	49	Liu, Y.	13-Apr	2:40PM	Cascade Tower- Auditorium	9
Kim, D.	15-Apr	12:00PM	Olympic Tower- Grand C	30	Liu, Y.	13-Apr	3:50PM	Cascade Tower- Regency A	13
Kim, H.	14-Apr	11:00AM	Olympic Tower- Evergreen B	17	Liu, Y.	15-Apr	11:30AM	Olympic Tower- Grand A	29
Kim, J.	14-Apr	4:20PM	Cascade Tower- Regency E	20	Liu, Y.	15-Apr	2:00PM	Olympic Tower- Grand EFGHIJK	33
Kim, S.	13-Apr	2:30PM	Cascade Tower- Juniper	15	Liu, Z.	15-Apr	2:00PM	Olympic Tower- Evergreen A	36
Kim, S.	17-Apr	2:20PM	Olympic Tower- Evergreen C	55	Lizu, K.	13-Apr	4:10PM	Cascade Tower- Auditorium	9
Kim, S.H.	16-Apr	1:30PM	Cascade Tower- Larch	49	Lopez Puga, C.	14-Apr	4:20PM	Cascade Tower- Larch	26
Kirihara, S.	14-Apr	2:00PM	Olympic Tower- Grand B	21	Luo, Y.	16-Apr	10:50AM	Olympic Tower- Grand C	39
Kirsch, A.	16-Apr	3:10PM	Cascade Tower- Regency C	48	Lupini, A.R.	16-Apr	2:00PM	Olympic Tower- Evergreen B	44
Kisiel, E.	16-Apr	3:20PM	Olympic Tower- Evergreen B	44	Lv, B.	14-Apr	2:10PM	Cascade Tower- Regency FG	24
Kleinke, H.	14-Apr	11:00AM	Olympic Tower- Evergreen C	18	<b>M</b>				
Kodangal, D.	15-Apr	3:50PM	Cascade Tower- Laurel	35	Ma, C.	13-Apr	4:20PM	Olympic Tower- Grand B	11
Kodangal, D.	17-Apr	10:50AM	Cascade Tower- Regency C	53	Mai, T.	14-Apr	4:50PM	Cascade Tower- Regency FG	24
Koh, Z.	13-Apr	4:50PM	Olympic Tower- Grand B	11	Maier, K.	14-Apr	3:50PM	Cascade Tower- Juniper	27
Kohl, J.	13-Apr	2:10PM	Cascade Tower- Juniper	15	Maier, R.	14-Apr	2:30PM	Olympic Tower- Grand B	22
Kohnert, A.	16-Apr	9:30AM	Olympic Tower- Evergreen C	40	Maier, R.	17-Apr	10:30AM	Cascade Tower- Regency A	54
Kollmar, W.	14-Apr	1:50PM	Cascade Tower- Regency FG	24	Maksimov, V.	13-Apr	4:20PM	Cascade Tower- Larch	15
Kongani, A.	14-Apr	4:30PM	Olympic Tower- Grand B	22	Maksymovych, P.	13-Apr	2:30PM	Cascade Tower- Regency FG	14
Koohfar, S.	16-Apr	9:00AM	Olympic Tower- Evergreen C	40	Maksymovych, P.	17-Apr	1:50PM	Olympic Tower- Evergreen A	55
Kroeker, S.	16-Apr	3:20PM	Cascade Tower- Juniper	50	Manan, A.	13-Apr	11:00AM	Cascade Tower- Regency C	7
Kroeker, S.	17-Apr	8:30AM	Cascade Tower- Laurel	52	Manière, C.	14-Apr	3:10PM	Olympic Tower- Grand B	22
Ku, N.	15-Apr	11:30AM	Olympic Tower- Grand B	31	Mannix, A.J.	13-Apr	2:00PM	Cascade Tower- Regency A	13
Kumah, D.P.	14-Apr	1:30PM	Olympic Tower- Grand A	19	Manukyan, K.	16-Apr	2:30PM	Olympic Tower- Grand A	45
Kumari, P.	15-Apr	2:00PM	Cascade Tower- Laurel	35	Marcial, J.	17-Apr	10:50AM	Cascade Tower- Larch	54
Kundu, R.	14-Apr	11:50AM	Olympic Tower- Grand EFGHIJK	16	Marder, R.	17-Apr	10:30AM	Cascade Tower- Regency C	53
Kundu, R.	14-Apr	4:00PM	Olympic Tower- Grand EFGHIJK	19	Marechaux, T.	14-Apr	11:00AM	Olympic Tower- Grand EFGHIJK	16
Kunwar, S.	16-Apr	3:50PM	Olympic Tower- Evergreen A	45	Maria, J.	13-Apr	11:00AM	Cascade Tower- Regency E	7
Kuo, C.	15-Apr	3:10PM	Cascade Tower- Regency E	32	Marina, O.A.	13-Apr	2:30PM	Olympic Tower- Evergreen A	14
Kutnjak, Z.	13-Apr	3:50PM	Cascade Tower- Regency C	12	Marinella, M.	17-Apr	10:20AM	Olympic Tower- Evergreen A	50
Kwon, S.	16-Apr	11:20AM	Cascade Tower- Regency A	42	Marotta, A.R.	14-Apr	1:50PM	Cascade Tower- Regency C	23
Kyriakou, V.	14-Apr	4:50PM	Olympic Tower- Evergreen A	25	Marotta, A.R.	15-Apr	2:50PM	Olympic Tower- Grand EFGHIJK	33
<b>L</b>									
LaCount, M.	17-Apr	2:00PM	Olympic Tower- Evergreen C	55	Martin, E.	14-Apr	2:30PM	Cascade Tower- Larch	26
LaCourse, W.	16-Apr	4:10PM	Cascade Tower- Juniper	50	Martin, L.W.	13-Apr	4:30PM	Cascade Tower- Regency E	12
Laguna-Bercero, M.	13-Apr	4:20PM	Olympic Tower- Evergreen A	14	Maskaly, G.R.	14-Apr	1:30PM	Cascade Tower- Regency B	22
Lamm, B.	16-Apr	3:20PM	Olympic Tower- Grand A	46	Massobrio, C.	13-Apr	1:30PM	Cascade Tower- Larch	15
Langer, S.	14-Apr	2:00PM	Cascade Tower- Regency B	22	Matyas, J.	17-Apr	2:30PM	Olympic Tower- Grand A	55
Le Coq, D.	15-Apr	1:30PM	Cascade Tower- Larch	37	Mays, M.	16-Apr	9:30AM	Olympic Tower- Grand B	41
Le Ferrand, H.	14-Apr	11:00AM	Olympic Tower- Grand B	17	Mazeffa, D.	14-Apr	3:35PM	Olympic Tower- Grand EFGHIJK	19
Le Ferrand, H.	16-Apr	11:20AM	Olympic Tower- Grand B	41	McClain, M.	15-Apr	1:30PM	Olympic Tower- Grand B	34
LeBeau, J.	13-Apr	4:50PM	Cascade Tower- Regency E	12	McCluskey, M.D.	17-Apr	8:30AM	Cascade Tower- Regency B	54
Lee, K.	14-Apr	3:50PM	Olympic Tower- Evergreen A	25	McGuire, P.	17-Apr	9:40AM	Cascade Tower- Laurel	52
Lee, S.	17-Apr	9:00AM	Olympic Tower- Evergreen A	50	McIlwaine, N.S.	16-Apr	9:30AM	Olympic Tower- Grand EFGHIJK	38
Lee, Y.	16-Apr	3:50PM	Olympic Tower- Evergreen C	45	McQueen, T.M.	13-Apr	2:00PM	Cascade Tower- Regency FG	13
Leighton, C.	13-Apr	1:30PM	Olympic Tower- Grand A	8	Medina, J.	13-Apr	3:10PM	Cascade Tower- Juniper	16
Leite, M.	14-Apr	2:00PM	Cascade Tower- Juniper	26	Merk, V.	15-Apr	2:20PM	Cascade Tower- Laurel	35
Leite, M.	16-Apr	1:30PM	Cascade Tower- Regency B	47	Meyer, L.E.	13-Apr	2:00PM	Cascade Tower- Larch	15
Lenser, C.	15-Apr	2:30PM	Olympic Tower- Grand A	33	Mi, Z.	13-Apr	11:00AM	Cascade Tower- Auditorium	7
Lewis, A.	16-Apr	2:00PM	Olympic Tower- Grand B	46	Miao, L.	14-Apr	4:40PM	Cascade Tower- Regency E	20
Lewis, D.J.	14-Apr	3:40PM	Cascade Tower- Regency B	22	Mills, S.C.	13-Apr	2:40PM	Cascade Tower- Regency C	12
Li, J.	15-Apr	1:30PM	Cascade Tower- Regency FG	36	Minnich, A.	13-Apr	1:30PM	Cascade Tower- Regency A	13
					Mishra, R.	16-Apr	1:30PM	Olympic Tower- Grand C	43
					Mishra, R.	17-Apr	8:30AM	Cascade Tower- Larch	54

## Oral Presenters

Name	Date	Time	Room	Page Number	Name	Date	Time	Room	Page Number
Misture, S.T.	14-Apr	4:30PM	Olympic Tower- Grand C	21	Rand, B.	16-Apr	10:40AM	Cascade Tower- Regency B	41
Modasiya, J.	16-Apr	9:30AM	Olympic Tower- Evergreen A	40	Rao, R.	15-Apr	2:00PM	Cascade Tower- Regency FG	36
Modugno, M.	17-Apr	9:10AM	Olympic Tower- Grand B	52	Rappe, A.M.	14-Apr	1:30PM	Cascade Tower- Auditorium	20
Montazerian, M.	17-Apr	2:20PM	Cascade Tower- Laurel	56	Ravichandran, J.	17-Apr	8:50AM	Cascade Tower- Regency B	54
Morgan, D.	15-Apr	3:20PM	Olympic Tower- Evergreen A	37	Regmi, B.	16-Apr	4:00PM	Cascade Tower- Regency C	48
Mori, T.	13-Apr	11:00AM	Olympic Tower- Evergreen C	8	Ren, S.	14-Apr	1:30PM	Olympic Tower- Grand B	21
Mozur, E.	13-Apr	3:40PM	Olympic Tower- Grand C	10	Rettenmaier, O.	14-Apr	5:10PM	Olympic Tower- Evergreen B	21
Muhammad, M.	16-Apr	2:30PM	Cascade Tower- Regency B	48	Reyes-Lillo, S.E.	14-Apr	4:40PM	Olympic Tower- Grand A	19
Musfeldt, J.	13-Apr	4:10PM	Cascade Tower- Regency FG	14	Rheinheimer, W.	16-Apr	3:30PM	Cascade Tower- Regency A	47
<b>N</b>					Ricote, S.	15-Apr	1:30PM	Olympic Tower- Grand A	33
Nagahiro, R.	14-Apr	3:50PM	Olympic Tower- Evergreen C	25	Rimsza, J.M.	14-Apr	1:30PM	Cascade Tower- Larch	26
Naleway, S.E.	14-Apr	4:20PM	Cascade Tower- Laurel	23	Robredo-Magro, I.	16-Apr	4:00PM	Olympic Tower- Grand C	43
Neeway, J.	16-Apr	4:40PM	Cascade Tower- Laurel	47	Rodman, K.L.	16-Apr	3:40PM	Cascade Tower- Laurel	47
Nemani, S.	14-Apr	2:40PM	Cascade Tower- Regency E	19	Rohrer, G.	13-Apr	2:50PM	Cascade Tower- Regency B	11
Nemani, S.	17-Apr	11:00AM	Olympic Tower- Grand A	51	Rost, C.M.	13-Apr	2:30PM	Cascade Tower- Regency E	12
Neumayer, S.	16-Apr	4:40PM	Olympic Tower- Evergreen A	45	Rozic, B.	13-Apr	4:10PM	Cascade Tower- Regency C	13
Nguyen, K.X.	14-Apr	3:20PM	Olympic Tower- Evergreen B	21	Rufner, J.F.	16-Apr	1:30PM	Olympic Tower- Grand B	46
Nguyen, T.	13-Apr	5:20PM	Cascade Tower- Auditorium	9	<b>S</b>				
Nguyen, T.	14-Apr	2:00PM	Cascade Tower- Auditorium	20	Saadatpour, D.	13-Apr	2:20PM	Cascade Tower- Larch	15
Ni, D.	13-Apr	11:30AM	Cascade Tower- Regency FG	8	Sacchi, A.	17-Apr	9:30AM	Olympic Tower- Evergreen C	51
Nino, J.C.	16-Apr	2:40PM	Olympic Tower- Evergreen C	45	Sachan, R.	15-Apr	1:30PM	Cascade Tower- Regency C	36
Niroui, F.	16-Apr	10:10AM	Cascade Tower- Regency B	41	Sakamoto, J.	15-Apr	1:30PM	Olympic Tower- Evergreen B	37
Nishiyama, N.	16-Apr	4:30PM	Cascade Tower- Regency A	47	Salanova Giampaoli, A.	17-Apr	9:00AM	Cascade Tower- Regency A	53
Nowadnick, E.	16-Apr	3:40PM	Olympic Tower- Grand C	43	Sanjuan, A.	15-Apr	4:20PM	Cascade Tower- Regency B	34
<b>O</b>					Saparov, B.	16-Apr	8:50AM	Cascade Tower- Regency B	41
O'Keefe, S.	14-Apr	1:30PM	Olympic Tower- Grand EFGHIJK	18	Sargin, I.	14-Apr	5:40PM	Cascade Tower- Larch	26
Ohtaki, M.	13-Apr	4:20PM	Olympic Tower- Evergreen C	15	Sastry, S.	14-Apr	9:40AM	Olympic Tower- Grand EFGHIJK	16
Okamoto, K.	13-Apr	4:30PM	Cascade Tower- Auditorium	9	Schaedler, T.	15-Apr	2:30PM	Olympic Tower- Grand B	34
Okanishi, O.	13-Apr	4:50PM	Cascade Tower- Regency A	13	Schmidlin, M.T.	17-Apr	9:00AM	Cascade Tower- Larch	54
Olenick, J.A.	16-Apr	1:30PM	Olympic Tower- Grand A	45	Schoenweger, G.	13-Apr	11:30AM	Cascade Tower- Auditorium	7
Ophus, C.	16-Apr	2:30PM	Olympic Tower- Evergreen B	44	Schwarz, C.	16-Apr	10:30AM	Olympic Tower- Grand EFGHIJK	39
Oshiro, J.M.	17-Apr	10:40AM	Cascade Tower- Laurel	52	Selim, F.	16-Apr	10:30AM	Olympic Tower- Evergreen C	40
Otebele, N.	17-Apr	11:00AM	Olympic Tower- Evergreen C	51	Serra, J.	15-Apr	1:30PM	Olympic Tower- Evergreen A	36
Otonicar, M.	13-Apr	4:30PM	Cascade Tower- Regency C	13	Shao, Y.	17-Apr	10:20AM	Olympic Tower- Evergreen B	50
Ouyang, B.	15-Apr	3:30PM	Olympic Tower- Evergreen B	37	Sharma, C.	16-Apr	2:00PM	Olympic Tower- Evergreen C	45
Ouyang, B.	16-Apr	1:30PM	Cascade Tower- Regency C	48	Sharma, H.	14-Apr	4:10PM	Olympic Tower- Evergreen B	21
<b>P</b>					Sharma, R.	14-Apr	2:50PM	Cascade Tower- Juniper	26
Page, K.	13-Apr	1:30PM	Olympic Tower- Evergreen B	10	Sheldon, B.W.	16-Apr	8:30AM	Olympic Tower- Evergreen B	43
Paik, H.	13-Apr	2:30PM	Olympic Tower- Grand A	8	Shen, K.M.	15-Apr	11:00AM	Olympic Tower- Grand A	29
Palmiotti, E.	13-Apr	2:00PM	Olympic Tower- Grand EFGHIJK	8	Shen, T.	13-Apr	4:00PM	Olympic Tower- Grand C	10
Panda, D.K.	14-Apr	5:20PM	Olympic Tower- Grand C	21	Shi, J.	16-Apr	4:20PM	Cascade Tower- Regency C	49
Parashar, K.	16-Apr	4:30PM	Cascade Tower- Regency B	48	Shi, Y.	14-Apr	4:40PM	Cascade Tower- Larch	26
Park, K.	14-Apr	3:50PM	Olympic Tower- Evergreen B	21	Shi, Y.	17-Apr	1:30PM	Olympic Tower- Grand A	55
Parruzot, B.	16-Apr	4:00PM	Cascade Tower- Laurel	47	Shin, H.	16-Apr	3:40PM	Olympic Tower- Grand A	46
Pashaki, B.V.	14-Apr	2:20PM	Cascade Tower- Laurel	23	Shirotto, N.	15-Apr	4:10PM	Cascade Tower- Regency C	36
Patterson, E.	13-Apr	2:20PM	Cascade Tower- Regency C	12	Shoukat, H.	16-Apr	8:30AM	Cascade Tower- Regency B	41
Paul, S.	17-Apr	1:30PM	Olympic Tower- Evergreen B	55	Shrestha, A.	17-Apr	8:50AM	Olympic Tower- Grand B	52
Paulson, N.	15-Apr	11:00AM	Olympic Tower- Grand EFGHIJK	30	Shults, A.	13-Apr	5:10PM	Cascade Tower- Regency FG	14
Pershin, Y.V.	16-Apr	8:30AM	Olympic Tower- Evergreen A	39	Sidebottom, D.	16-Apr	4:40PM	Cascade Tower- Larch	49
Pinky, T.	16-Apr	4:10PM	Cascade Tower- Regency B	48	Siebenhofer, M.	15-Apr	3:40PM	Olympic Tower- Evergreen C	32
Pooley, S.	14-Apr	2:50PM	Olympic Tower- Grand C	21	Skinner, S.	15-Apr	2:00PM	Olympic Tower- Grand A	33
Popescu, C.	14-Apr	12:00PM	Cascade Tower- Auditorium	18	Smaha, R.	14-Apr	4:30PM	Cascade Tower- Auditorium	20
Pramanick, A.	15-Apr	11:00AM	Olympic Tower- Evergreen B	30	Smith, K.C.	15-Apr	2:00PM	Cascade Tower- Regency B	34
Prasad, A.	13-Apr	5:10PM	Olympic Tower- Grand B	11	Song, Q.	13-Apr	2:00PM	Olympic Tower- Grand A	8
Prasad, A.	14-Apr	2:00PM	Cascade Tower- Laurel	22	Song, X.	15-Apr	3:20PM	Olympic Tower- Grand B	34
Prokhorenko, O.	13-Apr	4:00PM	Cascade Tower- Larch	15	Song, X.	16-Apr	2:00PM	Olympic Tower- Grand A	45
Prokhorenko, O.	17-Apr	9:30AM	Cascade Tower- Larch	54	Song, Z.	16-Apr	2:00PM	Cascade Tower- Regency B	47
<b>Q</b>					Sønsteby, H.H.	13-Apr	3:20PM	Olympic Tower- Grand A	9
Qi, Y.	14-Apr	3:50PM	Cascade Tower- Regency E	19	Sørensen, S.S.	15-Apr	2:40PM	Cascade Tower- Larch	38
Qi, Y.	15-Apr	11:30AM	Olympic Tower- Evergreen C	30	Sørensen, S.S.	16-Apr	4:10PM	Cascade Tower- Larch	49
Qi, Y.	16-Apr	11:20AM	Cascade Tower- Regency E	39	Soudani, S.	17-Apr	9:20AM	Cascade Tower- Laurel	52
<b>R</b>					Spaniol, J.E.	14-Apr	2:40PM	Cascade Tower- Auditorium	20
Rafiq, K.	17-Apr	2:00PM	Olympic Tower- Evergreen B	55	Spaniol, J.E.	16-Apr	1:30PM	Cascade Tower- Regency A	47
Rahbar, N.	15-Apr	1:30PM	Cascade Tower- Laurel	35	St. George, V.A.	14-Apr	3:40PM	Cascade Tower- Regency C	23
Ramasse, Q.	14-Apr	1:30PM	Olympic Tower- Evergreen B	20	Staerz, A.F.	17-Apr	11:20AM	Olympic Tower- Evergreen C	51
Ramos, E.	16-Apr	2:30PM	Olympic Tower- Grand B	46	Staruch, M.	14-Apr	4:40PM	Cascade Tower- Regency C	24
Ranasinghe, K.S.	17-Apr	2:00PM	Cascade Tower- Laurel	56	Stein, N.	14-Apr	4:20PM	Olympic Tower- Evergreen C	25
					Steirer, J.	14-Apr	1:15PM	Olympic Tower- Grand EFGHIJK	18
					Stewart, D.M.	16-Apr	9:00AM	Olympic Tower- Grand A	40
					Stuer, M.	16-Apr	10:30AM	Cascade Tower- Regency C	42
					Su, C.	16-Apr	10:50AM	Cascade Tower- Regency A	42

## Oral Presenters

Name	Date	Time	Room	Page Number	Name	Date	Time	Room	Page Number
Su, Z.	17-Apr	9:30AM	Cascade Tower- Regency C	53	Weber, M.L.	15-Apr	1:30PM	Cascade Tower- Regency E	32
Subedi, R.	15-Apr	3:50PM	Cascade Tower- Regency C	36	Wei, C.	15-Apr	4:00PM	Cascade Tower- Regency E	32
Sullivan, N.	15-Apr	4:00PM	Olympic Tower- Grand A	34	Welch, R.	15-Apr	5:10PM	Cascade Tower- Juniper	38
Sun, W.	14-Apr	4:40PM	Cascade Tower- Regency B	22	Westman, J.M.	17-Apr	10:20AM	Cascade Tower- Laurel	52
Sundaram, S.K.	14-Apr	1:30PM	Cascade Tower- Juniper	26	Wheaton, J.	15-Apr	4:20PM	Cascade Tower- Juniper	38
Sushko, P.	15-Apr	11:30AM	Cascade Tower- Regency E	30	Whittier, C.	14-Apr	2:30PM	Olympic Tower- Evergreen B	20
Sushko, P.	17-Apr	10:10AM	Cascade Tower- Regency A	54	Wiefels, S.	17-Apr	9:30AM	Olympic Tower- Evergreen A	50
Susner, M.A.	14-Apr	2:30PM	Cascade Tower- Regency FG	24	Wilkinson, C.	13-Apr	2:30PM	Olympic Tower- Grand B	11
Suyolcu, E.	14-Apr	1:30PM	Cascade Tower- Regency E	19	Wilkinson, C.	15-Apr	2:00PM	Cascade Tower- Juniper	38
Swapno, S.	13-Apr	3:50PM	Olympic Tower- Evergreen B	10	Wilson, S.	15-Apr	11:00AM	Cascade Tower- Regency FG	31
Sytwu, K.	14-Apr	4:40PM	Olympic Tower- Evergreen B	21	Wood, V.	15-Apr	2:30PM	Cascade Tower- Regency B	34
<b>T</b>					Wu, C.	14-Apr	3:50PM	Cascade Tower- Regency A	24
Tafese, B.	15-Apr	4:00PM	Olympic Tower- Evergreen B	37	Wu, C.	15-Apr	3:30PM	Olympic Tower- Grand EFGHIJK	33
Tafti, F.	14-Apr	3:20PM	Cascade Tower- Regency FG	24	Wu, J.	16-Apr	3:20PM	Cascade Tower- Larch	49
Takamura, Y.	15-Apr	2:00PM	Cascade Tower- Regency E	32	Wu, S.	15-Apr	3:50PM	Cascade Tower- Regency A	35
Takeda, W.	15-Apr	2:00PM	Cascade Tower- Larch	37	Wu, Y.	14-Apr	5:20PM	Olympic Tower- Grand B	22
Takeda, W.	16-Apr	5:00PM	Cascade Tower- Larch	49	Wu, Y.	15-Apr	2:00PM	Olympic Tower- Grand B	34
Tamerler, C.	14-Apr	3:20PM	Cascade Tower- Laurel	23	<b>X</b>				
Tamerler, C.	15-Apr	9:40AM	Olympic Tower- Grand EFGHIJK	29	Xiao, J.	13-Apr	1:30PM	Olympic Tower- Grand C	10
Tan, D.T.	14-Apr	4:30PM	Cascade Tower- Juniper	27	Xie, S.	14-Apr	11:00AM	Cascade Tower- Regency A	17
Tang, H.	15-Apr	4:20PM	Cascade Tower- Regency A	35	Xie, Y.	17-Apr	11:30AM	Olympic Tower- Grand A	51
Tang, J.	17-Apr	9:00AM	Olympic Tower- Evergreen C	51	Xu, X.	14-Apr	2:00PM	Olympic Tower- Grand C	21
Tang, M.	13-Apr	3:20PM	Cascade Tower- Regency B	11	<b>Y</b>				
Tang, M.	14-Apr	2:30PM	Olympic Tower- Grand C	21	Yamada, T.	14-Apr	2:00PM	Olympic Tower- Evergreen C	25
Tanjutco, M.T.	13-Apr	3:20PM	Cascade Tower- Regency FG	14	Yang, J.	15-Apr	3:40PM	Olympic Tower- Grand C	31
Tapia-Aracayo, L.	16-Apr	11:20AM	Olympic Tower- Evergreen B	43	Yang, J.	16-Apr	11:40AM	Cascade Tower- Regency A	42
Tellekamp, M.B.	17-Apr	10:10AM	Cascade Tower- Regency B	54	Yang, K.	14-Apr	4:00PM	Cascade Tower- Larch	26
Terrones, M.	14-Apr	3:20PM	Cascade Tower- Regency A	24	Yang, K.	15-Apr	3:20PM	Cascade Tower- Larch	38
Tischendorf, B.	16-Apr	2:20PM	Cascade Tower- Juniper	49	Yang, L.	16-Apr	8:30AM	Cascade Tower- Regency FG	42
Titus, R.	15-Apr	11:40AM	Olympic Tower- Evergreen B	30	Yang, W.	13-Apr	2:30PM	Olympic Tower- Grand C	10
Tiukalova, E.	15-Apr	2:00PM	Cascade Tower- Regency C	36	Yang, W.	16-Apr	3:30PM	Olympic Tower- Evergreen C	45
Tong, J.	14-Apr	3:20PM	Olympic Tower- Evergreen A	25	Yazawa, K.	16-Apr	3:30PM	Olympic Tower- Evergreen C	45
Torres, J.	16-Apr	4:10PM	Olympic Tower- Evergreen B	44	Ye, F.	14-Apr	4:20PM	Cascade Tower- Regency FG	24
Trolier-McKinstry, S.	13-Apr	1:30PM	Cascade Tower- Auditorium	9	Ye, Z.	16-Apr	2:30PM	Cascade Tower- Regency FG	48
Trolier-McKinstry, S.	13-Apr	4:10PM	Cascade Tower- Regency E	12	Yeo, W.	14-Apr	3:20PM	Cascade Tower- Regency C	23
Tsekrekas, A.	13-Apr	3:50PM	Cascade Tower- Juniper	16	Yeon, J.	14-Apr	2:50PM	Cascade Tower- Larch	26
Tsekrekas, A.	16-Apr	1:30PM	Cascade Tower- Laurel	46	Yildiz, B.	15-Apr	11:00AM	Olympic Tower- Grand C	30
Tsen, A.W.	16-Apr	10:40AM	Cascade Tower- Regency FG	43	Yildiz, B.	16-Apr	10:20AM	Olympic Tower- Evergreen B	43
Tseng, Y.	14-Apr	3:20PM	Olympic Tower- Evergreen C	25	Yildiz, B.	17-Apr	8:30AM	Olympic Tower- Evergreen A	50
Tsymbal, E.Y.	16-Apr	9:30AM	Olympic Tower- Grand C	39	Yu, J.	17-Apr	11:10AM	Olympic Tower- Grand B	52
Tu, H.Q.	16-Apr	11:30AM	Olympic Tower- Grand A	41	Yu, L.	16-Apr	9:00AM	Cascade Tower- Regency E	39
<b>U</b>					Yun, S.	17-Apr	9:30AM	Cascade Tower- Regency A	53
Uehara, M.	13-Apr	5:00PM	Cascade Tower- Auditorium	9	<b>Z</b>				
Urata, S.	14-Apr	5:00PM	Cascade Tower- Larch	26	Zahler, P.	17-Apr	9:10AM	Cascade Tower- Regency C	53
Uršič, H.	13-Apr	2:00PM	Cascade Tower- Regency C	12	Zakutayev, A.	15-Apr	4:50PM	Olympic Tower- Grand EFGHIJK	33
<b>V</b>					Zakutayev, A.	16-Apr	4:10PM	Olympic Tower- Evergreen C	45
van Benthem, K.	16-Apr	8:30AM	Olympic Tower- Grand A	40	Zaman, S.	15-Apr	4:20PM	Olympic Tower- Grand B	34
Vannier, R.M.	13-Apr	1:30PM	Olympic Tower- Evergreen A	14	Zeng, H.	17-Apr	9:20AM	Cascade Tower- Regency B	54
Vargas-Gonzalez, L.	17-Apr	9:40AM	Olympic Tower- Grand B	52	Zhang, D.	15-Apr	4:30PM	Olympic Tower- Grand EFGHIJK	33
Varnavides, G.	14-Apr	4:10PM	Cascade Tower- Regency B	22	Zhang, D.	16-Apr	10:10AM	Olympic Tower- Evergreen A	40
Vervlied, J.	14-Apr	11:30AM	Olympic Tower- Grand B	17	Zhang, T.	13-Apr	4:20PM	Cascade Tower- Regency A	13
<b>W</b>					Zhang, X.	13-Apr	3:50PM	Olympic Tower- Evergreen C	15
Wachsman, E.D.	13-Apr	9:30AM	Olympic Tower- Grand EFGHIJK	7	Zhang, X.	14-Apr	2:00PM	Cascade Tower- Regency A	24
Wachsman, E.D.	15-Apr	1:30PM	Olympic Tower- Evergreen C	32	Zhang, X.	16-Apr	11:10AM	Cascade Tower- Regency FG	43
Wagner, A.	17-Apr	10:30AM	Olympic Tower- Grand A	51	Zhang, X.	13-Apr	4:50PM	Olympic Tower- Evergreen A	14
Walsh, C.	16-Apr	2:00PM	Cascade Tower- Laurel	46	Zhao, H.	15-Apr	3:50PM	Cascade Tower- Regency FG	36
Walton, B.	13-Apr	3:20PM	Olympic Tower- Grand B	11	Zhao, L.	16-Apr	8:30AM	Olympic Tower- Grand C	39
Wang, B.	14-Apr	2:30PM	Olympic Tower- Grand A	19	Zhao, L.	16-Apr	9:30AM	Olympic Tower- Grand A	40
Wang, C.	14-Apr	11:00AM	Cascade Tower- Regency C	17	Zhao, Y.	14-Apr	4:40PM	Cascade Tower- Regency A	24
Wang, H.	15-Apr	2:30PM	Cascade Tower- Regency A	35	Zhao, Z.	14-Apr	4:20PM	Olympic Tower- Evergreen A	25
Wang, J.	15-Apr	2:00PM	Olympic Tower- Grand C	31	Zhou, M.	16-Apr	8:30AM	Olympic Tower- Grand B	41
Wang, L.	14-Apr	2:00PM	Olympic Tower- Grand A	19	Zhu, A.	14-Apr	5:20PM	Cascade Tower- Larch	26
Wang, R.	14-Apr	4:50PM	Olympic Tower- Grand C	21	Zhu, J.	13-Apr	3:20PM	Cascade Tower- Regency A	13
Wang, Z.	13-Apr	4:40PM	Olympic Tower- Grand C	10	Zhu, X.	13-Apr	2:30PM	Cascade Tower- Regency A	13
Ward, T.Z.	13-Apr	3:30PM	Cascade Tower- Regency E	12	Ziatdinov, M.	15-Apr	4:00PM	Olympic Tower- Grand EFGHIJK	33
Ward, T.Z.	16-Apr	8:30AM	Cascade Tower- Regency E	39	Zou, K.	14-Apr	11:30AM	Cascade Tower- Regency E	17
Warren, J.A.	13-Apr	2:00PM	Cascade Tower- Regency B	11	Zucker, R.	15-Apr	11:30AM	Cascade Tower- Regency B	31
					Zuñiga-Puelles, E.	13-Apr	4:50PM	Olympic Tower- Evergreen C	15
					Zwanziger, J.	15-Apr	2:30PM	Cascade Tower- Juniper	38

## Poster Presenters

Name	Date	Time	Room	Page Number	Name	Date	Time	Room	Page Number
<b>A</b>					<b>L</b>				
Anderson, M.G.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	Lin, Y.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28
Antonio, R.W.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	Lopez Puga, C.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28
<b>B</b>					<b>M</b>				
Bosomtvi, D.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	Loveday, M.D.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29
Broekman, N.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27	Lucy, M.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27
<b>C</b>					<b>N</b>				
Carr, A.R.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27	Manqueros, E.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29
Chang, S.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	Martin, C.S.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28
Cochran, H.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27	Montazerian, M.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29
<b>D</b>					<b>O</b>				
Downing, B.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	Nugent, E.W.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27
Dryzhakov, B.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	O'Keefe, L.D.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27
<b>E</b>					<b>P</b>				
Edwards, S.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29	Olabode, D.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28
Emerson, R.G.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27	Olaleye, O.P.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28
<b>F</b>					<b>R</b>				
Feldon, J.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27	Park, C.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28
<b>G</b>					<b>S</b>				
Garapati, S.J.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27	Patil, G.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28
Gervasio, V.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29	Rondeau, B.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27
Geven, I.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	Schaefer, M.K.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27
Gomez-Guevara, R.A.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	Schrooten, I.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27
Gorzkowski, E.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29	<b>T</b>				
<b>H</b>					<b>U</b>				
Harris, C.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27	Tader, N.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27
Hedrick, B.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	Tkachenko, Y.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27
Hufziger, K.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29	<b>V</b>				
Huk, R.E.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29	Uwase, S.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27
<b>I</b>					<b>W</b>				
Ibarra, L.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27	Varguez, M.J.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27
<b>J</b>					<b>Y</b>				
Joseph, J.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27	Villeneuve, G.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28
<b>K</b>					<b>W</b>				
Kandel, P.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	Wang, C.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28
Kao, H.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	Wang, G.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29
Kavanagh, R.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	27	Wollmershauser, J.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29
Kim, N.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	<b>Y</b>				
Kundu, R.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	28	Yamada, T.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29
					Yang, C.	14-Apr	5:30PM	Olympic Tower- Evergreen Foyer- Posters	29

## Monday, April 13, 2026

### Plenary

#### Basic Science and Electronics Division Plenary

Room: Olympic Tower- Grand EFGHIJK  
 Session Chairs: Aiping Chen, Los Alamos National Lab; Ming Tang, Rice University; Rajendra Bordia, Clemson University; Dong Hou, Clemson University; Reeya Jayan, Carnegie Mellon University

**8:15 AM**

**Welcome and Opening Remarks with Conference Chair Rajendra Bordia and ACerS President Mario Affatigato**

**8:30 AM**

**Basic Science Division- Introductions and announcements**

**8:40 AM**

**(PLEN-006-2026) Defect disorder and dynamics in electronic ceramics**

E. Dickey\*<sup>1</sup>

1. Carnegie Mellon University, USA

**9:30 AM**

**Electronics Division- Introductions and announcements**

**9:40 AM**

**(PLEN-001-2026) Transformative solid-state battery technology, from concept to commercialization**

E. D. Wachsmann\*<sup>1</sup>

1. University of Maryland, USA

### Award Talk

#### Robert B. Sosman Award Lecture

Room: Cascade Tower- Regency E

**11:00 AM**

**(Awards-001-2026) Robert B. Sosman Award Lecture: Ferroelectrics Everywhere (Invited)**

J. Maria\*<sup>1</sup>

1. Pennsylvania State University, USA

### S9 BSD|ED From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics

#### S9- Wurtzite Ferroelectric Devices

Room: Cascade Tower- Auditorium  
 Session Chair: Prashun Gorai, Rensselaer Polytechnic Institute

**11:00 AM**

**(SPRING-SYM 9- 01-2026) Molecular beam epitaxy and emerging device applications of ultrawide bandgap ferroelectric nitrides (Invited)**

Z. Mi\*<sup>1</sup>

1. University of Michigan Michigan Medicine, EECS, USA

**11:30 AM**

**(SPRING-SYM 9- 02-2026) Harnessing domain wall conduction in ferroelectric AlScN for memristive applications**

G. Schoenweger\*<sup>1</sup>; D. Dasenbrook<sup>2</sup>; N. Wolff<sup>1</sup>; N. Kyoushi<sup>1</sup>; R. Guido<sup>2</sup>; I. Streicher<sup>3</sup>; H. Lu<sup>4</sup>; A. Petraru<sup>5</sup>; S. Leone<sup>5</sup>; U. Schröder<sup>5</sup>; A. Gruverman<sup>5</sup>; L. Kienle<sup>5</sup>; T. Mikolajick<sup>5</sup>; H. Kohlstedt<sup>1</sup>; S. Fichtner<sup>1</sup>

1. Christian-Albrechts-Universität zu Kiel, Germany
2. NaMLab gGmbH, Germany
3. Cornell University, USA
4. University of Nebraska-Lincoln, USA
5. Fraunhofer-Institut für Angewandte Festkörperphysik IAF, Germany

### S25 ED Advanced Electronic Materials - Processing Structures/Properties and Applications

#### S25- Pb-Free Piezoelectrics

Room: Cascade Tower- Regency C  
 Session Chair: Neamul Khansur, Case Western Reserve University

**11:00 AM**

**(SPRING-SYM 25- 01-2026) Improvement in thermal stability, energy storage and impedance characteristics of Ca(Sc<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>-modified 0.70Na<sub>0.5</sub>Bi<sub>0.5</sub>TiO<sub>3</sub>-0.30SrTiO<sub>3</sub> ceramics (Invited)**

A. Manan\*<sup>1</sup>; S. Ullah<sup>1</sup>; M. Unaib<sup>1</sup>; S. Abdullaha<sup>1</sup>; M. Lanagan<sup>2</sup>

1. University of Science & Technology, Bannu, Physics, Pakistan
2. Penn State University, Dept. of Engineering Science and Mechanics, USA

**11:30 AM**

**(SPRING-SYM 25- 02-2026) Na<sub>0.5</sub>Bi<sub>0.5</sub>TiO<sub>3</sub>-based solid solutions – property control and cost efficiency**

S. Bauer\*<sup>1</sup>; H. Salimkhani<sup>1</sup>; T. Frömling<sup>2</sup>

1. Fraunhofer-Einrichtung für Wertstoffkreisläufe und Ressourcenstrategie IWKS, Germany
2. Technical University Darmstadt, Materials Science, Germany

### S27 ED Two-Dimensional Materials - Synthesis/Theories/ Properties and Applications

#### S27- Atomic layer processing, fabrication, and applications

Room: Cascade Tower- Regency A  
 Session Chair: Haozhe Wang, Duke University

**11:00 AM**

**(SPRING-SYM 27- 01-2026) Graphene foliar sensor for continuous monitoring of plant hydration, drought stress and circadian rhythm (Invited)**

N. Liu\*<sup>1</sup>; U. Misra<sup>2</sup>; D. Akinwande<sup>1</sup>

1. The University of Texas at Austin, USA
2. The University of Texas at Austin Cockrell School of Engineering, USA

**11:30 AM**

**(SPRING-SYM 27- 02-2026) Materials innovation towards 3D electronics (Invited)**

S. Bae\*<sup>1</sup>

1. Washington University, St. Louis, USA

### S31 ED Superconducting and 2D Magnetic Materials - From Basic Science to Applications

#### S31- 2D magnet heterostructures and devices: From nanoscale to large scale applications

Room: Cascade Tower- Regency FG  
 Session Chair: Michael Susner, Air Force Research Laboratory

**11:00 AM**

**(SPRING-SYM 31- 01-2026) Van der Waals heterostructure multiferroics (Invited)**

C. Gong\*<sup>1</sup>

1. University of Maryland, USA

**11:30 AM**

**(SPRING-SYM 31- 02-2026) Solid-state synthesis of magnetic materials with anisotropic structures (Invited)**

D. Ni<sup>\*1</sup>; X. Xu<sup>2</sup>; X. Gui<sup>3</sup>; R. J. Cava<sup>1</sup>

1. Princeton University, Chemistry, USA
2. University of Minnesota Twin Cities, USA
3. University of Pittsburgh, USA

## S32 EMSD Solid Oxide Cells for Sustainable Energy

### S32- Solid Oxide Cells I

Room: Olympic Tower- Evergreen A

Session Chairs: Jianhua Tong, Clemson University; Hanping Ding, The University of Oklahoma

**11:00 AM**

**(SPRING-SYM 32- 01-2026) Recent advances in SOEC activities and power-to-X applications at Topsoe (Invited)**

P. Blennow<sup>\*1</sup>; A. Hauch<sup>1</sup>; A. Mai<sup>2</sup>; E. Roedern<sup>1</sup>; J. Breiner<sup>1</sup>; S. D. Ebbesen<sup>1</sup>; M. Hultqvist<sup>1</sup>

1. Topsoe A/S, Denmark
2. Topsoe Germany GmbH, Germany

**11:30 AM**

**(SPRING-SYM 32- 02-2026) A comprehensive overview of SOEL technology development: Current status and key obstacles at cell, stack and system levels (Invited)**

I. Garbayo<sup>\*1</sup>; V. Ureña<sup>1</sup>; K. Ruiz<sup>1</sup>; Y. Betancur<sup>1</sup>; M. Fantova<sup>1</sup>; D. Cademartori<sup>1</sup>; G. Jiménez-Martín<sup>1</sup>; C. Arbeloa<sup>1</sup>; A. Acevedo<sup>1</sup>; L. Pérez<sup>1</sup>; X. Júdez<sup>1</sup>; P. Ciáurriz<sup>1</sup>; M. Aguado<sup>1</sup>

1. Centro Nacional de Energías Renovables, Grid Integration, Electrical Storage and Hydrogen, Spain

## S33 EMSD Advances in Thermoelectrics - Bridging Theory and Application

### S33- Magnetism, topology, and quantum transport in thermoelectrics

Room: Olympic Tower- Evergreen C

Session Chair: Sepideh Akhbarifar, The Catholic University of America

**11:00 AM**

**(SPRING-SYM 33- 01-2026) Utilizing magnetism for enhancement of thermoelectric properties (Invited)**

T. Morj<sup>\*1</sup>

1. National Institute for Materials Science, Japan

**11:30 AM**

**(SPRING-SYM 33- 02-2026) Friend or enemy? Magnetism, topology and quantum transport in metallic thermoelectrics (Invited)**

F. Garmroudi<sup>\*1</sup>; A. Pustogow<sup>2</sup>

1. Los Alamos National Laboratory, MPA-Q, USA
2. Technische Universität Wien, Institute of Solid State Physics, Austria

## S1 All DIV Emerging Frontiers in Glasses and Ceramics

### S1- Emerging Frontiers in Glasses and Ceramics

Room: Olympic Tower- Grand EFGHIJK

Session Chairs: Charmayne Lonergan, Missouri University of Science & Technology; Jessica Rimsza, Sandia National Laboratories; Bai Cui, University of Nebraska–Lincoln; Shiv Prakash Singh, Liaoning Academy of Materials (LAM), China

**1:30 PM**

**(SPRING-SYM 1- 01-2026) Glasses for energy (Invited)**

T. Egami<sup>\*1</sup>

1. University of Tennessee, Shull-Wollan Center, USA

**2:00 PM**

**(SPRING-SYM 1- 02-2026) Spontaneous glass breakage in modern glass/glass photovoltaic modules (Invited)**

E. Palmiotti<sup>\*1</sup>; T. J. Silverman<sup>1</sup>; M. Springer<sup>1</sup>; I. Repins<sup>1</sup>; M. Deceglie<sup>1</sup>; A. Gaulding<sup>1</sup>

1. National Renewable Energy Laboratory, USA

**2:30 PM**

**(SPRING-SYM 1- 04-2026) Dislocation interaction with point defects and grain boundaries in functional ceramics (Invited)**

X. Fang<sup>\*1</sup>; A. Frisch<sup>2</sup>; C. K. Okafor<sup>3</sup>; J. Zhang<sup>4</sup>; W. Lu<sup>4</sup>

1. Karlsruhe Institut für Technologie, Institute for Applied Materials, Germany
2. Karlsruhe Institute of Technology -KIT, Germany
3. Karlsruhe Institut für Technologie, Mechanical Engineering, Germany
4. Southern University of Science and Technology, China

**3:00 PM**

**Break**

**3:20 PM**

**(SPRING-SYM 1- 05-2026) Proton conducting solid oxide electrolysis cells for hydrogen production: materials design and catalyst surface engineering (Invited)**

H. Tian<sup>1</sup>; W. Li<sup>1</sup>; X. Liu<sup>\*1</sup>

1. West Virginia University, Mechanical & Aerospace Engineering, USA

**3:50 PM**

**(SPRING-SYM 1- 06-2026) The state of robocasting: Extrusion-based AM technology (Invited)**

J. Cesarano<sup>\*1</sup>

1. Robocasting Enterprises LLC, USA

**4:20 PM**

**(SPRING-SYM 1- 07-2026) Vertically aligned van der Waals heterostructure as robust electrode material for multifunctional energy storage applications (Invited)**

P. Deb<sup>\*1</sup>

1. Tezpur University, Physics, India

## S5 BSD|ED Oxide Quantum Materials

### S5- Oxide thin film synthesis

Room: Olympic Tower- Grand A

Session Chairs: Jennifer Fowlie, Northwestern University; Seung Sae Hong, University of California, Davis

**1:30 PM**

**(SPRING-SYM 5- 01-2026) Ultraclean transport and frustrated magnetism in single-crystal metallic delafossites (Invited)**

C. Leighton<sup>\*1</sup>

1. University of Minnesota, USA

**2:00 PM**

**(SPRING-SYM 5- 02-2026) Tuning interlayer coupling in Pd(Cr,Co<sub>1-x</sub>)O<sub>2</sub> films to manipulate electronic and magnetic properties in a delafossite (Invited)**

Q. Song<sup>\*1</sup>; L. Mitrović<sup>2</sup>; Y. Liang<sup>2</sup>; Y. Feng<sup>2</sup>; A. Scheid<sup>3</sup>; X. Huang<sup>2</sup>; C. Mowers<sup>2</sup>; E. Krysko<sup>2</sup>; N. Parker<sup>2</sup>; P. King<sup>4</sup>; E. Suyolcu<sup>5</sup>; P. van Aken<sup>3</sup>; K. Shen<sup>3</sup>; C. Dreyer<sup>6</sup>; D. Schlom<sup>6</sup>

1. University of California Irvine, USA
2. Cornell University, USA
3. Max-Planck-Institute Stuttgart, Germany
4. University of St Andrews, United Kingdom
5. Stony Brook University, USA
6. Cornell University, Department of Materials Science and Engineering, USA

**2:30 PM**

**(SPRING-SYM 5- 03-2026) Epitaxial hexaferrite integration on orthorhombic perovskite and CMOS-compatible Si platforms for spintronic studies (Invited)**

H. Paik<sup>\*1</sup>

1. University of Oklahoma, School of Electrical and Computer Engineering, USA

**3:00 PM**

**Break**

3:20 PM

**(SPRING-SYM 5- 04-2026) Atomic layer deposition as a design platform for oxide quantum materials (Invited)**H. H. Sønsteby\*<sup>1</sup>

1. Universitetet i Oslo, Department of Chemistry, Norway

**S5 - Characterization of oxide quantum materials**

Room: Olympic Tower- Grand A

Session Chair: Qi Song, University of California Irvine

3:50 PM

**(SPRING-SYM 5- 05-2026) In situ synchrotron X-ray studies of epitaxial oxide films (Invited)**D. Fong\*<sup>1</sup>

1. Argonne National Lab, USA

4:20 PM

**(SPRING-SYM 5- 06-2026) Atomic-scale mapping of emergent topologies in oxide superlattices (Invited)**J. Bang\*<sup>1</sup>; N. Strkalj<sup>2</sup>; H. Aramberr<sup>3</sup>; M. Trassin<sup>4</sup>; S. Rosenkranz<sup>1</sup>; T. Weber<sup>4</sup>

1. Argonne National Laboratory, Materials Science Division, USA  
 2. Institute of Physics, Croatia  
 3. Luxembourg Institute of Science and Technology, Luxembourg  
 4. ETH Zurich, Materials Department, Switzerland

4:50 PM

**(SPRING-SYM 5- 07-2026) Visualizing bias-driven domain wall motion and switching with Scanning Oscillator PFM (Invited)**N. Domingo Marimon\*<sup>1</sup>; J. Eckstein<sup>1</sup>; R. K. Vasudevan<sup>1</sup>; M. Checa<sup>1</sup>; K. Kelley<sup>1</sup>; S. Jesse<sup>1</sup>

1. Oak Ridge National Lab, Center for Nanophase Materials Science, USA

**S9 BSD|ED From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics****S9- Switching and Charge Compensation Mechanisms**

Room: Cascade Tower- Auditorium

Session Chair: Georg Schoenweger, Christian-Albrechts-Universitat zu Kiel

1:30 PM

**(SPRING-SYM 9- 03-2026) Switching in Wurtzite ferroelectrics (Invited)**E. Ozdemir<sup>1</sup>; B. Akkopru-Akgun<sup>1</sup>; L. Jacques<sup>1</sup>; D. Behrendt<sup>2</sup>; S. Calderon<sup>3</sup>; C. Randall<sup>1</sup>; A. M. Rappe<sup>2</sup>; E. C. Dickey<sup>3</sup>; J. Maria<sup>1</sup>; S. Trolier-McKinstry\*<sup>1</sup>

1. Pennsylvania State University, Materials Science and Engineering, USA  
 2. University of Pennsylvania, Chemistry, USA  
 3. Carnegie Mellon University, Materials Science and Engineering, USA

2:00 PM

**(SPRING-SYM 9- 04-2026) Ferroelectricity and high-field conduction mechanisms in sputtered (Al,Hf)N films**N. Bernstein<sup>1</sup>; D. Drury<sup>3</sup>; G. R. Fox<sup>2</sup>; B. Hanrahan<sup>3</sup>; K. Yazawa<sup>1</sup>; G. Brennecke\*<sup>1</sup>

1. Colorado School of Mines, USA  
 2. Fox Materials Consulting, USA  
 3. US Army Combat Capabilities Development Command Army Research Laboratory, USA

2:20 PM

**(SPRING-SYM 9- 05-2026) Charge localization is the key to designing Wurtzite ferroelectrics through heterovalent alloying**R. Chaliha<sup>1</sup>; T. Nguyen<sup>1</sup>; C. Lee<sup>2</sup>; G. Brennecke<sup>1</sup>; P. Gorai\*<sup>1</sup>

1. Rensselaer Polytechnic Institute, Chemical & Biological Engineering, USA  
 2. Colorado School of Mines, USA

**S9- Piezoelectric and Ferroelectric Characterization**

Room: Cascade Tower- Auditorium

Session Chair: Geoff Brennecke, Colorado School of Mines

2:40 PM

**(SPRING-SYM 9- 06-2026) Automated PFM investigation of polarization switching in Wurtzite ferroelectrics (Invited)**Y. Liu\*<sup>1</sup>; S. Harris<sup>1</sup>

1. Oak Ridge National Lab, USA

3:10 PM

Break

3:30 PM

**(SPRING-SYM 9- 07-2026) Visualization of antiferroelectric domains through piezoresponse force microscopy techniques**S. Hung\*<sup>1</sup>; S. Ho<sup>1</sup>; S. Chang<sup>1</sup>; Y. Chen<sup>1</sup>; J. Yang<sup>1</sup>

1. National Cheng Kung University, Department of Physics, Taiwan

3:50 PM

**(SPRING-SYM 9- 09-2026) Visualizing ferroelectric switching dynamics: Nucleation versus domain wall propagation by scanning oscillator PFM**J. Eckstein<sup>1</sup>; W. A. Prudnick<sup>3</sup>; R. K. Vasudevan<sup>1</sup>; S. Jesse<sup>1</sup>; P. Ganesh<sup>1</sup>; N. Domingo Marimon\*<sup>1</sup>; J. Maria<sup>2</sup>; K. Kelley<sup>2</sup>

1. Oak Ridge National Lab, Center for Nanophase Materials Sciences, USA  
 2. Oak Ridge National Laboratory, USA  
 3. The Pennsylvania State University, USA

4:10 PM

**(SPRING-SYM 9- 08-2026) Nano-volumetric characterization of Wurtzite ferroelectrics with tomographic atomic force microscopy**K. Lizu\*<sup>1</sup>; Z. Tang<sup>2</sup>; R. H. Olsson<sup>2</sup>; E. A. Stach<sup>2</sup>; B. Huey<sup>3</sup>

1. University of Connecticut, Materials Science & Engineering, USA  
 2. University of Pennsylvania, Electrical and Systems Engineering Department, USA  
 3. Purdue University System, Materials Science and Engineering, College of Engineering, USA

**S9- GaN-based Wurtzite Ferroelectrics**

Room: Cascade Tower- Auditorium

Session Chair: Prashun Gorai, Rensselaer Polytechnic Institute

4:30 PM

**(SPRING-SYM 9- 10-2026) Film fabrication and characterization of (Al,Ga,Sc)N and (Mg,Si)N<sub>2</sub> by RF magnetron sputtering (Invited)**K. Okamoto\*<sup>1</sup>; S. Kageyama<sup>1</sup>; N. Sun<sup>1</sup>; H. Funakubo<sup>1</sup>

1. Tokyo Kagaku Daigaku, School of Materials and Chemical Technology, Japan

5:00 PM

**(SPRING-SYM 9- 11-2026) Ferroelectricity and local structure of GaScN films**M. Uehara\*<sup>1</sup>; K. Hirata<sup>1</sup>; Y. Ikemoto<sup>2</sup>; H. Setoyama<sup>4</sup>; H. Hamada<sup>3</sup>; R. Asoshina<sup>3</sup>; H. Kobayashi<sup>2</sup>; S. Anggraini<sup>1</sup>; H. Yamada<sup>1</sup>; N. Nakajima<sup>3</sup>; H. Funakubo<sup>3</sup>; M. Akiyama<sup>1</sup>

1. Sangyo Gijyutsu Sogo Kenkyujo Kyushu Center, Sensing Technology Research Institute, Japan  
 2. Kyushu Daigaku Daigakuin Sogo Rikogakufu, Japan  
 3. Hiroshima Daigaku Daigakuin Senshin Rikokei Kagaku Kenkyuka, Japan  
 4. Saga Kenritsu Kyushu Synchrotron Hikari Kenkyu Center, Japan  
 5. Tokyo Institute of Technology, Japan

5:20 PM

**(SPRING-SYM 9- 12-2026) Rethinking how band gap changes enable ferroelectricity in wurtzite nitride alloys**T. Nguyen\*<sup>2</sup>; G. Brennecke<sup>1</sup>; P. Gorai<sup>2</sup>

1. Colorado School of Mines, USA  
 2. Rensselaer Polytechnic Institute, Chemical & Biological Engineering, USA

## **S11 BSD|ED Characterization of Structure - Property Relationships in Functional Ceramics**

### **S11- Advances in connecting local and global structure to properties I**

Room: Olympic Tower- Evergreen B

Session Chair: Chris Fancher, Oak Ridge National Lab

**1:30 PM**

**(SPRING-SYM 11- 01-2026) Seeing hydrogen in ceramics: Neutrons, symmetry, and structure-property relationships (Invited)**

K. Page\*<sup>1</sup>

1. University of Tennessee, Materials Science and Engineering, USA

**2:00 PM**

**(SPRING-SYM 11- 02-2026) Future of science of synthesis (Invited)**

A. Huq\*<sup>1</sup>

1. E O Lawrence Berkeley National Laboratory, Molecular Foundry, USA

**2:30 PM**

**(SPRING-SYM 11- 03-2026) The role of twinning in phase transitions pathways in ferroics (Invited)**

S. Gorfman\*<sup>1</sup>; I. Biran<sup>1</sup>; N. Zhang<sup>2</sup>; Z. Ye<sup>2</sup>

1. Tel Aviv University, Israel
2. Simon Fraser University, Canada
3. Xi'an Jiaotong University, China

**3:00 PM**

**Break**

### **S11-Advances in connecting local and global structure to properties II**

Room: Olympic Tower- Evergreen B

Session Chairs: Chris Fancher, Oak Ridge National Lab;

Steven Spurgeon, National Renewable Energy Laboratory

**3:20 PM**

**(SPRING-SYM 11- 04-2026) Redox-controlled stoichiometry as a tuning parameter for functionality in  $\alpha$ -Li<sub>2</sub>IrO<sub>3</sub> (Invited)**

B. Gade<sup>1</sup>; S. Sundar<sup>2</sup>; D. Fernandes de Almeida<sup>1</sup>; A. Brennan<sup>1</sup>; A. Browne<sup>1</sup>; A. Naden<sup>1</sup>; M. Isaacs<sup>3</sup>; D. Grinter<sup>4</sup>; M. Stanzione<sup>1</sup>; R. Armstrong<sup>1</sup>; D. Fortes<sup>5</sup>; C. Howard<sup>5</sup>; P. Baker<sup>5</sup>; R. Stewart<sup>6</sup>; A. Simonov<sup>6</sup>; D. Chaney<sup>6</sup>; A. Rost<sup>7</sup>; A. Gibbs\*<sup>1</sup>

1. University of St Andrews, School of Chemistry, United Kingdom
2. Universidade Federal do Rio de Janeiro, Instituto de Física, Brazil
3. University College London, United Kingdom
4. Diamond Light Source Ltd, United Kingdom
5. ISIS Neutron and Muon Source, United Kingdom
6. Eidgenössische Technische Hochschule Zurich, Switzerland
7. University of St Andrews, School of Physics and Astronomy, United Kingdom
8. ESRF, France

**3:50 PM**

**(SPRING-SYM 11- 05-2026) Nano-volumetric Insights into Multilayer Ceramic Capacitors**

S. Swapno\*<sup>1</sup>; O. Bermeo Contreras<sup>2</sup>; K. Lizu<sup>2</sup>; B. Huey<sup>1</sup>

1. Purdue University, Materials Engineering, USA
2. University of Connecticut, Materials Science and Engineering, USA

**4:10 PM**

**(SPRING-SYM 11- 06-2026) Vibrational spectroscopy of monoclinic beta gallium oxide: Defect-influenced phonon modes**

A. R. Balog\*<sup>1</sup>; S. Woo<sup>2</sup>; N. Alem<sup>1</sup>

1. Pennsylvania State University, Department of Materials Science and Engineering, USA
2. Oak Ridge National Laboratory Center for Nanophase Materials Sciences, USA

**4:30 PM**

**(SPRING-SYM 11- 07-2026) Hydride ions in CaTiO<sub>3-δ</sub>H<sub>y</sub>: Detailed crystal structure characterization**

K. Agyekum\*<sup>1</sup>; B. Cladek<sup>1</sup>; J. Liu<sup>2</sup>; K. Page<sup>1</sup>

1. The University of Tennessee Knoxville, Materials Science and Engineering, USA
2. Oak Ridge National Laboratory, Neutron Scattering Division, USA

## **S12 BSD|ED Electronic and Ionic Materials in Energy Storage and Conversion Systems**

### **S12- Recent advances in cathode materials for lithium ion batteries and beyond**

Room: Olympic Tower- Grand C

Session Chairs: Hua Zhou, Argonne National Lab; Hui Xiong, Boise State University

**1:30 PM**

**(SPRING-SYM 12- 01-2026) Characterizing single crystal Ni-rich cathode materials: From cathode-electrolyte interphase to single crystal growth (Invited)**

J. Xiao\*<sup>1</sup>

1. University of Washington, USA

**2:00 PM**

**(SPRING-SYM 12- 02-2026) Nanocellulose batteries (Invited)**

L. Hu\*<sup>1</sup>

1. Yale University, Electrical & Computer Engineering, USA

**2:30 PM**

**(SPRING-SYM 12- 03-2026) Redox mechanism of transition-metal oxide based high-energy battery cathodes (Invited)**

W. Yang\*<sup>1</sup>

1. E O Lawrence Berkeley National Laboratory, Advanced Light Source, USA

**3:00 PM**

**Break**

**3:20 PM**

**(SPRING-SYM 12- 04-2026) Order, disorder, and compositional complexity in Co-free Li-ion battery electrodes**

J. D. Langhout<sup>1</sup>; J. Perez<sup>1</sup>; D. Olds<sup>2</sup>; M. M. Butala\*<sup>1</sup>

1. University of Florida, Materials Science & Engineering, USA
2. Brookhaven National Laboratory, NSLS-II, USA

**3:40 PM**

**(SPRING-SYM 12- 05-2026) Design principles from the multi-electron redox reactions of conversion cathode materials**

E. Mozur\*<sup>1</sup>

1. Colorado School of Mines, Metallurgical and Materials Engineering, USA

**4:00 PM**

**(SPRING-SYM 12- 06-2026) Impact of crystallinity and compositional homogeneity on energy storage of rock salt high entropy oxides**

T. Shen\*<sup>1</sup>; X. Jia<sup>3</sup>; C. Liu<sup>2</sup>; G. Cao<sup>3</sup>; R. Bordia<sup>1</sup>

1. Clemson University, Materials Science & Engineering, USA
2. Tongji University, Materials Science & Engineering, China
3. University of Washington, Materials Science & Engineering, USA

**4:20 PM**

**(SPRING-SYM 12- 07-2026) Composition, structure, and electrochemistry of disordered Fe-based Na-ion battery cathodes**

Z. Chen\*<sup>1</sup>; D. Chen<sup>1</sup>

1. University of New Mexico College of Arts and Sciences, Chemistry, USA

**4:40 PM**

**(SPRING-SYM 12- 08-2026) Revealing the superior performance of Li(Mn<sub>0.6</sub>Fe<sub>0.4</sub>)PO<sub>4</sub> over LiFePO<sub>4</sub> for thick electrode applications**

Z. Wang\*<sup>1</sup>; Z. Li<sup>1</sup>; Q. Ai<sup>1</sup>; J. Lou<sup>1</sup>; M. Tang<sup>1</sup>

1. Rice University, Materials Science and Nanoengineering, USA

**5:00 PM**

**(SPRING-SYM 12- 09-2026) Physics-based charging protocols for graphite-LiFePO<sub>4</sub> lithium-ion batteries**

C. Hobby\*<sup>1</sup>; A. Sanjuan<sup>2</sup>; R. Garcia<sup>1</sup>

1. Purdue University, Materials Science and Engineering, USA
2. Purdue University, USA

## S18 MD|BSD|BIO|GOMD New Frontiers in Additive Manufacturing of Ceramic Materials

### S18- Additive manufacturing of glass I

Room: Olympic Tower- Grand B

Session Chair: Joel Destino, Creighton University

**1:30 PM**

#### (SPRING-SYM 18- 01-2026) Chemistry-driven colloid design for additively manufacturing inorganic glasses (Invited)

J. F. Destino<sup>\*</sup>; M. Murthi<sup>1</sup>; N. W. Tobin<sup>1</sup>; J. C. Chou<sup>1</sup>; A. Kayton<sup>1</sup>; A. R. Carr<sup>2</sup>; L. D. O'Keefe<sup>1</sup>; S. J. Garapati<sup>1</sup>; M. J. Varguez<sup>2</sup>; M. K. Schaefer<sup>1</sup>

1. Creighton University College of Arts and Sciences, Chemistry & Biochemistry, USA
2. Iowa State University, Materials Science and Engineering, USA

**2:00 PM**

#### (SPRING-SYM 18- 02-2026) Advanced 3D printing of ceramics and glass for optics related applications (Invited)

C. Gan<sup>\*</sup>; Z. Du<sup>2</sup>; Z. Koh<sup>2</sup>; T. C. Ho<sup>1</sup>; Z. Wei<sup>3</sup>; C. Soon<sup>1</sup>

1. Nanyang Technological University, School of Materials Science & Engineering, Singapore
2. Nanyang Technological University, Temasek Laboratories, Singapore
3. Nanyang Technological University, Singapore Center of 3D Printing, Singapore

**2:30 PM**

#### (SPRING-SYM 18- 03-2026) Model Driven Design of Recycled Glass Products (Invited)

C. Wilkinson<sup>\*</sup><sup>1</sup>

1. Alfred University, Glass Science, USA

**3:00 PM**

**Break**

### S18- Additive manufacturing of glass II

Room: Olympic Tower- Grand B

Session Chair: Beck Walton, Lawrence Livermore National Lab

**3:20 PM**

#### (SPRING-SYM 18- 04-2026) Volumetric Additive Manufacturing of Silica Glass with in situ Error Calculation and Projection Tiling (Invited)

M. de Beer<sup>1</sup>; H. Galvan<sup>1</sup>; D. Mittelberger<sup>1</sup>; A. Bhanvadia<sup>1</sup>; J. Lum<sup>1</sup>; S. Gothenquist<sup>1</sup>; X. Xia<sup>1</sup>; D. Porcincula<sup>1</sup>; B. Walton<sup>\*</sup><sup>1</sup>

1. Lawrence Livermore National Laboratory, Materials Engineering, USA

**3:50 PM**

#### (SPRING-SYM 18- 05-2026) Additive manufacturing of functional glass micro-optics: Programmable transparency and throughput scaling (Invited)

R. Liang<sup>\*</sup><sup>1</sup>; R. You<sup>1</sup>; Z. Zhang<sup>1</sup>; Y. Zhou<sup>1</sup>; Y. Wang<sup>1</sup>; D. Wang<sup>1</sup>; D. Loy<sup>2</sup>

1. University of Arizona, Optical Sciences, USA
2. The University of Arizona, Chemistry & Biochemistry, USA

### S18- New applications of additively manufactured ceramics

Room: Olympic Tower- Grand B

Session Chair: Chao Ma, Arizona State University

**4:20 PM**

#### (SPRING-SYM 18- 06-2026) Binder jetting 3D printing of monolithic zeolites (Invited)

C. Ma<sup>\*</sup><sup>1</sup>

1. Arizona State University, USA

**4:50 PM**

#### (SPRING-SYM 18- 07-2026) Vat-photopolymerization printed silicon nitride ceramics with high thermal conductivity and lightweight design for telescope application

Z. Koh<sup>\*</sup>; P. Phua<sup>2</sup>; Z. Du<sup>1</sup>; C. Gan<sup>3</sup>

1. Nanyang Technological University Temasek Laboratories, Singapore
2. LightHaus Photonics Pte. Ltd, Singapore
3. Nanyang Technological Univ, School of Materials Science and Engineering, Singapore

**5:10 PM**

#### (SPRING-SYM 18- 08-2026) Challenges and progress in additive manufacturing of nuclear fuel using a loaded filament approach

A. Prasad<sup>\*</sup>; N. Kotsios<sup>1</sup>; J. Crigger<sup>1</sup>

1. Canadian Nuclear Laboratories, Advanced Fuels and Reactor Physics, Canada

## S20 BSD Symposium to Honor W. Craig Carter

### S20- Grain Growth Fundamentals

Room: Cascade Tower- Regency B

Session Chairs: Catherine Bishop, University of Canterbury;

R. Edwin Garcia, Purdue University

**1:30 PM**

#### (SPRING-SYM 20- 01-2026) Grain boundaries, their shapes, and the forces that mold them (Invited)

C. Handwerker<sup>\*</sup><sup>1</sup>

1. Purdue University, Materials Engineering, USA

**2:00 PM**

#### (SPRING-SYM 20- 02-2026) Better models of grain boundaries (Invited)

J. A. Warren<sup>\*</sup><sup>1</sup>

1. National Institute of Standards and Technology, USA

**2:30 PM**

#### (SPRING-SYM 20- 03-2026) Applying surface evolver and extending KWC to model grain growth kinetics in polycrystalline thin films

D. Hermawan<sup>\*</sup><sup>2</sup>; Z. Su<sup>2</sup>; J. Blendell<sup>1</sup>; R. Garcia<sup>2</sup>

1. Purdue University, USA
2. Purdue University, Materials Engineering, USA

**2:50 PM**

#### (SPRING-SYM 20- 04-2026) Triple lines in polycrystals and their influence on grain growth (Invited)

G. Rohrer<sup>\*</sup><sup>1</sup>

1. Carnegie Mellon University, USA

### S20- Complexions: Equilibrium and Kinetics

Room: Cascade Tower- Regency B

Session Chair: James Warren, National Institute of Standards and Technology

**3:20 PM**

#### (SPRING-SYM 20- 05-2026) Complexion and morphological transitions of material interfaces (Invited)

M. Tang<sup>\*</sup><sup>1</sup>

1. Rice University, Materials Science & NanoEngineering, USA

**3:50 PM**

#### (SPRING-SYM 20- 06-2026) The scientific evolution of grain boundary complexions (Invited)

M. P. Harmer<sup>\*</sup>; P. Cantwell<sup>1</sup>; A. Harmer<sup>1</sup>

1. Lehigh University, Materials Science and Engineering, USA

**4:20 PM**

#### (SPRING-SYM 20- 07-2026) Relationships between grain boundary complexions and microstructural evolution (Invited)

S. J. Dillon<sup>\*</sup><sup>1</sup>

1. University of California, Irvine, USA

**4:50 PM**

#### (SPRING-SYM 20- 08-2026) Equilibrium complexions and the kinetics of grain growth (Invited)

W. D. Kaplan<sup>\*</sup><sup>1</sup>

1. Technion - Israel Institute of Technology, Dept. of Materials Science and Engineering, Israel

## **S22 BSD Robert B. Sosman Award and Lecture**

### **S22- Robert B. Sosman Award and Lecture**

Room: Cascade Tower- Regency E

Session Chair: Jon Ihlefeld, University of Virginia

**1:30 PM**

#### **(SPRING-SYM 22- 01-2026) Strong coupling for infrared nanophotonics and thermal processes (Invited)**

J. D. Caldwell\*

1. Vanderbilt University, Mechanical Engineering, USA

**1:50 PM**

#### **(SPRING-SYM 22- 02-2026) Pushing the limits of thermal transport in ceramics with wurtzite ferroelectric nitrides, entropy stabilized oxides, and high mobility cadmium oxide (Invited)**

P. Hopkins<sup>\*1</sup>; J. Maria<sup>2</sup>; J. Ihlefeld<sup>2</sup>; S. Trolier-McKinstry<sup>3</sup>; J. L. Braun<sup>4</sup>; C. M. Rost<sup>5</sup>; J. Tomko<sup>6</sup>; J. D. Caldwell<sup>7</sup>

1. University of Virginia, USA
2. University of Virginia, Department of Materials Science and Engineering, USA
3. Pennsylvania State University, Materials Science and Engineering, USA
4. Laser Thermal, USA
5. James Madison University, Physics and Astronomy, USA
6. Peak Nano, USA
7. Vanderbilt University, USA

**2:10 PM**

#### **(SPRING-SYM 22- 03-2026) Variable-temperature plasmonic high-entropy carbides (Invited)**

S. Curtarolo<sup>\*1</sup>

1. Duke University, USA

**2:30 PM**

#### **(SPRING-SYM 22- 04-2026) Disordered by design: Embracing chaos in functional ceramics (Invited)**

C. M. Rost<sup>\*1</sup>

1. Virginia Polytechnic Institute and State University, Materials Science & Engineering, USA

**2:50 PM**

**Break**

**3:10 PM**

#### **(SPRING-SYM 22- 06-2026) Magnetron sputtering synthesis of refractory high-entropy carbides (Invited)**

D. Hossain<sup>\*1</sup>; N. S. McIlwaine<sup>2</sup>; J. Maria<sup>2</sup>

1. The University of Tennessee Space Institute, Mechanical and Aerospace Engineering, USA
2. The Pennsylvania State University, Materials Science and Engineering, USA

**3:30 PM**

#### **(SPRING-SYM 22- 07-2026) Ion irradiation processing for continuous post-synthesis lattice symmetry control (Invited)**

T. Z. Ward<sup>\*2</sup>; M. Brahlek<sup>3</sup>; A. Herklotz<sup>1</sup>

1. Martin-Luther-Universität Halle-Wittenberg, Germany
2. Oak Ridge National Laboratory, USA

**3:50 PM**

#### **(SPRING-SYM 22- 08-2026) Property design in wurtzite ferroelectric films (Invited)**

H. Funakubo<sup>\*1</sup>; N. Sun<sup>1</sup>; K. Okamoto<sup>2</sup>; M. Uehara<sup>3</sup>; I. Kanno<sup>4</sup>

1. Tokyo Kagaku Daigaku, Japan
2. Tokyo Kagaku Daigaku, School of Materials and Chemical Technology, Japan
3. National Institute of Advanced Industrial Science and Technology (AIST), Japan
4. Kobe Daigaku, Japan

**4:10 PM**

#### **(SPRING-SYM 22- 09-2026) Domain Wall Motion and self-heating in ferroelectric materials (Invited)**

K. Kang<sup>2</sup>; D. Shoemaker<sup>2</sup>; R. Knox<sup>1</sup>; C. Randall<sup>1</sup>; S. Choi<sup>2</sup>; D. Pagan<sup>1</sup>; S. Trolier-McKinstry<sup>\*1</sup>

1. Pennsylvania State University, Materials Science and Engineering, USA
2. The Pennsylvania State University, Mechanical Engineering, USA

**4:30 PM**

#### **(SPRING-SYM 22- 10-2026) Lifting the fog – Lessons learned in the synthesis for ferroic complex oxides thin films (Invited)**

L. W. Martin<sup>\*1</sup>

1. Rice University, Materials Science and NanoEngineering, USA

**4:50 PM**

#### **(SPRING-SYM 22- 11-2026) Recent advances in atomic-scale characterization of functional complex oxides (Invited)**

J. LeBeau<sup>\*1</sup>

1. Massachusetts Institute of Technology, USA

## **S25- New Methods and Non-Conventional Processing Methods**

Room: Cascade Tower- Regency C

Session Chairs: Lucas Enright, National Institute of Standards & Technology; Sophie Bauer, Technical University of Darmstadt

**1:30 PM**

#### **(SPRING-SYM 25- 03-2026) Stress-modulated tailoring of polar perovskite oxides (Invited)**

N. H. Khansur<sup>\*1</sup>

1. Case Western Reserve University, Materials Science and Engineering, USA

**2:00 PM**

#### **(SPRING-SYM 25- 04-2026) Aerosol deposition of functional Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>-PbTiO<sub>3</sub> and PbSc<sub>0.5</sub>Ta<sub>0.5</sub>O<sub>3</sub> films**

H. Uršič<sup>\*1</sup>; M. D'Angelo<sup>1</sup>; V. Regis<sup>2</sup>; I. Goričan<sup>2</sup>

1. Jozef Stefan Institute, Electronic Ceramics Department, Slovenia
2. Jozef Stefan Institute, Electronic Ceramics Department K5, Slovenia

**2:20 PM**

#### **(SPRING-SYM 25- 05-2026) Aerosol deposition of mixed oxide composite thick films**

E. Patterson<sup>\*1</sup>; S. Mills<sup>1</sup>; J. Wollmershauser<sup>1</sup>

1. U.S. Naval Research Laboratory, Materials Science & Technology Division, USA

**2:40 PM**

#### **(SPRING-SYM 25- 06-2026) Processing-property relationships of electrospun undoped and doped barium titanate fibers**

S. C. Mills<sup>\*1</sup>; J. Sitter<sup>2</sup>; Z. Warecki<sup>1</sup>; M. Staruch<sup>1</sup>

1. US Naval Research Laboratory, Materials Science and Technology Division, USA
2. US Naval Research Laboratory, Chemistry Division, USA

**3:00 PM**

**Break**

**3:20 PM**

#### **(SPRING-SYM 25- 07-2026) Antiferroelectrics: An unexpected materials platform for piezocatalysis (Invited)**

B. Dkhil<sup>\*1</sup>

1. Université Paris-Saclay, CentraleSupélec, France

**3:50 PM**

#### **(SPRING-SYM 25- 08-2026) Ferroelectric nanoparticles for hydrogen production and dye degradation via water-splitting-driven piezoelectric and pyroelectric catalysis**

S. Touil<sup>1</sup>; M. El Marssi<sup>2</sup>; D. Mezzane<sup>2</sup>; M. Amjoud<sup>2</sup>; M. Jouiad<sup>2</sup>; B. Asbani<sup>2</sup>; H. Uršič<sup>3</sup>; B. Rožič<sup>5</sup>; Z. Kutnjak<sup>\*1</sup>

1. Jozef Stefan Institute, Slovenia
2. Université de Picardie Jules Verne, LPMC, France
3. Cadi Ayyad University, LMCN, Morocco
4. Jozef Stefan Institute, Electronic Ceramics Department, Slovenia
5. Jozef Stefan Institute, Department of Condensed Matter Physics, Slovenia

**4:10 PM****(SPRING-SYM 25- 09-2026) Dense ferroelectric nanocomposites for high electrocaloric effect and energy harvesting**

B. Rozic<sup>\*1</sup>; Z. Hanani<sup>2</sup>; D. Mezzane<sup>3</sup>; M. El Marssi<sup>4</sup>; A. N. Morozovska<sup>5</sup>; S. Ivanchenko<sup>6</sup>; V. Laguta<sup>6</sup>; H. Uršič<sup>7</sup>; M. Spreitzer<sup>8</sup>; Z. Kutnjak<sup>9</sup>

1. Jozef Stefan Institute, Department of Condensed Matter Physics, Slovenia
2. Jozef Stefan Institute, Advanced Materials, Slovenia
3. Cadi Ayyad University, LMCN, Morocco
4. Université de Picardie Jules Verne, LPMC, France
5. National Academy of Sciences of Ukraine, Institute of Physics, Ukraine
6. National Academy of Sciences of Ukraine, Institute for Problems of Materials Science, Ukraine
7. Jozef Stefan Institute, Electronic Ceramics Department, Slovenia
8. Jozef Stefan Institute, Advanced Materials, Slovenia
9. Jozef Stefan Institute, Slovenia

**4:30 PM****(SPRING-SYM 25- 10-2026) Understanding lattice distortions in ferroelectrics by 4DSTEM (Invited)**

M. Otonicar<sup>\*1</sup>; M. Lachhab<sup>1</sup>; V. Regis<sup>1</sup>; V. Sršan<sup>2</sup>; M. Vallet<sup>3</sup>; C. Paillard<sup>4</sup>; A. Bencan Golob<sup>1</sup>; G. Drazic<sup>5</sup>

1. Jozef Stefan Institute, Electronic ceramics department, Slovenia
2. Jozef Stefan Institute, Nanostructured Materials Department, Slovenia
3. University Paris-Saclay, CentraleSupélec, France
4. University of Arkansas, USA
5. Kemijski institut, Slovenia

**5:00 PM****(SPRING-SYM 25- 11-2026) Dielectric and structural properties of B<sub>2</sub>O<sub>3</sub>-added Ba-Sm-Ti ceramics sintered at low temperature**

B. Choi<sup>\*1</sup>; B. Kim<sup>1</sup>; H. Choi<sup>1</sup>; B. Min<sup>1</sup>; G. Lee<sup>1</sup>; S. Nahm<sup>1</sup>

1. Korea University College of Engineering, Department of Materials Science and Engineering, Republic of Korea

**S27 ED Two-Dimensional Materials - Synthesis/Theories/ Properties and Applications****S27- Atomic layer processing, fabrication, and applications II**

Room: Cascade Tower- Regency A

Session Chair: Haozhe Wang, Duke University

**1:30 PM****(SPRING-SYM 27- 03-2026) Directional atomic layer etching of MgO-doped lithium niobate using Br-based plasma (Invited)**

I. Chen<sup>1</sup>; M. Ezzy<sup>1</sup>; F. Greer<sup>2</sup>; A. Minnich<sup>\*1</sup>

1. California Institute of Technology, USA
2. Jet Propulsion Laboratory, USA

**2:00 PM****(SPRING-SYM 27- 04-2026) Deterministic synthesis, doping, and strain in two-dimensional semiconductors (Invited)**

A. J. Mannix<sup>\*1</sup>

1. Stanford University, Materials Science and Engineering, USA

**2:30 PM****(SPRING-SYM 27- 05-2026) Chemical vapor deposition of uniform and large-scale, molybdenum disulfide using heterogeneous precursors**

X. Zhu<sup>\*1</sup>; G. Jung<sup>3</sup>; J. Yang<sup>3</sup>; X. Hu<sup>1</sup>; X. Zhou<sup>4</sup>; Z. Shi<sup>5</sup>; V. Ravel<sup>1</sup>; C. Lin<sup>1</sup>; Z. Peng<sup>1</sup>; A. D. Franklin<sup>1</sup>; Q. Ma<sup>3</sup>; T. Roy<sup>2</sup>; H. Wang<sup>1</sup>

1. Duke University, Electrical and Computer Engineering, USA
2. Duke University, USA
3. Oak Ridge National Laboratory, Computational Sciences and Engineering Division, USA
4. Boston College, USA
5. Massachusetts Institute of Technology, USA

**2:50 PM****Break****S27- Atomic layer processing, fabrication, and applications III**

Room: Cascade Tower- Regency A

Session Chair: Haozhe Wang, Duke University

**3:20 PM****(SPRING-SYM 27- 06-2026) Enabling industrial adoption of 2D materials: Scalable growth, backend integration, and application-driven device engineering (Invited)**

J. Zhu<sup>\*1</sup>

1. CDimension Inc, USA

**3:50 PM****(SPRING-SYM 27- 07-2026) Van der Waals Heteroepitaxy of few-layer Ferroelectric Tin Monochalcogenide on Monolayer Transition Metal Dichalcogenide templates (Invited)**

Y. Liu<sup>\*1</sup>

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

**4:20 PM****(SPRING-SYM 27- 08-2026) 2D Janus transition metal dichalcogenides: From tailored synthesis to correlated nanoscale characterization (Invited)**

T. Zhang<sup>\*1</sup>; K. Xie<sup>2</sup>; A. Krayev<sup>3</sup>; T. Cao<sup>2</sup>; J. Kong<sup>4</sup>

1. Syracuse University, USA
2. University of Washington, USA
3. HORIBA Scientific, USA
4. Massachusetts Institute of Technology, USA

**4:50 PM****(SPRING-SYM 27- 09-2026) High-sensitivity and low-resistance gas sensor by hybridizing MoO<sub>x</sub> and graphene with a field-effect transistor structure**

O. Okanishi<sup>\*1</sup>; A. Katsura<sup>1</sup>; Y. Hirose<sup>1</sup>; N. Nagamura<sup>2</sup>; T. Ono<sup>3</sup>; T. Uemura<sup>4</sup>; T. Sugahara<sup>1</sup>

1. Kyoto Kogei Sen'i Daigaku, Japan
2. Busshitsu Zairyo Kenkyu Kiko, Japan
3. Osaka Daigaku Daigakuin Kiso Kogaku Kenkyuka Kiso Kogakubu, Japan
4. Osaka Daigaku, Japan

**5:10 PM****(SPRING-SYM 27- 10-2026) Functionalized graphene and applications (Invited)**

I. A. Aksay<sup>\*1</sup>

1. Princeton University, Chemical & Biological Engr., USA

**S31 ED Superconducting and 2D Magnetic Materials - From Basic Science to Applications****S31- Superconducting Materials and Devices I**

Room: Cascade Tower- Regency FG

Session Chair: Rahul Rao, Air Force Research Lab

**1:30 PM****(SPRING-SYM 31- 03-2026) Superconducting Nd<sub>1-x</sub>Eu<sub>x</sub>NiO<sub>2</sub> (NENO) thin films using in-situ MBE synthesis (Invited)**

C. Ahn<sup>\*1</sup>

1. Yale University, USA

**2:00 PM****(SPRING-SYM 31- 04-2026) Superconducting diode effects in real materials (Invited)**

T. M. McQueen<sup>\*1</sup>

1. Johns Hopkins University, Chemistry, Physics and Astronomy, Materials Science and Engineering, USA

**2:30 PM**

**(SPRING-SYM 31- 05-2026) Near contact tunneling spectroscopy - a surprisingly versatile probe of quantum materials on the atomic scale (Invited)**

P. Maksymovych\*<sup>1</sup>

1. Clemson University, Materials Science and Engineering, USA

**3:00 PM**

**Break**

## S31- Superconducting Materials and Devices II

Room: Cascade Tower- Regency FG

Session Chair: Bing Lv, University of Texas, Dallas

**3:20 PM**

**(SPRING-SYM 31- 06-2026) Improving solid-state synthesis of YBCO**

M. T. Tanjutco\*<sup>1</sup>; R. A. Gerhardt<sup>1</sup>

1. Georgia Institute of Technology, Materials Science and Engineering, USA

**3:40 PM**

**(SPRING-SYM 31- 07-2026) Revealing new quasi-particles and phenomena in exfoliated 2D, superconducting Fe-chalcogenides (Invited)**

K. Burch\*<sup>1</sup>

1. Boston College, Physics, USA

**4:10 PM**

**(SPRING-SYM 31- 08-2026) Pressure-tuned plethora of ferroelectric phases in  $\text{CuInP}_2\text{S}_6$  (Invited)**

J. Musfeldt\*<sup>1</sup>; S. Shah<sup>1</sup>; P. Mohammadi<sup>2</sup>; B. Singidas<sup>3</sup>; K. A. Smith<sup>1</sup>; L. Langston<sup>1</sup>; B. Taylor<sup>1</sup>; R. Siebenaller<sup>4</sup>; M. A. Susner<sup>5</sup>; S. Cheong<sup>6</sup>; H. Kadobayashi<sup>7</sup>; R. Sarmago<sup>8</sup>; Z. Liu<sup>8</sup>; S. Singh<sup>2</sup>

1. University of Tennessee, Chemistry, USA
2. University of Rochester, Mechanical Engineering, USA
3. University of Philippines - Diliman, Philippines
4. Air Force Research Laboratory, USA
5. Air Force Research Laboratory, Materials and Manufacturing Directorate, USA
6. Rutgers University, Physics, USA
7. Koeki Zaidan Hojin Kokido Hikari Kagaku Kenkyu Center, Japan
8. University of Illinois - Chicaog, Physics, USA

**4:40 PM**

**(SPRING-SYM 31- 09-2026) Elastic layered quantum materials (Invited)**

J. Chu\*<sup>1</sup>

1. University of Washington, Physics, USA

**5:10 PM**

**(SPRING-SYM 31- 10-2026) Superconducting niobium nitride (NbN): Thin film growth and Josephson junctions**

A. Shults\*<sup>1</sup>; S. S. Almishal<sup>1</sup>; L. Yi<sup>2</sup>; M. Kayaalha<sup>2</sup>; J. Maria<sup>1</sup>

1. Penn State, Materials Science and Engineering, USA
2. The Pennsylvania State University, Electrical Engineering, Uganda

## S32 EMSD Solid Oxide Cells for Sustainable Energy

### S32- Solid Oxide Cells II

Room: Olympic Tower- Evergreen A

Session Chairs: Kevin Huang, University of South Carolina; Jianhua Tong, Clemson University

**1:30 PM**

**(SPRING-SYM 32- 03-2026)  $\text{Ca}_3\text{Co}_4\text{O}_9$ : A material of growing interest as air electrode for SOC (Invited)**

R. M. Vannier\*<sup>1</sup>

1. Centrale Lille Institut, Unit of Catalysis and Solid State Chemistry, France

**2:00 PM**

**(SPRING-SYM 32- 04-2026) Reversible operation of solid oxide cell using LSGM thin film for energy storage with hydrogen (Invited)**

T. Ishihara\*<sup>1</sup>; L. Longtai<sup>1</sup>; K. Sovann<sup>1</sup>; M. Watanabe<sup>1</sup>; M. Inada<sup>1</sup>

1. Kyushu University, International Institute for Carbon-Neutral Energy Research, Japan

**2:30 PM**

**(SPRING-SYM 32- 05-2026) Steam electrolysis and co-electrolysis under pressurized conditions (Invited)**

O. A. Marina\*<sup>1</sup>; C. Coyle<sup>1</sup>; S. Belko<sup>1</sup>; T. Liu<sup>1</sup>; S. Ryu<sup>1</sup>

1. Pacific Northwest National Laboratory, USA

**3:00 PM**

**Break**

**3:20 PM**

**(SPRING-SYM 32- 06-2026) Advanced catalysts for  $\text{CO}_2$  reduction in solid oxide cells (Invited)**

C. Duan\*<sup>1</sup>

1. University of Utah, Chemical Engineering, USA

**3:50 PM**

**(SPRING-SYM 32- 07-2026) Oxygen deficient  $\text{Pr}_3\text{ZrO}_8$  as a new intermediate temperature oxygen carrier (Invited)**

K. Huang\*<sup>1</sup>

1. University of South Carolina, Mechanical Engineering, USA

**4:20 PM**

**(SPRING-SYM 32- 08-2026) Laser processing as a tool for increasing the performance and reduce cost of SOC components (Invited)**

M. Laguna-Bercero\*<sup>1</sup>

1. Instituto de Nanociencia y Materiales de Aragon, Spain

**4:50 PM**

**(SPRING-SYM 32- 09-2026) Coherent interface to enhance the oxygen electrode reaction kinetics of SOCs (Invited)**

H. Zhao\*<sup>1</sup>

1. University of Science and Technology Beijing, China

## S33 EMSD Advances in Thermoelectrics - Bridging Theory and Application

### S33- Devices and materials for waste heat recovery and thermal management

Room: Olympic Tower- Evergreen C

Session Chairs: Takao Mori, National Institute for Materials Science (NIMS); Fabian Garmroudi, Los Alamos National Laboratory; Holger Kleinke, University of Waterloo

**1:30 PM**

**(SPRING-SYM 33- 03-2026) Advancing High- $\Delta T$  Solid-State Cooling through Distributed Transport Property (DTP) Thermoelectrics (Invited)**

D. Crane\*<sup>1</sup>; C. Caylor<sup>1</sup>; L. Bell<sup>1</sup>

1. DTP Thermoelectrics, USA

**2:00 PM**

**(SPRING-SYM 33- 04-2026) Flexible thermoelectric devices for personal cooling under extreme heat conditions (Invited)**

R. Chen\*<sup>1</sup>

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

**2:30 PM**

**(SPRING-SYM 33- 05-2026) Hybrid transverse magneto-thermoelectrics in artificially tilted multilayers (Invited)**

T. Hirai\*<sup>1</sup>

1. NIMS, Japan

**3:00 PM**

**Break**

## 3:20 PM

### (SPRING-SYM 33- 06-2026) From skutterudite synthesis to device architecture: A comprehensive engineering approach (Invited)

H. Bouteiller\*; A. May<sup>1</sup>; T. R. Muth<sup>1</sup>; D. T. Hoelzer<sup>1</sup>; T. Aguirre<sup>1</sup>; L. Hansen<sup>1</sup>; M. Zach<sup>1</sup>; T. Parker<sup>1</sup>; N. Goth<sup>1</sup>; B. Johnson<sup>1</sup>; H. Wang<sup>1</sup>

1. Oak Ridge National Laboratory, USA

## 3:50 PM

### (SPRING-SYM 33- 07-2026) High-performance flexible Te-doped Ag<sub>2</sub>Se thermoelectric thin films and devices (Invited)

Z. Zheng<sup>2</sup>; D. Yang<sup>1</sup>; H. Ma<sup>1</sup>; X. Zhang\*<sup>1</sup>

1. University of Rennes/CNRS, Chemistry, France
2. Shenzhen University, China

## 4:20 PM

### (SPRING-SYM 33- 08-2026) Metal oxide ceramics for thermoelectric power generation applications (Invited)

M. Ohtaki\*<sup>1</sup>

1. Kyushu Daigaku, Interdisciplinary Graduate School of Engineering Sciences, Japan

## 4:50 PM

### (SPRING-SYM 33- 09-2026) Durable and sustainable thermoelectric devices based on zinc- and magnesium-antimony alloys (Invited)

E. Zuñiga-Puelles\*; R. He<sup>1</sup>; P. Ying<sup>1</sup>; S. Lehmann<sup>1</sup>; A. Bahrami<sup>1</sup>; K. Nielsch<sup>1</sup>

1. Leibniz-Institut für Festkörper- und Werkstoffforschung Dresden eV, Institute for Metallic Materials, Germany

## S36 GOMD Modeling and Simulations of Glass Structures and Properties

### S36- Atomistic simulation and predictive modeling of glasses I

Room: Cascade Tower- Larch

Session Chair: Xiaonan Lu, Pacific Northwest National Lab

## 1:30 PM

### (SPRING-SYM 36- 01-2026) Structural characterization of glassy structures via first-principles molecular dynamics: Where it all begins ! (Invited)

C. Massobrio\*<sup>1</sup>

1. ICube UMR 7357 - Laboratoire des sciences de l'ingénieur, de l'informatique et de l'imagerie 300 bd Sébastien Brant - CS 10413 - F-67412 Illkirch Cedex, France

## 2:00 PM

### (SPRING-SYM 36- 03-2026) Structure informed viscosity predictions of oxide glasses

L. E. Meyer\*; E. Tsekrekas<sup>2</sup>; C. L. Trivelpiece<sup>2</sup>; C. Wilkinson<sup>1</sup>

1. Alfred University, Glass Science, USA
2. Savannah River National Laboratory, USA

## 2:20 PM

### (SPRING-SYM 36- 04-2026) Classical semi-grand canonical Monte Carlo for estimating valence changes in oxide glass melts

D. Saadatpour\*; C. Wilkinson<sup>1</sup>

1. New York State College of Ceramics at Alfred University, USA

## 2:40 PM

### (SPRING-SYM 36- 05-2026) Structural origin of heat capacity and thermal conductivity in industrial borosilicate glasses

E. Akirmak-Yamac\*; C. Wilkinson<sup>2</sup>

1. Alfred University, Inamori School of Engineering, USA
2. Alfred University, Glass Science, USA

## 3:00 PM

### Break

## 3:20 PM

### (SPRING-SYM 36- 06-2026) Early stages of crystal growth in lithium niobate via molecular dynamics

J. Kaman\*; R. Thapa<sup>1</sup>; V. Dierolf<sup>2</sup>; H. Jain<sup>2</sup>

1. Lehigh University, Materials Science and Engineering, USA
2. Lehigh University, International Materials Institute for New Functionality in Glass, USA
3. Lehigh University, Physics, USA

## 3:40 PM

### (SPRING-SYM 36- 07-2026) Testing the reproducibility of the medium-range structure using the FEAR Method

A. E. Atnafe\*; E. Akirmak-Yamac<sup>1</sup>; C. Wilkinson<sup>2</sup>

1. Alfred University, Inamori School of Engineering, USA
2. Alfred University, Glass Science, USA

## 4:00 PM

### (SPRING-SYM 36- 08-2026) Three ways of glass hardening to obtain glasses with superstructure

O. Prokhorenko\*<sup>1</sup>

1. L.G.P. International, USA

## 4:20 PM

### (SPRING-SYM 36- 20-2026) Beyond LEFM: Atomistic modeling of fracture toughness in silicate glasses via energy landscape sampling

V. Maksimov\*; T. S. Mahadevan<sup>2</sup>; A. Potter<sup>2</sup>; J. Du<sup>2</sup>; C. Wilkinson<sup>3</sup>

1. University of North Texas System, USA
2. University of North Texas, Materials Science and Engineering, USA
3. Alfred University, Glass Science, USA

## S37 GOMD Optical and Electronic Materials and Devices

### S37- Optical and Electronic Materials and Devices I

Room: Cascade Tower- Juniper

Session Chairs: Rashi Sharma, University of Central Florida;

Myungkoo Kang, Alfred University

## 1:30 PM

### (SPRING-SYM 37- 01-2026) Energy transfer in borate glasses with different modifier-to-former ratios

M. Grüne\*; J. Kückelheim<sup>1</sup>; B. Ahrens<sup>1</sup>; S. Schweizer<sup>2</sup>

1. Fachhochschule Südwestfalen - Standort Soest, Germany
2. Fraunhofer IMWS, Application Center of Inorganic Phosphors, Germany

## 1:50 PM

### (SPRING-SYM 37- 02-2026) Low-loss optical circuits in glass by ion exchange: High speed optical communications to the chip

M. Dejneka\*; L. Brusberg<sup>1</sup>; D. McEnroe<sup>1</sup>; J. Holguin Lerma<sup>1</sup>; C. Terwilliger<sup>1</sup>; J. Walter<sup>1</sup>; C. Spier<sup>1</sup>

1. Corning Incorporated, USA

## 2:10 PM

### (SPRING-SYM 37- 03-2026) Chemically durable, hydrofluoric acid-resistant mixed modifier alumino-borophosphate glasses with high elastic moduli for re-usable carrier substrates

J. Kohl\*<sup>1</sup>

1. Corning Incorporated, USA

## 2:30 PM

### (SPRING-SYM 37- 04-2026) Piezo-driven micro probe system for precision measurements at temperatures as low as 80 K

S. Choi<sup>1</sup>; S. Kim\*<sup>1</sup>

1. Nextron Corporation, Republic of Korea

## 2:50 PM

### Break

### 3:10 PM

#### (SPRING-SYM 37- 05-2026) Scintillation of rare earth doped $\beta$ -Ga<sub>2</sub>O<sub>3</sub> at high temperatures

L. G. Jacobsohn<sup>1</sup>; J. Medina\*<sup>1</sup>

1. Clemson University, Material Science and Engineering, USA

### 3:30 PM

#### (SPRING-SYM 37- 06-2026) Structure of interface between glass and congruently laser-fabricated LaBGeO<sub>5</sub> single crystal by TEM and EELS

R. W. Antonio\*<sup>1</sup>; A. Tsekrekas<sup>1</sup>; V. Dierolf<sup>1</sup>; H. Jain<sup>3</sup>

1. Lehigh University, Materials Science & Engineering, USA
2. Lehigh University, Physics, USA
3. Lehigh University, International Materials Institute for New Functionality in Glass, USA

### 3:50 PM

#### (SPRING-SYM 37- 07-2026) Quantifying photochemical contributions to Ge nanoparticle formation in femtosecond laser irradiated glass

A. Tsekrekas\*<sup>1</sup>; H. Jain<sup>1</sup>; V. Dierolf<sup>1</sup>; S. Garner<sup>2</sup>

1. Lehigh University, Institute for Functional Materials and Devices, USA
2. Corning Research and Development Corporation, USA

## Tuesday, April 14, 2026

### Plenary

#### EMSD and GOMD Plenary

Room: Olympic Tower- Grand EFGHIJK

Session Chairs: Charmayne Lonergan, Missouri University of Science & Technology; Jose Marcial, Pacific Northwest National Laboratory; Sepideh Akhbarifar, The Catholic University of America; Shiv Prakash Singh, International Advanced Research Center for Powder Metallurgy and New Materials (ARCI), India

### 8:30 AM

#### EMSD announcements and Maarit Karppinen introduction

### 8:40 AM

#### (PLEN-002-2026) Novel thin-film materials through ALD/MLD as enablers of next-generation energy applications

M. Karppinen\*<sup>1</sup>

1. Aalto University, Department of Chemistry, Finland

### 9:30 AM

#### GOMD announcements and Srikanth Sastry introduction

### 9:40 AM

#### (PLEN-003-2026) Yielding and fatigue failure in sheared glasses

S. Sastry\*<sup>1</sup>

1. Jawaharlal Nehru Centre for Advanced Scientific Research, India

### SPECIAL EVENT Roundtable Discussion on Resilience of US Research

#### SPECIAL EVENT: Roundtable Discussion on Resilience of US Research

Room: Cascade Tower- Regency B

Session Chairs: Reeya Jayan, Carnegie Mellon University; Aiping Chen, Los Alamos National Lab; Geoff Brennecke, Colorado School of Mines; Christina Rost, James Madison University

### 11:00 AM

#### SPECIAL EVENT: Roundtable Discussion on Resilience of US Research

### S3 All DIV Sustainable Horizons - A Recurring Symposium on Collective Action for a Resilient Future

#### S3- Socio-ecological transformation and the role of individuals and societies: Examining the societal and individual roles in driving socio-ecological transformation towards sustainability

Room: Olympic Tower- Grand EFGHIJK

Session Chairs: Alp Sehirlioglu, Case Western Reserve University; Jürgen Rödel, Technische Universität Darmstadt

### 11:00 AM

#### (SPRING-SYM 3- 01-2026) Process intensification, circularity, and hacking the supply chain (Invited)

T. Marechaux\*<sup>1</sup>

1. Self, USA

### 11:25 AM

#### (SPRING-SYM 3- 02-2026) Rethinking well-being and sustainability beyond GDP (Invited)

Y. Gehlen\*<sup>1</sup>

1. Technische Universität Darmstadt, Germany

### 11:50 AM

#### (SPRING-SYM 3- 03-2026) A transparent and open-source approach to departmental carbon footprint assessment in academic institutions

R. Kundu\*<sup>1</sup>; B. Masanga<sup>1</sup>; A. Sehirlioglu<sup>1</sup>

1. Case Western Reserve University, Department of Materials Sc. & Eng., USA

### S5 BSD|ED Oxide Quantum Materials

#### S5 - Oxide superlattices

Room: Olympic Tower- Grand A

Session Chair: Ho Nyung Lee, Oak Ridge National Lab

### 11:00 AM

#### (SPRING-SYM 5- 08-2026) Tuning electronic properties in SrIrO<sub>3</sub> using interfaces and dopants (Invited)

R. Comes\*<sup>1</sup>

1. University of Delaware, Materials Science and Engineering, USA

### 11:30 AM

#### (SPRING-SYM 5- 09-2026) Digitized control of electromagnetic phases of Ruthenate Superlattices (Invited)

W. Choi\*<sup>1</sup>

1. Sungkyunkwan University - Natural Sciences Campus, Physics, Republic of Korea

### S6 BSD|ED Complex Oxide Thin Films and Heterostructures

#### S6- Synthesis of complex oxide thin films, superlattices, and nanocomposites I

Room: Cascade Tower- Regency E

Session Chair: Le Wang, Pacific Northwest National Laboratory

### 11:00 AM

#### (SPRING-SYM 6- 01-2026) Twisted oxide membrane interface by local atomic registry design (Invited)

C. Eom\*<sup>1</sup>

1. University of Wisconsin-Madison, Materials Science and Engineering, USA

11:30 AM

**(SPRING-SYM 6- 02-2026) Atomic-layer engineering of Ruddlesden–Popper Nickelates and Titanates using a universal RHEED-Control Method (Invited)**

K. Zou\*<sup>1</sup>

1. The University of British Columbia, Physics and Astronomy, Canada

### S11 BSD|ED Characterization of Structure - Property Relationships in Functional Ceramics

#### **S11- Advances in scattering, imaging and analytical techniques I**

Room: Olympic Tower- Evergreen B

Session Chair: Hadas Sternlicht, The Pennsylvania State University  
Department of Materials Science and Engineering

11:00 AM

**(SPRING-SYM 11- 08-2026) Characterizing the electrode capping effect in ferroelectric hafnium zirconium oxide thin films using 4D-STEM (Invited)**

H. Kim\*<sup>1</sup>; G. Baucom<sup>1</sup>; J. Gao<sup>2</sup>; R. Tabrizian<sup>2</sup>; Y. Gu<sup>1</sup>

1. University of Florida, Material Science and Engineering, USA  
2. University of Michigan, USA

11:30 AM

**(SPRING-SYM 11- 09-2026) Mapping atomic disorder into site-resolved fields via Fourier filtering (Invited)**

M. Eremenko\*<sup>1</sup>

1. Oak Ridge National Laboratory, USA

### S12 BSD|ED Electronic and Ionic Materials in Energy Storage and Conversion Systems

#### **S12- Advanced characterization of energy storage and conversion materials**

Room: Olympic Tower- Grand C

Session Chairs: Hui Xiong, Boise State University; Kai He, University of California Irvine

11:00 AM

**(SPRING-SYM 12- 10-2026) In situ and cryo-TEM for materials evolution in beyond-Li batteries (Invited)**

K. He\*<sup>1</sup>

1. University of California Irvine, USA

11:30 AM

**(SPRING-SYM 12- 12-2026) Characterization of double Perovskite  $\text{LaBa}(\text{Fe}_x\text{Co}_{2-x})\text{O}_{5+\delta}$  (LBFCO) as a cathode candidate for intermediate-temperature solid oxide fuel cells**

N. Huynh\*<sup>1</sup>; C. Chen<sup>2</sup>; R. Guo<sup>3</sup>; S. Kunwar<sup>4</sup>; C. Kreller<sup>4</sup>; A. Chen<sup>4</sup>; T. Deforest<sup>4</sup>

1. The University of Texas at San Antonio College of Engineering, Electrical and Computer Engineering, USA  
2. University of Texas San Antonio, Physics, USA  
3. University of Texas, San Antonio, USA  
4. Los Alamos National Lab, USA

11:50 AM

**(SPRING-SYM 12- 11-2026) Electrochemical stress and strain generation in hard carbon anode during electrochemical cycling of Na-ion batteries**

M. Wable<sup>1</sup>; M. Anderson<sup>1</sup>; Ö. Ö. Çapraz\*<sup>1</sup>

1. University of Maryland Baltimore, Chemical, Biochemical and Environmental Engineering, USA

### S18 MD|BSD|BIO|GOMD New Frontiers in Additive Manufacturing of Ceramic Materials

#### **S18- New approaches for AM processes of ceramics and ceramic-matrix composites I**

Room: Olympic Tower- Grand B

Session Chair: Hortense Le Ferrand, Nanyang Technological University

11:00 AM

**(SPRING-SYM 18- 09-2026) 4D printing of complex ceramic shapes using magnetically assisted drop printing and artificial intelligence (Invited)**

H. Le Ferrand\*<sup>1</sup>

1. Nanyang Technological University, Singapore

11:30 AM

**(SPRING-SYM 18- 10-2026) Joining and fabrication of thin-walled ceramic matrix composites (CMC's) with homogenous constituents using Embedded Wire Chemical Vapor Deposition (Invited)**

J. Vervlied\*<sup>1</sup>; S. Shuster<sup>1</sup>; S. Harrison<sup>1</sup>

1. Free Form Fibers, USA

### S25 ED Advanced Electronic Materials - Processing Structures/Properties and Applications

#### **S25- Sintering and Doping Effects I**

Room: Cascade Tower- Regency C

Session Chair: Hana Uršič, Jozef Stefan Institute

11:00 AM

**(SPRING-SYM 25- 12-2026) High temperature piezoelectric performance in textured  $\text{Bi}_3\text{TiNbO}_9$  ceramics via spark plasma sintering (Invited)**

X. Yu<sup>1</sup>; C. Wang\*<sup>1</sup>

1. Shandong University, School of Physics, China

11:30 AM

**(SPRING-SYM 25- 13-2026) Dielectric properties of the  $(1-x)\text{K}_{0.9}\text{Na}_{0.1}\text{NbO}_3-x\text{SrZrO}_3$  ceramics synthesized under various sintering conditions**

H. Choi\*<sup>1</sup>; B. Choi<sup>1</sup>; G. Lee<sup>1</sup>; B. Min<sup>1</sup>; B. Kim<sup>1</sup>; S. Nahm<sup>2</sup>

1. Korea University College of Engineering, Department of Materials Science and Engineering, Republic of Korea  
2. Korea University, Department of Materials Science and Engineering, Republic of Korea

### S27 ED Two-Dimensional Materials - Synthesis/Theories/ Properties and Applications

#### **S27- 2D materials synthesis and applications**

Room: Cascade Tower- Regency A

Session Chair: Haozhe Wang, Duke University

11:00 AM

**(SPRING-SYM 27- 11-2026) Atomically thin films and heterostructures for electronics (Invited)**

S. Xie\*<sup>1</sup>

1. Princeton University, USA

### **S31 ED Superconducting and 2D Magnetic Materials - From Basic Science to Applications**

#### **S31- Novel magnetic materials**

Room: Cascade Tower- Regency FG

Session Chair: Rosario Gerhardt, Georgia Institute of Technology

**11:00 AM**

#### **(SPRING-SYM 31- 11-2026) Skyrmion thin-film and heterostructures (Invited)**

D. A. Gilbert<sup>\*1</sup>; C. Buchanan<sup>1</sup>

1. The University of Tennessee Knoxville Tickle College of Engineering, Materials Science and Engineering, USA

**11:30 AM**

#### **(SPRING-SYM 31- 12-2026) AI-driven first-principles modeling of Moiré superlattices (Invited)**

T. Cao<sup>\*1</sup>

1. University of Washington, USA

### **S32 EMSD Solid Oxide Cells for Sustainable Energy**

#### **S32- Protonic Ceramic Cells I**

Room: Olympic Tower- Evergreen A

Session Chairs: Jianhua Tong, Clemson University; Zeyu Zhao, Idaho National Laboratory

**11:00 AM**

#### **(SPRING-SYM 32- 10-2026) Widespread overestimation of Faradaic efficiency in protonic ceramic electrochemical cells (Invited)**

S. M. Haile<sup>\*1</sup>; J. Kim<sup>1</sup>; S. Choi<sup>2</sup>

1. Northwestern University, Materials Science and Engineering, USA
2. Kumoh National Institute of Technology, Republic of Korea

**11:30 AM**

#### **(SPRING-SYM 32- 11-2026) Orbital-level electronic modulation decoupling Ce 4f and O 2p states in protonic ceramics (Invited)**

S. Chen<sup>1</sup>; W. Li<sup>1</sup>; X. Liu<sup>\*1</sup>

1. West Virginia University, Mechanical & Aerospace Engineering, USA

### **S33 EMSD Advances in Thermoelectrics - Bridging Theory and Application**

#### **S33- Modeling and computational approaches for thermoelectric materials**

Room: Olympic Tower- Evergreen C

Session Chair: Nicolas Stein, Universite de Lorraine

**11:00 AM**

#### **(SPRING-SYM 33- 11-2026) Online thermoelectric materials predictions by machine learning (Invited)**

H. Kleinke<sup>\*1</sup>

1. University of Waterloo, Chemistry, Canada

### **Award Talk**

#### **Norbert J. Kreidl Award**

Room: Cascade Tower- Auditorium

**12:00 PM**

#### **(Awards-003-2026) Phase-change metasurfaces with 2D pixel-level addressability**

C. Popescu<sup>\*1</sup>; M. Peters<sup>1</sup>; K. Dao<sup>1</sup>; R. Chen<sup>1</sup>; R. Sharma<sup>2</sup>; K. Richardson<sup>3</sup>; J. Hu<sup>1</sup>

1. Massachusetts Institute of Technology, USA
2. University of Central Florida, USA
3. University of Central Florida, CREOL, USA

### **S3 All DIV Sustainable Horizons - A Recurring Symposium on Collective Action for a Resilient Future**

#### **S3- Teaching sustainability**

Room: Olympic Tower- Grand EFGHIJK

Session Chairs: Alp Sehirlioglu, Case Western Reserve University; Jürgen Rödel, Technische Universität Darmstadt

**1:15 PM**

#### **(SPRING-SYM 3- 04-2026) Defining energy resiliency through building an interdisciplinary education and workforce ecosystem**

J. Steirer<sup>\*1</sup>; C. Eglund-Smith<sup>1</sup>

1. Case Western Reserve University, Great Lakes Energy Institute, USA

**1:30 PM**

#### **(SPRING-SYM 3- 05-2026) Engaging community in climate action along the learning continuum (Invited)**

S. O'Keefe<sup>\*1</sup>; T. Kovach<sup>1</sup>; C. Harmon<sup>1</sup>

1. City of Cleveland, Sustainability and Climate Justice, USA

**1:55 PM**

#### **(SPRING-SYM 3- 06-2026) Science communication for collective action (Invited)**

K. Ellenbogen<sup>\*1</sup>

1. Science Museum of Cleveland, USA

**2:20 PM**

#### **(SPRING-SYM 3- 07-2026) Incorporating sustainability competencies into curriculum: Best practices and frameworks (Invited)**

K. Bailey<sup>\*1</sup>

1. The Pennsylvania State University, USA

**2:45 PM**

#### **(SPRING-SYM 3- 08-2026) Materials, sustainability, and human resilience: From closing the carbon loop to microplastics in bone (Invited)**

F. Bakan Misirlioglu<sup>3</sup>; M. Kaymakoglu<sup>2</sup>; K. Nakay<sup>1</sup>; M. Türken<sup>2</sup>; M. Filibeli<sup>2</sup>; E. Erdem<sup>\*1</sup>

1. Sabanci University, Materials Science and Nanoengineering, Turkey
2. Izmir Ekonomi Üniversitesi, Izmir University Department of Orthopedics and Traumatology, Turkey
3. Sabanci University, SUNUM, Turkey
4. TC Sağlık Bakanlığı Izmir Sehir Hastanesi, Department of Orthopedics and Traumatology, Turkey

**3:10 PM**

#### **(SPRING-SYM 3- 09-2026) Sustainable universities – Core principles and best practices (Invited)**

Y. Gehlen<sup>1</sup>; D. Isaia<sup>1</sup>; P. Breckner<sup>1</sup>; R. Kundu<sup>2</sup>; J. Rödel<sup>1</sup>; K. Bailey<sup>3</sup>; T. Frömling<sup>\*1</sup>

1. Technische Universität Darmstadt, Germany
2. Case Western Reserve University, Department of Materials Sc. & Eng., USA
3. The Pennsylvania State University, USA

**3:35 PM****(SPRING-SYM 3- 10-2026) Navigating sustainability and supply chain risks as a global manufacturer (Invited)**D. Mazeffa\*<sup>1</sup>; A. Sehirlioglu<sup>2</sup>

1. The Lincoln Electric Company, USA
2. Case Western Reserve University, USA

**4:00 PM****(SPRING-SYM 3- 11-2026) Bridging the divide: Navigating narratives for science-based climate action**R. Kundu\*<sup>1</sup>; H. Dang<sup>2</sup>

1. Case Western Reserve University, Department of Materials Sc. & Eng., USA
2. Case Western Reserve University, Department of Philosophy, USA

**S5 BSD|ED Oxide Quantum Materials****S5 - Novel design of oxide quantum materials**

Room: Olympic Tower- Grand A

Session Chair: Woo Seok Choi, Sungkyunkwan University - Natural Sciences Campus

**1:30 PM****(SPRING-SYM 5- 10-2026) Interfacial reduction pathways for stabilizing superconducting Bi-rich intermetallic films (Invited)**D. P. Kumah\*<sup>1</sup>; S. Shama<sup>1</sup>; J. McCourt<sup>1</sup>; M. Baksi<sup>1</sup>; G. Finkelstein<sup>1</sup>

1. Duke University, Physics, USA

**2:00 PM****(SPRING-SYM 5- 11-2026) Interfacial charge transfer and emergent magnetism in complex oxide superlattices (Invited)**L. Wang\*<sup>2</sup>; K. P. Koirala<sup>1</sup>; M. Bowden<sup>2</sup>; P. Sushko<sup>2</sup>; Y. Du<sup>2</sup>

1. University of California Santa Barbara, USA
2. Pacific Northwest National Laboratory, USA

**2:30 PM****(SPRING-SYM 5- 12-2026) Continuous strain tuning of superconducting  $\text{La}_{1.875}\text{Sr}_{0.125}\text{CuO}_4$  membranes (Invited)**B. Wang\*<sup>1</sup>; E. Ko<sup>1</sup>; J. Li<sup>1</sup>; H. Lee<sup>3</sup>; C. Kuo<sup>3</sup>; Y. Wu<sup>1</sup>; X. Wei<sup>1</sup>; Y. Yu<sup>1</sup>; K. Saito<sup>2</sup>; Z. Chen<sup>1</sup>; S. Raghu<sup>1</sup>; W. Lee<sup>3</sup>; J. Lee<sup>3</sup>; H. Hwang<sup>1</sup>

1. Stanford University, USA
2. Rigaku Americas Corporation, Material Analysis Business Unit, USA
3. Stanford Linear Accelerator Center, USA

**3:00 PM****Break****3:20 PM****(SPRING-SYM 5- 13-2026) Design of multicomponent oxides with tunable memory properties for non-volatile memory (Invited)**S. Chae\*<sup>1</sup>

1. Oregon State University, Electrical Engineering and Computer Science, USA

**3:50 PM****(SPRING-SYM 5- 14-2026) Spatial resolution of rare earth nickelate metal-insulator transitions**L. Cline\*<sup>1</sup>; M. Kiaba<sup>1</sup>; A. J. Kaplan<sup>1</sup>; A. Devinenti<sup>1</sup>; J. Fowlie<sup>1</sup>

1. Northwestern University Robert R McCormick School of Engineering and Applied Science, Materials Science and Engineering, USA

**S5 - Theory of oxide quantum materials**

Room: Olympic Tower- Grand A

Session Chair: Elizabeth Nowadnick, University of California, Merced

**4:10 PM****(SPRING-SYM 5- 15-2026) Shedding light on complex materials out of equilibrium: Insights from theory (Invited)**N. Benedek\*<sup>1</sup>

1. Cornell University, USA

**4:40 PM****(SPRING-SYM 5- 16-2026) Ab-initio high-throughput screening of charge-order and spin-order induced multiferroics (Invited)**S. E. Reyes-Lillo\*<sup>1</sup>

1. Universidad Andres Bello, Fisica y Astronomia, Chile

**5:10 PM****(SPRING-SYM 5- 17-2026) Discovery of quantum magnetic delafossites via High-throughput first-principles calculation**D. Kiem\*<sup>1</sup>; S. Yeom<sup>1</sup>; M. Yoon<sup>2</sup>

1. Oak Ridge National Lab, MSTD, USA
2. Oak Ridge National Laboratory, USA

**S6 BSD|ED Complex Oxide Thin Films and Heterostructures****S6 - Synthesis of complex oxide thin films, superlattices, and nanocomposites II**

Room: Cascade Tower- Regency E

Session Chair: Sundar Kunwar, Los Alamos National Lab

**1:30 PM****(SPRING-SYM 6- 03-2026) Advanced epitaxy for complex oxides (Invited)**E. Suyolcu\*<sup>1</sup>

1. Max-Planck-Institut fur Festkörperforschung, Germany

**2:00 PM****(SPRING-SYM 6- 04-2026) Synthesis and stability of  $\text{BaFeO}_3$  via pulsed laser deposition**A. J. Kaplan\*<sup>1</sup>; M. Kiaba<sup>1</sup>; J. Fowlie<sup>1</sup>

1. Northwestern University, Materials Science and Engineering, USA

**2:20 PM****(SPRING-SYM 6- 05-2026) Stabilizing Ruddlesden-Popper nickelate via soft-chemistry**A. Devinenti\*<sup>1</sup>; M. Kiaba<sup>1</sup>; J. Fowlie<sup>1</sup>

1. Northwestern University, Materials science and Engineering, USA

**2:40 PM****(SPRING-SYM 6- 06-2026) Templated formation of iron oxide nanostructures in montmorillonite-SiOC ceramic hybrids**K. Lu<sup>1</sup>; A. Rau<sup>2</sup>; S. Nemani\*<sup>1</sup>

1. University of Alabama at Birmingham, USA
2. Virginia Polytechnic Institute and State University, USA

**3:00 PM****Break****S6- Strain, defect, and interface engineering: experiments and theory I**

Room: Cascade Tower- Regency E

Session Chairs: Ke Zou, The University of British Columbia; Le Wang, Pacific Northwest National Laboratory

**3:20 PM****(SPRING-SYM 6- 07-2026) Lithium-bearing oxide films for all solid-state lithium-ion batteries (Invited)**S. M. Haile\*<sup>1</sup>

1. Northwestern University, Materials Science and Engineering, USA

**3:50 PM****(SPRING-SYM 6- 08-2026) Multi-ion defect model for space-charge layer formation at  $\text{LiPON/Li}_x\text{V}_2\text{O}_5$  electrochemical interfaces (Invited)**Y. Qi\*<sup>1</sup>; G. Pustorino<sup>1</sup>; L. Brillson<sup>2</sup>; D. M. Stewart<sup>3</sup>

1. Brown University, School of Engineering, USA
2. The Ohio State University, USA
3. University of Maryland, USA

## 4:20 PM

### (SPRING-SYM 6- 09-2026) Harnessing composition to modulate domain ordering and reduce leakage in high- $\kappa$ SrHfO<sub>3</sub> thin films

J. Kim<sup>\*1</sup>; J. B. Choi<sup>1</sup>; J. Ko<sup>1</sup>; K. Char<sup>1</sup>; C. S. Chang<sup>2</sup>

1. Seoul National University College of Natural Sciences, Department of Physics and Astronomy, Republic of Korea
2. Seoul National University, Republic of Korea

## 4:40 PM

### (SPRING-SYM 6- 10-2026) Monopole Traps for Position-Based Information encoding

L. Miao<sup>\*1</sup>

1. New Mexico State University, Physics, USA

## 5:00 PM

### (SPRING-SYM 6- 31-2026) Freestanding single-crystal oxide nanomembranes: Unlocking a new frontier in materials physics (Invited)

S. Bae<sup>\*1</sup>

1. Washington University, St. Louis, USA

## S9 BSD|ED From Atoms to Applications of Wurtzite and Other Emerging Ferroelectrics

### S9- Computational and Data-Driven Studies of Wurtzite Ferroelectrics

Room: Cascade Tower- Auditorium

Session Chair: Prashun Gorai, Rensselaer Polytechnic Institute

#### 1:30 PM

#### (SPRING-SYM 9- 13-2026) From ML to kinetics: Modeling the switching in ferroelectric Wurtzites (Invited)

A. M. Rappe<sup>\*1</sup>; D. Behrendt<sup>1</sup>; A. Samanta<sup>1</sup>; V. Nascimento<sup>2</sup>

1. University of Pennsylvania, Chemistry, USA
2. Universidade Federal de Minas Gerais, Fisica, Brazil

#### 2:00 PM

#### (SPRING-SYM 9- 14-2026) Ferroelectricity in GaN and (Al,Ga)N alloys

T. Nguyen<sup>\*2</sup>; C. Lee<sup>1</sup>; G. Brennecke<sup>1</sup>; P. Gorai<sup>2</sup>

1. Colorado School of Mines, USA
2. Rensselaer Polytechnic Institute, Chemical & Biological Engineering, USA

#### 2:20 PM

#### (SPRING-SYM 9- 15-2026) Molecular simulation of AlN ferroelectric devices

X. Li<sup>\*1</sup>; J. Shi<sup>1</sup>; L. Huang<sup>1</sup>; Y. Shi<sup>1</sup>

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

### S9- AlN-based Wurtzite Ferroelectrics

Room: Cascade Tower- Auditorium

Session Chair: Georg Schoenweger, Christian-Albrechts-Universitat zu Kiel

#### 2:40 PM

#### (SPRING-SYM 9- 16-2026) Pulsed-laser deposition of low-coercivity, epitaxial ferroelectric ScAlN thin films (Invited)

J. E. Spanier<sup>\*1</sup>

1. Drexel University, USA

#### 3:10 PM

#### Break

#### 3:30 PM

#### (SPRING-SYM 9- 17-2026) Systematic study of post-growth oxidation of AlScN

M. Brown<sup>\*1</sup>; K. Yazawa<sup>1</sup>; G. Brennecke<sup>2</sup>

1. Colorado School of Mines, Metallurgical and Materials Engineering, USA
2. Colorado School of Mines, USA

## 3:50 PM

### (SPRING-SYM 9- 18-2026) Ion-engineered defect landscapes in Wurtzite ferroelectrics

K. Kelley<sup>\*1</sup>; S. Kim<sup>1</sup>; I. Mercer<sup>2</sup>; M. Brahlek<sup>2</sup>; S. J. Randolph<sup>1</sup>; S. Calderon<sup>4</sup>; J. Maria<sup>2</sup>; B. Dryzhakov<sup>5</sup>

1. Oak Ridge National Laboratory, USA
2. The Pennsylvania State University, Materials Science and Engineering, USA
3. Oak Ridge National Lab, Materials Science, USA
4. Carnegie Mellon University, Materials Science and Engineering, USA
5. Oak Ridge National Lab, Center for Nanophase Materials Sciences, USA

### S9- Other Emerging Ferroelectrics

Room: Cascade Tower- Auditorium

Session Chair: Geoff Brennecke, Colorado School of Mines

#### 4:10 PM

#### Break

#### 4:30 PM

#### (SPRING-SYM 9- 19-2026) High-throughput materials discovery of complex nitrides for piezo- and ferroelectric applications (Invited)

R. Smaha<sup>\*1</sup>

1. National Laboratory of the Rockies, Materials Science Center, USA

#### 5:00 PM

#### (SPRING-SYM 9- 20-2026) Atomic-scale insights into ferroelectric domain walls in Y-doped HfO<sub>2</sub>

E. Gunay<sup>\*1</sup>; S. Calderon<sup>1</sup>; R. Maki<sup>2</sup>; D. Kan<sup>2</sup>; E. C. Dickey<sup>1</sup>

1. Carnegie Mellon University, Materials Science and Engineering, USA
2. Osaka Daigaku Daigakuin Kiso Kogaku Kenkyuka Kiso Kogakubu, Graduate School of Engineering, Japan
3. Kyoto Daigaku Kagaku Kenkyujo, Institute for Chemical Research, Japan

## S11 BSD|ED Characterization of Structure - Property Relationships in Functional Ceramics

### S11- Advances in scattering, imaging and analytical techniques II

Room: Olympic Tower- Evergreen B

Session Chair: Hadas Sternlicht, The Pennsylvania State University Department of Materials Science and Engineering

#### 1:30 PM

#### (SPRING-SYM 11- 10-2026) An atomic-scale view of thermal transport in nanostructured ceramics through vibrational energy-loss spectroscopy (Invited)

Q. Ramasse<sup>\*1</sup>

1. University of Leeds, SuperSTEM, United Kingdom

#### 2:00 PM

#### (SPRING-SYM 11- 11-2026) Probing the emergent phases in ferroic domain walls (Invited)

S. Conroy<sup>\*1</sup>

1. Imperial College London, Materials, United Kingdom

#### 2:30 PM

#### (SPRING-SYM 11- 12-2026) Deconvolving defect, dopant, and interface effects in CdO heterostructures with monochromated STEM-EELS (Invited)

C. Whittier<sup>\*1</sup>; M. Tolchin<sup>2</sup>; M. Ghorbani<sup>1</sup>; J. Maria<sup>2</sup>; N. Bassim<sup>1</sup>

1. McMaster University, Materials Science and Engineering, Canada
2. Pennsylvania State University, Materials Science and Engineering, USA

#### 3:00 PM

#### Break

### S11- Integrating computational-imaging techniques and machine-learning into the structural measurement workflow

Room: Olympic Tower- Evergreen B

Session Chairs: Steven Spurgeon, National Renewable Energy Laboratory; James LeBeau, Massachusetts Institute of Technology

**3:20 PM**

#### (SPRING-SYM 11- 13-2026) Electron ptychography for quantum information sciences (Invited)

K. X. Nguyen\*

1. University of Oregon, Physics, USA

**3:50 PM**

#### (SPRING-SYM 11- 14-2026) Three-dimensional visualization of dislocations in freestanding BaTiO<sub>3</sub> membranes using multislice electron ptychography

K. Park\*; Y. Yun<sup>1</sup>; C. S. Chang<sup>1</sup>

1. Seoul National University, Republic of Korea

**4:10 PM**

#### (SPRING-SYM 11- 15-2026) High energy xrays for studying structure-property relationships in ceramics (Invited)

H. Sharma\*

1. Argonne National Laboratory, USA

**4:40 PM**

#### (SPRING-SYM 11- 16-2026) Machine learning for robust and large-scale nanoparticle characterization (Invited)

K. Sytwu\*; M. Cho<sup>1</sup>; L. Rangel DaCosta<sup>2</sup>; C. Groschner<sup>2</sup>; M. Scott<sup>1</sup>

1. E O Lawrence Berkeley National Laboratory, Molecular Foundry, USA
2. University of California Berkeley, Materials Science and Engineering, USA

**5:10 PM**

#### (SPRING-SYM 11- 17-2026) Connecting lattice compatibility conditions to transformation energy barriers in shape memory materials

O. Rettenmaier\*; S. Patala<sup>1</sup>; C. Schuh<sup>1</sup>

1. Northwestern University Robert R McCormick School of Engineering and Applied Science, Materials Science and Engineering, USA

### S12 BSD|ED Electronic and Ionic Materials in Energy Storage and Conversion Systems

#### S12- Advances in fast charging electrode materials, solid electrolyte, and battery manufacture

Room: Olympic Tower- Grand C

Session Chairs: Ming Tang, Rice University; Hui Xiong, Boise State University

**1:30 PM**

#### (SPRING-SYM 12- 13-2026) Acoustic field-assisted manufacturing for 3D lithium-ion battery electrodes (Invited)

C. L. Cobb\*

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

**2:00 PM**

#### (SPRING-SYM 12- 14-2026) How thick a coating do you need at the Li-solid electrolyte interface? (Invited)

X. Xu\*

1. Arizona State University, USA

**2:30 PM**

#### (SPRING-SYM 12- 15-2026) Criteria for optimizing electronic conductivity of thick electrodes

M. Tang\*; Z. Wang<sup>1</sup>; Z. Li<sup>1</sup>

1. Rice University, Materials Science & NanoEngineering, USA

**2:50 PM**

#### (SPRING-SYM 12- 16-2026) Morphology-dependent stability of electrochemically-formed metastable cubic tantalum oxide

S. Pooley\*; C. A. Koroni<sup>1</sup>; T. Merrell<sup>1</sup>; M. Bork<sup>1</sup>; J. A. Russell<sup>1</sup>; E. Gabriel<sup>1</sup>; K. Dixon<sup>1</sup>; P. Barnes<sup>2</sup>; H. Xiong<sup>1</sup>

1. Boise State University, Micron School of Materials Science & Engineering, USA
2. Idaho National Laboratory, USA

**3:10 PM**

**Break**

**3:30 PM**

#### (SPRING-SYM 12- 17-2026) Grain boundary orientation effects on the ion conductivity of Li<sub>3x</sub>La<sub>1/3-x</sub>TaO<sub>3</sub> (Invited)

J. Ihlefeld\*; I. A. Brummel<sup>1</sup>; S. Neumayer<sup>1</sup>; K. Burns<sup>1</sup>; W. J. Smith<sup>2</sup>; T. E. Beechem<sup>3</sup>

1. University of Virginia, Department of Materials Science and Engineering, USA
2. Oak Ridge National Lab, USA
3. Purdue University, USA

**4:00 PM**

#### (SPRING-SYM 12- 18-2026) Structure and superionic transition of Li<sub>3</sub>YCl<sub>6</sub> and Li<sub>3</sub>YBr<sub>6</sub> (Invited)

J. Liu\*; Z. Liu<sup>2</sup>; P. Cuillier<sup>2</sup>; Y. Zhang<sup>1</sup>; H. Chen<sup>2</sup>

1. Oak Ridge National Laboratory, Neutron Scattering Division, USA
2. Georgia Institute of Technology, USA
3. The Ohio State University, USA

**4:30 PM**

#### (SPRING-SYM 12- 19-2026) Unlocking fast lithiation through structural optimization of Wadsley-Roth shear phases

I. Milisavljevic<sup>2</sup>; C. Sturgill<sup>1</sup>; S. Wechsler<sup>1</sup>; R. R. Rajabi<sup>1</sup>; M. Muhi<sup>1</sup>; M. Kumar<sup>1</sup>; N. Karimitari<sup>1</sup>; H. zur Loye<sup>1</sup>; C. Sutton<sup>1</sup>; S. T. Misture\*<sup>2</sup>; M. Stefik<sup>1</sup>

1. University of South Carolina College of Arts and Sciences, Department of Chemistry and Biochemistry, USA
2. Alfred University, USA

**4:50 PM**

#### (SPRING-SYM 12- 20-2026) Discovery of selectively etched metastable materials for electrochemical energy storage (Invited)

R. Wang\*

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

**5:20 PM**

#### (SPRING-SYM 12- 21-2026) Comparative study of electrochemical behaviour of Sn/SiOC composite anodes in lithium-ion and sodium-ion batteries

D. K. Panda\*; S. Nagarani<sup>2</sup>; C. Chakraborty<sup>3</sup>; S. Ravindran<sup>2</sup>; D. Hou<sup>1</sup>; R. Bordia<sup>1</sup>

1. Clemson University, Materials Science and Engineering, USA
2. Birla Institute of Technology & Science Pilani, Hyderabad Campus, Mechanical Engineering, India
3. BITS Pilani - Hyderabad Campus, Department of Chemistry, India

### S18 MD|BSD|BIO|GOMD New Frontiers in Additive Manufacturing of Ceramic Materials

#### S18- Novel techniques to prepare ceramic powders for AM

Room: Olympic Tower- Grand B

Session Chair: Shenqiang Ren, University of Maryland

**1:30 PM**

#### (SPRING-SYM 18- 11-2026) Preceramic precursor derived high-temperature ceramic composites (Invited)

S. Ren\*

1. University of Maryland, USA

**2:00 PM**

#### (SPRING-SYM 18- 12-2026) Stereolithographic additive manufacturing of solid electrolytes with geometrically modulated dimensions (Invited)

S. Kiriara\*; F. Spirrett<sup>1</sup>

1. Osaka University, Joining and Welding Research Institute, Japan

### 2:30 PM

#### (SPRING-SYM 18- 13-2026) Development of metrology tools to improve the reliability of ceramics fabricated through slurry-based ceramic additive manufacturing (AM)

R. Maier\*<sup>1</sup>; A. J. Allen<sup>2</sup>; R. Tao<sup>1</sup>; S. H. Hales<sup>1</sup>

1. National Institute of Standards and Technology, USA
2. NIST, Materials Measurement Science Division, USA

### 2:50 PM

#### Break

## S18- Characterization and modeling for AM

Room: Olympic Tower- Grand B

Session Chair: Charles Manière, Laboratoire de Cristallographie et Sciences des Matériaux

### 3:10 PM

#### (SPRING-SYM 18- 14-2026) Ceramic material extrusion printing: From formulation to sintering and AI-assisted design tools (Invited)

C. Manière\*<sup>1</sup>; F. Lebas<sup>1</sup>; S. Marinel<sup>1</sup>

1. Laboratoire de Cristallographie et Sciences des Matériaux, France

### 3:40 PM

#### (SPRING-SYM 18- 15-2026) New insights in ceramic additive manufacturing feedstock slurry rheology from X-ray scattering (Invited)

A. J. Allen\*<sup>1</sup>; R. Maier<sup>1</sup>; R. Tao<sup>1</sup>; I. Kuzmenko<sup>2</sup>; J. Ilavsky<sup>2</sup>

1. National Institute of Standards and Technology, USA
2. Argonne National Laboratory, USA

### 4:10 PM

#### (SPRING-SYM 18- 17-2026) Improving density and reproducibility in alumina components produced by direct ink writing

I. Geven\*<sup>1</sup>; B. Kaynak<sup>1</sup>; S. Cinar-Aygun<sup>1</sup>

1. Orta Dogu Teknik Universitesi, Turkey

### 4:30 PM

#### (SPRING-SYM 18- 18-2026) Characterizing 3D printed alumina samples with impedance and dielectric spectroscopy

A. Kongani\*<sup>1</sup>; R. A. Gerhardt<sup>1</sup>; S. M. Allan<sup>2</sup>; J. Ilavsky<sup>2</sup>

1. Georgia Institute of Technology, Materials Science and Engineering, USA
2. Lithoz America, LLC, USA
3. Argonne National Laboratory, Advanced Photon Source, USA

### 4:50 PM

#### (SPRING-SYM 18- 19-2026) 3D Printing of ceramics and composites (Invited)

A. Bandyopadhyay\*<sup>1</sup>; S. Bose<sup>2</sup>

1. Washington State University, Mechanical and Materials Engineering, USA
2. Washington State University, School of Mechanical and Materials Engineering, USA

### 5:20 PM

#### (SPRING-SYM 18- 30-2026) Wet chemical synthesis of non-oxide powders for sintering transparent ceramics (Invited)

Y. Wu\*<sup>1</sup>

1. Alfred University, Kazuo Inamori School of Engineering, New York State College of Ceramics, USA

## S20 BSD Symposium to Honor W. Craig Carter

### S20- Microstructure, Geometry and Modelling of Materials

Room: Cascade Tower- Regency B

Session Chair: R. Edwin Garcia, Purdue University

### 1:30 PM

#### (SPRING-SYM 20- 09-2026) Balancing simulation, experiment, and materials insight in complex multiphysics problems (Invited)

G. R. Maskaly\*<sup>1</sup>

1. Pacific Fusion, USA

### 2:00 PM

#### (SPRING-SYM 20- 10-2026) Analyzing microstructures with OOF (Invited)

S. Langer\*<sup>1</sup>

1. National Institute of Standards and Technology, Applied and Computational Mathematics, USA

### 2:30 PM

#### (SPRING-SYM 20- 11-2026) Microstructure design of percolating multiphase granular ceramics

D. S. Estrella\*<sup>1</sup>; D. Hermawan<sup>2</sup>; R. Garcia<sup>2</sup>

1. Purdue University System, Materials Engineering, USA
2. Purdue University, Materials Engineering, USA

## S20- Materials Science Education

Room: Cascade Tower- Regency B

Session Chair: Carol Handwerker, Purdue University

### 3:10 PM

#### (SPRING-SYM 20- 13-2026) The qualities of good materials science pedagogy (Invited)

W. C. Carter\*<sup>1</sup>

1. Massachusetts Institute of Technology, Materials Science and Engineering, USA

### 3:40 PM

#### (SPRING-SYM 20- 14-2026) You can't teach (Invited)

D. J. Lewis\*<sup>1</sup>

1. Rensselaer Polytechnic Institute, USA

### 4:10 PM

#### (SPRING-SYM 20- 15-2026) Computational notebook pedagogy for materials science education and publishing (Invited)

G. Varnavides\*<sup>1</sup>

1. Technische Universiteit Delft Faculteit Technische Natuurwetenschappen, Imaging Physics, Netherlands

### 4:40 PM

#### (SPRING-SYM 20- 16-2026) Forgotten stories from the history of thermodynamics, and why they matter for its future (Invited)

W. Sun\*<sup>1</sup>

1. University of Michigan, Materials Science and Engineering, USA

## S24 BIO: Mechanobiology and Cell-Substrate Interactions at Biointerfaces in Bioceramics

### S24- Advanced manufacturing using bioceramics for biomedical applications

Room: Cascade Tower- Laurel

Session Chair: Kalpana Katti, North Dakota State University

### 1:30 PM

#### (SPRING-SYM 24- 01-2026) Biological evaluation of 3D printed calcium phosphate ceramic and Ti implants for orthopedic and dental applications (Invited)

S. Bose\*<sup>1</sup>

1. Washington State University, School of Mechanical and Materials Engineering, USA

### 2:00 PM

#### (SPRING-SYM 24- 02-2026) Enabling technologies for 3D printed bone reconstruction with a focus on pediatric solutions

R. A. Gomez-Guevara<sup>1</sup>; U. K. Dhar<sup>1</sup>; A. Prasad\*<sup>1</sup>

1. Florida International University, Biomedical Engineering, USA

### 2:20 PM

#### (SPRING-SYM 24- 03-2026) MicroRNA-based label-free biomarkers for cancer

B. V. Pashaki<sup>\*</sup>; R. Paulmurugan<sup>2</sup>; J. Woong Kang<sup>2</sup>; P. So<sup>2</sup>; D. Liepmann<sup>4</sup>; V. Renugopalakrishnan<sup>2</sup>; K. Katti<sup>2</sup>; D. R. Katti<sup>2</sup>

1. North Dakota State University, Civil, Construction, and Environmental Engineering (Biomedical Engineering Program), USA
2. Massachusetts Institute of Technology, USA
3. Northeastern University, Department of Chemistry, USA
4. University of California Berkeley, Department of Bioengineering, USA
5. North Dakota State University, Civil Construction and Environmental Engineering, USA
6. North Dakota State University, Department of Civil and Environmental Engineering, USA
7. Stanford University, Department of Radiology, USA

### 2:40 PM

#### (SPRING-SYM 24- 04-2026) Next generation testbeds of cancer metastasis using flow enabled biomechanically tunable nanoclay scaffolds

K. Katti<sup>\*</sup>; Q. Hoang<sup>1</sup>; S. V. Jaswandkar<sup>1</sup>; P. Vyas<sup>2</sup>; A. Gaba<sup>3</sup>; D. R. Katti<sup>1</sup>

1. North Dakota State University, Department of Civil Construction and Environmental Engineering, USA
2. Sanford Health, Orthopaedics, USA
3. Sanford Health, Oncology, USA

### 3:00 PM

#### Break

### S24- Bioceramics based human invitro disease models

Room: Cascade Tower- Laurel

Session Chair: Anamika Prasad, Florida International University

### 3:20 PM

#### (SPRING-SYM 24- 05-2026) Biohybrid interfaces and materials guided by machine learning (Invited)

C. Tamerler<sup>\*</sup>

1. University of Kansas, Mechanical Eng & BioEngineering, USA

### 3:50 PM

#### (SPRING-SYM 24- 06-2026) Mechanobiology of cancer progression (Invited)

D. R. Katti<sup>\*</sup>; H. Gaikwad<sup>1</sup>; B. V. Pashaki<sup>1</sup>; K. Katti<sup>2</sup>

1. North Dakota State University, Civil Construction and Environmental Engineering, USA
2. North Dakota State University, USA

### 4:20 PM

#### (SPRING-SYM 24- 07-2026) Porous biomaterials from mixed-energized field freeze casting (Invited)

S. E. Naleway<sup>\*</sup>

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

### S25 ED Advanced Electronic Materials - Processing Structures/Properties and Applications

### S25- Sintering and Doping Effects II

Room: Cascade Tower- Regency C

Session Chair: Eric Patterson, Naval Research Laboratory

### 1:30 PM

#### (SPRING-SYM 25- 14-2026) Effects of quenching on the electrical properties of BiFeO<sub>3</sub>-BaTiO<sub>3</sub>-based ternary piezo-/ferroelectric ceramics for high temperature applications

Q. Deng<sup>\*</sup>; Z. Ye<sup>2</sup>

1. Simon Fraser University, Chemistry, Canada
2. Simon Fraser University, Canada

### 1:50 PM

#### (SPRING-SYM 25- 15-2026) Elucidating the structural and electrical property relationship of BiFeO<sub>3</sub>-xBaTiO<sub>3</sub> ceramics through processing optimizations

A. R. Marotta<sup>\*</sup>; H. F. Chavez<sup>1</sup>; D. Lowry<sup>1</sup>; G. Kamm<sup>1</sup>; T. C. Douglas<sup>1</sup>; E. Neuman<sup>1</sup>; S. Bishop<sup>2</sup>

1. Sandia National Laboratories, USA
2. Sandia National Laboratories, Materials, USA

### 2:10 PM

#### (SPRING-SYM 25- 17-2026) Flash lamp annealing: A rapid route to ferroelectric films (Invited)

J. Cardoletti<sup>1</sup>; L. Song<sup>1</sup>; I. Goričan<sup>2</sup>; M. Kuhfuß<sup>3</sup>; E. Defay<sup>1</sup>; H. Uršič<sup>2</sup>; K. G. Webber<sup>3</sup>; S. Glinsek<sup>\*</sup>

1. Luxembourg Institute of Science and Technology, Luxembourg
2. Jozef Stefan Institute, Electronic Ceramics Department K5, Slovenia
3. Friedrich-Alexander-Universität Erlangen-Nürnberg, Materials Science and Engineering, Germany

### S25- Enhanced Measurement Techniques and High Frequency Materials

Room: Cascade Tower- Regency C

Session Chairs: Eric Patterson, Naval Research Laboratory; Sara Mills

### 2:40 PM

#### (SPRING-SYM 25- 18-2026) Sol-gel relaxor perovskite thin films for high-performance pyroelectric infrared detection

J. Barber<sup>\*</sup>; T. Jeong<sup>2</sup>; B. Dursun<sup>2</sup>; S. Trolier-McKinstry<sup>2</sup>; T. Jackson<sup>2</sup>; C. M. Rost<sup>1</sup>

1. Virginia Polytechnic Institute and State University, Materials Science and Engineering, USA
2. The Pennsylvania State University, Materials Science and Engineering, USA

### 3:00 PM

#### Breaks

### 3:20 PM

#### (SPRING-SYM 25- 19-2026) Sputter exploration of the (AlN)<sub>1-x</sub>(SiC)<sub>x</sub> system for piezoelectric applications

W. Yeo<sup>\*</sup>; M. Brown<sup>1</sup>; N. Bernstein<sup>1</sup>; L. Wolf<sup>1</sup>; V. Stevanovic<sup>1</sup>; K. Yazawa<sup>2</sup>; G. Brenneka<sup>1</sup>

1. Colorado School of Mines, Metallurgical and Materials Engineering, USA
2. National Renewable Energy Laboratory, USA

### 3:40 PM

#### (SPRING-SYM 25- 20-2026) On-wafer complex permittivity measurements of AlN to 220 GHz

V. A. St. George<sup>\*</sup>; N. Jungwirth<sup>1</sup>; B. Bosworth<sup>1</sup>; L. Enright<sup>2</sup>; K. Yazawa<sup>3</sup>; A. Zakutayev<sup>3</sup>; C. Long<sup>1</sup>; A. Stelson<sup>1</sup>; N. Orloff<sup>1</sup>; I. Takeuchi<sup>1</sup>

1. National Institute of Standards and Technology, USA
2. National Institute of Standards & Technology, Communications Technology Laboratory, USA
3. National Renewable Energy Laboratory, USA
4. NIST, Communications Technology Laboratory, USA
5. University of Maryland, USA

### 4:00 PM

#### (SPRING-SYM 25- 21-2026) Improving split-cylinder resonator measurements of the complex permittivity of substrates and thin films

L. Enright<sup>\*</sup>; B. Jamroz<sup>1</sup>; B. Bosworth<sup>1</sup>; G. Brenneka<sup>2</sup>; N. Orloff<sup>1</sup>

1. National Institute of Standards & Technology, Communications Technology Laboratory, USA
2. Colorado School of Mines, USA

### 4:20 PM

#### (SPRING-SYM 25- 22-2026) High linearity millimeter-wave acoustic filters

B. Bosworth<sup>\*</sup>; O. Barrera<sup>2</sup>; T. Anusorn<sup>2</sup>; K. Hyunh<sup>2</sup>; I. Anderson<sup>2</sup>; N. Jungwirth<sup>1</sup>; M. Laio<sup>2</sup>; S. Cho<sup>2</sup>; J. Kramer<sup>2</sup>; L. Matto<sup>2</sup>; M. Goorsky<sup>3</sup>; N. Orloff<sup>1</sup>; R. Lu<sup>2</sup>

1. NIST, USA
2. The University of Texas at Austin, USA
3. University of California Los Angeles, USA

**4:40 PM****(SPRING-SYM 25- 23-2026) High frequency piezoelectric response and effect of bias voltage in (011) PIN-PMN-PT single crystals**M. Staruch\*<sup>1</sup>; T. Mion<sup>1</sup>; P. Finkel<sup>1</sup>

1. Naval Research Laboratory, USA

**S27 ED Two-Dimensional Materials - Synthesis/Theories/ Properties and Applications****S27- 2D materials devices and applications**

Room: Cascade Tower- Regency A

Session Chair: Haozhe Wang, Duke University

**1:30 PM****(SPRING-SYM 27- 12-2026) Synthesis, properties, and applications of coal derived 2D carbon nanomaterials (Invited)**Q. Cao\*<sup>1</sup>

1. University of Illinois Urbana-Champaign, Materials Science and Engineering, USA

**2:00 PM****(SPRING-SYM 27- 13-2026) Graphene-enabled thermal metamaterial arrays for programmable mid-infrared emission control (Invited)**X. Zhang\*<sup>1</sup>

1. Carnegie Mellon University, USA

**2:30 PM****(SPRING-SYM 27- 14-2026) Atomically thin graphene electrodes for long-term stable EEG monitoring**N. Liu\*<sup>1</sup>; D. Akinwande<sup>1</sup>

1. The University of Texas at Austin, USA

**2:50 PM****Break****S27- Fabrication and application of novel 2D materials and MXenes**

Room: Cascade Tower- Regency A

Session Chair: Haozhe Wang, Duke University

**3:20 PM****(SPRING-SYM 27- 15-2026) Controlling functionality in 2D materials: From ferromagnetism to single photon emission and bio-applications (Invited)**M. Terrones\*<sup>1</sup>

1. The Pennsylvania State University, Physics, USA

**3:50 PM****(SPRING-SYM 27- 16-2026) MXene as a material platform for integrated electrochemical devices (Invited)**C. Wu\*<sup>1</sup>

1. Texas A&amp;M University, USA

**4:20 PM****(SPRING-SYM 27- 17-2026) Understanding and enhancing the longevity of  $Ti_3C_2T_x$  MXene in air**X. Hu\*<sup>1</sup>; C. Yang<sup>2</sup>; Y. Zhao<sup>1</sup>; G. Song<sup>2</sup>; W. Yang<sup>2</sup>; H. Wang<sup>1</sup>

1. Duke University, Electrical and Computer Engineering, USA

2. Duke University, Chemistry, USA

**4:40 PM****(SPRING-SYM 27- 18-2026) Directional photothermal actuation of  $Ti_3C_2T_x$  membranes enabled by aligned carbon nanotubes**Y. Zhao\*<sup>1</sup>; G. Fredi<sup>2</sup>; X. Hu<sup>2</sup>; B. L. Wardle<sup>3</sup>; H. Wang<sup>2</sup>

1. Duke University, USA

2. Duke University, Electrical and Computer Engineering, USA

3. Massachusetts Institute of Technology, USA

**S31 ED Superconducting and 2D Magnetic Materials - From Basic Science to Applications****S31- Novel magnetic materials and 2D structures I**

Room: Cascade Tower- Regency FG

Session Chair: Meltem Bolluk, University of Connecticut

**1:30 PM****(SPRING-SYM 31- 13-2026) Effect of heat treatment on the magnetic and electrical properties of a Mn-Zn-ferrite**R. A. Gerhardt\*<sup>1</sup>; C. Kelly<sup>1</sup>; C. Burton<sup>1</sup>; R. Speyer<sup>1</sup>; D. A. Gilbert<sup>2</sup>; B. Green<sup>3</sup>

1. Georgia Institute of Technology, Materials Science and Engineering, USA

2. University of Tennessee, USA

3. RF Genesis, USA

**1:50 PM****(SPRING-SYM 31- 14-2026) Fabrication of PVDF/BT/Mn-Zn-ferrite composites**W. Kollmar\*<sup>1</sup>; R. A. Gerhardt<sup>1</sup>; D. S. Foster<sup>1</sup>; C. Kelly<sup>1</sup>

1. Georgia Institute of Technology, Materials Science and Engineering, USA

**2:10 PM****(SPRING-SYM 31- 15-2026) Emergent ferromagnetism and unusual irreversible magnetoresistance in an intercalated vdW antiferromagnet CrSBr**Z. Zhai<sup>2</sup>; W. Liu<sup>2</sup>; X. Guo<sup>3</sup>; D. Schulze<sup>4</sup>; T. Kuo<sup>4</sup>; N. Agarwal<sup>3</sup>; A. Stangel<sup>3</sup>; L. Deng<sup>4</sup>; R. Hovden<sup>3</sup>; L. Zhao<sup>5</sup>; C. Chu<sup>4</sup>; B. Lv\*<sup>1</sup>

1. University of Texas, Dallas, USA

2. University of Texas, Dallas, Physics, USA

3. University of Michigan, USA

4. University of Houston, USA

5. University of Michigan, Physics, USA

**2:30 PM****(SPRING-SYM 31- 16-2026) Multi-band luminescence from a rare earth-based two-dimensional material (Invited)**M. A. Susner\*<sup>1</sup>; R. Rao<sup>1</sup>

1. Air Force Research Laboratory, Materials and Manufacturing Directorate, USA

**3:00 PM****Break****S31- Novel magnetic materials and 2D structures II**

Room: Cascade Tower- Regency FG

Session Chair: Jun Xiao, University of Wisconsin-Madison

**3:20 PM****(SPRING-SYM 31- 17-2026) Tuning Kitaev magnets using chemical and physical pressure (Invited)**F. Tafti\*<sup>1</sup>; M. Graf<sup>1</sup>; Y. Ran<sup>1</sup>; D. Haskel<sup>2</sup>

1. Boston College, USA

2. Argonne National Lab, X-ray Science Division, Advanced Photon Source, USA

**3:50 PM****(SPRING-SYM 31- 18-2026) Quantum sensing of Moiré magnetism (Invited)**C. R. Du\*<sup>1</sup>

1. Georgia institute of technology, USA

**4:20 PM****(SPRING-SYM 31- 19-2026) On the ordering mechanism of  $Cu^+$  in 2D van der Waals multiferroic  $CuCrP_2S_6$  (Invited)**F. Ye\*<sup>1</sup>

1. Oak Ridge National Laboratory, USA

**4:50 PM****(SPRING-SYM 31- 20-2026) Zone-folded phonons: An effect of magnetism on lattice vibrations observed by Raman Scattering (Invited)**T. Mai\*<sup>1</sup>

1. Air Force Research Laboratory, RX, USA

**S32 EMSD Solid Oxide Cells for Sustainable Energy****S32- Protonic Ceramic Cells II**

Room: Olympic Tower- Evergreen A

Session Chairs: Chuancheng Duan, University of Utah; Xinfang Jin, The University of Texas at Dallas School of Economic Political and Policy Sciences

**1:30 PM****(SPRING-SYM 32- 12-2026) Flexible electrosynthesis of chemicals and fuels via Intensified Processes at Intermediate Temperatures at Idaho National Laboratory (Invited)**D. Ding\*<sup>1</sup>

1. Idaho National Laboratory, USA

**2:00 PM****(SPRING-SYM 32- 13-2026) Advancing yttrium-doped barium zirconate electrolytes via process optimization and interfacial engineering for reversible protonic ceramic cells (Invited)**H. Ding\*<sup>1</sup>; S. Zheng<sup>1</sup>; Y. Geng<sup>1</sup>; I. Bello<sup>1</sup>; S. Karki<sup>1</sup>; A. Kumari<sup>1</sup>

1. The University of Oklahoma, Aerospace and Mechanical Engineering, USA

**2:30 PM****(SPRING-SYM 32- 14-2026) Reaction mechanism of electrochemical oxygen evolution/reduction reaction in proton conducting ceramic cells (Invited)**K. Amezawa\*<sup>1</sup>

1. Tohoku University, IMRAM, Japan

**3:00 PM****Break****3:20 PM****(SPRING-SYM 32- 15-2026) Sintering of protonic ceramic electrolyte membranes for high-performance protonic ceramic electrochemical cells (Invited)**J. Tong\*<sup>1</sup>

1. Clemson University, USA

**3:50 PM****(SPRING-SYM 32- 16-2026) Entropy-engineered oxide architectures for advanced Protonic Ceramic Electrochemical Cells (Invited)**K. Lee\*<sup>1</sup>

1. Korea Advanced Institute of Science and Engineering (KAIST), Mechanical Engineering, Republic of Korea

**4:20 PM****(SPRING-SYM 32- 17-2026) Achieving Robust and High-Performance Large-Scale Protonic Ceramic Electrochemical Cells at Idaho National Laboratory (Invited)**Z. Zhao\*<sup>1</sup>; W. Wang<sup>1</sup>; S. Koomson<sup>1</sup>; F. Liu<sup>1</sup>; H. Li<sup>1</sup>; W. Bian<sup>1</sup>; D. Ding<sup>1</sup>

1. Idaho National Laboratory, USA

**4:50 PM****(SPRING-SYM 32- 27-2026) Effect of methane reforming catalysis on the performance of fuel flexible protonic ceramic cells (Invited)**V. Kyriakou\*<sup>1</sup>; H. Zheng<sup>1</sup>

1. Rijksuniversiteit Groningen Faculty of Science and Engineering, Engineering and Technology Institute Groningen (ENTEg), Netherlands

**S33 EMSD Advances in Thermoelectrics - Bridging Theory and Application****S33- Design, synthesis, and processing of thermoelectric materials**

Room: Olympic Tower- Evergreen C

Session Chairs: Takahiro Yamada, Tohoku Daigaku; Michitaka Ohtaki, Kyushu Daigaku

**1:30 PM****(SPRING-SYM 33- 12-2026) Roles of phase purity in Mg<sub>3-x</sub>Mn<sub>x</sub>(Sb,Bi)<sub>2</sub> thermoelectric materials (Invited)**S. Chen\*<sup>1</sup>

1. University of Houston, Physics, USA

**2:00 PM****(SPRING-SYM 33- 13-2026) Thermal transport engineering in tin-based Zintl compounds via rattling Na atoms in tunnel frameworks (Invited)**T. Yamada\*<sup>1</sup>

1. Tohoku Daigaku, Institute of Multidisciplinary Research for Advanced Materials, Japan

**2:30 PM****(SPRING-SYM 33- 14-2026) Thermoelectric performance enhancement in defect-controlled thin film (Invited)**T. Ishibe\*<sup>1</sup>; Y. Nakamura<sup>1</sup>

1. Osaka Daigaku Daigakuin Kiso Kogaku Kenkyuka Kiso Kogakubu, Japan

**3:00 PM****Break****3:20 PM****(SPRING-SYM 33- 15-2026) Accelerating the synthesis of CoSb<sup>3</sup>-based skutterudite thermoelectric materials by Bayesian optimization (Invited)**Y. Tseng\*<sup>1</sup>; Y. Pao<sup>2</sup>; T. Lo<sup>2</sup>; Y. Mozharivskiy<sup>2</sup>1. Natural Resources Canada, Canada  
2. McMaster University, Canada**3:50 PM****(SPRING-SYM 33- 16-2026) Silicon thermoelectrics and thermal boundary conductance measurements (Invited)**R. Nagahiro\*<sup>1</sup>; J. Shiomi<sup>1</sup>

1. Tokyo Daigaku, Institute of Engineering Innovation, Graduate School of Engineering, Japan

**4:20 PM****(SPRING-SYM 33- 17-2026) Electrochemical nanofabrication: A versatile toolbox for thermoelectric innovation (Invited)**N. Stein\*<sup>1</sup>

1. Universite de Lorraine, Institut Jean Lamour, France

**4:50 PM****(SPRING-SYM 33- 18-2026) Tuning electronic and thermal transport through La substitution and Ti/Ru chemistry in perovskite oxides (Invited)**S. Akhbarifar\*<sup>1</sup>

1. The Catholic University of America, Physics – VSL, USA

## **S36 GOMD Modeling and Simulations of Glass Structures and Properties**

### **S36- Atomistic simulation and predictive modeling of glasses II**

Room: Cascade Tower- Larch

Session Chairs: Jincheng Du, University of North Texas; Xiaonan Lu, Pacific Northwest National Lab

**1:30 PM**

#### **(SPRING-SYM 36- 09-2026) Surface stability of silica in high pH solutions (Invited)**

J. M. Rimsza\*<sup>1</sup>

1. Sandia National Laboratories, USA

**2:00 PM**

#### **(SPRING-SYM 36- 10-2026) Predicting the long-term corrosion of borosilicate glasses from their compositions (Invited)**

S. N. Kerisit\*<sup>1</sup>; J. Neeway<sup>1</sup>; B. Parruzot<sup>1</sup>; J. V. Crum<sup>1</sup>; J. Anderson<sup>1</sup>; G. Smith<sup>1</sup>; M. Asmussen<sup>1</sup>

1. Pacific Northwest National Lab, USA

**2:30 PM**

#### **(SPRING-SYM 36- 11-2026) Thermal conductivity of glassy silica films by first-principles molecular dynamics**

L. Petit<sup>1</sup>; C. o. Diarra<sup>1</sup>; A. Lambrecht<sup>1</sup>; M. Boero<sup>1</sup>; C. Massobrio<sup>1</sup>; E. Martin\*<sup>1</sup>

1. iCube UMR 7357 - Laboratoire des sciences de l'ingénieur, de l'informatique et de l'imagerie 300 bd Sébastien Brant - CS 10413 - F-67412 Illkirch Cedex, France

**2:50 PM**

#### **(SPRING-SYM 36- 12-2026) Preliminary study on interfacial reaction of silica and multi-oxide glass surface using GNNFF pretrained model**

J. Yeon\*<sup>1</sup>; A. Antony<sup>1</sup>

1. Corning Incorporated, S&T, USA

### **S36- Data-driven modeling and machine learning for glass science**

Room: Cascade Tower- Larch

Session Chairs: Xiaonan Lu, Pacific Northwest National Lab; Jincheng Du, University of North Texas

**3:10 PM**

**Break**

**3:30 PM**

#### **(SPRING-SYM 36- 13-2026) From empirical fits to machine learning: Models for viscosity and electrical conductivity in nuclear waste glass (Invited)**

P. Ferkl\*<sup>1</sup>; X. Lu<sup>1</sup>; J. Vienna<sup>1</sup>; P. Hrma<sup>2</sup>; A. Kruger<sup>3</sup>

1. Pacific Northwest National Laboratory, USA
2. AttainX, USA
3. U.S. Department of Energy, Hanford Field Office, USA

**4:00 PM**

#### **(SPRING-SYM 36- 14-2026) A generative diffusion model for amorphous materials**

K. Yang\*<sup>1</sup>; D. Schwalbe-Koda<sup>1</sup>

1. University of California Los Angeles, Materials Science and Engineering, USA

**4:20 PM**

#### **(SPRING-SYM 36- 15-2026) Effects of composition and oxidation states on chromium-containing silicate glasses from MD simulations using machine learning interatomic potentials**

C. Lopez Puga\*<sup>1</sup>; X. Lu<sup>2</sup>; J. Vienna<sup>3</sup>; J. Du<sup>1</sup>

1. University of North Texas, Material Science and Engineering, USA
2. Pacific Northwest National Lab, Energy and Environment Directorate, USA
3. Pacific Northwest National Lab, USA

**4:40 PM**

#### **(SPRING-SYM 36- 16-2026) Brittle-brittle glassy composite design via quantum combinatorial optimization**

Y. Shi\*<sup>1</sup>; J. Shi<sup>2</sup>; L. Huang<sup>2</sup>; X. Li<sup>2</sup>; A. Leicester<sup>2</sup>; A. Zhu<sup>2</sup>

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

**5:00 PM**

#### **(SPRING-SYM 36- 17-2026) Structure and deformation behavior of borate glass: Simulation study**

S. Urata\*<sup>1</sup>

1. AGC Inc., Innovetive Technology Laboratories, Japan

**5:20 PM**

#### **(SPRING-SYM 36- 18-2026) Mechanistic understanding of nano-ductility in oxide glasses via molecular dynamics simulations**

A. Zhu\*<sup>1</sup>; Y. Shi<sup>1</sup>; L. Huang<sup>1</sup>

1. Rensselaer Polytechnic Institute, USA

**5:40 PM**

#### **(SPRING-SYM 36- 19-2026) Moving beyond binary nepheline prediction in high-level waste glasses with small data modeling (Invited)**

I. Sargin\*<sup>1</sup>

1. Middle East Technical University, Turkey

## **S37 GOMD Optical and Electronic Materials and Devices**

### **S37- Optical and Electronic Materials and Devices - II**

Room: Cascade Tower- Juniper

Session Chairs: Shiv Prakash Singh, International Advanced Research Center for Powder Metallurgy and New Materials (ARCI), India; Casey Schwarz, Ursinus College

**1:30 PM**

#### **(SPRING-SYM 37- 08-2026) Ceramics and glasses for terahertz optics and photonics (Invited)**

S. K. Sundaram\*<sup>1</sup>

1. Alfred University, Inamori School of Engineering, USA

**2:00 PM**

#### **(SPRING-SYM 37- 09-2026) Ceramic materials for ultra-high-temperature photonics (Invited)**

M. Leite\*<sup>1</sup>

1. UC Davis, Materials Science and Engineering, USA

**2:30 PM**

#### **(SPRING-SYM 37- 10-2026) Fluorescent glasses that efficiently convert UV to visible light for higher power and longer lasting solar panels**

M. Dejneka\*<sup>1</sup>; S. Yamada<sup>1</sup>; C. Spier<sup>1</sup>; J. Walter<sup>1</sup>

1. Corning Incorporated, USA

**2:50 PM**

#### **(SPRING-SYM 37- 11-2026) Tuning multispectral transparency: Effects of Ga<sub>2</sub>S<sub>3</sub> incorporation in Ge-Ga-Se-CsCl chalcogenide glass system.**

R. Sharma\*<sup>1</sup>; J. Marro<sup>2</sup>; A. Howe<sup>1</sup>; M. Kocher<sup>2</sup>; J. Whetstone<sup>2</sup>; D. Wiedeman<sup>1</sup>; E. Laczko<sup>1</sup>; K. Richardson<sup>3</sup>

1. University of Central Florida, USA
2. Schott, USA
3. University of Central Florida, CREOL, USA

**3:10 PM**

**Break**

**3:30 PM****(SPRING-SYM 37- 12-2026) Glass formation and crystallization tendencies of  $22.5\text{GeSe}_2\text{-}67.5\text{As}_2\text{Se}_3\text{-}10\text{Bi}_2\text{Se}_3$** 

S. Banker<sup>\*1</sup>; C. Kosan<sup>1</sup>; J. Klucinec<sup>1</sup>; E. Lackzo<sup>1</sup>; Z. G. Ramsey<sup>2</sup>; G. Sop Tange<sup>2</sup>; D. Wiedeman<sup>1</sup>; R. Sharma<sup>1</sup>; M. Kang<sup>2</sup>; K. Richardson<sup>1</sup>

1. University of Central Florida, CREOL, USA
2. Alfred University, Ceramic Engineering Program, USA

**3:50 PM****(SPRING-SYM 37- 14-2026) Nitrogen doping of sodium mixed-oxy-sulfide glassy solid electrolytes**

K. Maier<sup>\*1</sup>; N. Tader<sup>1</sup>; A. Wakefield<sup>1</sup>; S. Kmiec<sup>1</sup>; S. W. Martin<sup>1</sup>

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

**4:10 PM****(SPRING-SYM 37- 15-2026) Patterning new functionalities in phase change material  $\text{Sb}_2\text{S}_3$  via lattice curvature**

J. Kaman<sup>\*1</sup>

1. Lehigh University, Materials Science and Engineering, USA

**4:30 PM****(SPRING-SYM 37-16-2026) Nonlinear optics in ultra-silicon-rich nitride devices (Invited)**

D. T. Tan<sup>\*1</sup>; B. Sohn<sup>1</sup>; J. Choi<sup>1</sup>; D. Ng<sup>1</sup>; G. Chen<sup>1</sup>; A. Chowdury<sup>1</sup>; X. Wang<sup>1</sup>; Y. Wang<sup>1</sup>

1. Singapore University of Technology and Design, Singapore
2. Institute of Microelectronics, Singapore

**Posters**

Room: Olympic Tower- Evergreen Ballroom EFGH1

**5:30 PM****(SPRING-POSTER-U01-2026) Reduction of atomically flat epitaxial  $\text{WO}_3$  thin films to conducting  $\text{WO}_{3-x}$  suboxide phases**

J. Feldon<sup>\*1</sup>; M. Kiaba<sup>2</sup>; J. Fowlie<sup>1</sup>

1. Northwestern University, USA
2. Northwestern University, Materials science and Engineering, USA

**(SPRING-POSTER-U02-2026) In-situ study of phase formation in the Nb – W – Mo – O Wadsley-Roth system**

R. Kavanagh<sup>\*1</sup>; R. Santiago<sup>1</sup>; I. Milisavljevic<sup>1</sup>; C. Sturgill<sup>2</sup>; S. Wechsler<sup>2</sup>; R. R. Rajabi<sup>2</sup>; M. Muhit<sup>2</sup>; M. Kumar<sup>2</sup>; N. Karimitari<sup>2</sup>; H. zur Loye<sup>2</sup>; C. Sutton<sup>2</sup>; M. Stefik<sup>2</sup>; S. T. Misture<sup>1</sup>

1. Alfred University, Inamori School of Engineering, USA
2. University of South Carolina, Chemistry and Biochemistry, USA

**(SPRING-POSTER-U04-2026) Atomic-resolution strain analysis in swift-heavy ion-irradiated high-entropy pyrochlore oxide**

C. Harris<sup>\*1</sup>; R. Subedi<sup>1</sup>; W. J. Weber<sup>2</sup>; Y. Zhang<sup>3</sup>; S. Kalinin<sup>2</sup>; M. Ziatdinov<sup>3</sup>; R. Sachan<sup>1</sup>

1. Oklahoma State University, School of Mechanical and Aerospace Engineering, USA
2. University of Tennessee, Materials Science & Engineering, USA
3. Oak Ridge National Laboratory, USA

**(SPRING-POSTER-U05-2026) Interpretable graph neural networks for classifying structure and magnetism in delafossite compounds**

J. Joseph<sup>\*1</sup>; D. Kiem<sup>2</sup>; S. Yeom<sup>2</sup>; M. Yoon<sup>2</sup>

1. Texas A&M University, Artie McFerrin Department of Chemical Engineering, USA
2. Oak Ridge National Laboratory, USA

**(SPRING-POSTER-U06-2026) Modifying germania and germania-silica nanoparticle chemistry via polyol addition**

M. K. Schaefer<sup>\*2</sup>; E. Hicks<sup>2</sup>; Z. Alhejaj<sup>2</sup>; J. F. Destino<sup>1</sup>

1. Creighton University, Chemistry & Biochemistry, USA
2. Creighton University College of Arts and Sciences, Chemistry & Biochemistry, USA

**(SPRING-POSTER-U07-2026) Influence of fumed silica type and solvent mixtures on direct ink write glass additive manufacturing**

R. G. Emerson<sup>\*1</sup>; N. W. Tobin<sup>1</sup>; J. C. Chou<sup>1</sup>; M. Murthi<sup>1</sup>; J. F. Destino<sup>1</sup>

1. Creighton University, Chemistry & Biochemistry, USA

**(SPRING-POSTER-U08-2026) Spectroscopic analysis of multi-layered, 3D-printable germania-silica nanoparticles**

L. D. O'Keefe<sup>\*1</sup>; S. J. Garapati<sup>1</sup>; M. Murthi<sup>1</sup>; J. F. Destino<sup>1</sup>

1. Creighton University College of Arts and Sciences, Chemistry & Biochemistry, USA

**(SPRING-POSTER-U09-2026) Synthesis and analysis of metal-doped nanoparticles for glass additive manufacturing**

M. J. Varguez<sup>\*1</sup>; A. R. Carr<sup>2</sup>; M. Murthi<sup>1</sup>; J. F. Destino<sup>1</sup>

1. Creighton University College of Arts and Sciences, Chemistry & Biochemistry, USA
2. Iowa State University, Materials Science and Engineering, USA

**(SPRING-POSTER-U10-2026) Scanning electron microscopy & energy dispersive X-ray spectroscopy of multi-layered, mixed-composition glass nanoparticles**

S. J. Garapati<sup>\*2</sup>; L. D. O'Keefe<sup>1</sup>; M. Murthi<sup>2</sup>; J. F. Destino<sup>2</sup>

1. Creighton University, USA
2. Creighton University College of Arts and Sciences, Chemistry & Biochemistry, USA

**(SPRING-POSTER-U11-2026) Exploration of aluminophosphate materials for long-term storage of radioiodine**

M. Lucy<sup>\*1</sup>; J. Ryan<sup>1</sup>; C. Lonergan<sup>1</sup>

1. Missouri University of Science and Technology, USA

**(SPRING-POSTER-U12-2026) Magnetic responses in Fe- and Sc-containing high entropy perovskite oxides**

L. Ibarra<sup>\*1</sup>; J. Barber<sup>1</sup>; Y. Son<sup>2</sup>; S. Trolrier-McKinstry<sup>2</sup>; C. M. Rost<sup>1</sup>

1. Virginia Polytechnic Institute and State University, Materials Science and Engineering, USA
2. Pennsylvania State University, Materials Science and Engineering, USA

**(SPRING-POSTER-U13-2026) Crystal growth quantification via electrical impedance spectroscopy**

B. Rondeau<sup>\*1</sup>; N. Elango<sup>2</sup>; C. B. Bragatto<sup>1</sup>

1. Alfred University, Engineering Department, USA
2. University of Minnesota Twin Cities, USA

**(SPRING-POSTER-U14-2026) A reliable framework for estimating viscosity from molecular dynamics**

N. Broekman<sup>\*1</sup>; L. E. Meyer<sup>1</sup>; C. Wilkinson<sup>1</sup>

1. Alfred University, Glass Science, USA

**(SPRING-POSTER-U15-2026) Wetting behavior of rare-earth containing glasses**

S. Uwase<sup>\*1</sup>; R. Roy<sup>1</sup>; M. Affatigato<sup>1</sup>

1. Coe College, Physics, USA

**(SPRING-POSTER-U16-2026) The impact of nitrogen incorporation on NaPSiSO glassy solid electrolytes**

N. Tader<sup>\*1</sup>; K. Maier<sup>1</sup>; A. Wakefield<sup>1</sup>; S. W. Martin<sup>1</sup>

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

**(SPRING-POSTER-U17-2026) Electrochemical analysis of lithium mixed-oxy-sulfide electrolytes:  $y\text{Li}_2\text{S} + (1-x)(1-y)\text{SiS}_2 + x(1-y)\text{Li}_{3.48}\text{SiO}_{3.74}$** 

A. R. Carr<sup>\*1</sup>; H. Cochran<sup>1</sup>; S. Leland<sup>1</sup>; S. W. Martin<sup>1</sup>

1. Iowa State University of Science and Technology, Materials Science & Engineering, USA

**(SPRING-POSTER-U18-2026) Identifying the effects of structural disproportionation on the physical and electrochemical properties of  $\text{Li}_2\text{S-SiS}_2$  glasses**

H. Cochran<sup>\*1</sup>; S. Kmiec<sup>1</sup>; S. W. Martin<sup>1</sup>

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

**(SPRING-POSTER-U19-2026) Influence of oxide precursors on the properties of  $\text{Li}_{2.35}\text{Si}_{2.8}\text{O}_{0.38}$  glasses**

I. Schrooten<sup>\*1</sup>; S. Kmiec<sup>1</sup>; S. W. Martin<sup>1</sup>

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

**(SPRING-POSTER-U20-2026) Temperature-dependent phase development during reactive sintering of YAG precursors**

E. W. Nugent<sup>\*1</sup>; C. Lonergan<sup>1</sup>

1. Missouri University of Science and Technology, USA

**(SPRING-POSTER-U21-2026) An improved approach for recycling diverse soda-lime-silicate glass cullet based on the Adam-Gibbs framework**

Y. Tkachenko<sup>\*1</sup>; E. Akirmak-Yamac<sup>3</sup>; C. Wilkinson<sup>2</sup>

1. New York State College of Ceramics at Alfred University, Glass Science Department, USA
2. Alfred University, Glass Science, USA
3. Alfred University, Inamori School of Engineering, USA

**(SPRING-POSTER-G01-2026) Direct visualization of sacrificial layer dissolution in freestanding membrane release using Cryo-ToF-SIMS**H. Kao\*<sup>1</sup>; M. Choi<sup>2</sup>; J. Yao<sup>2</sup>; C. Chang<sup>1</sup>; Z. Zhu<sup>3</sup>; Y. Du<sup>3</sup>

1. Oregon State University, School of Chemical, Biological and Environmental Engineering, USA
2. Pacific Northwest National Laboratory, Environmental Molecular Sciences Laboratory, USA
3. Pacific Northwest National Laboratory, Physical and Computational Sciences Directorate, USA

**(SPRING-POSTER-G02-2026) Tailoring the stability of antiferroelectric and ferroelectric phases in PbZrO<sub>3</sub> via cation stoichiometry control**S. Chang\*<sup>1</sup>; J. Yang<sup>1</sup>

1. National Cheng Kung University, Department of Physics, Taiwan

**(SPRING-POSTER-G03-2026) Operando UV-Vis reflectance spectroscopy for fuel cell electrode degradation: A feasibility study**C. S. Martin\*<sup>1</sup>; K. F. Valeti<sup>1</sup>; A. F. Staerz<sup>1</sup>; R. O'Hayre<sup>1</sup>

1. Colorado School of Mines, Metallurgical & Materials Engineering, USA

**(SPRING-POSTER-G04-2026) Characterizing the effect of sodium concentration in NaSiCON (Na<sub>1-x</sub>Zr<sub>2</sub>Si<sub>x</sub>P<sub>3-x</sub>O<sub>12</sub>): 36 mS/cm bulk conductivity achieved at x = 2.6, 2.8**C. Wang\*<sup>1</sup>; J. Sakamoto<sup>1</sup>

1. University of California Santa Barbara, Materials, USA

**(SPRING-POSTER-G05-2026) Resolving the missing wedge artifacts in nano-CT via machine-learning for energy storage materials**B. Hedrick\*<sup>1</sup>; D. Hou<sup>2</sup>

1. Clemson University College of Engineering Computing and Applied Sciences, Materials Science, USA
2. Clemson University, Materials Science and Engineering, USA

**(SPRING-POSTER-G06-2026) Integrated semantic data pipeline for degradation and reliability assessment of Multi-Layer Ceramic Capacitors**R. Kundu\*<sup>1</sup>; J. A. Lample<sup>1</sup>; F. J. Kelly<sup>1</sup>; R. Lin<sup>1</sup>; R. H. French<sup>1</sup>; A. Sehirlioglu<sup>1</sup>

1. Case Western Reserve University, Department of Materials Sc. & Eng., USA

**(SPRING-POSTER-G07-2026) Retraining of machine learning interatomic potentials for accurate modeling in garnet-type solid electrolytes**C. Lopez Puga\*<sup>1</sup>; I. Migliaro<sup>2</sup>; J. Du<sup>1</sup>

1. University of North Texas, Material Science and Engineering, USA
2. The University of Texas at Dallas School of Natural Sciences and Mathematics, USA

**(SPRING-POSTER-G08-2026) Simulation of dielectric response and field distribution in SiO<sub>2</sub>-coated carbon black epoxy nanocomposite**G. Patil\*<sup>1</sup>; R. A. Gerhardt<sup>1</sup>

1. Georgia Institute of Technology, Materials Science and Engineering, USA

**(SPRING-POSTER-G09-2026) Polishing of high-aspect ratio features in silicon nitride using a hybrid thermochemical-mechanical process**G. Villeneuve\*<sup>1</sup>; R. Wuthrich<sup>2</sup>; L. Hof<sup>1</sup>

1. Ecole de technologie superieure, Mechanical Engineering, Canada
2. Concordia University, Mechanical, Industrial and Aerospace Engineering, Canada

**(SPRING-POSTER-G10-2026) Post-firing acid activation of kaolin for enhanced catalyst support performance in ethanol steam reforming**O. P. Olaleye\*<sup>1</sup>; S. Ricote<sup>3</sup>; G. Coors<sup>4</sup>; A. F. Staerz<sup>1</sup>; I. Reimanis<sup>2</sup>

1. Colorado School of Mines, Metallurgical and Materials Engineering, USA
2. Colorado School of Mines, USA
3. Colorado School of Mines, Mechanical Engineering, USA
4. Hydrogen Helix, USA

**(SPRING-POSTER-G11-2026) Developing Translucent Alumina through Air Sintering of a Low-Organic Slip System**I. Geven\*<sup>2</sup>; E. Karadagli<sup>1</sup>

1. Roketsan Roket Sanayii ve Ticaret AS, Turkey
2. Orta Dogu Teknik Universitesi, Turkey

**(SPRING-POSTER-G12-2026) Matrix particle size and lead volatilization effects on templated grain growth of Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>-PbTiO<sub>3</sub>**B. Downing\*<sup>1</sup>

1. Colorado School of Mines, USA

**(SPRING-POSTER-G13-2026) Deposition of thin films utilizing intermetallic Ce-Co-Ge targets**M. G. Anderson\*<sup>1</sup>; L. Wang<sup>2</sup>; Y. Du<sup>3</sup>; J. S. Smith<sup>1</sup>; G. McCandless<sup>1</sup>; J. Y. Chan<sup>1</sup>

1. Baylor University, Chemistry, USA
2. Pacific Northwest National Laboratory, USA
3. PNNL, USA

**(SPRING-POSTER-G14-2026) 3D printing of trabecular mimicking bone scaffolds with a focus on accessibility in a clinical setting**R. A. Gomez-Guevara\*<sup>1</sup>; A. Prasad<sup>1</sup>

1. Florida International University, Biomedical Engineering, USA

**(SPRING-POSTER-G15-2026) A data-driven epidemiological framework for degradation-focused reliability assessment of Multi-Layer Ceramic Capacitors**R. Kundu\*<sup>1</sup>; R. Lin<sup>1</sup>; J. A. Lample<sup>1</sup>; R. H. French<sup>1</sup>; A. Sehirlioglu<sup>1</sup>

1. Case Western Reserve University, Department of Materials Sc. & Eng., USA

**(SPRING-POSTER-G16-2026) Enhanced energy storage performance of lead hafnate-based antiferroelectric solid solutions**Y. Lin\*<sup>1</sup>; V. Chauhan<sup>1</sup>; Z. Ye<sup>1</sup>

1. Simon Fraser University, Chemistry, Canada

**(SPRING-POSTER-G18-2026) Role of Mn in valency shifts and overall magnetism in La-based high entropy oxide perovskite thin films**P. Kandel\*<sup>1</sup>; D. Miertschin<sup>1</sup>; B. Regmi<sup>1</sup>; A. Mazza<sup>2</sup>; A. Farhan<sup>1</sup>; T. Z. Ward<sup>3</sup>

1. Baylor University, Physics, USA
2. Los Alamos National Lab, USA
3. Oak Ridge National Lab, USA

**(SPRING-POSTER-G19-2026) Mapping crystal orientation within LabGeO<sub>5</sub> spherulites and laser fabricated seeds**R. W. Antonio\*<sup>1</sup>; E. Musterman<sup>2</sup>; C. O'Shaughnessy<sup>2</sup>; A. Kiss<sup>2</sup>; V. Dierolf<sup>1</sup>; H. Jain<sup>3</sup>

1. Lehigh University, Materials Science & Engineering, USA
2. Brookhaven National Laboratory, USA
3. Corning Incorporated, USA
4. Lehigh University, Physics, USA
5. Lehigh University, International Materials Institute for New Functionality in Glass, USA

**(SPRING-POSTER-G20-2026) Photon Correlation Spectroscopy in Alkali-Germanate Glass Melts**D. Olabode\*<sup>1</sup>; D. Sidebottom<sup>1</sup>

1. Creighton University, Physics, USA

**(SPRING-POSTER-01-2026) Loss-engineered polymer composites for broadband electromagnetic shielding**D. Bosomtwi\*<sup>1</sup>; A. Peretti<sup>1</sup>; S. Bishop<sup>2</sup>; A. S. Padgett<sup>3</sup>

1. Sandia National Laboratories, USA
2. Sandia National Laboratories, Materials, USA
3. Sandia National Laboratories, High Voltage Sciences, USA

**(SPRING-POSTER-02-2026) Effect of 490 °C solution treatment time on the microstructure and conductivity of an Al-Si-Mg-Cu die-casting alloy for EV motor housings**N. Kim\*<sup>1</sup>; N. Sim<sup>1</sup>; K. Choi<sup>1</sup>; S. Ha<sup>1</sup>; S. Kim<sup>1</sup>; Y. Yoon<sup>1</sup>

1. Korea Institute of Industrial Technology, Materials Supply Chain R&D Department, Republic of Korea

**(SPRING-POSTER-03-2026) Functional agents for functional materials**B. Dryzhakov\*<sup>1</sup>; E. Herron<sup>2</sup>

1. Oak Ridge National Lab, Center for Nanophase Materials Sciences, USA
2. Oak Ridge National Laboratory Computing and Computational Sciences Directorate, National Center for Computational Science, USA

**(SPRING-POSTER-04-2026) MoS<sub>2</sub>/PEI ceramic nanofiltration membranes for high-performance semiconductor wastewater treatment**H. Kim<sup>1</sup>; C. Park\*<sup>1</sup>

1. Ewha Womans University, Department of Environmental Science and Engineering, Republic of Korea

## (SPRING-POSTER-05-2026) Interparticle comminution of $Al_2O_3$ , $MgO$ , and $SiO_2$ as represented by their compaction fracture resistance ( $K_{COMP}$ )

R. E. Huk<sup>\*1</sup>; A. Wereszczak<sup>2</sup>

1. The University of Tennessee Knoxville Tickle College of Engineering, Institute for Nuclear Security, USA
2. Oak Ridge National Lab, USA

## (SPRING-POSTER-06-2026) SWICHBaDNESS: A mnemonic for morphology and material characteristics that affect powder flow behavior

M. D. Loveday<sup>\*1</sup>; A. Wereszczak<sup>1</sup>; W. M. Carty<sup>2</sup>

1. Oak Ridge National Laboratory, Materials Science and Technology Division, USA
2. Ceramic Consulting, LLC, USA

## (SPRING-POSTER-07-2026) Na-assisted low-temperature synthesis of transition metal nitride crystal grains from oxides and boron nitride

T. Yamada<sup>\*1</sup>; T. Sekiya<sup>2</sup>; N. Kuge<sup>2</sup>; H. Yamane<sup>1</sup>

1. Tohoku Daigaku, Institute of Multidisciplinary Research for Advanced Materials, Japan
2. Graduate School of Engineering, Tohoku University, Japan

## (SPRING-POSTER-08-2026) Exploration of the brittle-to-ductile transition as a function of temperature in milled brittle materials

S. Edwards<sup>\*1</sup>; R. Parten<sup>1</sup>; R. E. Huk<sup>1</sup>; A. Boyd<sup>1</sup>; C. Rhine<sup>1</sup>; A. Wereszczak<sup>2</sup>; E. Ghezawi<sup>2</sup>

1. The University of Tennessee Knoxville Tickle College of Engineering, Institute for Nuclear Security, USA
2. Oak Ridge National Lab, USA

## (SPRING-POSTER-09-2026) The enhancement of durability of ammonia-fed SDC-based SOFC via anode modification with the $Co_2FeGe$ Heusler alloys

J. Lin<sup>1</sup>; C. Yang<sup>\*1</sup>

1. National Taipei University of Technology, chemical engineering, Taiwan

## (SPRING-POSTER-10-2026) Improvement of technetium retention during vitrification of direct feed low activity waste (DFLAW) by reductant boron nitride

G. Wang<sup>\*1</sup>; J. Lang<sup>1</sup>; V. Gervasio<sup>2</sup>; J. C. Rigby<sup>3</sup>; J. Marcial<sup>4</sup>; W. C. Eaton<sup>1</sup>; A. Kruger<sup>5</sup>

1. Pacific Northwest National Laboratory, USA
2. Pacific Northwest National Lab, Energy and Environment Directorate, USA
3. PNNL, Radiological Materials Group, USA
4. Pacific Northwest National Laboratory, Materials Testing and Development team, USA
5. US Department of Energy, Office of River Protection, USA

## (SPRING-POSTER-11-2026) Enabling novel phenomena in nanocrystalline ceramics via Environmentally Controlled – Pressure Assisted Sintering

J. Wollmershauser<sup>\*1</sup>; K. P. Anderson<sup>1</sup>; B. L. Greenberg<sup>2</sup>; B. N. Feigelson<sup>2</sup>; E. Gorzkowski<sup>1</sup>

1. U.S. Naval Research Laboratory, Materials Science & Technology Division, USA
2. US Naval Research Laboratory, Electronic Science Division, USA

## (SPRING-POSTER-12-2026) Processing and thermal properties of high-entropy carbides for ultrahigh temperature applications

A. Salanova Giampaoli<sup>1</sup>; J. Wollmershauser<sup>1</sup>; E. Gorzkowski<sup>\*1</sup>

1. U.S. Naval Research Laboratory, Materials Science & Technology Division, USA

## (SPRING-POSTER-13-2026) Revisiting transient nucleation through differential thermal analysis

E. Manqueros<sup>\*1</sup>; K. S. Ranasinghe<sup>1</sup>

1. Kennesaw State University College of Science and Mathematics, Physics, USA

## (SPRING-POSTER-14-2026) Fictive temperature quantification of $TiO_2$ - $SiO_2$ glass via Raman and IR spectroscopies

K. Hufziger<sup>\*1</sup>; C. Li<sup>1</sup>; J. Tingley<sup>1</sup>; K. Hrdina<sup>1</sup>

1. Corning Incorporated, USA

## (SPRING-POSTER-15-2026) Re-Establishing the Center for Glass Research: Industry-driven innovation in glass science

M. Montazerian<sup>\*1</sup>; C. Wilkinson<sup>2</sup>; C. Lonergan<sup>3</sup>; N. J. Smith<sup>3</sup>; S. H. Kim<sup>5</sup>; J. C. Mauro<sup>1</sup>

1. The Pennsylvania State University Department of Materials Science and Engineering, USA
2. Alfred University, Glass Science, USA
3. Corning Incorporated, USA
4. Missouri University of Science & Technology, USA
5. Pennsylvania State University, Chemical Engineering & Materials Science, USA

## (SPRING-POSTER-16-2026) Effects of $B_2O_3$ , $CaO$ , and $Fe_2O_3$ on the solubility of $Cr_2O_3$ in high-level waste glasses

V. Gervasio<sup>\*1</sup>; X. Lu<sup>1</sup>; T. Jin<sup>2</sup>; J. V. Crum<sup>2</sup>; B. Riley<sup>2</sup>; N. A. Lumetta<sup>2</sup>; G. Torres<sup>2</sup>; A. Kruger<sup>2</sup>; J. Vienna<sup>2</sup>

1. Pacific Northwest National Lab, Energy and Environment Directorate, USA
2. Pacific Northwest National Laboratory, USA
3. DOE, Hanford Field Office, USA

# Wednesday, April 15, 2026

## Plenary

### Bioceramics and Manufacturing Division Plenary

Room: Olympic Tower- Grand EFGHIJK

Session Chairs: Kalpana Katti, North Dakota State University; Bai Cui, University of Nebraska–Lincoln; Chao Ma, Arizona State University; Hrishikesh Kamat, James R. Glidewell Dental Ceramics

**8:30 AM**

#### Manufacturing announcements and introductions

**8:40 AM**

#### (PLEN-004-2026) Ceramic Processing: Think Like a Particle?

W. M. Carty<sup>\*1</sup>

1. Alfred University, NYS College of Ceramics, USA

**9:30 AM**

#### Bioceramics announcements and introductions

**9:40 AM**

#### (PLEN-005-2026) Biomimetic, Biohybrid and Bioactive Functional Materials with Meta-Adaptive Solutions Enabled by AI-Guided Multiscale Interface Engineering

C. Tamerler<sup>\*1</sup>

1. University of Kansas, Mechanical Eng & BioEngineering, USA

## S5 BSD|ED Oxide Quantum Materials

### S5- Superconductivity in nickelates

Room: Olympic Tower- Grand A

Session Chair: Bai Yang Wang, Stanford University

**11:00 AM**

#### (SPRING-SYM 5- 18-2026) Spin density wave order in different structural polymorphs of the high-temperature superconductor $La_3Ni_2O_7$ (Invited)

K. M. Shen<sup>\*1</sup>; Y. Wu<sup>1</sup>; H. Yang<sup>3</sup>; Y. Zhao<sup>1</sup>; M. Nguyen<sup>2</sup>; D. Park<sup>5</sup>; A. Georgescu<sup>2</sup>; D. Hawthorn<sup>5</sup>; D. Muller<sup>2</sup>; D. Schlom<sup>1</sup>

1. Cornell University, Physics, USA
2. Indiana University Bloomington, Chemistry, USA
3. Cornell University, Applied and Engineering Physics, USA
4. Cornell University, Department of Materials Science and Engineering, USA
5. University of Waterloo Faculty of Science, Physics and Astronomy, Canada

**11:30 AM**

#### (SPRING-SYM 5- 19-2026) Resonant X-ray scattering spectroscopy study on bilayer nickelates $La_2PrNi_2O_7$ (Invited)

J. Li<sup>1</sup>; C. T. Parzyck<sup>2</sup>; Y. Liu<sup>\*1</sup>; E. Lomeli<sup>1</sup>; T. Kim<sup>3</sup>; H. Lee<sup>4</sup>; E. Ko<sup>1</sup>; Y. Tarn<sup>1</sup>; C. Kuo<sup>4</sup>; Z. Zhuo<sup>5</sup>; R. Sutarto<sup>6</sup>; C. Jia<sup>2</sup>; V. Thampy<sup>4</sup>; B. Moritz<sup>1</sup>; Y. Yu<sup>8</sup>; J. Lee<sup>4</sup>; V. Bisogni<sup>3</sup>; T. Devereaux<sup>1</sup>; H. Hwang<sup>1</sup>; W. Lee<sup>1</sup>

1. Stanford Linear Accelerator Center, SIMES, USA
2. Stanford Linear Accelerator Center, Photon Science, USA
3. Brookhaven National Laboratory, USA
4. Stanford Synchrotron Radiation Lightsource, USA
5. Advanced Light Source, USA
6. Canadian Light Source Inc, Canada
7. University of Florida, USA
8. Fudan University, China

## S6 BSD|ED Complex Oxide Thin Films and Heterostructures

### S6- Strain, defect, and interface engineering: experiments and theory II

Room: Cascade Tower- Regency E

Session Chair: Le Wang, Pacific Northwest National Laboratory

11:00 AM

#### (SPRING-SYM 6- 11-2026) Unit-Cell engineering of RuO<sub>2</sub>/TiO<sub>2</sub> heterostructure: Strain, polarization, and altermagnetism (Invited)

B. Jalan\*

1. University of Minnesota, USA

11:30 AM

#### (SPRING-SYM 6- 12-2026) Harnessing off-stoichiometry for control of extended defect structures in complex oxide thin films (Invited)

P. Sushko\*

1. Pacific Northwest National Lab, Physical Sciences Division, USA

## S11 BSD|ED Characterization of Structure - Property Relationships in Functional Ceramics

### S11- Addressing open questions in functional ceramics

Room: Olympic Tower- Evergreen B

Session Chair: Russell Maier, National Institute of Standards and Technology

11:00 AM

#### (SPRING-SYM 11- 18-2026) Quantitative structure-property relations of piezoelectric metamaterials

A. Pramanick\*; C. Baboori; L. Daniel<sup>2</sup>; F. Albertini<sup>3</sup>; F. H. Gjørup<sup>4</sup>; M. Jørgensen<sup>5</sup>; Y. Li<sup>6</sup>; D. A. Hall<sup>7</sup>

1. New York State College of Ceramics at Alfred University, Ceramics Engineering, USA
2. Universite Paris-Saclay CentraleSupélec, France
3. Université de Versailles Saint-Quentin-en-Yvelines, France
4. Lunds Universitet, Sweden
5. MAX IV-laboratoriet, Sweden
6. The University of Manchester, United Kingdom
7. University of Manchester, School of Materials, United Kingdom

11:20 AM

#### (SPRING-SYM 11- 19-2026) Elucidating Structure–Property Relationships in High Curie Temperature Piezoelectric Ceramics

M. Chandra\*; B. N. Richtig<sup>2</sup>; M. Dolgos<sup>1</sup>; A. M. Manjon Sanz<sup>1</sup>

1. Oak Ridge National Laboratory Neutron Sciences Directorate, USA
2. University of Calgary, Chemistry, Canada

11:40 AM

#### (SPRING-SYM 11- 20-2026) Electromagnetic Interference Study of Beta Silicon Carbide Composites

R. Titus\*; R. A. Gerhardt<sup>1</sup>

1. Georgia Institute of Technology, Materials Science & Engineering, USA

## S12 BSD|ED Electronic and Ionic Materials in Energy Storage and Conversion Systems

### S12 and S32- Ionic/Electric Materials (Joint Session between S12 and S32)

Room: Olympic Tower- Grand C

Session Chairs: Jianhua Tong, Clemson University; Hui Xiong, Boise State University

11:00 AM

#### (SPRING-SYM 12- 22-2026) Controlling metal exsolution on epitaxial oxides by external drivers—Role of elastic strain and ion irradiation (Invited)

B. Yildiz\*

1. Massachusetts Institute of Technology, USA

11:30 AM

#### (SPRING-SYM 12- 23-2026) Proton-conducting oxides for energy conversion and storage (Invited)

C. Duan\*

1. University of Utah, Chemical Engineering, USA

12:00 PM

#### (SPRING-SYM 12- 24-2026) Entropy-tailored multi-phase catalysts for direct ammonia protonic ceramic fuel cells

D. Kim\*; D. Park<sup>2</sup>; I. Jeong<sup>3</sup>; S. Oh<sup>1</sup>; H. Kim<sup>1</sup>; M. Lee<sup>1</sup>; S. Lee<sup>2</sup>; K. Lee<sup>1</sup>; K. Roh<sup>3</sup>; J. Bae<sup>1</sup>; T. Shin<sup>4</sup>; K. Lee<sup>5</sup>

1. Korea Advanced Institute of Science and Technology, Republic of Korea
2. Korea Institute of Ceramic Engineering and Technology, Republic of Korea
3. Korea Institute of Geoscience and Mineral Resources, Republic of Korea
4. Korea Institute of Ceramic Engineering & Technology, Energy Materials Center, Republic of Korea
5. Korea Advanced Institute of Science and Engineering (KAIST), Mechanical Engineering, Republic of Korea

## S13 BSD|ED Defects and Transport in Ceramics

### S13- Bulk Defects and Transport in Ceramics I

Room: Olympic Tower- Evergreen C

Session Chairs: Xin Xu, Arizona State University; Tiffany Kaspar, Pacific Northwest National Lab

11:00 AM

#### (SPRING-SYM 13- 01-2026) Defect chemistry and hydrogen production capacity of Sr(Ti<sub>0.5</sub>Mn<sub>0.5</sub>)O<sub>3-δ</sub> (Invited)

S. M. Haile\*; X. Qian<sup>1</sup>; J. Kim<sup>1</sup>; H. Bae<sup>1</sup>; D. Veigel<sup>2</sup>

1. Northwestern University, Materials Science and Engineering, USA
2. Northwestern University, USA

11:30 AM

#### (SPRING-SYM 13- 02-2026) Defect complexion induced electrostriction in doped Ceria: Origin and Implications (Invited)

Y. Qi\*; B. Xu<sup>1</sup>; A. I. Frenkel<sup>2</sup>; I. Lubomirsky<sup>3</sup>

1. Brown University, School of Engineering, USA
2. Stony Brook University, USA
3. Weizmann Institute of Science, Israel

## S14 BSD|ED|MD AI/ML-Driven Discovery/ Manufacturing and Characterizations

### S14- AI/ML-Driven Discovery, Manufacturing and Characterizations I

Room: Olympic Tower- Grand EFGHIJK

Session Chairs: Yongtao Liu, Oak Ridge National Lab; Davi Febba, National Renewable Energy Laboratory

11:00 AM

#### (SPRING-SYM 14- 01-2026) Towards integrated materials development via AI, physics, and experimentation (Invited)

N. Paulson\*

1. Argonne National Laboratory Computing Environment and Life Sciences Directorate, Data Science and Learning Division, USA

11:30 AM

#### (SPRING-SYM 14- 02-2026) Data guided remote epitaxy: Human-AI co-optimization of BaTiO<sub>3</sub> thin films on graphene

A. Haque\*; J. Chowdhury<sup>1</sup>; D. Yimam<sup>1</sup>; R. Bulanadi<sup>1</sup>; I. Vlasiouk<sup>1</sup>; J. Lasseter<sup>1</sup>; S. Ghosh<sup>1</sup>; C. Rouleau<sup>1</sup>; K. Xiao<sup>1</sup>; Y. Liu<sup>1</sup>; E. Zarkadoulas<sup>1</sup>; R. K. Vasudevan<sup>1</sup>; S. Harris<sup>1</sup>

1. Oak Ridge National Laboratory, Center for Nanophase Nanophase Material Science, USA

## S18 MD|BSD|BIO|GOMD New Frontiers in Additive Manufacturing of Ceramic Materials

### **S18- New approaches for AM processes of ceramics and ceramic-matrix composites II**

Room: Olympic Tower- Grand B

Session Chair: Erina Baynojiir Joyee, University of North Carolina at Charlotte

**11:00 AM**

#### **(SPRING-SYM 18- 20-2026) Photoswitchable curing for DLP 3D printing of polymer-ceramic composites (Invited)**

E. Joyee\*<sup>1</sup>; S. Sagor<sup>1</sup>

1. University of North Carolina at Charlotte, USA

**11:30 AM**

#### **(SPRING-SYM 18- 21-2026) Densification of binder jet additively manufactured ceramics using preceramic polymers (Invited)**

N. Ku\*<sup>1</sup>; M. P. Ivill<sup>1</sup>; S. D. Jackson<sup>2</sup>; M. C. Golt<sup>1</sup>

1. DEVCOM - Army Research Laboratory, Ceramics and Transparent Materials Branch, USA
2. DEVCOM - Army Research Laboratory, Manufacturing Sciences and Technology Branch, USA

## S20 BSD Symposium to Honor W. Craig Carter

### **S20- Materials and AI**

Room: Cascade Tower- Regency B

Session Chair: Daniel Lewis, Rensselaer Polytechnic Institute

**11:00 AM**

#### **(SPRING-SYM 20- 17-2026) Semantic materials science: Ontology, graph neural networks and knowledge graphs for FAIR, learning, and reasoning (Invited)**

R. H. French\*<sup>1</sup>

1. Case Western Reserve University, Materials Science, USA

**11:30 AM**

#### **(SPRING-SYM 20- 18-2026) Geometry models in industry: A Craig student wanders through the AI revolution (Invited)**

R. Zucker\*<sup>1</sup>

1. Backflip AI, AI / engineering, USA

## S27 ED Two-Dimensional Materials - Synthesis/Theories/ Properties and Applications

### **S27- Advanced 2D materials devices and systems**

Room: Cascade Tower- Regency A

Session Chair: Haozhe Wang, Duke University

**11:00 AM**

#### **(SPRING-SYM 27- 19-2026) 2D materials for advanced logic and 3D integration (Invited)**

S. Das\*<sup>1</sup>

1. The Pennsylvania State University, ESM, USA

## S31 ED Superconducting and 2D Magnetic Materials - From Basic Science to Applications

### **S31- Low dimensional superconductors, flat bands, and Kagome superconductors**

Room: Cascade Tower- Regency FG

Session Chair: Jun Xiao, University of Wisconsin-Madison

**11:00 AM**

#### **(SPRING-SYM 31- 21-2026) Interplay between superconductivity and charge density wave states in kagome and pyrochlore-based superconductors (Invited)**

S. Wilson\*<sup>1</sup>

1. University of California Santa Barbara, Materials Department, USA

**11:30 AM**

#### **(SPRING-SYM 31- 22-2026) Two nearly decoupled superconducting gaps in CsV<sub>3</sub>Sb<sub>5</sub> (Invited)**

L. Balicas\*<sup>1</sup>

1. Baylor University, Physics, USA

## S4 BSD|ED Frontiers in Low Dimension Ferroic Oxides

### **S4- Oxide membranes and Multiferroics**

Room: Olympic Tower- Grand C

Session Chair: Yu-Tsun Shao, University of Southern California

**1:30 PM**

#### **(SPRING-SYM 4- 01-2026) Single-domain BiFeO<sub>3</sub> freestanding membranes for efficient magnetoelectric devices (Invited)**

C. Eom\*<sup>1</sup>

1. University of Wisconsin-Madison, Materials Science and Engineering, USA

**2:00 PM**

#### **(SPRING-SYM 4- 02-2026) Magnon generation, transport and detection in multiferroic heterostructures (Invited)**

J. Wang\*<sup>1</sup>

1. City University of Hong Kong, Physics, Hong Kong

**2:30 PM**

#### **(SPRING-SYM 4- 03-2026) Abnormal magnetic properties of ferroic thin films and membranes**

Z. Corey<sup>2</sup>; Q. Jia<sup>3</sup>; A. Chen\*<sup>1</sup>

1. Los Alamos National Lab, USA
2. University of Buffalo, USA
3. University at Buffalo, Materials Design and Innovation, USA

**2:50 PM**

**Break**

**3:10 PM**

#### **(SPRING-SYM 4- 04-2026) Fabrication of low-dimensional freestanding oxide membrane and its characterization by TEM (Invited)**

C. S. Chang\*<sup>1</sup>

1. Seoul National University, Republic of Korea

**3:40 PM**

#### **(SPRING-SYM 4- 05-2026) Deterministic manipulation of structural variants in freestanding antiferroelectric membranes (Invited)**

J. Yang\*<sup>1</sup>

1. National Cheng Kung University, Department of Physics, Taiwan

**4:10 PM****(SPRING-SYM 4- 06-2026) Large-area oxide moiré superlattices with clean interfaces and precise twist-angle control**

R. Ghanbari<sup>\*1</sup>; E. Rodrigues<sup>2</sup>; Y. Kim<sup>2</sup>; K. Koons<sup>3</sup>; A. Khandelwal<sup>3</sup>; K. Lebogang<sup>1</sup>; Y. Ding<sup>1</sup>; D. Barefoot<sup>1</sup>; Y. Wang<sup>1</sup>; Y. Liu<sup>2</sup>; H. Hwang<sup>3</sup>; H. Zhou<sup>4</sup>; M. Chi<sup>2</sup>; R. Xu<sup>1</sup>

1. North Carolina State University, USA
2. Oak Ridge National Laboratory, USA
3. Stanford University, USA
4. Argonne National Lab, Advanced Photon Source, USA
5. NC State University, Materials Science and Engineering, USA

**4:30 PM****(SPRING-SYM 4- 07-2026) Engineering ferroic oxides by freestanding membranes (Invited)**

S. Hong<sup>\*1</sup>

1. University of California, Davis, USA

**S6 BSD|ED Complex Oxide Thin Films and Heterostructures****S6- Strain, defect, and interface engineering: experiments and theory III**

Room: Cascade Tower- Regency E

Session Chairs: Sundar Kunwar, Los Alamos National Lab; Le Wang, Pacific Northwest National Laboratory

**1:30 PM****(SPRING-SYM 6- 13-2026) Engineering dislocations through epitaxy as a new route to investigate structure-property relationships: Insights from metal exsolution catalysts (Invited)**

M. L. Weber<sup>\*1</sup>; D. Jennings<sup>2</sup>; M. Kindelmann<sup>3</sup>; A. Sarantopoulos<sup>5</sup>; O. Preuß<sup>6</sup>; K. Sasaki<sup>4</sup>; X. Fang<sup>2</sup>; F. Gunkel<sup>2</sup>

1. Kyushu Daigaku, Next Generation Fuel Cell Research Center (NEXT-FC), Japan
2. Ruhr-Universität Bochum, Advanced Transmission Electron Microscopy, Faculty of Physics and Astrono, Germany
3. Danmarks Tekniske Universitet Institut for Energikonvertering og -lagring, Denmark
4. Kyushu University, Japan
5. Forschungszentrum Juelich, Peter Gruenberg Institute, Germany
6. Karlsruher Institut für Technologie, Germany

**2:00 PM****(SPRING-SYM 6- 14-2026) Harnessing interfacial interactions in perovskite oxide heterostructures (Invited)**

Y. Takamura<sup>\*1</sup>; I. Nihal<sup>2</sup>; M. Frame<sup>1</sup>; C. Klewe<sup>2</sup>

1. University of California Davis, Materials Science and Engineering, USA
2. E O Lawrence Berkeley National Laboratory, Advanced Light Source, USA

**2:30 PM****(SPRING-SYM 6- 16-2026) Structural, electronic, and transport properties of domain boundaries in epitaxial Fe<sub>3</sub>O<sub>4</sub>/MgO heterostructures**

S. Bhattacharya<sup>\*1</sup>; L. Wangoh<sup>1</sup>; Z. Yang<sup>1</sup>; L. Wang<sup>1</sup>; D. Peng<sup>1</sup>; L. Kovarik<sup>1</sup>; P. Sushko<sup>2</sup>; Y. Du<sup>1</sup>

1. Pacific Northwest National Laboratory, USA
2. Pacific Northwest National Lab, Physical Sciences Division, USA

**2:50 PM****Break****S6- In situ, operando, and advanced characterization**

Room: Cascade Tower- Regency E

Session Chair: Moritz Weber, Kyushku Daigaku

**3:10 PM****(SPRING-SYM 6- 17-2026) Exploring complex oxides with the new RSXS endstation at SSRL beamline 13-3 (Invited)**

C. Kuo<sup>\*1</sup>; H. Lee<sup>1</sup>; J. Lee<sup>1</sup>

1. Stanford Linear Accelerator Center, Stanford Synchrotron Radiation Lightsource, USA

**3:40 PM****(SPRING-SYM 6- 18-2026) Optically-induced unconventional polar mode in freestanding BiFeO<sub>3</sub>**

C. Chiu<sup>\*1</sup>; C. Wei<sup>1</sup>; J. Yang<sup>1</sup>; B. Guzelurk<sup>3</sup>

1. National Cheng Kung University, Physics, Taiwan
2. National Cheng Kung University, Department of Physics, Taiwan
3. Argonne National Laboratory, X-ray Science Division, USA

**4:00 PM****(SPRING-SYM 6- 20-2026) Proximity effects in lateral manganite homostructures**

C. Wei<sup>\*1</sup>; S. Ho<sup>1</sup>; Y. Chang<sup>1</sup>; C. Chiu<sup>1</sup>; S. Chen<sup>1</sup>; S. Hung<sup>1</sup>; H. Sun<sup>4</sup>; Y. Lin<sup>3</sup>; Y. Chen<sup>1</sup>; B. Guzelurk<sup>2</sup>; J. Lin<sup>2</sup>; J. Yang<sup>1</sup>

1. National Cheng Kung University, Physics, Taiwan
2. Diamond Light Source Ltd, United Kingdom
3. Kokuritsu Kenkyu Kaihatsu Hojin Sangyo Gijutsu Sogo Kenkyujo, Japan
4. Osaka Daigaku, Japan
5. Argonne National Laboratory, X-ray Science Division, USA

**S13 BSD|ED Defects and Transport in Ceramics****S13- Bulk Defects and Transport in Ceramics II**

Room: Olympic Tower- Evergreen C

Session Chair: Xin Xu, Arizona State University

**1:30 PM****(SPRING-SYM 13- 03-2026) Bismuth oxide electrolytes with superior conductivity and stability (Invited)**

E. D. Wachsman<sup>\*1</sup>

1. University of Maryland, USA

**2:00 PM****(SPRING-SYM 13- 04-2026) Defects and transport in ceramic solid electrolytes (Invited)**

Y. Hu<sup>\*1</sup>

1. Florida State University, Chemistry & Biochemistry, USA

**2:30 PM****(SPRING-SYM 13- 05-2026) The interplay of point defects in mixed ion-electron transport of lithium layered oxides (Invited)**

C. Chen<sup>\*1</sup>

1. National Taiwan University, Taiwan

**3:00 PM****Break****3:20 PM****(SPRING-SYM 13- 06-2026) Interstitialcy-mediated anion transport in  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> at moderate temperatures**

T. Kaspar<sup>\*1</sup>; K. Yano<sup>2</sup>; A. Kohnert<sup>2</sup>; B. Matthews<sup>1</sup>; S. Taylor<sup>1</sup>; B. P. Uberuaga<sup>4</sup>; D. Schreiber<sup>2</sup>

1. Pacific Northwest National Laboratory, Physical and Computational Sciences Directorate, USA
2. Pacific Northwest National Laboratory, Energy and Environment Directorate, USA
3. Los Alamos National Laboratory, USA
4. Los Alamos National Laboratory, Materials Science and Technology Division, USA

**3:40 PM****(SPRING-SYM 13- 07-2026) Decoupling electronic and ionic properties of mixed conducting oxides for application-specific materials design (Invited)**

M. Siebenhofer<sup>\*1</sup>; C. Steinbach<sup>1</sup>; J. Fleig<sup>1</sup>

1. TU Wien, Institute of Chemical Technologies and Analytics, Austria

**4:10 PM****(SPRING-SYM 13- 08-2026) Tailoring cation disorder in unconventional solid-state structures (Invited)**

D. Chen<sup>\*1</sup>

1. University of New Mexico College of Arts and Sciences, Chemistry, USA

**4:40 PM**

**(SPRING-SYM 13- 09-2026) A solid-solution approach to expand the room-temperature ductile perovskite oxide toolbox**

A. Frisch<sup>\*1</sup>; J. Zhang<sup>2</sup>; O. Preuß<sup>1</sup>; W. Lu<sup>2</sup>; X. Fang<sup>1</sup>

1. Karlsruhe Institute of Technology -KIT, Germany
2. Southern University of Science and Technology, China

**5:00 PM**

**(SPRING-SYM 13- 10-2026) An ensemble-averaged model to predict non-stoichiometric oxygen vacancy in doped ceria**

I. Hsieh<sup>\*1</sup>; W. Bian<sup>2</sup>; Y. Qi<sup>1</sup>

1. Brown University, School of Engineering, USA
2. Idaho National Laboratory, Energy and Environment Science and Technology, USA

## S14 BSD|ED|MD AI/ML-Driven Discovery/ Manufacturing and Characterizations

### **S14- AI/ML-Driven Discovery, Manufacturing and Characterizations II**

Room: Olympic Tower- Grand EFGHIJK

Session Chairs: Yongtao Liu, Oak Ridge National Lab; Davi Febba, National Renewable Energy Laboratory

**1:30 PM**

**(SPRING-SYM 14- 03-2026) Towards theory-in-the-loop for autonomous experiments – Workflows, ML models and ab initio developments for accelerated scientific discovery (Invited)**

P. Ganesh<sup>\*1</sup>

1. Oak Ridge National Lab, USA

**2:00 PM**

**(SPRING-SYM 14- 04-2026) Bridging human insight and AI for autonomous microscopy**

Y. Liu<sup>\*1</sup>; R. K. Vasudevan<sup>2</sup>

1. Oak Ridge National Lab, USA
2. Oak Ridge National Lab, Center for Nanophase Materials Sciences, USA

**2:20 PM**

**(SPRING-SYM 14- 05-2026) Finding stable crystals without full relaxation (Invited)**

P. Gorai<sup>\*1</sup>

1. Rensselaer Polytechnic Institute, Chemical & Biological Engineering, USA

**2:50 PM**

**(SPRING-SYM 14- 06-2026) Predicting and high throughput experimentally validating new zero and negative thermal expansion oxides**

A. R. Marotta<sup>\*1</sup>; R. R. Martin<sup>1</sup>; T. C. Douglas<sup>1</sup>; A. Peretti<sup>1</sup>; M. Blea-Kirby<sup>1</sup>; M. dean<sup>1</sup>; J. Boissiere<sup>1</sup>; M. Witman<sup>1</sup>; J. Greathouse<sup>1</sup>; P. Weck<sup>1</sup>; S. Bishop<sup>2</sup>

1. Sandia National Laboratories, USA
2. Sandia National Laboratories, Materials, USA

**3:10 PM**

**Break**

**3:30 PM**

**(SPRING-SYM 14- 07-2026) Accelerating solid-state materials discovery: An automated high-throughput synthesis and characterization platform (Invited)**

C. Wu<sup>\*1</sup>

1. MTI Corporation, USA

**4:00 PM**

**(SPRING-SYM 14- 08-2026) Toward multi-agent collaboration for materials synthesis and characterization (Invited)**

M. Ziatdinov<sup>\*1</sup>

1. Pacific Northwest National Laboratory, USA

**4:30 PM**

**(SPRING-SYM 14- 09-2026) High throughput combinatorial approach for the synthesis of lead free relaxor ferroelectric systems**

D. Zhang<sup>\*1</sup>; K. Harmon<sup>2</sup>; M. J. Zachman<sup>3</sup>; P. Lu<sup>4</sup>; Q. Tu<sup>5</sup>; A. Chen<sup>6</sup>

1. The University of Texas at Arlington, Materials Science and Engineering, USA
2. Stanford University, Materials Science, USA
3. Oak Ridge National Laboratory, USA
4. Sandia National Laboratories, USA
5. Texas A&M University System, Materials Science and Engineering, USA
6. Los Alamos National Lab, USA

**4:50 PM**

**(SPRING-SYM 14- 10-2026) Autonomous growth and characterization of oxide semiconductors (Invited)**

A. Zakutayev<sup>\*1</sup>

1. National Renewable Energy Laboratory, USA

## S17 BSD|ED Ceramics for the Hydrogen Economy

### **S17- Ceramics for the Hydrogen Economy**

Room: Olympic Tower- Grand A

Session Chair: Till Frömling, Technische Universität Darmstadt

**1:30 PM**

**(SPRING-SYM 17- 01-2026) Upscaling protonic ceramic electrolysis cells (Invited)**

Y. Kim<sup>2</sup>; J. Shah<sup>3</sup>; C. Schiller<sup>4</sup>; S. Ricote<sup>\*1</sup>

1. Colorado School of Mines, Mechanical Engineering, USA
2. Colorado School of Mines, Metallurgical and Materials Engineering, USA
3. HyET NoCarbon, USA
4. Allied Tech Supply, USA

**2:00 PM**

**(SPRING-SYM 17- 02-2026) Correlating spin state with air electrode performance in proton conducting ceramic fuel/ electrolysis cells (Invited)**

E. guo<sup>1</sup>; A. Seong<sup>1</sup>; I. Nevjestic<sup>1</sup>; V. Celorrio<sup>2</sup>; S. Skinner<sup>\*1</sup>

1. Imperial College London, United Kingdom
2. Diamond Light Source Ltd, United Kingdom

**2:30 PM**

**(SPRING-SYM 17- 03-2026) Processing and durability of fuel electrode-supported cells with Ni-GDC electrode (Invited)**

C. Lenser<sup>\*1</sup>; D. Ramler<sup>1</sup>; S. Kucharski<sup>1</sup>; I. Kogut<sup>2</sup>; A. Weber<sup>2</sup>; N. H. Menzler<sup>1</sup>

1. Forschungszentrum Julich GmbH, Institute of Energy Materials and Devices - Materials Synthesis and Processing (IMD-2), Germany
2. Karlsruher Institut für Technologie, Institute for Applied Materials (IAM-ET), Germany

**3:00 PM**

**Break**

**3:20 PM**

**(SPRING-SYM 17- 04-2026) Direct ink writing advanced Ga-doped LSM perovskite geometries for thermochemical hydrogen production**

A. Israel<sup>\*3</sup>; R. Thota<sup>1</sup>; E. Rigdon<sup>2</sup>; Y. Ghadge<sup>2</sup>; K. Driggers<sup>2</sup>; J. Scheffe<sup>2</sup>; J. C. Nino<sup>3</sup>

1. University of Florida, Chemical Engineering, USA
2. University of Florida, Mechanical and Aerospace Engineering, USA
3. University of Florida, Materials Science and Engineering, USA

**3:40 PM**

**(SPRING-SYM 17- 05-2026) Stabilization and Ionic Transport in  $\delta$ -Bi<sub>2</sub>O<sub>3</sub> Thin Films**

N. Huynh<sup>\*1</sup>; Z. Corey<sup>2</sup>; Q. Jia<sup>2</sup>; R. Guo<sup>3</sup>; C. Chen<sup>4</sup>; A. Chen<sup>5</sup>

1. The University of Texas at San Antonio College of Engineering, Electrical and Computer Engineering, USA
2. University at Buffalo, Materials Design and Innovation, USA
3. University of Texas, San Antonio, USA
4. University of Texas San Antonio, Physics, USA
5. Los Alamos National Lab, USA

**4:00 PM****(SPRING-SYM 17- 06-2026) Solid-oxide electrochemistry at elevated pressure (Invited)**N. Sullivan\*; R. O'Hayre; T. Vincent<sup>2</sup>; R. Braun<sup>1</sup>

1. Colorado School of Mines, Mechanical Engineering, USA
2. Colorado School of Mines, Metallurgical and Materials Engineering, USA
3. Colorado School of Mines, Electrical Engineering, USA

**S18 MD|BSD|BIO|GOMD New Frontiers in Additive Manufacturing of Ceramic Materials****S18- New approaches for AM processes of ceramics and ceramic-matrix composites III**

Room: Olympic Tower- Grand B

Session Chair: Monique McClain, Purdue University

**1:30 PM****(SPRING-SYM 18- 22-2026) Additive manufacturing of ceramic matrix composites with high fiber loadings (Invited)**M. McClain\*<sup>1</sup>

1. Purdue University, USA

**2:00 PM****(SPRING-SYM 18- 24-2026) Digital light projection 3D printing of transparent optical ceramics (Invited)**Y. Wu\*<sup>1</sup>

1. Alfred University, Kazuo Inamori School of Engineering, New York State College of Ceramics, USA

**2:30 PM****(SPRING-SYM 18- 25-2026) Leveraging preceramic polymers for AM of high temperature composites and semiconductor packaging (Invited)**T. Schaedler\*<sup>1</sup>; K. Porter<sup>1</sup>; P. Bui<sup>1</sup>; M. O'Masta<sup>1</sup>

1. HRL Laboratories, USA

**3:00 PM****Break****S18- New approaches for AM processes of ceramics and ceramic-matrix composites IV**

Room: Olympic Tower- Grand B

Session Chair: Tobias Schaedler, HRL Laboratories

**3:20 PM****(SPRING-SYM 18- 26-2026) Hydrothermal-assisted jet fusion additive manufacturing: A selective cold sintering approach for ceramics (Invited)**X. Song\*<sup>1</sup>

1. University of Iowa, Industrial and Systems Engineering, USA

**3:50 PM****(SPRING-SYM 18- 27-2026) Advancing oxide and non-oxide ceramics additive manufacturing for multifunctional structures in extreme environments (Invited)**S. Zaman<sup>2</sup>; Y. Lin\*<sup>1</sup>

1. The University of Texas at El Paso College of Engineering, Aerospace and Mechanical Engineering, USA
2. The University of Texas at El Paso College of Engineering, Mechanical Engineering, USA

**4:20 PM****(SPRING-SYM 18- 28-2026) DIW of Fiber-Reinforced Cyanate Ester IPNs and ZrB<sub>2</sub>-SiC UHTCMCs**S. Zaman\*<sup>1</sup>; Y. Lin<sup>1</sup>

1. The University of Texas at El Paso College of Engineering, Mechanical Engineering, USA

**4:40 PM****(SPRING-SYM 18- 29-2026) Optimization of ceramic vat photopolymerization by controlling resin rheology (Invited)**S. H. Hales\*<sup>1</sup>; R. Maier<sup>2</sup>

1. National Institute of Standards and Technology Material Measurement Laboratory, USA
2. National Institute of Standards and Technology, USA

**5:10 PM****(SPRING-SYM 18- 30-2026) Research progress on additive manufacturing of complex ceramic components**A. Liu<sup>1</sup>; C. Sun<sup>1</sup>; J. He<sup>1</sup>; T. Li\*<sup>1</sup>; X. Sun<sup>1</sup>; X. Gong<sup>1</sup>

1. Wuhan University of Technology, China

**S20 BSD Symposium to Honor W. Craig Carter****S20- Electrochemical Materials and Devices I**

Room: Cascade Tower- Regency B

Session Chair: R. Edwin Garcia, Purdue University

**1:30 PM****(SPRING-SYM 20- 19-2026) Ceramics in sustainability (Invited)**Y. Chiang\*<sup>1</sup>

1. Massachusetts Institute of Technology, Materials Science and Engineering, USA

**2:00 PM****(SPRING-SYM 20- 20-2026) Exploiting intercalation-mediated salt depletion for desalination and carbon capture (Invited)**K. C. Smith\*<sup>1</sup>

1. University of Illinois Urbana-Champaign, Mechanical Science and Engineering, USA

**2:30 PM****(SPRING-SYM 20- 21-2026) Studying cathode materials in lithium ion batteries (Invited)**V. Wood\*<sup>1</sup>

1. Eidgenossische Technische Hochschule Zurich, Switzerland

**3:00 PM****Break****S20- Electrochemical Materials and Devices II**

Room: Cascade Tower- Regency B

Session Chair: Ming Tang, Rice University

**3:20 PM****(SPRING-SYM 20- 22-2026) The effects of microstructure for electrically active materials (Invited)**R. Garcia\*<sup>1</sup>

1. Purdue University, Materials Engineering, USA

**3:50 PM****(SPRING-SYM 20- 23-2026) Electro-chemo-mechanics and architecture in battery materials (Invited)**G. Bucci\*<sup>1</sup>

1. Lawrence Livermore National Laboratory, USA

**4:20 PM****(SPRING-SYM 20- 24-2026) Electrochemical shock maps to minimize battery degradation**A. Sanjuan\*<sup>1</sup>; R. Garcia<sup>1</sup>

1. Purdue University, Materials Engineering, USA

**4:40 PM****(SPRING-SYM 20- 12-2026) The multifaceted regenerative applications of bioactive glasses (Invited)**V. Cannillo\*<sup>1</sup>

1. Universita degli Studi di Modena e Reggio Emilia, Italy

**5:10 PM****(SPRING-SYM 20- 25-2026) Thermodynamics to microstructural development (Invited)**C. Bishop\*<sup>1</sup>

1. University of Canterbury, Mechanical Engineering, New Zealand

**S24 BIO: Mechanobiology and Cell-Substrate Interactions at Biointerfaces in Bioceramics****S24- Experimental evaluation of bio-nano interfaces of bioceramic composites with substrates**

Room: Cascade Tower- Laurel

Session Chair: Anamika Prasad, Florida International University

**1:30 PM****(SPRING-SYM 24- 09-2026) A negative emission structural material (Invited)**N. Rahbar\*<sup>1</sup>

1. Worcester Polytechnic Institute, Civil Engineering, USA

**2:00 PM****(SPRING-SYM 24- 10-2026) Cellular response of biomaterials and scaffolds for anterior cruciate ligament repair**P. Kumar\*<sup>1</sup>; P. V. Pashaki<sup>1</sup>; B. Noonan<sup>2</sup>; D. R. Katti<sup>1</sup>; K. Katti<sup>2</sup>

1. North Dakota State University, Civil Construction and Environmental Engineering, USA
2. North Dakota State University, USA
3. Sanford Health Sanford Orthopedics and Sports Medicine, Orthopedics, USA

**S24- Mechanobiology and Cell-Substrate Interactions at Biointerfaces in Bioceramics: Theory and Experiments**

Room: Cascade Tower- Laurel

Session Chair: Dinesh Katti, North Dakota State University

**2:20 PM****(SPRING-SYM 24- 11-2026) Linking the multiscale structure, chemistry and mechanical function of bioceramics (Invited)**V. Merk\*<sup>1</sup>; E. De La Uz<sup>1</sup>; A. Coronel-Zegarra<sup>1</sup>; D. Raja Somu<sup>1</sup>; I. Greving<sup>2</sup>; J. Voss<sup>3</sup>; M. Porter<sup>4</sup>; Y. Wen<sup>5</sup>; P. Smeets<sup>5</sup>

1. Florida Atlantic University, Chemistry & Biochemistry, Ocean & Mechanical Engineering, USA
2. Helmholtz-Zentrum Hereon, Institute of Materials Physics, Germany
3. Florida Atlantic University, Harbor Branch Oceanographic Institute, USA
4. Florida Atlantic University, Department of Biological Sciences, USA
5. Northwestern University, The NUANCE Center, USA

**2:50 PM****(SPRING-SYM 24- 12-2026) Multiscale characterization of unmineralized shark cartilage insights for bioceramics design**E. De La Uz\*<sup>1</sup>; D. Raja Somu<sup>1</sup>; I. Greving<sup>2</sup>; V. Merk<sup>1</sup>

1. Florida Atlantic University, Department of Chemistry & Biochemistry, Department of Ocean & Mechanical Engineering, USA
2. Helmholtz-Zentrum Hereon, Institute of Materials Physics, Germany

**3:10 PM****BREAK****3:30 PM****(SPRING-SYM 24- 13-2026) Advancing 3d in vitro bone metastasis testbeds using various patient-derived prostate cancer subtypes**Q. Hoang\*<sup>1</sup>; S. Panduru<sup>1</sup>; S. Ghosh<sup>2</sup>; J. Kim<sup>2</sup>; P. Vyas<sup>3</sup>; D. R. Katti<sup>1</sup>; K. Katti<sup>4</sup>

1. North Dakota State University, Civil Construction Environmental Engineering, USA
2. North Dakota State University, Biological Sciences, USA
3. Sanford Medical Center Fargo, USA
4. North Dakota State University, USA

**3:50 PM****(SPRING-SYM 24- 14-2026) Engineered Porosity Hydroxyapatite via Freeze casting and Robocasting**K. Hadagalli<sup>1</sup>; D. Kodangal\*<sup>1</sup>; B. Basu<sup>2</sup>; R. Bordia<sup>1</sup>

1. Clemson University, Materials Science and Engineering, USA
2. Indian Institute of Science, Materials Research Centre, India

**S27 ED Two-Dimensional Materials - Synthesis/Theories/ Properties and Applications****S27- 2D materials properties, devices and applications I**

Room: Cascade Tower- Regency A

Session Chair: Haozhe Wang, Duke University

**1:30 PM****(SPRING-SYM 27- 20-2026) Two-dimensional neuromorphic electronic materials and applications (Invited)**M. C. Hersam\*<sup>1</sup>

1. Northwestern University, Materials Science and Engineering, USA

**2:00 PM****(SPRING-SYM 27- 21-2026) Real-time twisting on a chip (Invited)**Y. Cao\*<sup>1</sup>

1. University of California Berkeley, EECS, USA

**2:30 PM****(SPRING-SYM 27- 22-2026) Beyond human limits: Foundation models in 2D materials analysis (Invited)**H. Wang\*<sup>1</sup>

1. Duke University, Electrical and Computer Engineering, USA

**3:00 PM****Break****S27- 2D materials properties, devices and applications II**

Room: Cascade Tower- Regency A

Session Chair: Haozhe Wang, Duke University

**3:20 PM****(SPRING-SYM 27- 23-2026) Transport in contacts to 2D semiconductors using diverse contact structures (Invited)**A. D. Franklin\*<sup>1</sup>

1. Duke University, ECE, USA

**3:50 PM****(SPRING-SYM 27- 24-2026) van der Waals nanoreactors (Invited)**S. Wu\*<sup>1</sup>

1. Princeton University, Physics, USA

**4:20 PM****(SPRING-SYM 27- 25-2026) Arbitrarily tunable optical nonlinearity via lattice stacking and quantum applications (Invited)**H. Tang\*<sup>1</sup>

1. MIT, USA

**4:50 PM****(SPRING-SYM 27- 26-2026) Valley polarization changes in chiral semiconductor nanocrystal/transition metal dichalcogenide heterostructures**M. Cottlet\*<sup>1</sup>

1. Brookhaven National Laboratory, Center for Functional Nanomaterials, USA

## S28 ED Advanced Characterization of Functionalized Low-Dimensional Material Surfaces

### S28- Advanced Characterization of Functionalized Low-Dimensional Material Surfaces

Room: Cascade Tower- Regency C

1:30 PM

#### (SPRING-SYM 28- 01-2026) Unveiling swift heavy ion track morphology in Sr-based high-entropy perovskites (Invited)

R. Sachan<sup>\*1</sup>; A. Gupta<sup>1</sup>; E. Zarkadoula<sup>2</sup>; S. Kalinin<sup>2</sup>; V. Keppens<sup>3</sup>; Y. Zhang<sup>3</sup>; W. J. Weber<sup>2</sup>

1. Oklahoma State University, Mechanical and Aerospace Engineering, USA
2. University of Tennessee, Materials Science & Engineering, USA
3. University Tennessee, USA
4. Oak Ridge National Lab, Materials Science and Technology, USA
5. Oak Ridge National Laboratory, USA

2:00 PM

#### (SPRING-SYM 28- 02-2026) Cryogenic monochromated STEM-EELS for probing exciton-lattice coupling in van der Waals heterostructures (Invited)

E. Tiukalova<sup>\*1</sup>; E. L. Ray<sup>2</sup>; X. Xu<sup>2</sup>; J. C. Idrobo<sup>2</sup>; M. Chi<sup>1</sup>

1. Oak Ridge National Laboratory, CNMS, USA
2. University of Washington, Materials Science & Engineering, USA

2:30 PM

#### (SPRING-SYM 28- 03-2026) Exploring ferroic orders in high-entropy oxide perovskite thin films (Invited)

A. Farhan<sup>\*1</sup>

1. Baylor University, Physics, USA

3:00 PM

Break

3:20 PM

#### (SPRING-SYM 28- 04-2026) Nanoscale magnetic imaging with LTEM and scanning NV magnetometry (Invited)

H. Arava<sup>\*1</sup>

1. Argonne National Laboratory, USA

3:50 PM

#### (SPRING-SYM 28- 05-2026) Misfit-strain accommodation and epitaxial stabilization of Ba(ZrSnTiHfNb)O<sub>3</sub> high-entropy oxide thin films

R. Subedi<sup>\*1</sup>; V. Paduri<sup>1</sup>; S. Goswami<sup>2</sup>; M. Gutierrez<sup>3</sup>; N. Shirato<sup>4</sup>; V. Thirumalai<sup>4</sup>; R. Sachan<sup>1</sup>

1. Oklahoma State University, Mechanical and Aerospace Engineering, USA
2. The University of Oklahoma, USA
3. Arizona State University, USA
4. Argonne National Laboratory, USA

4:10 PM

#### (SPRING-SYM 28- 06-2026) Atomic-scale insights into functionalized nanomaterials: A multi-technique approach

N. Shirato<sup>\*1</sup>

1. Argonne National Laboratory, USA

## S31 ED Superconducting and 2D Magnetic Materials - From Basic Science to Applications

### S31- Electronic, optical, and magnetic properties I

Room: Cascade Tower- Regency FG

Session Chair: Michael Susner, Air Force Research Laboratory

1:30 PM

#### (SPRING-SYM 31- 23-2026) Noncollinear altermagnet devices (Invited)

R. Comin<sup>1</sup>; J. Li<sup>\*1</sup>

1. Massachusetts Institute of Technology, Physics, USA

2:00 PM

#### (SPRING-SYM 31- 24-2026) Investigations of magnon and spin-phonon coupling in 2D antiferromagnets (Invited)

R. Rao<sup>\*1</sup>

1. Air Force Research Lab, USA

2:30 PM

#### (SPRING-SYM 31- 25-2026) Electron beam-induced Cu ion migration dynamics in van der Waals ferroelectric CuInP<sub>2</sub>S<sub>6</sub> (Invited)

M. Bolluk<sup>\*1</sup>; S. Jiang<sup>1</sup>; S. Safalitin<sup>2</sup>; M. A. Susner<sup>2</sup>; P. Alpay<sup>1</sup>; V. Ortalan<sup>1</sup>

1. University of Connecticut, Materials Science and Engineering, USA
2. University of Connecticut, Institute of Materials Science, USA
3. Air Force Research Laboratory, Materials and Manufacturing Directorate, USA

3:00 PM

Break

3:20 PM

#### (SPRING-SYM 31- 26-2026) Anisotropic propagation of magnetically dressed exciton polaritons in van der Waals antiferromagnets (Invited)

N. Liu<sup>1</sup>; A. Barabas<sup>1</sup>; C. Trinh<sup>1</sup>; S. Lee<sup>1</sup>; H. Huang<sup>2</sup>; A. C. Jones<sup>1</sup>; Z. Tian<sup>2</sup>; P. Padmanabhan<sup>1</sup>; L. Huang<sup>3</sup>; B. Lv<sup>4</sup>; A. Piryatinski<sup>1</sup>; H. Htoon<sup>\*1</sup>

1. Los Alamos National Laboratory, Center for Integrated Nanotechnologies, USA
2. Cornell University, Sibley School of Mechanical and Aerospace Engineering, USA
3. Purdue University System, Chemistry, USA
4. University of Texas, Dallas, USA

3:50 PM

#### (SPRING-SYM 31- 27-2026) Tunable spin chirality and electric polarization from a bilayer antiferromagnet (Invited)

L. Zhao<sup>\*1</sup>

1. University of Michigan, Physics, USA

4:20 PM

#### (SPRING-SYM 31- 28-2026) Magnetic force microscopic study of nanoscale magnetic domains in the van der Waals ferromagnet Fe<sub>3</sub>GaTe<sub>2</sub> (Invited)

M. Altvater<sup>\*1</sup>; T. Mai<sup>1</sup>; R. Rao<sup>1</sup>; N. Glavin<sup>1</sup>; M. A. Susner<sup>1</sup>

1. Air Force Research Laboratory, USA

4:50 PM

#### (SPRING-SYM 31- 29-2026) UOTe: Kondo-interacting topological antiferromagnet in a Van der Waals lattice (Invited)

C. Broyles<sup>\*1</sup>; S. Mardanya<sup>2</sup>; M. Liu<sup>3</sup>; S. Xu<sup>3</sup>; J. E. Hoffman<sup>3</sup>; J. D. Denlinger<sup>2</sup>; S. Chowdhury<sup>2</sup>; S. Ran<sup>4</sup>

1. Los Alamos National Laboratory, Center for Integrated Nanotechnologies, USA
2. Howard University, Physics and Astronomy, USA
3. Harvard University, Physics, USA
4. Harvard University, Chemistry and Chemical Biology, USA
5. Advanced Light Source, Photon Science Operations, USA
6. Washington University in St Louis, Physics, USA

## S32 EMSD Solid Oxide Cells for Sustainable Energy

### S32- Protonic Ceramic Cells III

Room: Olympic Tower- Evergreen A

Session Chairs: Jianhua Tong, Clemson University; Xinfang Jin, The University of Texas at Dallas School of Economic Political and Policy Sciences

1:30 PM

#### (SPRING-SYM 32- 19-2026) Intensified catalysis in ceramic membrane reactors (Invited)

J. Serra<sup>\*1</sup>

1. Instituto de Tecnologia Quimica, Spain

2:00 PM

#### (SPRING-SYM 32- 20-2026) Steam-induced cation exchange in oxygen electrodes for superior protonic solid oxide cells

Z. Liu<sup>\*1</sup>; X. Hu<sup>1</sup>; H. Li<sup>1</sup>; W. Wang<sup>1</sup>; N. Govindarajan<sup>1</sup>; Y. Ding<sup>1</sup>; R. Choudhury<sup>1</sup>; K. Wang<sup>1</sup>; Y. Song<sup>1</sup>; M. Liu<sup>1</sup>

1. Georgia Institute of Technology, USA

**2:20 PM****(SPRING-SYM 32- 21-2026) Stability enhancement of anode-supported protonic ceramic fuel cells**Y. Cai\*; R. Kitamura<sup>1</sup>; J. Conrad<sup>1</sup>; J. Tong<sup>1</sup>

1. Clemson University, Materials Science and Engineering, USA

**2:40 PM****(SPRING-SYM 32- 22-2026) Rapid microwave synthesis of functional materials used in solid-state devices**P. Cheekatamarla\*; A. Serov<sup>1</sup>; K. Li<sup>1</sup>

1. Oak Ridge National Laboratory, USA

**3:00 PM****Break****S32- Modeling/Simulation**

Room: Olympic Tower- Evergreen A

Session Chairs: Zeyu Zhao, Idaho National Laboratory; Jianhua Tong, Clemson University

**3:20 PM****(SPRING-SYM 32- 23-2026) Molecular simulations and machine learning for computational design of materials with fast oxygen kinetics (Invited)**

D. Morgan\*

1. University of Wisconsin-Madison, Materials Science and Engineering, USA

**3:50 PM****(SPRING-SYM 32- 24-2026) Modeling of microstructural delamination at electrode-electrolyte interface in solid oxide electrolysis cell (Invited)**X. Jin\*; J. Juan<sup>2</sup>; Y. Shoukry<sup>1</sup>

1. The University of Texas at Dallas School of Economic Political and Policy Sciences, Mechanical Engineering, USA
2. The University of Texas at Dallas Erik Jonsson School of Engineering and Computer Science, Mechanical Engineering, USA

**4:20 PM****(SPRING-SYM 32- 25-2026) Surface-aware deep learning for oxygen electrocatalysis in protonic solid oxide cells (Invited)**X. Hu\*; Z. Liu<sup>1</sup>; M. Liu<sup>1</sup>

1. Georgia Institute of Technology, USA

**4:50 PM****(SPRING-SYM 32- 26-2026) Influence of anode support layer porosity on performance of protonic ceramic fuel cells using a digital twin approach**S. Jang\*; D. Kim<sup>2</sup>; Y. Kang<sup>2</sup>; H. Kim<sup>2</sup>; K. Lee<sup>1</sup>

1. Korea Advanced Institute of Science and Technology, Mechanical Engineering, Republic of Korea
2. Korea Advanced Institute of Science and Technology, KAIST InnoCORE PRISM-AI Center, Republic of Korea

**S34 EMSD Advances and Current Challenges in Solid-State Battery Technologies****S34- Advances in next-generation solid-state battery chemistries**

Room: Olympic Tower- Evergreen B

Session Chairs: Elif Pinar Alsac, Georgia Institute of Technology College of Engineering; Ömer Çapraz, University of Maryland Baltimore

**1:30 PM****(SPRING-SYM 34- 01-2026) Mechanochemical phenomena in ceramic ion conductors (Invited)**

J. Sakamoto\*

1. University of California Santa Barbara, Materials, USA

**2:10 PM****(SPRING-SYM 34- 02-2026) Binary transport and concentration polarization in single-ion conductors (Invited)**

P. Bai\*

1. Washington University in St Louis, Energy, Environmental and Chemical Engineering, USA

**2:40 PM****(SPRING-SYM 34- 04-2026) Defects, ion transport, and dendrite formation in solid-state batteries (Invited)**

Y. Hu\*

1. Florida State University, Chemistry & Biochemistry, USA

**3:10 PM****Break****3:30 PM****(SPRING-SYM 34- 05-2026) Harness disordered battery materials through specialized model, database and machine learning (Invited)**B. Ouyang\*; K. Huang<sup>1</sup>; L. Wang<sup>1</sup>

1. Florida State University, Chemistry and Biochemistry, USA

**4:00 PM****(SPRING-SYM 34- 06-2026) Phase pure Ta-stabilized Li<sub>3</sub>La<sub>2</sub>Zr<sub>2</sub>O<sub>12</sub> solid electrolyte thin films with high Li-ion conductivity through alternating dual-target deposition**B. Tafese\*; H. Guo<sup>2</sup>; M. Palmer<sup>2</sup>; E. Cho<sup>3</sup>; N. H. Perry<sup>1</sup>; J. Sakamoto<sup>2</sup>; W. Bowman<sup>3</sup>; S. M. Haile<sup>4</sup>

1. University of Illinois at Urbana-Champaign, Materials Science and Engineering, USA
2. University of California Santa Barbara, Materials, USA
3. University of California Irvine, Materials Science and Engineering, USA
4. Northwestern University, Materials Science and Engineering, USA

**S35 GOMD Fundamentals of the Glassy State****S35- Chalcogenide glasses and amorphous materials**

Room: Cascade Tower- Larch

Session Chair: Yueh-Ting Shih, National Cheng Kung University

**1:30 PM****(SPRING-SYM 35- 01-2026) Femtosecond laser writing in chalcogenide glasses for mid-infrared optical components (Invited)**D. Le Coq\*; M. Ledesma Molinero<sup>1</sup>; T. Le Phu<sup>3</sup>; C. Bousard Pledel<sup>1</sup>; A. Cassez<sup>2</sup>; L. Bigot<sup>2</sup>; N. Nguyen<sup>4</sup>; P. Loiko<sup>4</sup>; A. Braud<sup>4</sup>; P. Masselin<sup>3</sup>

1. University of Rennes, ISCR, France
2. Université de Lille, France
3. University of Littoral Côte d'Opale, France
4. Centre de Recherche sur les Ions les Matériaux et la Photonique, France

**2:00 PM****(SPRING-SYM 35- 02-2026) Multiphysics modeling of switching in chalcogenide phase-change materials: Effects of glass dynamics on crystallization and amorphization kinetics**W. Takeda\*; P. Lucas<sup>1</sup>

1. The University of Arizona, Materials science and engineering, USA

**S35- Structural characterizations of glasses and melts**

Room: Cascade Tower- Larch

Session Chairs: Yueh-Ting Shih, National Cheng Kung University; Søren Sørensen, Aalborg University

**2:20 PM****(SPRING-SYM 35- 03-2026) On the structural role of indium in aluminoborosilicate glasses: A multi-spectroscopic study**A. Ashjari\*; R. Youngman<sup>1</sup>; H. Bradtmüller<sup>2</sup>; A. Ogrinc<sup>3</sup>; R. F. Lancelotti<sup>4</sup>; M. Kang<sup>6</sup>; S. H. Kim<sup>5</sup>; D. Möncke<sup>5</sup>

1. Corning Incorporated, Science & Technology Division, USA
2. Universidade de Sao Paulo Instituto de Fisica, Brazil
3. Yale University, USA
4. Universidade Federal de Sao Carlos Centro de Desenvolvimento de Materiais Funcionais, Materials Science and Engineering, Brazil
5. Pennsylvania State University, Chemical Engineering & Materials Science, USA
6. New York State College of Ceramics at Alfred University, USA

## 2:40 PM

### (SPRING-SYM 35- 04-2026) Revisiting the germanate anomaly in glasses using <sup>73</sup>Ge nuclear forward scattering

S. S. Sørensen<sup>\*3</sup>; J. Finkler<sup>2</sup>; R. Christensen<sup>3</sup>; S. Marchesin<sup>1</sup>; D. Bessas<sup>2</sup>; M. M. Smedskjaer<sup>2</sup>; G. Monaco<sup>1</sup>

1. Università degli Studi di Padova, Department of Physics and Astronomy 'Galileo Galilei', Italy
2. ESRF, France
3. Aalborg University, Department of Chemistry and Bioscience, Denmark

## 3:00 PM

### Break

## 3:20 PM

### (SPRING-SYM 35- 05-2026) Information entropy reveals the short- and medium-range order of amorphous materials

K. Yang<sup>\*1</sup>; D. Schwalbe-Koda<sup>1</sup>

1. University of California Los Angeles, Materials Science and Engineering, USA

## 3:40 PM

### (SPRING-SYM 35- 07-2026) Assessment of structure and thermophysical properties of aluminophosphate glasses for nuclear reactor fuel

A. O. Adesanya<sup>\*1</sup>; C. Lonergan<sup>1</sup>

1. Missouri University of Science and Technology, Materials Science and Engineering, USA

## S39 GOMD Steve Feller Honorary Symposium

### S39- Steve Feller Honorary Symposium I

Room: Cascade Tower- Juniper

Session Chairs: Mario Affatigato, Coe College; Collin Wilkinson, Alfred University

## 1:30 PM

### (SPRING-SYM 39- 01-2026) The Scientific Life of Steve Feller (Invited)

M. Affatigato<sup>\*1</sup>

1. Coe College, Physics, USA

## 2:00 PM

### (SPRING-SYM 39- 02-2026) Undergraduate research in glass: Tracing roots from Coe College to Alfred University (Invited)

C. Wilkinson<sup>\*1</sup>; G. Gaustad<sup>2</sup>; R. Welch<sup>2</sup>

1. Alfred University, Glass Science, USA
2. NYS College of Ceramics, Alfred University, Inamori School of Engineering, USA

## 2:30 PM

### (SPRING-SYM 39- 03-2026) Tellurite glass structure: Memories of Steve Feller (Invited)

J. Zwanziger<sup>\*1</sup>; A. Farrant<sup>1</sup>

1. Dalhousie University, Chemistry, Canada

## 3:00 PM

### Break

## 3:20 PM

### (SPRING-SYM 39- 04-2026) A study of the contributions of film relaxation to total pitch change in TFT manufacturing (Invited)

T. Kiczanski<sup>\*1</sup>; C. A. Paulson<sup>2</sup>; S. J. Koseba<sup>1</sup>; A. Sarafian<sup>1</sup>

1. Corning Incorporated, Inorganic Technologies, USA
2. Corning Incorporated, Thin Films, USA

## 3:50 PM

### (SPRING-SYM 39- 05-2026) Highly modified borate glasses (Invited)

E. I. Kamitsos<sup>\*1</sup>

1. National Hellenic Research Foundation, Greece

## 4:20 PM

### (SPRING-SYM 39- 06-2026) Development of the thin-film drawing process of lithium glassy solid-electrolytes

J. Wheaton<sup>\*1</sup>; S. W. Martin<sup>2</sup>

1. Coe College, Physics, USA
2. Iowa State University, Materials Science & Engineering, USA

## 4:40 PM

### (SPRING-SYM 39- 07-2026) Finding order out of disorder in a journey from glass to complex energy materials (Invited)

F. M. Alamgir<sup>\*1</sup>

1. Georgia Institute of Technology, School of Materials Science and Engineering, USA

## 5:10 PM

### (SPRING-SYM 39- 08-2026) The impact of outreach on campus culture: Lessons learned from Coe College

R. Welch<sup>\*1</sup>

1. Alfred University, Glass Science Engineering, USA

## Thursday, April 16, 2026

### Award Talk

### Darshana and Arun Varshneya Frontiers of Glass Lecture

Room: Cascade Tower- Auditorium

## 9:00 AM

### (Awards-005-2026) Design of damage-resistant glasses

T. M. Gross<sup>\*1</sup>

1. Corning Incorporated, Physical Properties, USA

### S2 All DIV Outreach and Engagement - STE(A)M Outreach/ Education/ Engagement and Retention

### S2- Outreach and Engagement: STE(A)M Outreach, Education, Engagement and Retention

Room: Olympic Tower- Grand EFGHIJK

Session Chairs: Charmayne Lonergan, Missouri University of Science & Technology; Casey Schwarz, Ursinus College

## 8:30 AM

### (SPRING-SYM 2- 01-2026) The International Day of Ceramics and the International Ceramic Federation (Invited)

S. M. Johnson<sup>\*1</sup>

1. NASA-Ames Research Center (ret.), USA

## 9:00 AM

### (SPRING-SYM 2- 02-2026) From the Black Hills to the classroom: Building ceramic engineering pathways through local engagement (Invited)

K. J. Donovan<sup>\*1</sup>; S. Keenan<sup>1</sup>

1. South Dakota School of Mines and Technology, USA

## 9:30 AM

### (SPRING-SYM 2- 04-2026) Addressing the STEAM skills gap: Ceramic and glass manufacturing plant tours with K-12 virtual field trips

N. S. McIlwaine<sup>\*1</sup>

1. The American Ceramic Society, USA

## 9:50 AM

### Break

10:10 AM

**(SPRING-SYM 2- 05-2026) The Talent Accelerator Program – Industry and university partners working together to fill technical skill gaps**R. Grodsky\*; S. Neidhart<sup>1</sup>; J. Williams<sup>1</sup>; P. Rulis<sup>2</sup>; A. Nelson<sup>3</sup>; R. Thomas<sup>1</sup>

1. Honeywell FM&T, USA
2. University of Missouri-Kansas City, USA
3. University of Arkansas, USA

10:30 AM

**(SPRING-SYM 2- 06-2026) Form and fusion, the art and science of ceramics and glass STEAM course creation at Ursinus College**C. Schwarz\*; H. Ross<sup>1</sup>; K. Evans<sup>1</sup>

1. Ursinus College, Physics & Astronomy, USA

10:50 AM

**(SPRING-SYM 2- 07-2026) Creating and maintaining an undergraduate research program in glass science (Invited)**

M. Affatigato\*

1. Coe College, Physics, USA

**S4 BSD|ED Frontiers in Low Dimension Ferroic Oxides****S4- Altermagnetism and Spintronics**

Room: Olympic Tower- Grand C

Session Chair: Lucas Caretta, Brown University

8:30 AM

**(SPRING-SYM 4- 08-2026) Nonlinear optical spectroscopy investigation of altermagnets (Invited)**

L. Zhao\*

1. University of Michigan, Physics, USA

9:00 AM

**(SPRING-SYM 4- 10-2026) Novel properties due to crystal symmetry in altermagnets (Invited)**

J. Liu\*

1. Hong Kong University of Science and Technology, Hong Kong

9:30 AM

**(SPRING-SYM 4- 11-2026) Electrically switchable spin splitting in antiferromagnets (Invited)**

E. Y. Tsybal\*

1. University of Nebraska-Lincoln, USA

10:00 AM

Break

10:20 AM

**(SPRING-SYM 4- 12-2026) Strain-tunable anomalous Hall plateau in antiferromagnet  $\text{CoNb}_3\text{S}_6$  (Invited)**L. Chen\*; R. Lai<sup>1</sup>; S. Pandey<sup>1</sup>; D. Cui<sup>2</sup>; A. Brassington<sup>1</sup>; H. Zhou<sup>1</sup>

1. University of Tennessee, Physics, USA
2. Institute for Advanced Materials and Manufacturing, USA

10:50 AM

**(SPRING-SYM 4- 13-2026) Ultrasensitive optical detection of spin-orbit torques in low-dimensional ferroic oxides (Invited)**

Y. Luo\*

1. University of Southern California, Physics and Astronomy, USA

**S6 BSD|ED Complex Oxide Thin Films and Heterostructures****S6- High-entropy and metastable oxide thin films**

Room: Cascade Tower- Regency E

Session Chairs: Le Wang, Pacific Northwest National Laboratory; Saeed Almishal, Penn State

8:30 AM

**(SPRING-SYM 6- 21-2026) Harnessing configurational disorder for emergent electronic states in quantum oxides (Invited)**T. Z. Ward\*; A. Farhan<sup>1</sup>; M. Brahlek<sup>3</sup>; Z. Salaman<sup>2</sup>; A. Mazza<sup>4</sup>

1. Baylor University, Physics, USA
2. Paul Scherrer Institut PSI, Switzerland
3. Oak Ridge National Laboratory, USA
4. Los Alamos National Laboratory, USA

9:00 AM

**(SPRING-SYM 6- 22-2026) High entropy oxides prediction and discovery by the Mixed Enthalpy-Entropy Descriptor (Invited)**

L. Yu\*

1. University of Central Florida, Materials Science and Engineering, USA

9:30 AM

**(SPRING-SYM 6- 23-2026) Exsolution-self-assembly in entropy designed oxide thin films (Invited)**W. Bowman\*; H. Guo<sup>1</sup>; S. Xuan<sup>1</sup>; H. Vahidi<sup>1</sup>

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

10:00 AM

Break

10:20 AM

**(SPRING-SYM 6- 24-2026) Entropy-assisted kinetically-arrested anomalous crystallinity and coherent heterostructures (Invited)**S. S. Almishal\*; C. M. Rost<sup>2</sup>; T. Charlton<sup>3</sup>; J. Heron<sup>4</sup>; J. Maria<sup>1</sup>

1. Penn State, Materials Science and Engineering, USA
2. Virginia Polytechnic Institute and State University, Materials Science and Engineering, USA
3. Oak Ridge National Lab, USA
4. University of Michigan, USA

10:50 AM

**(SPRING-SYM 6- 26-2026) Evolution of surface atomic structure and composition in oxide catalysts operating in the oxygen evolution reaction (OER) (Invited)**

S. Chung\*

1. Korea Advanced Institute of Science and Technology, Materials Sci. & Eng., Republic of Korea

11:20 AM

**(SPRING-SYM 6- 27-2026) Competing phases of  $\text{HfO}_2$  from multiple unstable flat phonon bands (Invited)**Y. Qi\*; K. Rabe<sup>2</sup>

1. The University of Alabama at Birmingham College of Arts and Sciences, Physics, USA
2. Rutgers The State University of New Jersey, Physics, USA

**S8 BSD|ED Nano4Neuro 3 - Materials Advances for Analogue, Neuromorphic and Post-Moore Computing Paradigms****S8- Frontiers of neuromorphic devices and characterization**

Room: Olympic Tower- Evergreen A

Session Chair: Petro Maksymovych, Clemson University

8:30 AM

**(SPRING-SYM 8- 01-2026) Advancing low-power computation using resistive switching memory technologies (Invited)**

Y. V. Pershin\*

1. University of South Carolina, Department of Physics and Astronomy, USA

**9:00 AM****(SPRING-SYM 8- 03-2026) Exploiting memristor materials for next-generation signal processing and computation (Invited)**T. D. Brown\*<sup>1</sup>; F. Jardali<sup>2</sup>; P. Shamberger<sup>2</sup>; R. S. Williams<sup>3</sup>

1. Oklahoma State University College of Engineering Architecture and Technology, Electrical and Computer Engineering, USA
2. Texas A&M University, Materials Science and Engineering, USA
3. Texas A&M University, Electrical and Computer Engineering, USA

**9:30 AM****(SPRING-SYM 8- 04-2026) Development of novel titanium alloyed niobium oxide electrode for NbO<sub>2</sub> based threshold switch devices**J. Modasiya\*<sup>1</sup>; R. Mathkari<sup>1</sup>; M. Liehr<sup>2</sup>; K. Beckmann<sup>3</sup>; N. Cady<sup>2</sup>

1. University at Albany, Nanoscale Engineering, USA
2. College of Nanoscale Science & Engineering, USA
3. NY CREATES, USA

**9:50 AM****Break****10:10 AM****(SPRING-SYM 8- 05-2026) In Situ TEM and STEM-EELS study of a nitride film based memristive device (Invited)**D. Zhang\*<sup>1</sup>; R. Dhall<sup>2</sup>; S. Kunwar<sup>3</sup>; H. Dou<sup>1</sup>; H. Wang<sup>2</sup>; Y. Cao<sup>1</sup>; A. Chen<sup>3</sup>

1. The University of Texas at Arlington, Materials Science and Engineering, USA
2. E O Lawrence Berkeley National Laboratory, Molecular Foundry, USA
3. Los Alamos National Lab, USA
4. Purdue University, Materials Engineering, USA
5. Purdue University, School of Materials Engineering, USA

**10:40 AM****(SPRING-SYM 8- 06-2026) Time-of-flight secondary ion mass spectrometry: Investigations of chemical phenomena in neuromorphic materials (Invited)**A. V. Ievlev\*<sup>1</sup>

1. Oak Ridge National Lab, Center for Nanophase Materials Sciences, USA

**11:10 AM****(SPRING-SYM 8- 07-2026) Deconstructing the interfacial origins of a multifunctional high-mobility 2DEG (Invited)**H. R. Cox\*<sup>2</sup>; M. Ahmadi<sup>2</sup>; S. Sanjay<sup>3</sup>; M. Sarott<sup>2</sup>; A. Garcia Castro<sup>2</sup>; J. Baas<sup>1</sup>; K. Cherkaoui<sup>3</sup>; B. Noheda<sup>2</sup>; D. Rubi<sup>4</sup>

1. Rijksuniversiteit Groningen, Netherlands
2. Rijksuniversiteit Groningen, Cognitive Systems and Materials Center (COGNIGRON), Netherlands
3. Tyndall National Institute, Ireland
4. Comision Nacional de Energia Atomica, Argentina
5. Universidad Industrial de Santander, Colombia

**S13 BSD|ED Defects and Transport in Ceramics****S13- Surface and Interfacial Defects and Transport in Ceramics**

Room: Olympic Tower- Evergreen C

Session Chairs: Xin Xu, Arizona State University; Till Frömling, Technische Universität Darmstadt

**8:30 AM****(SPRING-SYM 13- 11-2026) Solid state ionics and defects in elevated temperatures: An overview of electrochemical processing and electrocatalysis at Idaho National Laboratory (Invited)**D. Ding\*<sup>1</sup>

1. Idaho National Laboratory, USA

**9:00 AM****(SPRING-SYM 13- 12-2026) Suppression of dopant segregation and improvement of electrochemical activity on a perovskite oxide surface (Invited)**S. Koohfar\*<sup>1</sup>

1. Arizona State University, USA

**9:30 AM****(SPRING-SYM 13- 13-2026) Charged point defect transport through passivating oxide films simulated with cluster dynamics models (Invited)**A. Kohnert\*<sup>2</sup>; E. F. Holby<sup>1</sup>; E. A. Peterson<sup>1</sup>; B. P. Uberuaga<sup>2</sup>

1. Los Alamos National Laboratory, Theoretical Division, USA
2. Los Alamos National Laboratory, Materials Science and Technology Division, USA

**10:00 AM****Break****10:30 AM****(SPRING-SYM 13- 14-2026) Defect migration and transport phenomena across oxide interfaces (Invited)**F. Selim\*<sup>1</sup>

1. Arizona State University, USA

**11:00 AM****(SPRING-SYM 13- 15-2026) Holistic modeling of the electrical double layer in solid ion conductors**Z. Ahmad\*<sup>1</sup>

1. Texas Tech University, Mechanical Engineering, USA

**S15 BSD|ED|MD Ceramic Materials and Systems for a Sustainable and Resilient Energy Future****S15- Manufacturing and Process Control Ceramics and Composites for Energy Applications, and Advances in Characterization tools and Property Evaluation Techniques**

Room: Olympic Tower- Grand A

Session Chairs: Kevin Huang, University of South Carolina; Enrique Gomez, The Pennsylvania State University; Josef Matyas, PNNL; Chuancheng Duan, University of Utah

**8:30 AM****(SPRING-SYM 15- 01-2026) Stressing interfaces to change microstructures: Effects of electric fields and chemistry (Invited)**K. van Benthem\*<sup>1</sup>

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

**9:00 AM****(SPRING-SYM 15- 02-2026) Solid-state electrochemical interfaces: Advanced characterization of multi-charge interactions (Invited)**D. M. Stewart\*<sup>1</sup>; L. Tapia-Aracayo<sup>1</sup>; D. Halbing<sup>2</sup>; G. Pustorino<sup>2</sup>; Y. Qi<sup>2</sup>; L. Brillson<sup>3</sup>

1. University of Maryland, Materials Science & Engineering, USA
2. Brown University, School of Engineering, USA
3. The Ohio State University, USA

**9:30 AM****(SPRING-SYM 15- 03-2026) Operando soft X-ray spectroscopy and spectro-microscopy at oxide-electrolyte interfaces for energy applications. (Invited)**X. Zhao\*<sup>1</sup>; E. Carlson<sup>1</sup>; A. Burgos<sup>1</sup>; W. Chueh<sup>1</sup>

1. Stanford University, Materials Science and Engineering, USA

**10:00 AM****Break****10:30 AM****(SPRING-SYM 15- 04-2026) High-throughput electrochemical operando characterizations for battery materials diagnosis (Invited)**P. Bai\*<sup>1</sup>

1. Washington University in St Louis, Energy, Environmental and Chemical Engineering, USA

**11:00 AM**

**(SPRING-SYM 15- 05-2026) Colloidal and processing science characterization for battery systems (Invited)**

B. L. Armstrong\*<sup>1</sup>

1. Oak Ridge National Lab, Material Science & Technology, USA

**11:30 AM**

**(SPRING-SYM 15- 06-2026) Multiscale understanding of performance degradation issues in the composite cathode (Invited)**

H. Q. Tu\*<sup>1</sup>

1. Rochester Institute of Technology, USA

## **S16 MD|ED|GOMD Advanced Manufacturing and Processing of Ceramic Materials**

### **S16- Novel processing of high performance ceramics I**

Room: Olympic Tower- Grand B

Session Chairs: Jifeng Liu, Dartmouth College; Meng Zhou, New Mexico State University

**8:30 AM**

**(SPRING-SYM 16- 01-2026) Ceramic Molten Carbonate Fuel Cell (MCFC) for CO<sub>2</sub> capture and concentration (Invited)**

M. Zhou\*<sup>1</sup>; H. Luo<sup>2</sup>

1. New Mexico State University, Chemical and Materials Engineering, USA
2. New Mexico State University, USA

**9:00 AM**

**(SPRING-SYM 16- 03-2026) Engineering atomic ordering as a new degree of freedom for high performance functional materials (Invited)**

J. Liu\*<sup>1</sup>

1. Dartmouth College, Thayer School of Engineering, USA

**9:30 AM**

**(SPRING-SYM 16- 04-2026) Effects of humidity, ambient temperature, and ink age on the morphological & optoelectronic properties of sol-gel indium tin oxide thin films**

M. Mays\*<sup>1</sup>; R. A. Gerhardt<sup>1</sup>

1. Georgia Institute of Technology, Materials Science and Engineering, USA

**9:50 AM**

**Break**

### **S16- Machining of ceramics**

Room: Olympic Tower- Grand B

Session Chair: Shibin Jiang, AdValue Photonics Inc

**10:20 AM**

**(SPRING-SYM 16- 05-2026) Laser precision processing of advanced ceramic materials (Invited)**

S. Jiang\*<sup>1</sup>

1. AdValue Photonics Inc, USA

**10:50 AM**

**(SPRING-SYM 16- 06-2026) Activating mobile dislocation in boron carbide via Al doping (Invited)**

Q. An\*<sup>1</sup>

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

**11:20 AM**

**(SPRING-SYM 16- 16-2026) Engineering mortar phase in nacre-like alumina with complex hierarchical micro-structuring for damage-tolerant applications**

H. Le Ferrand\*<sup>1</sup>

1. Nanyang Technological University, Singapore

## **S26 ED Semiconductors and Microelectronics in Metal Halide/Chalcogenide and Oxide Perovskites**

### **S26- Metal Halide Perovskite Optoelectronics and Semiconductor Property I**

Room: Cascade Tower- Regency B

Session Chairs: Qing Tu, Texas A&M University System;

Cosmi (Yuxuan) Lin

**8:30 AM**

**(SPRING-SYM 26- 01-2026) Structure–Property relationships in lead-free dual-metal halides showing excitation-dependent emission**

H. Shoukat\*<sup>1</sup>

1. The University of Oklahoma, Chemistry and Biochemistry, USA

**8:50 AM**

**(SPRING-SYM 26- 02-2026) Preparation and characterization of optical metal halides (Invited)**

B. Saparov\*<sup>1</sup>; D. Popyl<sup>1</sup>; M. Muhammad<sup>1</sup>

1. The University of Oklahoma, USA

**9:20 AM**

**(SPRING-SYM 26- 03-2026) Chiral halide perovskite for circularly polarized light generation and detection (Invited)**

M. Liu\*<sup>1</sup>

1. Yale University, Electrical and Computer Engineering, USA

**9:50 AM**

**Break**

**10:10 AM**

**(SPRING-SYM 26- 04-2026) Deterministic halide perovskite quantum light sources with engineered light-matter interactions (Invited)**

F. Niroui\*<sup>1</sup>

1. Massachusetts Institute of Technology, EECS, USA

**10:40 AM**

**(SPRING-SYM 26- 05-2026) Beyond ‘ion migration’: Redox activity and what’s really going on inside halide perovskites (Invited)**

B. Rand\*<sup>1</sup>

1. Princeton University, USA

**11:10 AM**

**(SPRING-SYM 26- 07-2026) Tailoring the dielectric breakdown of 2D metal halide perovskites**

M. Jin\*<sup>2</sup>; K. E. Nassar<sup>3</sup>; F. Zahin<sup>2</sup>; Y. Liang<sup>2</sup>; B. Baskar<sup>1</sup>; G. Aguilar<sup>1</sup>; C. Lin<sup>2</sup>; I. Spanopoulos<sup>3</sup>; Q. Tu<sup>2</sup>

1. Texas A&M University, Mechanical Engineering, USA
2. Texas A&M University System, Materials Science and Engineering, USA
3. University of South Florida, Departments of Chemistry & Chemical, Biological and Materials Engineering, USA

**11:30 AM**

**(SPRING- SYM 26- 16-2026) Rutile GeO<sub>2</sub> thin films: Opportunities, synthetic strategies, and challenges**

B. Jalan\*<sup>1</sup>

1. University of Minnesota, USA

## **S27 ED Two-Dimensional Materials - Synthesis/Theories/ Properties and Applications**

### **S27- 2D materials fundamentals, properties, and characterizations**

Room: Cascade Tower- Regency A

Session Chair: Haozhe Wang, Duke University

**10:20 AM**

#### **(SPRING-SYM 27- 27-2026) Defect engineering in 2D semiconductors facilitated by energetic hydrogen species (Invited)**

Y. Lin\*<sup>1</sup>

1. Texas A&M University, Department of Materials Science and Engineering, USA

**10:50 AM**

#### **(SPRING-SYM 27- 28-2026) Toward a better 2D semiconductor crystal lattice (Invited)**

C. Su\*<sup>1</sup>

1. Yale University, Materials Science, USA

**11:20 AM**

#### **(SPRING-SYM 27- 29-2026) Interface-driven charge density wave formation in FeSn step-edge heterostructures**

S. Kwon\*<sup>1</sup>; D. Kiem<sup>1</sup>; Y. Ozbek<sup>2</sup>; S. Yeom<sup>1</sup>; P. Zhang<sup>2</sup>; M. Yoon<sup>1</sup>

1. Oak Ridge National Laboratory, USA
2. Michigan State University, Physics and Astronomy, USA

**11:40 AM**

#### **(SPRING-SYM 27- 30-2026) Autonomous LLM agent system for multimodal nano-fabrication and high-yield device optimization**

J. Yang\*<sup>1</sup>; X. Zhu<sup>1</sup>; X. Hu<sup>1</sup>; H. Wang<sup>1</sup>

1. Duke University, Electrical and Computer Engineering, USA

## **S30 ED Quo Vadis - High-Entropy Oxides?**

### **S30- High-entropy oxides-Engineering fundamental and functional properties**

Room: Cascade Tower- Regency C

Session Chairs: Alan Farhan, Baylor University; Sundar Kunwar, Los Alamos National Lab

**8:30 AM**

#### **(SPRING-SYM 30- 01-2026) Spin dynamics in rocksalt high-entropy oxides (Invited)**

R. Hermann\*<sup>1</sup>; S. Wang<sup>1</sup>; M. Manley<sup>1</sup>

1. Oak Ridge National Laboratory, USA

**9:00 AM**

#### **(SPRING-SYM 30- 02-2026) When high-entropy meets epitaxy: Emergent phenomena in multi-component complex oxide thin films (Invited)**

Y. Du\*<sup>1</sup>

1. Pacific Northwest National Laboratory, USA

**9:30 AM**

#### **(SPRING-SYM 30- 03-2026) Configurational disorder as a pathway to novel polar and optical states in epitaxial oxides**

Z. Corey<sup>2</sup>; Q. Jia<sup>2</sup>; A. Chen\*<sup>1</sup>

1. Los Alamos National Lab, USA
2. University at Buffalo, Materials Design and Innovation, USA

**9:50 AM**

**Break**

**10:10 AM**

#### **(SPRING-SYM 30- 04-2026) Vacancy-driven magnetic behavior in rare earth high-entropy oxides**

G. R. Bejger\*<sup>1</sup>; C. M. Rost<sup>1</sup>

1. Virginia Polytechnic Institute and State University, Materials Science and Engineering, USA

**10:30 AM**

#### **(SPRING-SYM 30- 05-2026) Microstructure engineering in high-entropy perovskite oxides for improved thermoelectric performance (Invited)**

R. Shukla<sup>1</sup>; M. Stuer\*<sup>1</sup>

1. Swiss Federal Laboratories for Materials Science and Technology, Empa, Dübendorf, ZH, Switzerland, Switzerland

**11:00 AM**

#### **(SPRING-SYM 30- 06-2026) Linking structure and property in compositionally complex rare earth zirconates via multimodal probes**

J. Holliman\*<sup>1</sup>; J. Safin<sup>1</sup>; D. Pearl<sup>1</sup>; S. Drewry<sup>1</sup>; A. Corrao<sup>2</sup>; P. Rack<sup>1</sup>; K. Page<sup>1</sup>

1. The University of Tennessee Knoxville Tickle College of Engineering, Materials Science and Engineering, USA
2. Brookhaven National Laboratory, USA

## **S31 ED Superconducting and 2D Magnetic Materials - From Basic Science to Applications**

### **S31- Theory and Applications of Novel Magnetic Materials I**

Room: Cascade Tower- Regency FG

Session Chair: Rahul Rao, Air Force Research Lab

**8:30 AM**

#### **(SPRING-SYM 31- 30-2026) Lieb-lattice altermagnetic materials: Unveiling unique altermagnetic response and topological phenomena (Invited)**

L. Yang\*<sup>1</sup>

1. Washington University in St Louis, Physics, USA

**9:00 AM**

#### **(SPRING-SYM 31- 31-2026) Elastocaloric effects in TmVO<sub>4</sub>: From fundamentals to applications in cryogenic refrigeration (Invited)**

I. R. Fisher\*<sup>1</sup>

1. Stanford University, Applied Physics, USA

**9:30 AM**

#### **(SPRING-SYM 31- 32-2026) Soft ferrites (magnetic ceramics) for power electronics (wide bandgap) applications: A brief review and future research**

Y. Hong\*<sup>1</sup>; S. Li<sup>1</sup>; J. Jalli<sup>2</sup>; J. Lee<sup>3</sup>; W. Lee<sup>4</sup>; C. Yeo<sup>5</sup>; S. Alam<sup>6</sup>; M. Wahed<sup>7</sup>; S. Choi<sup>8</sup>; A. Hauser<sup>7</sup>; H. Yim<sup>8</sup>

1. The University of Alabama, Department of Electrical and Computer Engineering, USA
2. Schweitzer Engineering Laboratories, Inc. (SEL), USA
3. Intel Corporation Hawthorn Farm, USA
4. Samsung Electronics Co Ltd, Republic of Korea
5. Texas Tech University, Department of Mechanical Engineering, USA
6. Mississippi State University, Department of Electrical and Computer Engineering, USA
7. The University of Alabama, Department of Physics and Astronomy, USA
8. Sookmyung Women's University, Department of Applied Physics, Republic of Korea

**9:50 AM**

**Break**

### **S31- Theory and Applications of Novel Magnetic Materials II**

Room: Cascade Tower- Regency FG

Session Chair: Li Yang, Washington University in St Louis

**10:10 AM**

#### **(SPRING-SYM 31- 33-2026) Two-dimensional magnets: Magnetoelastic coupling and engineered magnetoelectric two-dimensional multiferroics (Invited)**

S. Barraza-Lopez\*<sup>1</sup>

1. University of Arkansas System, Physics, USA

**10:40 AM**

**(SPRING-SYM 31- 34-2026) Photogalvanic effects in a 2D magnet with PT symmetry (Invited)**

A. W. Tsen\*<sup>1</sup>

1. University of Waterloo, Canada

**11:10 AM**

**(SPRING-SYM 31- 35-2026) Spin excitation and manipulation with 2D magnet/semiconductor heterostructure (Invited)**

X. Zhang\*<sup>1</sup>

1. University of Florida, USA

## **S34 EMSD Advances and Current Challenges in Solid-State Battery Technologies**

### **S34- Electrode engineering and interfaces in solid-state batteries**

Room: Olympic Tower- Evergreen B

Session Chairs: Bisrat Niguise Tafese, Northwestern University; Jeff Sakamoto, University of California Santa Barbara; Jianhua Tong, Clemson University

**8:30 AM**

**(SPRING-SYM 34- 07-2026) Analysis and mitigation of stress-driven lithium penetration in solid electrolytes (Invited)**

B. W. Sheldon\*<sup>1</sup>

1. Brown University, School of Engineering, USA

**9:10 AM**

**(SPRING-SYM 34- 08-2026) Understanding the origins of high impedance of solid-state batteries across length scales (Invited)**

Z. Ahmad\*<sup>1</sup>

1. Texas Tech University, Mechanical Engineering, USA

**9:40 AM**

**(SPRING-SYM 34- 09-2026) Electro-chemo-mechanical evolution of conversion-type cathodes in solid-state batteries**

E. Alsac\*<sup>1</sup>; M. T. McDowell<sup>1</sup>

1. Georgia Institute of Technology, George W. Woodruff School of Mechanical Engineering, USA

**10:00 AM**

**Break**

**10:20 AM**

**(SPRING-SYM 34- 10-2026) Electro-chemo-mechanical coupling mechanisms in solid electrolytes (Invited)**

B. Yildiz\*<sup>1</sup>

1. Massachusetts Institute of Technology, USA

**10:50 AM**

**(SPRING-SYM 34- 11-2026) Probing stress/strain generation in solid electrolyte – Electrode interphase by developing operando mechanical measurement capabilities (Invited)**

B. Marckx<sup>1</sup>; Ö. Ö. Çapraz\*<sup>1</sup>

1. University of Maryland Baltimore, Chemical, Biochemical and Environmental Engineering, USA

**11:20 AM**

**(SPRING-SYM 34- 12-2026) LiPON-enabled reduction of V<sub>2</sub>O<sub>5</sub> during fabrication of Thin-Film Ionic Devices**

L. Tapia-Aracayo\*<sup>1</sup>; D. Halbing<sup>3</sup>; G. Pustorino<sup>2</sup>; D. M. Stewart<sup>1</sup>; L. Brillson<sup>3</sup>; Y. Qi<sup>2</sup>; G. Rubloff<sup>1</sup>

1. University of Maryland, Material Science and Engineering, USA

2. Brown University, School of Engineering, USA

3. The Ohio State University, Physics, USA

## **S4 BSD|ED Frontiers in Low Dimension Ferroic Oxides**

### **S4- Ferroelectrics and Multiferroics**

Room: Olympic Tower- Grand C

Session Chair: Liuyan Zhao, University of Michigan

**1:30 PM**

**(SPRING-SYM 4- 14-2026) Emergent polar topologies from frustrated antipolar waves (Invited)**

G. Jung<sup>1</sup>; M. Swamynadhan<sup>1</sup>; B. Zhao<sup>2</sup>; P. Omprakash<sup>1</sup>; G. Ren<sup>1</sup>; J. Ravichandran<sup>2</sup>; R. Mishra\*<sup>1</sup>

1. Washington University in St Louis, Mechanical Engineering & Materials Science, USA

2. University of Southern California, Chemical Engineering and Material Science, USA

**2:00 PM**

**(SPRING-SYM 4- 15-2026) Thickness-driven symmetry breaking and topological magnetoelectric states in BiFeO<sub>3</sub> (Invited)**

L. M. Caretta\*<sup>1</sup>

1. Brown University, USA

**2:30 PM**

**(SPRING-SYM 4- 16-2026) Vector PFM of complex ferroelectric domain structures**

M. Checa\*<sup>1</sup>

1. Oak Ridge National Laboratory, CNMS, USA

**2:50 PM**

**Break**

**3:10 PM**

**(SPRING-SYM 4- 17-2026) Terahertz light-matter interaction in ferroelectric membranes: Analytical model and dynamical phase-field simulations (Invited)**

J. Hu\*<sup>1</sup>

1. University of Wisconsin-Madison, USA

**3:40 PM**

**(SPRING-SYM 4- 18-2026) Isolated magnetic dopants in ferroelectric oxides: A platform for highly tunable magnetic anisotropy**

E. Nowadnick\*<sup>1</sup>

1. University of California, Merced, USA

**4:00 PM**

**(SPRING-SYM 4- 19-2026) Ferroelectric switching in BiFeO<sub>3</sub>, from ab-initio mechanisms to machine-learned models for sustainable electronics (Invited)**

I. Robredo-Magro\*<sup>1</sup>; U. Dey<sup>1</sup>; S. Park<sup>2</sup>; K. Cho<sup>2</sup>; R. Kim<sup>2</sup>; I. Young<sup>2</sup>; J. Iñiguez-González<sup>1</sup>

1. Luxembourg Institute of Science and Technology, Luxembourg

2. Intel Corporation, USA

## **S6 BSD|ED Complex Oxide Thin Films and Heterostructures**

### **S6- AI/ML assisted synthesis**

Room: Cascade Tower- Regency E

Session Chair: Sundar Kunwar, Los Alamos National Lab

**1:30 PM**

**(SPRING-SYM 6- 28-2026) Artificial intelligence for on-the-fly analysis and control during oxide molecular beam epitaxy (Invited)**

T. Kaspar\*<sup>1</sup>

1. Pacific Northwest National Laboratory, Physical and Computational Sciences Directorate, USA

**2:00 PM**

**(SPRING-SYM 6- 29-2026) Stoichiometry determination in epitaxial films from RHEED to enable autonomous human-in-the-loop film growth (Invited)**

R. Comes\*<sup>1</sup>

1. University of Delaware, Materials Science and Engineering, USA

**2:30 PM**

**(SPRING-SYM 6- 30-2026) AI approaches to thin-film synthesis by pulsed laser deposition: LLMs, autonomous experimentation, and real-time control (Invited)**

S. Harris\*<sup>1</sup>; A. Haque<sup>2</sup>; R. Fajardo<sup>2</sup>; F. Bao<sup>2</sup>; P. Gemperline<sup>3</sup>; R. Comes<sup>4</sup>; K. Xiao<sup>1</sup>; R. K. Vasudevan<sup>1</sup>

1. Oak Ridge National Laboratory, Center for Nanophase Nanophase Material Science, USA  
2. Florida State University, Department of Mathematics, USA  
3. Auburn University, Department of Physics, USA  
4. University of Delaware, Materials Science and Engineering, USA

**3:00 PM**

**Break**

## S7 BSD|ED In Situ/Operando Characterization of Nanomaterials

**S7- Advances in operando/in situ characterization methods related to electron, X-ray, and neutron techniques**

Room: Olympic Tower- Evergreen B

Session Chairs: Di Zhang, Los Alamos National Lab; Katherine Harmon, Stanford University

**1:30 PM**

**(SPRING-SYM 7- 01-2026) Advent of the ultrathin SiN<sub>x</sub> membrane era for in-situ/operando electron microscopy (Invited)**

X. Hu\*<sup>1</sup>; V. Dravid<sup>1</sup>

1. Northwestern University, Materials Science and Engineering, USA

**2:00 PM**

**(SPRING-SYM 7- 02-2026) High-speed multidimensional scanning transmission electron microscopy (Invited)**

A. R. Lupini\*<sup>1</sup>; E. Tiukalova<sup>1</sup>; M. Benoit<sup>1</sup>; O. Dyck<sup>1</sup>; S. Jesse<sup>1</sup>; A. Reifsnnyder<sup>1</sup>; M. Chi<sup>1</sup>

1. Oak Ridge National Laboratory, CNMS, USA

**2:30 PM**

**(SPRING-SYM 7- 03-2026) In Situ 4DSTEM for dynamic materials characterization (Invited)**

C. Ophus\*<sup>1</sup>

1. Stanford University, Materials Science and Engineering, USA

**3:00 PM**

**Break**

**3:20 PM**

**(SPRING-SYM 7- 04-2026) Mesoscale diffraction-contrast imaging of substrate strain from a localized phase transition in a thin film (Invited)**

E. Kisiel\*<sup>1</sup>

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

**3:50 PM**

**(SPRING-SYM 7- 05-2026) Leveraging high-energy coherent X-rays for multiscale microscopy of bulk polycrystalline ceramics**

M. Angelone\*<sup>1</sup>; S. Hruszkewycz<sup>2</sup>; J. Park<sup>2</sup>; R. Harder<sup>2</sup>; W. Cha<sup>2</sup>; P. Kenesei<sup>2</sup>; A. Krause<sup>2</sup>; R. Sandberg<sup>2</sup>; A. Bucsek<sup>2</sup>; H. Sharma<sup>2</sup>; M. Chlupsa<sup>2</sup>; H. Hall<sup>2</sup>; W. Li<sup>2</sup>; M. C. Dursun<sup>2</sup>; S. Shastri<sup>2</sup>; N. Porter<sup>4</sup>

1. Northwestern University, Applied Physics, USA  
2. Argonne National Lab, USA  
3. Carnegie Mellon University, Materials Science and Engineering, USA  
4. Brigham Young University, Physics, USA  
5. University of Michigan, Material Sciences and Engineering, USA

**4:10 PM**

**(SPRING-SYM 7- 06-2026) In situ and in operando materials characterization using neutron scattering and imaging (Invited)**

J. Torres\*<sup>1</sup>; Y. Zhang<sup>1</sup>; H. Zhu<sup>2</sup>; V. Fanelli<sup>1</sup>; R. Hermann<sup>3</sup>; G. Nelson<sup>4</sup>; M. Gober<sup>4</sup>; H. Bilheux<sup>1</sup>; J. Bilheux<sup>1</sup>; J. Amai<sup>1</sup>; S. Tang<sup>1</sup>; T. Ji<sup>2</sup>

1. Oak Ridge National Laboratory, Neutron Scattering Division, USA  
2. Northeastern University, USA  
3. Oak Ridge National Laboratory, USA  
4. The University of Alabama in Huntsville, USA

**4:40 PM**

**(SPRING-SYM 7- 07-2026) Time resolved neutron reflectivity: Watching light elements move (Invited)**

T. Charlton\*<sup>1</sup>

1. Oak Ridge National Lab, USA

**5:10 PM**

**(SPRING-SYM 7- 08-2026) Functional and structural property insights into low-symmetry, monoclinic gallium oxide under dynamic conditions**

A. R. Balog\*<sup>1</sup>; S. Woo<sup>2</sup>; N. Alem<sup>1</sup>

1. Pennsylvania State University, Department of Materials Science and Engineering, USA  
2. Oak Ridge National Laboratory Center for Nanophase Materials Sciences, USA

**5:30 PM**

**(SPRING-SYM 7- 14-2026) 3D property mapping for multiphase and polycrystalline functional ceramics**

A. Akoma<sup>1</sup>; S. Swapno<sup>1</sup>; O. Bermeo Contreras<sup>1</sup>; F. Wang<sup>1</sup>; K. Lizu<sup>1</sup>; B. Huey\*<sup>2</sup>

1. University of Connecticut, Materials Science and Engineering, USA  
2. Purdue University, School of Materials Engineering, USA

## S8 BSD|ED Nano4Neuro 3 - Materials Advances for Analogue, Neuromorphic and Post-Moore Computing Paradigms

**S8- Emerging complex neuromorphic materials**

Room: Olympic Tower- Evergreen A

Session Chair: Karsten Beckmann

**1:30 PM**

**(SPRING-SYM 8- 08-2026) Topotactic-phase-transition-driven memristor of strontium cobaltite thin film (Invited)**

M. Kim<sup>1</sup>; A. Chen<sup>2</sup>; D. Kwon<sup>3</sup>; K. Kang\*<sup>1</sup>

1. Kyungpook National University, Department of Physics, Republic of Korea  
2. Los Alamos National Lab, USA  
3. Korea Institute of Science and Technology, Center for Energy Materials Research, Republic of Korea

**2:00 PM**

**(SPRING-SYM 8- 09-2026) Resistive switching and neuromorphic computing in metal/Nb:SrTiO<sub>3</sub>: Mechanism, interface physics and charge transport (Invited)**

C. Broyles\*<sup>1</sup>; E. Krenkel<sup>1</sup>; F. P. Barrows<sup>2</sup>; S. Kunwar<sup>2</sup>; A. Chen<sup>2</sup>

1. Los Alamos National Laboratory, Center for Integrated Nanotechnologies, USA  
2. Los Alamos National Laboratory, USA

**2:30 PM**

**(SPRING-SYM 8- 10-2026) Nanoscopy of hydrogenated perovskite nickelates neuromorphic devices (Invited)**

Y. Abate\*<sup>1</sup>

1. University of Georgia, Physics, USA

**3:00 PM**

**Break**

**3:20 PM**

**(SPRING-SYM 8- 11-2026) Reservoir computing devices based on layered materials for dynamic control applications (Invited)**

X. Liang\*<sup>1</sup>

1. University of Michigan, Mechanical Engineering, USA

## 3:50 PM

### (SPRING-SYM 8- 12-2026) Emergence of resistive switching properties in hydrogenated $\text{SmNiO}_3$

S. Kunwar\*<sup>1</sup>

1. Los Alamos National Lab, USA

## 4:10 PM

### (SPRING-SYM 8- 13-2026) Design of Ge-based chalcogenides for highly reliable and energy-efficient selector-only-memory (Invited)

S. Chae\*<sup>1</sup>

1. Oregon State University, School of Electrical Engineering and Computer Science, USA

## 4:40 PM

### (SPRING-SYM 8- 14-2026) Interface-tunable properties of van der Waals layered materials for neuromorphic applications

S. Neumayer\*<sup>1</sup>

1. Oak Ridge National Laboratory, USA

## S10 BSD|ED Extreme Environment Microelectronics Materials and Devices

### S10- Ferroelectric and memory applications for extreme environment

Room: Olympic Tower- Evergreen C

Session Chair: Andriy Zakutayev, National Renewable Energy Laboratory

## 1:30 PM

### (SPRING-SYM 10- 01-2026) Fabrication and assessment of ferroelectric $\text{AlScN}$ capacitor arrays for high temperature memory (Invited)

D. E. Drury\*<sup>1</sup>; G. R. Fox<sup>2</sup>; N. Moshir<sup>1</sup>; B. Hanrahan<sup>1</sup>

1. US Army Combat Capabilities Development Command Army Research Laboratory, USA
2. Fox Materials Consulting, LLC, USA

## 2:00 PM

### (SPRING-SYM 10- 02-2026) Operando performance of $\text{Hf}_{0.5}\text{Zr}_{0.5}\text{O}_{0.5}$ (HZO)-based ferroelectric capacitors under neutron radiation

C. Sharma\*<sup>1</sup>; N. Lam<sup>2</sup>; M. Lee<sup>2</sup>; Z. Becerra<sup>2</sup>; L. Boivin<sup>1</sup>; A. O. Boozer<sup>1</sup>; Y. Li<sup>1</sup>; A. Lim<sup>2</sup>; E. M. Ruddell<sup>2</sup>; J. Nimmagadda<sup>1</sup>; A. Angerhofer<sup>2</sup>; J. Kim<sup>2</sup>; J. Ihlefeld<sup>2</sup>; J. C. Nino<sup>1</sup>

1. University of Florida, Materials Science and Engineering, USA
2. University of Florida, Chemistry, USA
3. University of Virginia, Materials Science and Engineering, USA
4. The University of Texas at Dallas, Electrical and Computer Engineering, USA
5. University of Virginia, Materials Science and Engineering, Electrical and Computer Engineering, USA
6. The University of Texas at Dallas, Electrical and Computer Engineering, Materials Science and Engineering, USA
7. University of Florida, Computer and Informational Science and Engineering, Electrical and Computer Engineering, USA

## 2:20 PM

### (SPRING-SYM 10- 03-2026) Low earth orbit exposure of ferroelectric aluminum nitride thin films

B. Dryzhakov\*<sup>1</sup>; K. Kelley<sup>2</sup>; T. Z. Ward<sup>2</sup>; J. Maria<sup>3</sup>; I. Mercer<sup>3</sup>; E. Dickey<sup>4</sup>; I. Ivanov<sup>1</sup>

1. Oak Ridge National Lab, Center for Nanophase Materials Sciences, USA
2. Oak Ridge National Laboratory, USA
3. The Pennsylvania State University, Materials Science and Engineering, USA
4. Carnegie Mellon University, USA

## 2:40 PM

### (SPRING-SYM 10- 04-2026) Operando performance of electronic devices under mixed neutron and gamma radiation (Invited)

C. Sharma<sup>1</sup>; J. C. Nino\*<sup>1</sup>

1. University of Florida, Materials Science and Engineering, USA

## 3:10 PM

### Break

## 3:30 PM

### (SPRING-SYM 10- 05-2026) Epitaxial $\text{Al}_{1-x}\text{Gd}_x\text{N}$ ferroelectric thin films

K. Yazawa\*<sup>2</sup>; J. Mangum<sup>1</sup>; G. Brennecke<sup>2</sup>; A. Zakutayev<sup>1</sup>; N. Haegel<sup>1</sup>

1. National Renewable Energy Laboratory, USA
2. Colorado School of Mines, USA

## 3:50 PM

### (SPRING-SYM 10- 06-2026) Substrate effects on piezoelectric properties of AlN-based thin films

Y. Lee\*<sup>1</sup>; G. R. Fox<sup>2</sup>; G. Brennecke<sup>2</sup>; K. Yazawa<sup>1</sup>

1. Colorado School of Mines, Metallurgical and Materials Engineering, USA
2. Fox Materials Consulting, LLC, USA
3. Colorado School of Mines, USA

## S10- Materials for power electronics and devices I

Room: Olympic Tower- Evergreen C

Session Chair: Ahmad Islam, Air Force Research Laboratory Sensors Directorate

## 4:10 PM

### (SPRING-SYM 10- 07-2026) Ultra-wide bandgap semiconductor materials and devices for extreme environments (Invited)

A. Zakutayev\*<sup>1</sup>

1. National Renewable Energy Laboratory, USA

## 4:40 PM

### (SPRING-SYM 10- 08-2026) In situ strain and defect evolution in WBG/UWBG semiconductors at high temperatures (Invited)

K. Fu<sup>1</sup>; H. Ellis\*<sup>1</sup>

1. The University of Utah, USA

## 5:10 PM

### (SPRING-SYM 10- 09-2026) GaN defects: A multifidelity DFT approach for predicting electronic structure degradation in radiation-heavy environments

J. Everts\*<sup>1</sup>; S. Muller<sup>1</sup>

1. Pacific Northwest National Laboratory, USA

## S15 BSD|ED|MD Ceramic Materials and Systems for a Sustainable and Resilient Energy Future

### S15- Innovation of new ceramic materials systems, novel processing and manufacturing techniques to overcome current technical challenges to enable next generation energy technologies

Room: Olympic Tower- Grand A

Session Chairs: Hosop Shin, Purdue University; James Hemrick, Oak Ridge National Laboratory

## 1:30 PM

### (SPRING-SYM 15- 07-2026) Fast roll-to-roll processing of ceramic materials (Invited)

J. A. Olenick\*<sup>1</sup>

1. Pennsylvania State University, EMS, USA

## 2:00 PM

### (SPRING-SYM 15- 08-2026) Sustainable additive manufacturing of ceramics assisted by pressure and water (Invited)

X. Song\*<sup>1</sup>

1. University of Iowa, Industrial and Systems Engineering, USA

## 2:30 PM

### (SPRING-SYM 15- 09-2026) Combustion-enabled synthesis and ultrafast processing of actinide oxide ceramics and thin films (Invited)

K. Manukyan\*<sup>1</sup>

1. University of Notre Dame, USA

**3:00 PM**

**Break**

**3:20 PM**

**(SPRING-SYM 15- 10-2026) Advancements in ceramic vapor processing technologies at Oak Ridge National Laboratory**

B. Lamm\*; B. L. Armstrong<sup>1</sup>

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

## **S15- Recycling, sustainability, safety and reliability for energy material and systems**

Room: Olympic Tower- Grand A

Session Chairs: James Hemrick, Oak Ridge National Laboratory;

Dong Hou, Clemson University

**3:40 PM**

**(SPRING-SYM 15- 11-2026) Regeneration of battery-grade cathode ceramics via planetary mixing-assisted processing for sustainable battery materials (Invited)**

H. Shin\*<sup>1</sup>

1. Purdue University, USA

**4:10 PM**

**(SPRING-SYM 15- 12-2026) Cold sintering of ceramic composites to enable recyclable solid-state batteries (Invited)**

E. D. Gomez\*<sup>1</sup>

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

**4:40 PM**

**(SPRING-SYM 15- 13-2026) Repurposing, reuse, and recycling of end of life electric vehicle batteries: A comprehensive review**

N. Belay\*<sup>1</sup>

1. Bahir Dar Institute of Technology, School of Materials Science and Engineering, Ethiopia

## **S16 MD|ED|GOMD Advanced Manufacturing and Processing of Ceramic Materials**

### **S16- Sintering I**

Room: Olympic Tower- Grand B

Session Chairs: Rajendra Bordia, Clemson University; Alexis Lewis, National Science Foundation

**1:30 PM**

**(SPRING-SYM 16- 07-2026) Combining advanced manufacturing methods with machine learning for complex field assisted sintering of ceramic materials (Invited)**

J. F. Rufner\*; A. Gorman<sup>1</sup>; S. Pitts<sup>1</sup>; W. Chuirazzi<sup>1</sup>; A. Preston<sup>1</sup>; V. Walker<sup>1</sup>; E. Murdock<sup>1</sup>; M. Matos<sup>1</sup>; M. Moorehead<sup>1</sup>

1. Idaho National Laboratory, Materials and Manufacturing, USA

**2:00 PM**

**(SPRING-SYM 16- 08-2026) Emerging priorities and funding opportunities in ceramics processing and manufacturing at the National Science Foundation (Invited)**

A. Lewis\*<sup>1</sup>

1. National Science Foundation, USA

**2:30 PM**

**(SPRING-SYM 16- 09-2026) Scaling spark plasma sintering beyond the lab: An industry perspective on processing advanced ceramic systems (Invited)**

E. Ramos\*<sup>1</sup>; E. Eyerma<sup>1</sup>

1. California Nanotechnologies, USA

**3:00 PM**

**Break**

**3:20 PM**

**(SPRING-SYM 16- 10-2026) Use of Machine-learning for Robust Processing-Microstructure-Property Relationships for Ceramics (Invited)**

X. Geng<sup>1</sup>; H. Xiao<sup>2</sup>; F. Peng<sup>1</sup>; R. Bordia\*<sup>1</sup>

1. Clemson University, Materials Science and Engineering, USA

2. Clemson University, Electrical and Computer Engineering, USA

**3:50 PM**

**(SPRING-SYM 16- 11-2026) High pressure spark plasma sintering for ultra-fine nanocrystalline dense ceramics (Invited)**

R. Castro\*<sup>1</sup>

1. Lehigh University, Material Science & Engineering, USA

**4:20 PM**

**(SPRING-SYM 16- 12-2026) Compositionally complex (Hf,Zr,Nb,Ti) B<sub>2</sub>-LaB<sub>6</sub> ceramics**

B. Cui\*<sup>1</sup>; X. Chen<sup>1</sup>; L. Trinh<sup>1</sup>; Z. Hua<sup>2</sup>; K. Bawane<sup>2</sup>; Y. Lu<sup>1</sup>

1. University of Nebraska-Lincoln, USA

2. Idaho National Laboratory, USA

**4:40 PM**

**(SPRING-SYM 16- 13-2026) High-temperature vacuum furnaces revisited**

W. M. Carty\*<sup>1</sup>

1. Materials Research Furnaces, CTO, USA

## **S19 GOMD|EMSD Glass and Interactions with its Environment - Fundamentals and Applications**

### **S19- Glass and glass-ceramics for waste immobilization I**

Room: Cascade Tower- Laurel

Session Chair: Jim Neeway, Pacific Northwest National Lab

**1:30 PM**

**(SPRING-SYM 19- 01-2026) Correlation between glass structure and reactivity in high ionic strength, high pH solutions (Invited)**

E. Tsekrekas\*<sup>1</sup>; R. Hausrath<sup>1</sup>; B. Pershing<sup>1</sup>; E. Pham<sup>1</sup>; C. L. Trivelpiece<sup>1</sup>

1. Savannah River National Laboratory, Glass, Cement, and Ceramic Sciences, USA

**2:00 PM**

**(SPRING-SYM 19- 02-2026) Expansion of viscosity models for US Hanford site radioactive wasteglass melts**

C. Walsh\*<sup>1</sup>; J. George<sup>1</sup>; P. Ferk<sup>1</sup>; A. Scrimshire<sup>1</sup>; P. Hrma<sup>3</sup>; A. Bell<sup>1</sup>; R. Smith<sup>1</sup>; P. A. Bingham<sup>1</sup>; A. A. Kruger<sup>2</sup>

1. Sheffield Hallam University, Materials and Engineering Research Institute, United Kingdom

2. US Department of Energy, Office of River Protection, USA

3. AttainX, USA

4. Pacific Northwest National Laboratory, USA

**2:20 PM**

**(SPRING-SYM 19- 03-2026) Evaluation of glasses to expand compositional boundaries for DFHLW vitrification – Viscosity and electrical conductivity measurements**

J. George\*<sup>1</sup>; R. Russell<sup>1</sup>; J. Bai<sup>1</sup>; T. Jin<sup>1</sup>; S. Chong<sup>1</sup>; A. Kruger<sup>2</sup>; J. Vienna<sup>3</sup>; W. C. Eaton<sup>1</sup>

1. Pacific Northwest National Laboratory, USA

2. Hanford Field Office, USA

**2:40 PM**

**(SPRING-SYM 19- 04-2026) The influence of dissolved grout components on glass corrosion**

M. Asmussen\*<sup>1</sup>; V. Drozd<sup>2</sup>; Y. Katsenovich<sup>2</sup>

1. Pacific Northwest National Lab, Energy and Environment Directorate, USA

2. Florida International University, ARC, USA

**3:00 PM**

**Break**

**3:20 PM**

**(SPRING-SYM 19- 05-2026) Predicting the long-term corrosion of multiphase waste forms**

S. N. Kerisit\*; B. Parruzot<sup>1</sup>; J. Neeway<sup>1</sup>; J. T. Reiser<sup>1</sup>; J. M. Westman<sup>1</sup>; P. Sutton<sup>2</sup>; D. Gregg<sup>2</sup>; M. Asmussen<sup>1</sup>; G. Smith<sup>1</sup>

1. Pacific Northwest National Lab, USA
2. Australia's Nuclear Science and Technology Organisation, Australia

**3:40 PM**

**(SPRING-SYM 19- 06-2026) Impact of cation coordination on halide behavior in sulfate-containing Hanford LAW glasses**

K. L. Rodman\*; J. Bussey<sup>1</sup>; C. Dixon<sup>1</sup>; S. Soudani<sup>1</sup>; J. McCloy<sup>1</sup>

1. Washington State University, School of Mechanical and Materials Engineering, USA

**4:00 PM**

**(SPRING-SYM 19- 07-2026) Using the ILAW glass corrosion model and compositional space to predict release of contaminants in disposal conditions**

B. Parruzot\*; J. Anderson<sup>1</sup>; S. N. Kerisit<sup>2</sup>; J. Neeway<sup>1</sup>; G. Smith<sup>1</sup>; M. Asmussen<sup>1</sup>

1. Pacific Northwest National Lab, Energy and Environment Directorate, USA
2. Pacific Northwest National Lab, Physical and Computational Sciences Directorate, USA

**4:20 PM**

**(SPRING-SYM 19- 08-2026) Structural and corrosion studies of iron-phosphate waste forms derived from halide salt compositions**

L. L. Greiner\*; K. Carlson<sup>3</sup>; C. Lonergan<sup>2</sup>

1. Missouri University of Science and Technology, Materials Science and Engineering, USA
2. Missouri University of Science & Technology, USA
3. University of Nevada Reno, USA

**4:40 PM**

**(SPRING-SYM 19- 09-2026) A feedforward approach to support low-activity waste glass disposal at Hanford**

J. Neeway\*; S. N. Kerisit<sup>2</sup>; J. V. Crum<sup>1</sup>; J. T. Reiser<sup>3</sup>; B. Parruzot<sup>4</sup>; G. Smith<sup>1</sup>; M. Asmussen<sup>4</sup>

1. Pacific Northwest National Lab, USA
2. Pacific Northwest National Lab, Physical and Computational Sciences Directorate, USA
3. Pacific Northwest National Lab, Chemistry, USA
4. Pacific Northwest National Lab, Energy and Environment Directorate, USA

**5:00 PM**

**(SPRING-SYM 19- 17-2026) Degradation mechanism of the lead-glazed cups from the 'Yangtze River Estuary No. 2' shipwreck**

W. Li\*

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

## **S23 BSD High Interfacial Materials - Controlling Grain Boundaries and their Network**

### **S23- High Interfacial Materials - Grain Boundary Effects**

Room: Cascade Tower- Regency A

Session Chairs: Edward Gorzkowski, Naval Research Lab; James Wollmershauser, U.S. Naval Research Laboratory; Hadas Sternlicht, The Pennsylvania State University Department of Materials Science and Engineering

**1:30 PM**

**(SPRING-SYM 23- 01-2026) Grain boundary symmetry and migration: Recent results (Invited)**

D. J. Srolovitz\*; C. Qiu<sup>1</sup>; M. Salvalaglio<sup>3</sup>; J. Han<sup>4</sup>

1. The University of Hong Kong, Mechanical Engineering, Hong Kong
2. The University of Hong Kong, Hong Kong
3. Technische Universität Dresden, Germany
4. City University of Hong Kong, Hong Kong

**2:10 PM**

**(SPRING-SYM 23- 02-2026) A unified framework for grain boundary creep and deformation in ceramics (Invited)**

S. J. Dillon\*

1. University of California, Irvine, USA

**2:40 PM**

**(SPRING-SYM 23- 03-2026) Unambiguous correlation of ionic conductivity and grain boundary space charge structure (Invited)**

W. Bowman\*; H. Guo<sup>1</sup>

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

### **S23- High Interfacial Materials - Grain Boundary and Size Effects**

Room: Cascade Tower- Regency A

Session Chairs: James Wollmershauser, U.S. Naval Research Laboratory; Edward Gorzkowski, Naval Research Lab; Hadas Sternlicht, The Pennsylvania State University Department of Materials Science and Engineering

**3:10 PM**

**Break**

**3:30 PM**

**(SPRING-SYM 23- 04-2026) Ionic conductivity in BaZrO<sub>3</sub> and SrTiO<sub>3</sub>: interplay of sintering, space charge, segregation and grain boundary conductivity (Invited)**

J. N. Ebert<sup>1</sup>; P. Zahler<sup>1</sup>; M. Kindelmann<sup>2</sup>; W. Rheinheimer\*

1. Universität Stuttgart, Institute for Ceramic Materials and Technologies, Germany
2. DTU, Denmark

**4:00 PM**

**(SPRING-SYM 23- 06-2026) Deformation in nanocrystalline CdTe and photomechanical effects from machine-learning force field simulations (Invited)**

Q. An\*

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

**4:30 PM**

**(SPRING-SYM 23- 07-2026) Synthesis of nanopolycrystalline cubic silicon nitride and related materials under high pressure and temperature (Invited)**

N. Nishiyama\*

1. Busshitsu Zairyo Kenkyu Kiko, Research Center for Materials Nanoarchitectonics, Japan

**5:00 PM**

**(SPRING-SYM 23- 08-2026) Fine grained ZnS via multiple sintering techniques**

J. Gild\*; D. Boyd<sup>1</sup>; B. Sadowski<sup>2</sup>; S. Bayya<sup>1</sup>; W. Kim<sup>1</sup>; J. Sanghera<sup>1</sup>

1. US Naval Research Laboratory, Optical Materials and Devices, USA
2. Armentum Services Inc, USA

## **S26 ED Semiconductors and Microelectronics in Metal Halide/Chalcogenide and Oxide Perovskites**

### **S26- Metal Halide Perovskite Optoelectronics and Semiconductor Property II**

Room: Cascade Tower- Regency B

Session Chairs: Wanyi Nie, SUNY University at Buffalo; Qing Tu, Texas A&M University System

**1:30 PM**

**(SPRING-SYM 26- 08-2026) Predicting the dynamic behavior of halide perovskites using machine learning (Invited)**

M. Leite\*

1. UC Davis, Materials Science and Engineering, USA

**2:00 PM**

**(SPRING-SYM 26- 09-2026) Metal halide perovskite solar cells under extreme conditions (Invited)**

Z. Song\*

1. The University of Toledo, USA

**2:30 PM****(SPRING-SYM 26- 10-2026) Optimized photoemission from organic molecules in 2D layered halide perovskites**M. Muhammad<sup>\*1</sup>; B. Saparov<sup>2</sup>; D. Glatzhofer<sup>1</sup>

1. The University of Oklahoma, Chemistry and Biochemistry, USA
2. The University of Oklahoma, USA

**2:50 PM****Break****3:10 PM****(SPRING-SYM 26- 11-2026) Molecular engineering in layered metal halide hybrid perovskites for tunable thermal conductivity, elastic modulus, and beyond (Invited)**J. Liu<sup>\*1</sup>

1. NC State University, Mechanical and Aerospace Engineering, USA

**3:40 PM****(SPRING-SYM 26- 12-2026) Tracking and making use of heat in two-dimensional metal halide perovskites (Invited)**P. Guo<sup>\*1</sup>

1. Yale University, USA

**4:10 PM****(SPRING-SYM 26- 13-2026) Bridging structural diversity and optical properties: A study on a series of hybrid organic-inorganic copper(I) bromides**T. Pinky<sup>\*1</sup>; K. Parashar<sup>1</sup>; B. Saparov<sup>2</sup>

1. The University of Oklahoma, Department of Chemistry and Biochemistry, USA
2. The University of Oklahoma, USA

**4:30 PM****(SPRING-SYM 26- 14-2026) Exploring the structural and functional properties of a novel category of hybrid double metal halide perovskites**K. Parashar<sup>\*1</sup>; T. Pinky<sup>1</sup>; B. Saparov<sup>2</sup>

1. The University of Oklahoma, Department of Chemistry and Biochemistry, USA
2. The University of Oklahoma, USA

**S29 ED Scale-Bridging Approaches for Electroceramic Design and Performance****S29- Scale-Bridging Approaches for Electroceramic Design and Performance**

Room: Cascade Tower- Regency FG

Session Chair: Zuo-Guang Ye, Simon Fraser University

**1:30 PM****(SPRING-SYM 29- 01-2026) Atomic-resolution spectroscopic and nanodiffraction analysis of transition metal oxide interfaces (Invited)**K. Burns<sup>\*1</sup>; N. Qureshi<sup>1</sup>; H. Barry<sup>1</sup>; S. Garg<sup>1</sup>; P. Balachandran<sup>1</sup>; T. E. Beechem<sup>3</sup>; J. Ihlefeld<sup>1</sup>; J. A. Hachte<sup>2</sup>

1. University of Virginia, Department of Materials Science and Engineering, USA
2. Oak Ridge National Laboratory, USA
3. Purdue University, Mechanical Engineering, USA

**2:00 PM****(SPRING-SYM 29- 02-2026) Atomic-scale characterization of defects in lead-free ferroelectrics via multi-modal electron microscopy (Invited)**A. Bencan Golob<sup>\*1</sup>; J. Roknič<sup>1</sup>; K. Ziberna<sup>1</sup>; M. Poberznik<sup>2</sup>; A. Kokalj<sup>2</sup>; M. Stojmichev<sup>3</sup>; M. Martinc<sup>3</sup>; S. Dzeroski<sup>2</sup>; G. Drazic<sup>4</sup>

1. Jozef Stefan Institute, Electronic Ceramics, Slovenia
2. Jozef Stefan Institute, Physical and Organic Chemistry Department, Slovenia
3. Jozef Stefan Institute, Knowledge Technologies Department, Slovenia
4. National Institute of Chemistry, Department of Materials Chemistry, Slovenia

**2:30 PM****(SPRING-SYM 29- 03-2026) Development of novel antiferro-/ferroelectric materials for energy storage (Invited)**Z. Ye<sup>\*1</sup>

1. Simon Fraser University, Canada

**3:00 PM****Break****S30 ED Quo Vadis - High-Entropy Oxides?****S30- High-entropy oxides: theory, chemistry and properties**

Room: Cascade Tower- Regency C

Session Chairs: Megan Butala, University of Florida; Katharine Page, University of Tennessee

**1:30 PM****(SPRING-SYM 30- 07-2026) Understand the hidden rules of high entropy oxides through specialized database and models (Invited)**B. Ouyang<sup>\*1</sup>; L. Wang<sup>1</sup>

1. Florida State University, Chemistry and Biochemistry, USA

**2:00 PM****(SPRING-SYM 30- 08-2026) Probing the chemical stability of high entropy oxides under acidic conditions**W. J. Deary<sup>\*1</sup>; G. R. Bejger<sup>1</sup>; C. M. Rost<sup>1</sup>

1. Virginia Polytechnic Institute and State University, Materials Science and Engineering, USA

**2:20 PM****(SPRING-SYM 30- 09-2026) Compositional complexity driven relaxor ferroelectrics (Invited)**Y. Chu<sup>\*1</sup>

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

**2:50 PM****Break****3:10 PM****(SPRING-SYM 30- 10-2026) High-entropy oxides as innovative catalysts (Invited)**A. Kirsch<sup>\*1</sup>

1. Ruhr University Bochum, Research Center Future Energy Materials and Systems & Faculty of Chemistry and Biochemistry, Germany

**3:40 PM****(SPRING-SYM 30- 11-2026) Synthesis of compositionally complex rare earth aluminum garnets (CCREAGs)**V. Garcia<sup>\*1</sup>; K. Loughlin<sup>1</sup>; T. Kwaidah<sup>2</sup>; J. Holliman<sup>1</sup>; J. Safin<sup>1</sup>; A. Corrao<sup>3</sup>; D. Olds<sup>3</sup>; K. Page<sup>1</sup>; C. Rawn<sup>1</sup>

1. The University of Tennessee Knoxville Tickle College of Engineering, Materials Science and Engineering, USA
2. Clemson University College of Agriculture Forestry and Life Sciences, Plant and Environmental Sciences, USA
3. Brookhaven National Laboratory, National Synchrotron Light Source II, USA

**4:00 PM****(SPRING-SYM 30- 12-2026) Epitaxial growth and magnetic characterization of orthorhombic Ho(Ni<sub>0.2</sub>Co<sub>0.2</sub>Fe<sub>0.2</sub>Mn<sub>0.2</sub>Cr<sub>0.2</sub>)O<sub>3</sub> high-entropy oxide perovskite thin films**B. Regmi<sup>\*1</sup>; D. Miertschin<sup>1</sup>; P. Kandel<sup>1</sup>; A. Farhan<sup>1</sup>

1. Baylor University, Physics, USA

**4:20 PM****(SPRING-SYM 30- 13-2026) Cation diffusion, site occupancy, and magnetism in high-entropy spinel oxide thin films**J. Shi<sup>\*1</sup>; L. Wang<sup>2</sup>; H. Kao<sup>2</sup>; M. Bowden<sup>1</sup>; E. Hershkovitz<sup>1</sup>; B. Ravel<sup>3</sup>; Z. Zhu<sup>4</sup>; C. Wang<sup>4</sup>; Y. Du<sup>1</sup>

1. Pacific Northwest National Laboratory, USA
2. Oregon State University, School of Chemical, Biological and Environmental Engineering, USA
3. National Institute of Standards and Technology, USA
4. Pacific Northwest National Laboratory, Environmental Molecular Sciences Laboratory, USA

**4:40 PM****(SPRING-SYM 30- 14-2026) Influence of compositional complexity on cation inversion in high entropy spinel oxides**J. Bergh<sup>\*1</sup>; G. Bejger<sup>1</sup>; A. Titus<sup>1</sup>; J. Wright<sup>2</sup>; J. Barber<sup>1</sup>; C. M. Rost<sup>2</sup>

1. Virginia Polytechnic Institute and State University, Materials Science and Engineering, USA
2. James Madison University, Physics and Astronomy, USA
3. Argonne National Laboratory, USA

**S35 GOMD Fundamentals of the Glassy State****S35- Mechanical properties of glasses and glass crystallization and glass-ceramics**

Room: Cascade Tower- Larch

Session Chair: Yueh-Ting Shih, National Cheng Kung University

**1:30 PM****(SPRING-SYM 35- 08-2026) Reconciling classical nucleation theory models for congruent nucleation in lithium disilicate glass (Invited)**S. H. Kim<sup>\*1</sup>; M. Link<sup>1</sup>; M. A. Ozay<sup>1</sup>; M. Montazerian<sup>2</sup>; J. C. Mauro<sup>2</sup>

1. Pennsylvania State University, Chemical Engineering & Materials Science, USA
2. The Pennsylvania State University Department of Materials Science and Engineering, USA

**2:00 PM****(SPRING-SYM 35- 09-2026) Phase separation and crystallization of phosphates in borosilicate waste glasses**J. Bai<sup>\*1</sup>; J. V. Crum<sup>1</sup>; X. Lu<sup>1</sup>; J. Vienna<sup>1</sup>; A. A. Kruger<sup>2</sup>

1. Pacific Northwest National Laboratory, USA
2. US Department of Energy, Hanford Field Office, USA

**2:20 PM****(SPRING-SYM 35- 10-2026) Determining nucleation kinetics across the  $\text{Na}_2\text{Ca}_2\text{Si}_3\text{O}_9$  -  $\text{NaAlSi}_3\text{O}_8$  join through complementary non-isothermal and in-situ methods**W. L. Kiff<sup>\*2</sup>; R. Pao<sup>1</sup>; C. Dixon<sup>2</sup>; C. Wilkinson<sup>1</sup>; J. McCloy<sup>2</sup>

1. Alfred University, College of Ceramics, USA
2. Washington State University, School of Mechanical and Materials Engineering, USA

**2:40 PM****(SPRING-SYM 35- 11-2026) A crystallization study of combeite glass-ceramics**Q. Fu<sup>\*2</sup>; M. R. Jesuit<sup>1</sup>; A. Shearer<sup>2</sup>; M. haller<sup>2</sup>; L. zhang<sup>2</sup>; B. Abel<sup>2</sup>; R. Miller<sup>2</sup>; R. Youngman<sup>2</sup>

1. Coe College, Physics, USA
2. Corning Incorporated, Science & Technology Division, USA

**3:00 PM****Break****3:20 PM****(SPRING-SYM 35- 12-2026) Steam strengthened glass (Invited)**J. Wu<sup>\*1</sup>; T. M. Gross<sup>1</sup>; Z. Zheng<sup>1</sup>; K. Hufziger<sup>1</sup>; R. Youngman<sup>1</sup>

1. Corning Incorporated, USA

**3:50 PM****(SPRING-SYM 35- 13-2026) Coloration of phosphate-based LionGlass with transition metal oxides**E. Aichele<sup>\*1</sup>; N. Clark<sup>1</sup>; J. C. Mauro<sup>1</sup>

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

**S35- Glass formation and structural relaxation**

Room: Cascade Tower- Larch

Session Chairs: Yueh-Ting Shih, National Cheng Kung University; Søren Sørensen, Aalborg University

**4:10 PM****(SPRING-SYM 35- 14-2026) Decoupling density and disorder effects on the boson peak in metal-organic frameworks (Invited)**S. S. Sørensen<sup>\*1</sup>; F. Cao<sup>1</sup>; P. Rasmussen<sup>1</sup>; J. Finkler<sup>1</sup>; M. H. Henningsen<sup>1</sup>; M. M. Smedskjaer<sup>1</sup>; M. Aouane<sup>2</sup>; D. Bessas<sup>3</sup>; A. Chumakov<sup>3</sup>; J. Bulled<sup>3</sup>; A. Bosak<sup>3</sup>; G. Monaco<sup>4</sup>

1. Aalborg University, Department of Chemistry and Bioscience, Denmark
2. ISIS Facility, Rutherford Appleton Laboratory, MARI, United Kingdom
3. ESRF, France
4. Università degli Studi di Padova, Department of Physics and Astronomy 'Galileo Galilei', Italy

**4:40 PM****(SPRING-SYM 35- 15-2026) Photon correlation spectroscopy in mixed network forming glass melts**D. Sidebottom<sup>\*1</sup>; J. McCown<sup>1</sup>; J. Kevill<sup>1</sup>; D. White<sup>1</sup>; D. Olabode<sup>1</sup>

1. Creighton University, Physics, USA

**5:00 PM****(SPRING-SYM 35- 16-2026) Modeling heterogeneous supercooled liquids and glasses: Linking fragility to the temperature dependence of nonexponentiality in structural relaxation (Invited)**W. Takeda<sup>\*1</sup>; P. Lucas<sup>1</sup>

1. The University of Arizona, Materials science and engineering, USA

**5:30 PM****(SPRING-SYM 35- 17-2026) Reinterpreting the non-Arrhenius behavior of transport coefficients in the glass transition regime**A. Ahmed<sup>1</sup>; C. Beg<sup>1</sup>; J. Kieffer<sup>\*1</sup>

1. University Of Michigan, USA

**S39 GOMD Steve Feller Honorary Symposium****S39- Steve Feller Honorary Symposium II**

Room: Cascade Tower- Juniper

Session Chairs: Collin Wilkinson, Alfred University; Mario Affatigato, Coe College

**1:30 PM****(SPRING-SYM 39- 09-2026) Borate tetrahedra and the chemical stability of borate-based glasses**R. Brow<sup>\*1</sup>

1. Missouri S&T, Materials Sci & Engrg, USA

**1:50 PM****(SPRING-SYM 39- 10-2026) From Coe glass research to climate litigation: One student's journey integrating science, history, and law (Invited)**B. Franta<sup>\*1</sup>

1. University of Oxford, United Kingdom

**2:20 PM****(SPRING-SYM 39- 12-2026) From network formers to mentorship bonds: Ionic transport in borate glasses**C. B. Bragatto<sup>\*1</sup>

1. Alfred University, Engineering Department, USA

## 2:40 PM

### (SPRING-SYM 39- 13-2026) Alkaline-earth cations in borophosphate glasses: Network modifiers, charge compensators and beyond (Invited)

S. Kroeker\*<sup>1</sup>; M. Abbasi<sup>1</sup>

1. University of Manitoba, Chemistry, Canada

## 3:10 PM - Break

## 3:30 PM

### (SPRING-SYM 39- 14-2026) I have never let my schooling interfere with my education: On pure and modified tellurite glasses

B. M. Hauke\*<sup>1</sup>; E. Barney<sup>2</sup>

1. The American Ceramic Society, USA
2. University of Nottingham, Mechanical Engineering, United Kingdom

## 3:50 PM

### (SPRING-SYM 39- 15-2026) Molar volume interpretations in variable network former oxide glasses (Invited)

B. Moulton<sup>1</sup>; W. LaCourse\*<sup>1</sup>; C. Wilkinson<sup>2</sup>; D. Möncke<sup>1</sup>; R. Welch<sup>1</sup>; M. R. Caccia<sup>1</sup>; C. B. Bragatto<sup>1</sup>; J. Shelby<sup>1</sup>; A. Cormack<sup>1</sup>

1. Alfred University, Inamori School of Engineering, USA
2. Alfred University, Glass Science, USA

# Friday, April 17, 2026

## S7 BSD|ED In Situ/Operando Characterization of Nanomaterials

### S7- In situ/operando study of electronic materials such as ferroics, perovskites, ionics, and semiconductors

Room: Olympic Tower- Evergreen B

Session Chairs: Hao Zheng, Argonne National Lab; Di Zhang, Los Alamos National Lab

## 8:30 AM

### (SPRING-SYM 7- 09-2026) In situ synchrotron X-ray studies of ferroelectric oxides: from growth dynamics to autonomous synthesis (Invited)

R. Liu\*<sup>1</sup>

1. Argonne National Laboratory, USA

## 9:00 AM

### (SPRING-SYM 7- 10-2026) Light-driven symmetry control in quantum dots (Invited)

B. Guzelurk\*<sup>1</sup>

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

## 9:30 AM

### (SPRING-SYM 7- 11-2026) The origin of macroscopic inversion symmetry breaking in quantum paraelectric KTaO<sub>3</sub> single crystal (Invited)

X. Li\*<sup>1</sup>; G. Zhao<sup>2</sup>; F. Yang<sup>2</sup>; M. Krogstad<sup>1</sup>; R. D. Schaller<sup>3</sup>; E. Karapetrova<sup>1</sup>; D. Talbayev<sup>4</sup>; L. Chen<sup>2</sup>; J. Kim<sup>1</sup>; P. Ryan<sup>1</sup>

1. Argonne National Laboratory Advanced Photon Source, USA
2. The Pennsylvania State University, USA
3. Argonne National Laboratory, USA
4. Tulane University, USA

## 10:00 AM

### Break

## 10:20 AM

### (SPRING-SYM 7- 12-2026) Multi-modal electron microscopy for probing real-space topological textures and their phase transitions (Invited)

Y. Shao\*<sup>1</sup>

1. University of Southern California, Mork Family Department of Chemical Engineering and Materials Science, USA

## 10:50 AM

### (SPRING-SYM 7- 13-2026) Strain mapping of freestanding crystalline membranes under applied strain with coherent nano-focused X-rays

S. Y. Htun\*<sup>1</sup>; N. Flanders<sup>2</sup>; P. Lozano<sup>3</sup>; S. Hruszkewycz<sup>4</sup>; M. Landberg<sup>6</sup>; I. Almazán<sup>5</sup>; C. Horn<sup>2</sup>; P. Ryan<sup>7</sup>; R. Xu<sup>8</sup>; J. Li<sup>8</sup>

1. Northwestern University, Department of Physics, USA
2. The university of Chicago, Pritzker School of Molecular Engineering, USA
3. Argonne National Laboratory Advanced Photon Source, USA
4. Argonne National Lab, USA
5. Universidad de Zaragoza, Spain
6. MAX IV-laboratoriet, Sweden
7. North Carolina State University, USA
8. Stanford Linear Accelerator Center, SIMES, USA

## 11:10 AM

### (SPRING-SYM 7- 15-2026) A multimodal operando optical characterization framework for probing electrochemical doping kinetics in organic mixed ionic–electronic conductors

P. Guo\*<sup>1</sup>

1. Yale University, USA

## S8 BSD|ED Nano4Neuro 3 - Materials Advances for Analogue, Neuromorphic and Post-Moore Computing Paradigms

### S8- Redox memory and computing I

Room: Olympic Tower- Evergreen A

Session Chairs: Anton levlev, Oak Ridge National Lab; Sabine Neumayer, Oak Ridge National Lab

## 8:30 AM

### (SPRING-SYM 8- 15-2026) Electrochemical ionic synapses for energy-efficient brain-inspired computing (Invited)

B. Yildiz\*<sup>1</sup>

1. Massachusetts Institute of Technology, USA

## 9:00 AM

### (SPRING-SYM 8- 16-2026) Neuromorphic devices using iono-physical coupling effects (Invited)

S. Lee\*<sup>1</sup>

1. Daegu Gyeongbuk Institute of Science & Technology, Physics and Chemistry, Republic of Korea

## 9:30 AM

### (SPRING-SYM 8- 17-2026) Potentiation of VCM based RRAM devices on sub-ns timescales (Invited)

S. Wiefels\*<sup>1</sup>; F. Munir<sup>1</sup>; D. Schön<sup>1</sup>; S. Menzel<sup>1</sup>

1. Forschungszentrum Julich GmbH, PGI-7, Germany

## 10:00 AM

### Break

## 10:20 AM

### (SPRING-SYM 8- 18-2026) Dual-ion electrochemical memory for energy efficient analog AI and reservoir computing (Invited)

M. Marinella\*<sup>1</sup>

1. Arizona State University, Electric, Computer and Energy Engineering, USA

## 10:50 AM

### (SPRING-SYM 8- 19-2026) Engineering of nanoscale NbO<sub>2</sub> threshold switches for neuromorphic computing

K. Beckmann\*<sup>1</sup>; J. Modasiya<sup>2</sup>; M. Liehr<sup>1</sup>; S. Rogalskyj<sup>1</sup>; S. Ogden<sup>1</sup>; W. Collison<sup>1</sup>; K. Lee<sup>1</sup>; M. Rodgers<sup>1</sup>; N. Cady<sup>2</sup>

1. NY CREATES, USA
2. College of Nanoscale Science & Engineering, USA
3. University at Albany, Nanoscale Engineering, USA

**11:10 AM**

**(SPRING-SYM 8- 20-2026) Strong radial electric field scaling near nanoscale conductive filaments (Invited)**

R. Jacobs-Gedrim<sup>\*1</sup>; S. Oh<sup>1</sup>; W. S. Wahby<sup>1</sup>; C. Carlos<sup>1</sup>; P. S. Finnegan<sup>1</sup>; T. Awe<sup>1</sup>; P. Xiao<sup>1</sup>; M. Witten<sup>1</sup>; J. Martinez-Marez<sup>1</sup>; K. Seetala<sup>1</sup>; D. Hughart<sup>1</sup>; A. Dozier<sup>2</sup>; Y. Li<sup>2</sup>; C. Bowers<sup>3</sup>; K. Mahalingam<sup>4</sup>; A. A. Talin<sup>1</sup>; C. Bennett<sup>1</sup>; M. Marinella<sup>2</sup>; S. Agarwal<sup>1</sup>

1. Sandia National Laboratories, USA
2. University of Michigan, Materials Science & Engineering, USA
3. Arizona State University, USA
4. Air Force Research Laboratory, USA
5. Arizona State University, Electric, Computer and Energy Engineering, USA

**S10 BSD|ED Extreme Environment Microelectronics Materials and Devices**

**S10- 2: Materials for power electronics and devices II**

Room: Olympic Tower- Evergreen C

Session Chair: Marshall Tellekamp, National Renewable Energy Laboratory

**8:30 AM**

**(SPRING-SYM 10- 10-2026) Thermally-hardened electronics for RF and power (THE-RaP) (Invited)**

A. E. Islam<sup>\*1</sup>

1. Air Force Research Laboratory Sensors Directorate, Electronics Device Branch, USA

**9:00 AM**

**(SPRING-SYM 10- 11-2026) Metastable Ga<sub>2</sub>O<sub>3</sub> polymorphs for next-generation power electronics: Growth and phase stability (Invited)**

J. Tang<sup>\*1</sup>; K. Jiang<sup>1</sup>; P. Tseng<sup>1</sup>; R. Kurchin<sup>1</sup>; L. Porter<sup>1</sup>; R. Davis<sup>1</sup>

1. Carnegie Mellon University, Materials Science & Engineering, USA

**9:30 AM**

**(SPRING-SYM 10- 12-2026) Characterization, stability and interlayer formation at epitaxial p-type oxides/Ga<sub>2</sub>O<sub>3</sub> interfaces**

A. Sacchi<sup>\*1</sup>; M. A. Smeaton<sup>1</sup>; S. R. Spurgeon<sup>1</sup>; S. Gowda<sup>2</sup>; P. Hopkins<sup>3</sup>; M. B. Tellekamp<sup>4</sup>; A. Zakutayev<sup>1</sup>

1. National Renewable Energy Laboratory, USA
2. University of Virginia School of Engineering and Applied Science, USA
3. University of Virginia, USA
4. National Renewable Energy Laboratory, Materials, Chemical, and Computational Sciences, USA

**9:50 AM**

**Break**

**S10- Detector materials and devices at harsh environment**

Room: Olympic Tower- Evergreen C

Session Chair: Alexey Drobizhev, E O Lawrence Berkeley National Laboratory

**10:10 AM**

**(SPRING-SYM 10- 13-2026) Cryogenic-compatible integrated circuits for detection of neutrinos in noble liquids (Invited)**

C. Grace<sup>\*1</sup>

1. E O Lawrence Berkeley National Laboratory, Engineering, USA

**10:40 AM**

**(SPRING-SYM 10- 14-2026) Long-term operation of gallium oxide-based hydrogen sensors at 600°C**

W. Callahan<sup>\*1</sup>; K. Egbo<sup>2</sup>; D. Febba<sup>1</sup>; A. F. Staerz<sup>2</sup>; R. O'Hayre<sup>2</sup>; A. Zakutayev<sup>1</sup>

1. National Renewable Energy Laboratory, USA
2. Colorado School of Mines, Metallurgical and Materials Engineering, USA
3. Headway Technologies Inc, USA

**11:00 AM**

**(SPRING-SYM 10- 15-2026) Self-healing UV responsive SiO<sub>2</sub>/ZnO microcapsule coating for low earth orbit applications**

N. Otebele<sup>\*2</sup>; R. A. Gerhardt<sup>1</sup>

1. Georgia Institute of Technology, Materials Science and Engineering, USA
2. Georgia Institute of Technology, Aerospace Engineering, USA

**11:20 AM**

**(SPRING-SYM 10- 16-2026) Semiconducting metal oxide based gas sensors for harsh conditions**

A. F. Staerz<sup>\*1</sup>; K. F. Valeti<sup>1</sup>

1. Colorado School of Mines, MME, USA

**S15 BSD|ED|MD Ceramic Materials and Systems for a Sustainable and Resilient Energy Future**

**S15- Ceramics and composites for energy production, refining, chemical processing, and associated harsh environment survivability improvements**

Room: Olympic Tower- Grand A

Session Chairs: Jorgen Rufner, Idaho National Laboratory; Xitong Liu, George Washington University; Xuan Song, University of Iowa; Chuancheng Duan, University of Utah

**8:30 AM**

**(SPRING-SYM 15- 14-2026) Compositionally complex carbides for extreme environments in fission and fusion energy applications (Invited)**

B. Cui<sup>\*1</sup>; L. Trinh<sup>1</sup>; Y. Lu<sup>1</sup>; Z. Hua<sup>2</sup>; K. Bawane<sup>2</sup>; L. Malakkal<sup>2</sup>

1. University of Nebraska-Lincoln, USA
2. Idaho National Laboratory, USA

**9:00 AM**

**(SPRING-SYM 15- 15-2026) High-temperature ion-conducting ceramics for sustainable energy (Invited)**

C. Duan<sup>\*1</sup>

1. University of Utah, Chemical Engineering, USA

**9:30 AM**

**(SPRING-SYM 15- 16-2026) A lithium-permeable and water-stable ceramic membrane for selective electrochemical lithium extraction from diluted aqueous sources (Invited)**

K. Huang<sup>\*1</sup>

1. University of South Carolina, Mechanical Engineering, USA

**10:00 AM**

**Break**

**10:30 AM**

**(SPRING-SYM 15- 17-2026) Nuclear ceramics for fuel innovation in a sustainable energy landscape (Invited)**

A. Wagner<sup>\*1</sup>

1. Idaho National Laboratory, USA

**11:00 AM**

**(SPRING-SYM 15- 18-2026) Degradation and performance of polymer-derived TiC/SiC ceramics with MXene additives (Invited)**

S. Nemani<sup>\*1</sup>; K. Lu<sup>1</sup>; M. Shirani Bidabadi<sup>1</sup>

1. University of Alabama at Birmingham, USA

**11:30 AM**

**(SPRING-SYM 15- 19-2026) Corrosion resistance of single and bilayer boronized coatings on stainless steel for molten salt environments**

Q. Xu<sup>1</sup>; Y. Xie<sup>\*1</sup>

1. Peking University, College of Chemistry and Molecular Engineering, China

## **S16 MD|ED|GOMD Advanced Manufacturing and Processing of Ceramic Materials**

### **S16- Sintering II**

Room: Olympic Tower- Grand B

Session Chair: Qi An, Iowa State University

**8:30 AM**

#### **(SPRING-SYM 16- 15-2026) Correlation of apparent thermal conductivity with specific surface area and relative density of a sintering alumina**

D. J. Delia\*<sup>1</sup>; M. Modugno<sup>1</sup>; A. Wereszczak<sup>1</sup>; J. G. Hemrick<sup>1</sup>

1. Oak Ridge National Laboratory, USA

**8:50 AM**

#### **(SPRING-SYM 16- 17-2026) A microwave plasma approach to synthesis of high-entropy borides**

A. Shrestha\*<sup>1</sup>; B. Storr<sup>1</sup>; S. A. Catledge<sup>1</sup>

1. The University of Alabama at Birmingham College of Arts and Sciences, Department of Physics, USA

### **S16-Novel processing of ceramics II**

Room: Olympic Tower- Grand B

Session Chairs: Lionel Vargas-Gonzalez, US Army Combat Capabilities Development Command Army Research Laboratory Aberdeen Proving Ground; Max Modugno, Oak Ridge National Laboratory

**9:10 AM**

#### **(SPRING-SYM 16- 18-2026) A new comminution resistance parameter ( $\Psi$ ) (Invited)**

M. Modugno\*<sup>1</sup>; J. G. Hemrick<sup>1</sup>; A. Wereszczak<sup>1</sup>; E. Ghezawi<sup>1</sup>; M. D. Loveday<sup>1</sup>; R. E. Huk<sup>2</sup>

1. Oak Ridge National Laboratory, USA
2. The University of Tennessee Knoxville Tickle College of Engineering, Institute for Nuclear Security, USA

**9:40 AM**

#### **(SPRING-SYM 16- 19-2026) Low-cost processing and densification of near-net shape ultra high temperature ceramics (Invited)**

L. Vargas-Gonzalez\*<sup>1</sup>; M. Golt<sup>1</sup>; T. W. Moore<sup>1</sup>; N. Ku<sup>1</sup>; M. Ivill<sup>1</sup>; S. M. Smith<sup>1</sup>

1. DEVCOM - Army Research Laboratory, Ceramics and Transparent Materials Branch, USA

**10:10 AM**

**Break**

**10:30 AM**

#### **(SPRING-SYM 16- 20-2026) Intercalation-Assisted Self-Propagated High-Temperature Ceramic Manufacturing**

P. Gouma\*<sup>1</sup>

1. The Ohio State University, MSE, USA

**10:50 AM**

#### **(SPRING-SYM 16- 21-2026) The Characterization of Particle Size Distributions with Two-Parameter Models**

W. M. Carty\*<sup>1</sup>; M. Ciccarella<sup>2</sup>

1. Alfred University, NYS College of Ceramics, USA
2. Oak Ridge National Laboratory, Materials Science and Technology Division, USA

**11:10 AM**

#### **(SPRING-SYM 16- 22-2026) Additive manufacturing of ultra-high temperature ceramics via hybrid material extrusion-casting process**

J. Yu\*<sup>1</sup>; L. Ho<sup>2</sup>; C. Williams<sup>2</sup>; C. Tallon<sup>1</sup>

1. Virginia Polytechnic Institute and State University, Materials Science & Engineering, USA
2. Virginia Polytechnic Institute and State University, Mechanical Engineering, USA

**11:30 AM**

#### **(SPRING-SYM 16- 23-2026) A lower size limit for particle size distribution measurement by laser diffraction method**

M. Ciccarella\*<sup>1</sup>; J. G. Hemrick<sup>1</sup>; A. Wereszczak<sup>1</sup>

1. Oak Ridge National Laboratory, USA

## **S19 GOMD|EMSD Glass and Interactions with its Environment - Fundamentals and Applications**

### **S19- Glass and glass-ceramics for waste immobilization II**

Room: Cascade Tower- Laurel

Session Chair: Charmayne Lonergan, Missouri University of Science & Technology

**8:30 AM**

#### **(SPRING-SYM 19- 10-2026) From bioglass to nuclear waste glass: How phosphorus influences aqueous durability (Invited)**

S. Kroeker\*<sup>1</sup>

1. University of Manitoba, Chemistry, Canada

**9:00 AM**

#### **(SPRING-SYM 19- 11-2026) Phosphosilicate phase partitioning in nuclear waste forms: Understanding cesium and strontium behavior**

J. Everts\*<sup>1</sup>; B. Riley<sup>1</sup>; K. Yano<sup>1</sup>; Z. Zhu<sup>2</sup>

1. Pacific Northwest National Laboratory, USA
2. Pacific Northwest National Laboratory, Environmental Molecular Sciences Laboratory, USA

**9:20 AM**

#### **(SPRING-SYM 19- 12-2026) Structural changes in highly-modified phospho-aluminoborosilicate, role of Bismuth on phase-separation**

S. Soudani\*<sup>1</sup>; J. Bussey<sup>2</sup>; C. Dixon<sup>1</sup>; J. McCloy<sup>2</sup>

1. Washington State University, Institute of Material Research, USA
2. Washington State University, School of Mechanical and Materials Engineering, USA

**9:40 AM**

#### **(SPRING-SYM 19- 13-2026) Tin fluorophosphate glass as a nuclear salt waste form**

P. McGuire\*<sup>1</sup>; B. Riley<sup>2</sup>; K. Brinkman<sup>1</sup>

1. Clemson University, Materials Science & Engineering, USA
2. Pacific Northwest National Laboratory, USA

**10:00 AM**

**Break**

**10:20 AM**

#### **(SPRING-SYM 19- 14-2026) Performance evaluation of multiphase waste forms in Stirred Reactor - Coupon Analysis**

J. M. Westman\*<sup>1</sup>; B. Parruzot<sup>2</sup>; S. N. Kerisit<sup>3</sup>; I. Burch<sup>1</sup>; P. Sutton<sup>4</sup>; D. Gregg<sup>6</sup>; C. L. Thorpe<sup>4</sup>; M. T. Harrison<sup>5</sup>; G. Smith<sup>1</sup>; M. Asmussen<sup>2</sup>

1. Pacific Northwest National Lab, Radiological Materials Group, USA
2. Pacific Northwest National Lab, Energy and Environment Directorate, USA
3. Pacific Northwest National Lab, Physical and Computational Sciences Directorate, USA
4. University of Sheffield, Materials Science and Engineering, United Kingdom
5. National Nuclear Laboratory, WM&D, United Kingdom
6. Australian Nuclear Science and Technology Organisation, Australia

**10:40 AM**

#### **(SPRING-SYM 19- 15-2026) Effects of glass composition on the corrosion and microstructural alteration of A690 alloys**

J. M. Oshiro\*<sup>1</sup>; J. V. Crum<sup>2</sup>; N. Ruehle<sup>2</sup>; N. L. Canfield<sup>2</sup>; M. Miller<sup>2</sup>; G. Torres<sup>2</sup>; M. A. Hall<sup>2</sup>; A. Kruger<sup>3</sup>

1. Pacific Northwest National Laboratory, Nuclear Sciences, USA
2. Pacific Northwest National Laboratory, USA
3. US Department of Energy, Hanford Field Office, USA

**11:00 AM**

#### **(SPRING-SYM 19- 16-2026) ToF-SIMS analysis for trace metals in optical thin films and glasses**

T. Dimond\*<sup>1</sup>; A. Fahey<sup>1</sup>; C. Cushman<sup>1</sup>

1. Corning Incorporated, Characterization Sciences, USA

## S21 BSD Science of Sintering and Grain Growth

### **S21- Advanced Sintering Techniques: Field-assisted and rapid sintering methods for ultra-fine grain control**

Room: Cascade Tower- Regency C

Session Chair: Ricardo Castro, Lehigh University

**8:30 AM**

#### **(SPRING-SYM 21- 01-2026) Photonic sintering of ceramics: advantages and limitations**

J. Ebert<sup>\*1</sup>; C. Teucher<sup>1</sup>; P. Zahler<sup>1</sup>; D. Jennings<sup>2</sup>; W. Rheinheimer<sup>1</sup>

1. Universität Stuttgart, IKMT, Germany
2. Ruhr-Universität Bochum, Germany

**8:50 AM**

#### **(SPRING-SYM 21- 02-2026) Photonic sintering of varistor devices**

A. Sayyadishahraki<sup>2</sup>; L. Porz<sup>3</sup>; M. Scherer<sup>3</sup>; T. Frömling<sup>\*1</sup>

1. Technische Universität Darmstadt, Germany
2. Isfahan University of Technology, Islamic Republic of Iran
3. Illutherm GmbH, Germany

**9:10 AM**

#### **(SPRING-SYM 21- 03-2026) Photonic Sintering of Fe doped SrTiO<sub>3</sub>: Impact on sintering, microstructure evolution and functional GB properties**

P. Zahler<sup>\*1</sup>; M. Kindelmann<sup>3</sup>; J. Ebert<sup>1</sup>; C. Teucher<sup>1</sup>; D. Jennings<sup>2</sup>; T. Frömling<sup>4</sup>; W. Rheinheimer<sup>1</sup>

1. Universität Stuttgart, Institute for Ceramic Materials and Technologies, Germany
2. Ruhr-Universität Bochum, Germany
3. Danmarks Tekniske Universitet, Denmark
4. Technische Universität Darmstadt, Germany

### **S21- Grain Boundary Engineering: Measurement, modeling, and control of grain boundary energies; effects of dopants**

Room: Cascade Tower- Regency C

Session Chair: Ricardo Castro, Lehigh University

**9:30 AM**

#### **(SPRING-SYM 21- 05-2026) Inferring analytical polycrystalline grain growth rules from microstructural images**

Z. Su<sup>\*1</sup>; D. Hermawan<sup>1</sup>; R. Garcia<sup>1</sup>

1. Purdue University, Materials Engineering, USA

**9:50 AM**

**Break**

**10:10 AM**

#### **(SPRING-SYM 21- 06-2026) The influence of Ca and electric fields on grain growth in alumina**

A. R. Kazmirsky<sup>\*1</sup>; R. Marder<sup>1</sup>; W. D. Kaplan<sup>1</sup>

1. Technion Israel Institute of Technology, Department of Materials Science and Engineering, Israel

### **S21- Thermodynamics & Kinetics: Energy landscapes, driving forces, and diffusion mechanisms during sintering**

Room: Cascade Tower- Regency C

Session Chair: Ricardo Castro, Lehigh University

**10:30 AM**

#### **(SPRING-SYM 21- 07-2026) Correlative EBSD-FIB analysis to determine the equilibrium crystal shape: Ca-Doped alumina**

R. Marder<sup>\*1</sup>; I. Naamne<sup>1</sup>; W. D. Kaplan<sup>1</sup>

1. Technion Israel Institute of Technology, Dept. of Materials Science and Engineering, Israel

### **S21- Multiscale Modeling & In Situ Characterization: Integration of simulation and real-time experiments to understand microstructural evolution**

Room: Cascade Tower- Regency C

Session Chair: Ricardo Castro, Lehigh University

**10:50 AM**

#### **(SPRING-SYM 21- 10-2026) Development of models for densification and microstructural evolution of ceramic green bodies produced by direct ink writing**

D. Kodungal<sup>\*1</sup>; N. Dhanankam<sup>2</sup>; U. Schiller<sup>2</sup>; R. Bordia<sup>1</sup>

1. Clemson University, Materials Science and Engineering, USA
2. University of Delaware College of Engineering, Computer and Information Sciences, USA

**11:10 AM**

#### **(SPRING-SYM 21- 11-2026) Effect of elevated sintering temperature on mechanical and impact behavior of silicon carbide ceramics**

I. Geven<sup>\*2</sup>; E. Karadagli<sup>1</sup>

1. Roketsan Roket Sanayii ve Ticaret AS, Turkey
2. Orta Dogu Teknik Universitesi, Metallurgical and Materials Engineering, Turkey

## S23 BSD High Interfacial Materials - Controlling Grain Boundaries and their Network

### **S23- High Interfacial Materials - UHTCs**

Room: Cascade Tower- Regency A

Session Chairs: James Wollmershauser, U.S. Naval Research Laboratory; Edward Gorzkowski, Naval Research Lab; Hadas Sternlicht, The Pennsylvania State University Department of Materials Science and Engineering

**8:30 AM**

#### **(SPRING-SYM 23- 09-2026) Processing studies on the high entropy (MoNbTaVW)C (Invited)**

L. Backman<sup>\*1</sup>; K. P. Anderson<sup>3</sup>; H. Ryou<sup>3</sup>; H. Keshmiri<sup>1</sup>; S. Mills<sup>3</sup>; E. Patterson<sup>3</sup>; S. Opeka<sup>2</sup>; A. J. Martin<sup>3</sup>; Z. Warecki<sup>3</sup>; B. De Gregorio<sup>3</sup>; E. Lock<sup>3</sup>; M. B. Dickerson<sup>3</sup>; E. Gorzkowski<sup>3</sup>; J. Maxwell<sup>1</sup>; J. Wollmershauser<sup>3</sup>

1. U.S. Naval Research Laboratory, Spacecraft Engineering Division, USA
2. Air Force Research Laboratory, USA
3. U.S. Naval Research Laboratory, Materials Science & Technology Division, USA

**9:00 AM**

#### **(SPRING-SYM 23- 10-2026) Controlled processing of novel high-entropy carbides with high valence electron configuration (Invited)**

A. Salanova Giampaoli<sup>\*1</sup>; E. Gorzkowski<sup>2</sup>; J. Wollmershauser<sup>3</sup>

1. US Naval Research Laboratory, USA
2. Naval Research Lab, USA
3. U.S. Naval Research Laboratory, Materials Science & Technology Division, USA

**9:30 AM**

#### **(SPRING-SYM 23- 11-2026) Enhanced high-Temperature protection of ultra-light Cf/SiC hybrid composites**

S. Moon<sup>1</sup>; S. Yun<sup>\*1</sup>; W. Kim<sup>2</sup>

1. Korea Institute of Science and Technology, Republic of Korea
2. Korea Institute of Ceramic Engineering and Technology, Aerospace&Defense R&D Group, Republic of Korea

### **S23- High Interfacial Materials - Stability**

Room: Cascade Tower- Regency A

Session Chairs: James Wollmershauser, U.S. Naval Research Laboratory; Alejandro Salanova Giampaoli, US Naval Research Laboratory

**9:50 AM**

**Break**

### 10:10 AM

#### (SPRING-SYM 23- 12-2026) Grain boundaries facilitate the hydride phase formation in palladium nanostructures

P. Sushko<sup>\*1</sup>; U. Madhushani<sup>2</sup>; H. Park<sup>1</sup>; H. Zhou<sup>2</sup>; D. Datta Mal<sup>3</sup>; B. Yang<sup>3</sup>; Q. Pang<sup>1</sup>; D. Li<sup>1</sup>; L. Luo<sup>3</sup>

1. Pacific Northwest National Lab, Physical Sciences Division, USA
2. Argonne National Lab, Advanced Photon Source, USA
3. University of Utah, Department of Chemistry, USA

### 10:30 AM

#### (SPRING-SYM 23- 13-2026) Utilizing the eutectoid decomposition of perovskite CeAlO<sub>3</sub> as a processing strategy for producing dense CeO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> nanocomposite ceramics

R. Maier<sup>\*1</sup>; A. Johnston-Peck<sup>1</sup>

1. National Institute of Standards and Technology, USA

### 10:50 AM

#### (SPRING-SYM 23- 14-2026) 4D growth studies in textured and untextured alumina microstructures

H. Hall<sup>\*1</sup>; M. Haraldsson<sup>1</sup>; D. P. DeLellis<sup>1</sup>; M. S. Kesler<sup>2</sup>; A. Krause<sup>1</sup>

1. Carnegie Mellon University, Materials Science and Engineering, USA
2. Oak Ridge National Laboratory, USA

## S26 ED Semiconductors and Microelectronics in Metal Halide/Chalcogenide and Oxide Perovskites

### S26- Semiconductors and Microelectronics in Metal Oxide and Chalcogenide Perovskites

Room: Cascade Tower- Regency B

Session Chairs: Mythili Surendran, E O Lawrence Berkeley National Laboratory; Chris Broyles, Center for Integrated Nanotechnologies

#### 8:30 AM

##### (SPRING-SYM 26- 15-2026) Persistent photoconductivity and photochromism in KTaO<sub>3</sub>

M. D. McCluskey<sup>\*1</sup>; M. Santillan<sup>1</sup>

1. Washington State University, USA

#### 8:50 AM

##### (SPRING-SYM 26- 20-2026) Towards electronic and opto-electronic devices with low-dimensional chalcogenides (Invited)

J. Ravichandran<sup>\*1</sup>

1. University of Southern California, Chemical Engineering and Material Science, USA

#### 9:20 AM

##### (SPRING-SYM 26- 19-2026) Flux-assisted pathways to enhanced quality of chalcogenide perovskite thin films (Invited)

H. Zeng<sup>\*1</sup>

1. University at Buffalo, USA

#### 9:50 AM

#### Break

#### 10:10 AM

##### (SPRING-SYM 26- 18-2026) Controlling negative differential resistance in rare earth nickelate perovskites (Invited)

M. B. Tellekamp<sup>\*1</sup>; K. Sahebkar<sup>3</sup>; C. Muzillo<sup>1</sup>; O. Schneble<sup>4</sup>; M. A. Smeaton<sup>2</sup>; I. Leahy<sup>1</sup>; M. Mirzokarimov<sup>1</sup>; S. Lee<sup>2</sup>; H. Ogasawara<sup>2</sup>; R. Need<sup>6</sup>

1. National Renewable Energy Laboratory, Materials, Chemical, and Computational Sciences, USA
2. National Renewable Energy Laboratory, USA
3. University of Florida, USA
4. Massachusetts Institute of Technology, USA
5. SLAC National Accelerator Laboratory, USA
6. University of California San Diego, USA

## S38 GOMD Glass Manufacturing

### S38- Glass Manufacturing

Room: Cascade Tower- Larch

Session Chairs: Joseph Wright; Kathryn Goetschius, Corning Incorporated

#### 8:30 AM

##### (SPRING-SYM 38- 01-2026) Meeting the bandwidth demands of AI: The evolution of fiber technologies (Invited)

R. Mishra<sup>\*1</sup>; L. Cook<sup>2</sup>

1. Corning Incorporated, Optical Fiber, USA
2. Corning Incorporated, USA

#### 9:00 AM

##### (SPRING-SYM 38- 02-2026) Sulfur fining in specialty glass manufacturing (Invited)

M. T. Schmidlin<sup>\*1</sup>; J. Wright<sup>1</sup>; E. Sarafian<sup>1</sup>; A. Sarafian<sup>1</sup>; M. DeLamielleure<sup>1</sup>

1. Corning Incorporated, USA

#### 9:30 AM

##### (SPRING-SYM 38- 03-2026) Characterization of soda-lime silicate glass composition with record-breaking properties

O. Prokhorenko<sup>\*1</sup>

1. L.G.P. International, USA

#### 9:50 AM

##### (SPRING-SYM 38- 04-2026) Simplifying waste glass melter CFD models with momentum source terms

D. P. Guillen<sup>\*1</sup>; Z. Diermyer<sup>1</sup>; P. Ferkl<sup>2</sup>; R. Pokorny<sup>2</sup>; A. A. Kruger<sup>4</sup>

1. Idaho National Laboratory, USA
2. Pacific Northwest National Laboratory, USA
3. University of Chemistry and Technology Prague, Czechia
4. US Department of Energy, Office of River Protection, USA

#### 10:10 AM

#### Break

#### 10:30 AM

##### (SPRING-SYM 38- 05-2026) Characteristics of direct-feed high-level waste melter feeds

N. C. Bohrmann<sup>\*1</sup>; J. C. Rigby<sup>1</sup>; P. Ghate<sup>1</sup>; J. Marcial<sup>1</sup>; J. Seo<sup>1</sup>; D. Dixon<sup>1</sup>; P. Ferkl<sup>1</sup>; E. A. Patrick<sup>1</sup>; J. Lang<sup>1</sup>; M. A. Hall<sup>1</sup>; W. C. Eaton<sup>1</sup>; A. A. Kruger<sup>2</sup>

1. Pacific Northwest National Laboratory, USA
2. US Department of Energy, Hanford Field Office, USA

#### 10:50 AM

##### (SPRING-SYM 38- 06-2026) Evolved gas analysis studies of melter feeds for Hanford nuclear waste vitrification

J. Marcial<sup>\*2</sup>; J. C. Rigby<sup>2</sup>; J. Seo<sup>1</sup>; N. C. Bohrmann<sup>1</sup>; P. Ghate<sup>2</sup>; W. C. Eaton<sup>2</sup>; A. Kruger<sup>3</sup>

1. Pacific Northwest National Laboratory, USA
2. Pacific Northwest National Laboratory, Radiological Materials, USA
3. US DOE Hanford Field Office, USA

#### 11:10 AM

##### (SPRING-SYM 38- 07-2026) Alternate vanadium sources in high level activity waste in melter feed

P. Ghate<sup>\*1</sup>; J. C. Rigby<sup>1</sup>

1. Pacific Northwest National Laboratory, Radiological Materials, USA

#### 11:30 AM

##### (SPRING-SYM 38- 08-2026) Aggregation and settling of crystalline materials in waste glass melters

P. Hrma<sup>\*1</sup>

1. AttainX, USA

## S7 BSD|ED In Situ/Operando Characterization of Nanomaterials

### **S7- In situ/operando characterization of metal oxide structure and reactivity in (electro)chemical systems**

Room: Olympic Tower- Evergreen B

Session Chairs: Katherine Harmon, Stanford University; Hao Zheng, Argonne National Lab

**1:30 PM**

#### **(SPRING-SYM 7- 16-2026) Percolating path to green iron (Invited)**

S. Paul<sup>\*</sup>; L. Dresselhaus-Marais<sup>1</sup>

1. Stanford University, USA

**2:00 PM**

#### **(SPRING-SYM 7- 17-2026) Operando DRIFTS–EIS investigation of NO<sub>2</sub> interactions on semiconducting metal oxide gas sensors**

K. Rafiq<sup>\*</sup>; C. Crabtree<sup>2</sup>; A. F. Staerz<sup>2</sup>

1. Colorado School of Mines, Mechanical Engineering, USA
2. Colorado School of Mines, MME, USA
3. Colorado School of Mines, Computer Science, USA

**2:20 PM**

#### **(SPRING-SYM 7- 18-2026) X-ray emission/absorption spectroscopy as a local lens into redox chemistry and spin transitions in batteries**

F. M. Alamgir<sup>\*</sup>; A. Krishnan<sup>1</sup>

1. Georgia Institute of Technology, School of Materials Science and Engineering, USA

**2:40 PM**

#### **(SPRING-SYM 7- 19-2026) Chemo-mechanical failure modes in transition metal oxide cathodes for Na-ion batteries**

M. Wable<sup>1</sup>; Ö. Ö. Çapraz<sup>\*</sup>

1. University of Maryland Baltimore, Chemical, Biochemical and Environmental Engineering, USA

## S8 BSD|ED Nano4Neuro 3 - Materials Advances for Analogue, Neuromorphic and Post-Moore Computing Paradigms

### **S8- Redox memory and computing II**

Room: Olympic Tower- Evergreen A

Session Chairs: Anton Ilevlev, Oak Ridge National Lab; Sabine Neumayer, Oak Ridge National Lab

**1:30 PM**

#### **(SPRING-SYM 8- 21-2026) Molecular dynamics simulation of ferroelectric devices for neuromorphic computing**

X. Li<sup>1</sup>; J. Shi<sup>1</sup>; L. Huang<sup>1</sup>; Y. Shi<sup>\*</sup>

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

**1:50 PM**

#### **(SPRING-SYM 8- 23-2026) Time-delayed embedding for effective analysis of resistive and ferroelectric hysteresis**

P. Maksymovych<sup>\*</sup>; S. Neumayer<sup>2</sup>; M. A. Susner<sup>3</sup>; M. Lavrentovich<sup>4</sup>

1. Clemson University, Materials Science and Engineering, USA
2. Oak Ridge National Lab, USA
3. Air Force Research Laboratory, Materials and Manufacturing Directorate, USA
4. Worcester State University, USA

**2:10 PM**

#### **(SPRING-SYM 8- 24-2026) Designing ferroelectric memristors through defect polarization coupling**

A. Chen<sup>\*</sup>

1. Los Alamos National Lab, USA

## S10 BSD|ED Extreme Environment Microelectronics Materials and Devices

### **S10- Fundamental and characterization of materials**

Room: Olympic Tower- Evergreen C

Session Chair: Keisuke Yazawa, National Renewable Energy Laboratory

**1:30 PM**

#### **(SPRING-SYM 10- 17-2026) Dirac Semimetal Scandium Diboride substrates for AlGaN power electronics (Invited)**

M. Chandrashekar<sup>\*</sup>; A. Dzutcha<sup>1</sup>; A. Raihan<sup>1</sup>; D. Harrison<sup>1</sup>; S. Gowda<sup>5</sup>; F. Shipra<sup>1</sup>; S. Khushwaha<sup>2</sup>; T. M. McQueen<sup>3</sup>; P. Hopkins<sup>3</sup>; M. Spencer<sup>1</sup>; M. B. Tellekamp<sup>4</sup>

1. Morgan State University, Electrical and Computer Engineering, USA
2. Johns Hopkins University, Chemistry, USA
3. Johns Hopkins University, Chemistry, Physics and Astronomy, Materials Science and Engineering, USA
4. National Renewable Energy Laboratory, Materials, Chemical, and Computational Sciences, USA
5. University of Virginia, Mechanical Engineering, USA

**2:00 PM**

#### **(SPRING-SYM 10- 18-2026) Ab initio derived I-V curves for semiconductor devices**

M. LaCount<sup>\*</sup>

1. Pacific Northwest National Laboratory, USA

**2:20 PM**

#### **(SPRING-SYM 10- 20-2026) Micro-probe system for in-situ XRD analysis up to 1000°C**

S. Kim<sup>\*</sup>; K. Park<sup>1</sup>; H. Jeon<sup>2</sup>

1. Nextron Corporation, Republic of Korea
2. Pusan National University, Republic of Korea

## S15 BSD|ED|MD Ceramic Materials and Systems for a Sustainable and Resilient Energy Future

### **S15- Advances in manufacturing technologies for energy materials and components for reducing emissions and improving efficiency; Circular economy and their role in resource efficiency and lifecycle extension**

Room: Olympic Tower- Grand A

Session Chairs: Khachatur Manukyan, University of Notre Dame; Tianyu Zhu, Clemson University

**1:30 PM**

#### **(SPRING-SYM 15- 20-2026) Ultrafast high-temperature synthesis for emerging materials (Invited)**

L. Hu<sup>\*</sup>

1. Yale University, Electrical & Computer Engineering, USA

**2:00 PM**

#### **(SPRING-SYM 15- 21-2026) Overcoming mineral scaling and electrode stability challenges in electrochemical lithium extraction from brines (Invited)**

Y. Yu<sup>1</sup>; X. Liu<sup>\*</sup>

1. George Washington University, Civil and Environmental Engineering, USA

**2:30 PM**

#### **(SPRING-SYM 15- 22-2026) Advanced air separation using mixed-conducting membrane architectures (Invited)**

J. Matyas<sup>\*</sup>; D. Reed<sup>1</sup>

1. Pacific Northwest National Laboratory, USA

### **S19 GOMD|EMSD Glass and Interactions with its Environment - Fundamentals and Applications**

#### **S19- Glass and glass-ceramics for biomedical applications**

Room: Cascade Tower- Laurel

Session Chair: Maziar Montazerian, The Pennsylvania State University  
Department of Materials Science and Engineering

**1:30 PM**

#### **(SPRING-SYM 19- 18-2026) Novel zirconia containing bioactive glasses: Origin of enhanced bioactivity and biomedical applications (Invited)**

J. Du\*<sup>1</sup>

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

**2:00 PM**

#### **(SPRING-SYM 19- 19-2026) A spectroscopic study of the role of cerium valence states in structural changes of Nanoceria-embedded borate glasses**

K. S. Ranasinghe\*<sup>1</sup>; E. Manqueros<sup>1</sup>; A. Scott<sup>1</sup>; C. Pierce<sup>1</sup>

1. Kennesaw State University College of Science and Mathematics, Physics, USA

**2:20 PM**

#### **(SPRING-SYM 19- 20-2026) Machine learning-driven microstructure-property correlations in lithium silicate dental glass-ceramics**

H. Kim<sup>1</sup>; M. Montazerian\*<sup>1</sup>; N. Clark<sup>1</sup>; A. Schöch<sup>2</sup>; T. Senti<sup>2</sup>; A. Frey<sup>2</sup>; M. Rampf<sup>2</sup>; J. C. Mauro<sup>1</sup>

1. The Pennsylvania State University Department of Materials Science and Engineering, USA

2. Ivoclar Vivadent AG, Liechtenstein

### **SPECIAL EVENT Failure - The Greatest Teacher**

#### **SPECIAL EVENT: Failure: The Greatest Teacher**

Room: Cascade Tower- Auditorium

Session Chair: Geoff Brennecka, Colorado School of Mines

**3:30 PM**

#### **Research is Discovery: Without Failure, There Would Be No Serendipity- Neus Domingo- Oak Ridge National Laboratory**

**4:15 PM**

#### **Taking Responsibility: Students are Not the Only Problem- Bill Carty- Alfred University**

# THE ACerS ANTI-HARASSMENT POLICY

## SPRING MEETING 2026

### Statement of Policy:

The American Ceramic Society (ACerS) is committed to ensuring that all ACerS activities are free from discrimination, harassment, and/or retaliation of any form. ACerS seeks to foster an environment promoting the free expression and exchange of scientific ideas. ACerS is committed to ensuring equality of treatment and opportunity and freedom from harassment for all members and participants regardless of race, gender, nationality, religious beliefs, gender identity, color, age, marital status, sexual orientation, disabilities, ancestry, personal appearance, or any other basis not relevant to scientific merit. Violators of this policy will be subject to discipline by the Society.

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Includes, but is not limited to, offensive verbal comments related to gender, gender identity and expression, sexual orientation, disability, physical appearance, body size, race, national origin, religion, age, marital status, military status, or any other status protected by law; deliberate intimidation; stalking; following; harassing photography or recording; sustained disruption of talks or other events; and inappropriate physical contact. Attendees asked to stop any harassing behavior are expected to comply immediately.

### Definition of Sexual Harassment:

Sexual harassment does not refer to occasional compliments or other generally acceptable social behavior. Sexual harassment refers to verbal, physical, and visual conduct of a sexual nature that is unwelcome and offensive to the recipient. By way of example, sexual harassment may include such conduct as sexual flirtations, advances, or propositions; verbal comments or physical actions of a sexual nature; sexually degrading words used to describe an individual; an unwelcome display of sexually suggestive objects or pictures; sexually explicit jokes; and offensive, unwanted physical contact such as patting, pinching, grabbing, groping, or constant brushing against another's body. Attendees asked to stop any sexually harassing behavior are expected to comply immediately.

### Scope of Policy:

This policy applies to all attendees of ACerS meetings, events, and activities, including members, non-members, partnering organizations, volunteers, students, guests, staff, contractors, exhibitors, and all other participants related to ACerS events and activities.

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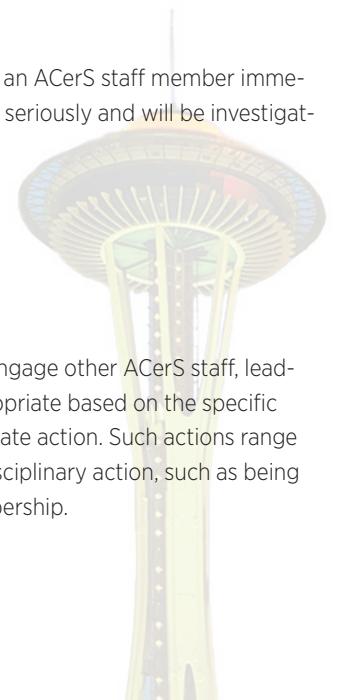
If you are being harassed, notice that someone else is being harassed, or have any other concerns, please contact an ACerS staff member immediately. ACerS staff can be identified by the official staff badge, their name and title. All complaints will be treated seriously and will be investigated promptly. Names(s) and Contact Information Onsite to Report an Incident:

1. [ACerS Executive Director, Mark Mecklenborg, ph 614-794-5829 / email: ExecDirector@ceramics.org](mailto:ExecDirector@ceramics.org)
2. [ACerS President, Mario Affatigato / email: ACerSPresident@ceramics.org](mailto:ACerSPresident@ceramics.org)

### Disciplinary Action:

All reports of harassment will be directed immediately to the ACerS leadership team who may consult with and engage other ACerS staff, leaders and legal counsel as appropriate. Conference security and/or local law enforcement may be involved, as appropriate based on the specific circumstances. In response to a report of harassment, the ACerS leadership team or ACerS staff will take appropriate action. Such actions range from a verbal warning to ejection from the event without a refund. Repeat offenders may be subject to further disciplinary action, such as being banned from participating in future ACerS conferences or events and/or permanently expelled from ACerS membership.

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11 Na 22.98976928 Sodium	12 Mg 24.305 Magnesium	13 Al 26.9815386 Aluminum	14 Si 28.0855 Silicon	15 P 30.973762 Phosphorus	16 S 32.066 Sulfur	17 Cl 35.453 Chlorine	18 Ar 39.948 Argon										
19 K 39.0983 Potassium	20 Ca 40.078 Calcium	21 Sc 44.955912 Scandium	22 Ti 47.867 Titanium	23 V 50.9415 Vanadium	24 Cr 51.9961 Chromium	25 Mn 54.938045 Manganese	26 Fe 55.845 Iron	27 Co 58.933195 Cobalt	28 Ni 58.6934 Nickel	29 Cu 63.546 Copper	30 Zn 65.38 Zinc	31 Ga 69.723 Gallium	32 Ge 72.64 Germanium	33 As 74.9216 Arsenic	34 Se 78.96 Selenium	35 Br 79.904 Bromine	36 Kr 83.798 Krypton
37 Rb 85.4678 Rubidium	38 Sr 87.62 Strontium	39 Y 88.90585 Yttrium	40 Zr 91.224 Zirconium	41 Nb 92.90638 Niobium	42 Mo 95.96 Molybdenum	43 Tc (98.0) Technetium	44 Ru 101.07 Ruthenium	45 Rh 102.9055 Rhodium	46 Pd 106.42 Palladium	47 Ag 107.8662 Silver	48 Cd 112.411 Cadmium	49 In 114.818 Indium	50 Sn 118.71 Tin	51 Sb 121.76 Antimony	52 Te 127.6 Tellurium	53 I 126.90447 Iodine	54 Xe 131.293 Xenon
55 Cs 132.9054 Cesium	56 Ba 137.327 Barium	57 La 138.90547 Lanthanum	72 Hf 178.48 Hafnium	73 Ta 180.9488 Tantalum	74 W 183.84 Tungsten	75 Re 186.207 Rhenium	76 Os 190.23 Osmium	77 Ir 192.217 Iridium	78 Pt 195.084 Platinum	79 Au 196.966569 Gold	80 Hg 200.59 Mercury	81 Tl 204.3833 Thallium	82 Pb 207.2 Lead	83 Bi 208.9804 Bismuth	84 Po (209) Polonium	85 At (210) Astatine	86 Rn (222) Radon
87 Fr (223) Francium	88 Ra (226) Radium	89 Ac (227) Actinium	104 Rf (267) Rutherfordium	105 Db (268) Dubnium	106 Sg (271) Seaborgium	107 Bh (272) Bohrium	108 Hs (270) Hassium	109 Mt (276) Meitnerium	110 Ds (281) Darmstadtium	111 Rg (280) Roentgenium	112 Cn (285) Copernicium	113 Nh (284) Nihonium	114 Fl (289) Flerovium	115 Mc (288) Moscovium	116 Lv (293) Livermorium	117 Ts (294) Tennesine	118 Og (294) Oganesson

58 Ce 140.116 Cerium	59 Pr 140.90765 Praseodymium	60 Nd 144.242 Neodymium	61 Pm (145) Promethium	62 Sm 150.36 Samarium	63 Eu 151.964 Europium	64 Gd 157.25 Gadolinium	65 Tb 158.92535 Terbium	66 Dy 162.5 Dysprosium	67 Ho 164.93032 Holmium	68 Er 167.259 Erbium	69 Tm 168.93421 Thulium	70 Yb 173.054 Ytterbium	71 Lu 174.9668 Lutetium
90 Th 232.0376 Thorium	91 Pa 231.03688 Protactinium	92 U 238.02891 Uranium	93 Np (237) Neptunium	94 Pu (244) Plutonium	95 Am (243) Americium	96 Cm (247) Curium	97 Bk (247) Berkelium	98 Cf (251) Californium	99 Es (252) Einsteinium	100 Fm (257) Fermium	101 Md (258) Mendelevium	102 No (259) Nobelium	103 Lr (262) Lawrencium

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