

**Materials Research Society (MRS) 2019 Fall Meeting  
December 1-6, 2019  
Boston, Massachusetts**

<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>The Role of Plastics in Achieving Energy Sustainability by 2050— Friend or Foe?</b>	Brett Helms	December 2	5:15 – 6:15 pm	Sheraton, 2nd Floor, Constitution A	TMF
<b>Anomalous Compliance of Structured Liquids</b>	Paul Ashby	December	2:30 – 2:45 pm	Hynes, Level 3, Room 306	TMF
<b>Stiff and Responsive Hybrid Bacterial Assemblies through Covalent Crosslinking of Nanoparticles to Engineered Bacterial S-Layer Proteins</b>	Dong Li	December 3	11:15 – 11:30 am	Hynes, Level 2, Room 201	TMF
<b>Molecular Insight into the Osmolality of Ionic Liquid with Lower Critical Solution Temperature Transition Behavior</b>	Hyungmook Kang	December 4	9:15 – 9:30 am	Sheraton, 2nd Floor, Liberty BC	TMF
<b>Robot-Accelerated Perovskite Investigation and Discovery (RAPID)—A High-throughput Approach Towards Metal Halide Perovskite Single Crystal Discovery</b>	Zhi Li	December 2	10:45 – 11:00 am	Hynes, Level 2, Room 210	TMF
<b>Low-Threshold Upconverting Microlasers via Controlled Assembly of lanthanide-Doped Nanoparticles</b>	Ayelet Teitelboim	December 5	9:00 – 9:15 am	Sheraton, 2nd Floor, Back Bay D	TMF
<b>Size-Dependent Phase Stability and Optical Properties of CsPbX<sub>3</sub> (X = Br, I) Nanocrystals</b>	Ruoxi Yang	December 3	4:00 – 4:15 pm	Hynes, Level 3, Room 311	TMF
<b>Fundamental Understanding of Polymorph Formation via Structural Evolution and H<sub>2</sub> Storage Properties in Nanohybride of Magnesium Borohydride Supported by Reduced Graphene Oxide (Poster)</b>	Sohee Jeong	December 3	8:00 – 10:00 pm	Hynes, Level 1, Hall B	TMF

<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>Correlation between Structure and X-Ray Absorption Spectroscopy of Two-Dimensional Organic-Inorganic Hybrid Halide Perovskites (Poster)</b>	Jisook Hong	December 4	8:00 - 10:00 pm	Hynes, Level 1, Hall B	TMF
<b>Quantum Spin-Nematic State in Layered Vanadophosphates</b>	Andrey Zheludev	December 2	9:00 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Emergent Quantum Phenomena in Frustrated Quantum Magnets— Application of External Tuning Parameters</b>	Sara Haravifard	December 2	9:30 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Overview of the Neutron Scattering Program at DOE's Office of Basic Energy Sciences</b>	Pappannan Thiyagarajan	December 2	10:30 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Identification and Control of Domain Wall Patterning in Spinel Ferrimagnets</b>	Gregory MacDougall	December 2	11:00 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Anharmonic Effects on Phonon Eigenvectors and S(Q,E) in Quantum Parraelectric SrTiO3</b>	Xing He, Dipanshu Bansal, Barry Winn, Songxue Chi, Olivier Delaire	December 2	11:30 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Nuclear Quantum Effects, Pure Anharmonicity and the Thermophysical Properties of Silicon</b>	Dennis Kim, Björn Hellman, Nina Shulumba, Jiao Lin, Hillary Smith, Jane Herriman, Jennifer Niedziela, Chen Li, Douglas Abernathy, Brent Fultz	December 2	11:45 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Nature of Magnetic Excitations in 2D and 3D Spin Liquids</b>	Martin Mourigal	December 2	1:30 pm	Hynes, Level 2, Room 207	SNS/HFIR
<b>Characterization of Local Atomic Structure and Dynamics in Pb-Free Relaxor Ferroelectrics</b>	Abhijit Pramanick	December 2	2:45 pm	Hynes, Level 2, Room 207	SNS/HFIR
<b>Field-Tunable Quantum Disordered Ground State in NaYbO2 and Related Compounds</b>	Stephen Wilson	December 2	3:30 pm	Hynes, Level 2, Room 207	SNS/HFIR

<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>Origin of Long Lifetime of Band-Edge Charge Carriers in Organic-Inorganic Lead Iodide Perovskites</b>	Tianran Chen	December 2	4:00 pm	Hynes, Level 2, Room 207	SNS
<b>Neutron Scattering Studies of Strong Anharmonicity and Phonon Breakdown Near Phase Transitions</b>	Olivier Delaire	December 2	4:30 pm	Hynes, Level 2, Room 207	SNS/HFIR
<b>In Situ Neutron Diffraction Study of Crystallization in a Phase-Separated Zr-Cu-Fe-Al Bulk Metallic Glass</b>	Sinan Liu, Jiacheng Ge, Dong Ma, Xun-Li Wang, Horst Hahn, Si Lan	December 2	8:00 pm	Hynes, Level 1, Hall B	SNS/HFIR
<b>Advances in Neutron Radiography for Materials Science</b>	Hassina Bilheux, Jean-Christophe Bilheux, Yuxuan Zhang, Jiao Lin, Gian Song, Qingge Xie, Paris Cornwell, Erik Stringfellow, Jamie Molaison, Louis Santodonato, Ke An, Alexandru Stoica, Ryan Dehoff, Michael Kirka, Sarma Gorti	December 3	9:00 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Application of Advanced Neutron Scattering Techniques to Study Hydrogen Behavior in LWR Nuclear Fuel Cladding</b>	Brent Heuser, Jun-Li Lin, Timothy Prisk, Tanya Dax, Alexander Kolesnikov, Changwoo Do, Hassina Bilheux, Brianne Heisinger, Yongfeng Zhang, Garrett Granroth	December 3	10:30 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Advanced Characterization of Nuclear Materials Using Neutron Imaging</b>	Yuxuan Zhang, Hassina Bilheux, Kristian Myhre, Jean-Christophe Bilheux, Jiao Lin, Jared Johnson, Andrew Miskowiec, Rodney Hunt,	December 3	11:00 am	Hynes, Level 2, Room 207	SNS/HFIR

Talk Title	Speaker	Date	Time	Location	Facility
	Louis Santodonato, Jamie Molaison, Paris Cornwell, Erik Stringfellow				
<b>Mapping Porosity, Crystal Phases and Material Phases with Multi-Scale and Multi-Modal Imaging</b>	D.S. Hussey, V. DiStefano, J.M. LaManna, L.G. Butler, L.M. Anovitz, D.L. Jacobson	December 3	11:30 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Determining Electron/Phonon Interactions in Organic Semiconductors Using Inelastic Neutron Scattering</b>	Adam Moule, Harrelson Thomas, Varuni Dantanarayana, Makena Dettmann, Luke Daemen, John Anthony, Enrique Gomez, Alessandro Troisi, Nir Goldman, Roland Faller	December 3	2:30 pm	Hynes, Level 2, Room 207	SNS
<b>Local Atomic Dynamics in Liquid in Real Space and Time</b>	Takeshi Egami	December 3	3:30 pm	Hynes, Level 2, Room 207	SNS/HFIR
<b>Capturing Functional Nanostructures and Their Interfaces with Neutron Total Scattering</b>	Katharine Page	December 3	4:00 pm	Hynes, Level 2, Room 207	SNS
<b>Creepy Concrete— Understanding Concrete Creep In Situ Using Neutron Scattering</b>	Nishant Garg	December 3	4:45 pm	Hynes, Level 2, Room 207	SNS
<b>A Novel Strongly Spin-Orbit Coupled Quantum Dimer Magnet: Yb<sub>2</sub>Si<sub>2</sub>O<sub>7</sub></b>	Kate Ross	December 4	9:00 am	Hynes, Level 2, Room 207	SNS
<b>First Experiments at the Second Target Station of the Spallation Neutron Source</b>	Paul Langan	December 4	10:30 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Examples of Materials Research at ESS Using Neutrons—From Construction towards Operation</b>	Monika Hartl, Luke Daemen, Yongjoong Lee	December 4	11:30 am	Hynes, Level 2, Room 207	SNS
<b>Identifying the Conformational Characteristics of Sheared Wormlike Micelles from</b>	Yuya Shinohara, Wei-Ren Chen, Guan-Rong Huang,	December 4	2:00 pm	Hynes, Level 2, Room 207	SNS

<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>Anisotropic Scattering Profiles</b>	Changwoo Do, Yun Liu, Lionel Porcar, Takeshi Egami				
<b>Theoretical Framework for Determining the Structural Characteristics of Deforming Objects from Their Scattering Signature</b>	Guan-Rong Huang, Yangyang Wang, Yuya Shinohara, Changwoo Do, Takeshi Egami, Wei-Ren Chen	December 4	2:15 pm	Hynes, Level 2, Room 207	SNS
<b>Advancing Neutron Scattering to Explore Nano-Scale Physics in Energy Systems and Engineering Materials</b>	Li Liu, Kemal Ramic, Jinghua Feng	December 4	3:30 pm	Hynes, Level 2, Room 207	SNS
<b>Neutron Optics to Enable Polychromatic Neutron Imaging and Powder and Stress-Strain Diffraction</b>	Boris Khaykovich, Alexandru Stoica, J. Cremer, Muhammad Abir, D.S. Hussey	December 4	4:30 pm	Hynes, Level 2, Room 207	SNS
<b>Impact of Encapsulated Species on Block Copolymer Micelle Self-Assembly and Dynamics</b>	Megan Robertson, Tyler Cooksey, Xiuli Li, Bryce Kidd, Louis Madsen	December 5	9:00 am	Hynes, Level 2, Room 207	HFIR
<b>Elucidation of Buried Polymer Interfaces through Contrast Variations</b>	Wei Chen, Zhang Jiang, Matthew Tirrell	December 5	10:30 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Exploring Protein-Polymer Interactions with Neutron Scattering</b>	Bradley Olsen, Helen Yao, Chris Lam, Aaron Huang, Wei-Ren Chen	December 5	11:00 am	Hynes, Level 2, Room 207	SNS/HFIR
<b>Composition of Polyimide Aerogels Saturated with Ionic Liquids by SANS</b>	Mark Dadmun, Samantha Rinehart, Rocco Viggiano, Baochau Nguyen, Maryann Meador	December 5	11:45 am	Hynes, Level 2, Room 207	SNS
<b>Exploring Molecular Exchange in Polyelectrolyte Complex Micelles with TR-SANS</b>	Jeffrey Ting, Matthew Tirrell, Hao Wu	December 5	1:30 pm	Hynes, Level 2, Room 207	SNS
<b>QENS Insights on the Nanoscopic Origin of Rheological Properties in</b>	Antonio Faraone, Erkan Senses	December 5	2:00 pm	Hynes, Level 2, Room 207	SNS

<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>Some Well-Dispersed Polymer Nanocomposites</b>					
<b>Neutron Scattering Investigations on Structure and Dynamics of Architecturally-Engineered All-Polymer Nanocomposites</b>	Erkan Senses, Madhusudan Tyagi, Antonio Faraone	December 5	2:15 pm	Hynes, Level 2, Room 207	SNS
<b>Application of Artificial Intelligence and Machine Learning for Accelerated Data Collection and Analysis of Small Angle Neutron Scattering</b>	Changwoo Do, Ming-Ching Chang, Yi Wei, Wei-Ren Chen	December 5	2:45 pm	Hynes, Level 2, Room 207	SNS
<b>Biomimetic Lipid Membranes—A Neutron Scattering and Simulations Perspective</b>	Rana Ashkar, Milka Doktorova, Haden Scott, Frederick Heberle, Elizabeth Kelley, Michihiro Nagao, Jan-Michael Carrillo, Bobby Sumpter, Francisco Barrera, George Khelashvili, John Katsaras	December 5	4:00 pm	Hynes, Level 2, Room 207	SNS/HFIR
<b>Nuclear quantum effects, pure anharmonicity, and the thermophysical properties of silicon</b>	Dennis S. Kim	December 2	11:45 am	Hynes, Level 2, Room 207	CNMS
<b>Gel Composite Electrolyte Membrane for Lithium-Metal Batteries</b>	Xi Chen	December 2	2:15 - 2:30 pm	EN04: Advanced Membranes for Energy-Efficient Molecular Separation and Ion Conduction	CNMS
<b>Anion Redox Materials—A Comprehensive Study Combining Computation and Experiments</b>	Shirley Meng	December 2	2:30 - 3:00 pm	Sheraton, 2nd Floor, Independence East	CNMS
<b>Tear Resistant Organic Electronics</b>	Song Zhang	December 2	8:00 - 10:00 pm	Hynes, Level 1, Hall B	CNMS
<b>Effect of Post-Deformation Annealing on the Microstructure and Micro-Mechanical Behavior of Zn-</b>	David Hernandez-Escobar	December 2	8:00 - 10:00 pm	Hynes, Level 1, Hall B	CNMS

<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>Mg Hybrids Processed by High-Pressure Torsion</b>					
<b>Mechanisms Controlling Molecular and Ion Transport through Polymer Membranes</b>	Alexei Sokolov	December 3	1:30 pm	Sheraton, 3rd Floor, Fairfax A	CNMS
<b>Abnormal Interlayer Coupling in Janus MoSSe/MoS<sub>2</sub> Heterostructures</b>	Kunyan Zhang	December 3	1:45 - 2:00 pm	Hynes, Level 3, Room 312	CNMS
<b>Pulsed Laser-Assisted Helium Ion Nanomachining of Monolayer Graphene— Direct-Write Kirigami Patterns</b>	Cheng Zhang	December 3	11:15 am	Hynes, Level 2, Room 204	CNMS
<b>Determining Electron/Phonon Interactions in Organic Semiconductors Using Inelastic Neutron Scattering</b>	Adam Moule	December 3	2:30 pm	Hynes, Level 2, Room 207	CNMS
<b>Advancing Atomistic Capabilities for Heterogeneous Systems</b>	Susan B. Sinnott	December 3	3:30 - 3:45 pm	Hynes Convention Center, room 206	CNMS
<b>Engineering Dopant Position in Core-Shell CeO<sub>2</sub>-ZrO<sub>2</sub> Nanoparticles to Control Catalytic Activity</b>	James Dorman	December 3	4:00	Shearton, 2nd floor, Independence West	CNMS
<b>Exploring Photoinduced Dielectric Polarization in Organic-Inorganic Halide Perovskites</b>	Yixuan Dou	December 3	8:00 - 10:00 pm	Hynes, Level 1, Hall B	CNMS
<b>Highly Ordered Na-2x3 and Na-2x4 Tunnel Manganese Oxide Nanowires for Electrochemical Water Desalination</b>	Ryan Andris	December 4	1:45 - 2:00 pm	Hynes, Level 3, Room 311	CNMS
<b>Identifying the Conformational Characteristics of Sheared Wormlike Micelles from Anisotropic Scattering Profiles</b>	Yuya Shinohara	December 4	2:00 pm	Hynes, Level 2, Room 207	CNMS
<b>Unveiling Photoinduced Ion Dynamics in Hybrid Organic-Inorganic Perovskites Using Time-Resolved Time-of-Flight Secondary Ion Mass Spectrometry</b>	Yongtao Liu	December 4	2:15 pm	Hynes, Level 2, Room 204	CNMS

<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>Systematic Characterization of 3D-Printed Polycaprolactone/ Poly (Ethylene Oxide)/ Hydroxyapatite (HA) Scaffolds For Biomedical Devices and Bone Tissue Engineering—Influence of Material Composition and Structure Design</b>	Roger Narayan	December 4	8:00 - 10:00 pm (poster)	Hynes, Level 1, Hall B	CNMS
<b>Enhanced carrier transport of MoS<sub>2</sub> through metal-semiconductor interface decorated by monolayer h-BN</b>	Hemendra Jaiswal	December 4	8:00 pm	Hynes, Level 1, Hall B	CNMS
<b>Voltage gated inter-cation selective ion channels from graphene nanopores</b>	Scott Bunch	December 4	8:30 - 9:00 am	Hynes, Level 3, Room 309	CNMS
<b>Controlling Orbit-Orbit Interaction in Hybrid Perovskites through Managing Grain Formation towards Amplified Spontaneous Emission</b>	Bin Hu	December 5	10:00 - 10:30 am	Sheraton, 2nd Floor, Constitution B	CNMS
<b>3D Nanoprinting Using Electrons and Ion Beams</b>	Jason Fowlkes	December 5	10:30 - 11:00 am	Hynes, Level 2, Room 204	CNMS
<b>Pan-Sharpener Algorithm for Spectral Map Reconstruction</b>	Nick Borodinov	December 5	2:00 - 2:15 pm	Hynes, Level 2, Room 210	CNMS
<b>Characterizing Chemo-Mechanical Degradation at Solid-State Battery Interfaces</b>	Jack (John) Lewis	December 5	2:45 - 3:00 pm	Sheraton, 2nd Floor, Republic B	CNMS
<b>Biomimetic Lipid Membranes: A neutron scattering and simulations perspective</b>	Rana Ashkar	December 5	4:00 - 4:30 pm	Hynes, Level 2, Room 207	CNMS
<b>Ferroic-Ionic Effects in Photovoltaic Hybrid Organic-Inorganic Perovskites</b>	Yongtao Liu	December 5	4:30 pm	Sheraton, 2nd Floor, Constitution B	CNMS
<b>Thin Solid Composite Electrolyte with Three-Dimensional Interconnected Structure</b>	Xi Chen	December 5	8:00 -10:00 pm	EN02: Materials for High-Energy and Safe Electrochemical Energy Storage	CNMS
<b>Spatially Extended Gap States Induced Up-Conversion Photoluminescence</b>	Xixiang Zhu	December 5	8:00 - 10:00 pm	Hynes, Level 1, Hall B	CNMS



<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>Novel In Situ Tensile Platform for Thin-Film Characterization</b>	Luke Galuska	December 5	8:00 - 10:00 pm	Hynes, Level 1, Hall B	CNMS
<b>Transition Metal Enhanced Carrier Transport in Two-Dimensional Semiconducting Crystals</b>	Maomao Liu	December 5	8:00 pm	Hynes, Level 1, Hall B	CNMS
<b>In-situ Chemical Studies of Functional Materials via combined AFM/ToF-SIMS platform</b>	Anton Ievlev	December 5	9:00 am	Hynes, Level 2, Room 205	CNMS
<b>Uniformly Arranging Different-n-Value Nanoplates for Developing Highly Efficient Quasi-2D Perovskite Solar Cells</b>	Jia Zhang	December 5	9:15 - 9:30 am	Sheraton, 2nd Floor, Back Bay AB	CNMS
<b>Rigidity of Interlayer Structural Water in Tungsten Oxide Leads to High-Rate, Pseudocapacitive Electrochemical Proton Intercalation</b>	Veronica Augustyn	December 6	8:30 – 9:00 am	Hynes, Level 2, Room 201	CNMS
<b>In Situ Probing of Ultrafast Electrochemical Reactions with High Catalyst Mass Activities for Efficient Water Splitting</b>	Feng-Yuan Zhang	December 6	9:15 - :30 am	Hynes, Level 2, Room 203	CNMS
<b>Giant Negative Electrostriction in <math>\text{CuInP}_2\text{S}_6</math>—Linking Theory and Experiments</b>	Sabine Neumayer	December 6	10:45 - 11:00 am	Hynes, Level 3, Room 312	CNMS
<b>Magnetic Iron Defect Centers in Molybdenum Disulfide Monolayers</b>	Shichen Fu	December 4	8:00 - 10:00 am	Hynes, Level 1, Hall B	CFN
<b>Engineering Sequence-Defined Peptoids for DNA Origami Protection and Molecular Interfacing</b>	Shih-Ting Wang	December 5	9:30 - 9:45 am	Hynes, Level 2, Room 200	CFN
<b>3D Patterning of Nanoparticles by Molecular Stamping</b>	Yan Xiong	December 6	8:30 - 8:45 am	Hynes, Level 3, Room 313	CFN
<b>Understanding the Complex of 3d Transition Metal Dopants and Sulfur Vacancies in the Activation of <math>\text{MoS}_2</math> Basal Plane for HER: From Structures to Intrinsic Descriptors</b>	Mingjie Liu	December 3	9:15 - 9:30 am	Sheraton, 2 <sup>nd</sup> Floor, Liberty BC	CFN

<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>Robotic mechanical exfoliation of graphite and BSCCO</b>	Young Jae Shin	December 2	2:00 - 2:15 pm	Hynes, Level 1, Room 108	CFN
<b>Vapor-Phase Inorganic Infiltration into Hierarchically Self-Assembled Block Copolymer Thin Films Generates Three-Dimensional Electroactive ZnO Nanomesh</b>	Chang-Yong Nam	December 5	4:15 - 4:30 pm	Hynes, Level 3, Room 310	CFN
<b>Laser Scribing of Organometal Halide Perovskite Solar Cells for See-Through Module Fabrication</b>	David Hwang	December 4	8:00 - 10:00 pm	Hynes, Level 1, Hall B	CFN
<b>Conformal Coating of Freestanding Particles by Vapor-Phase Infiltration</b>	Andreas Liapis	December 3	8:00 - 10:00 am	Hynes, Level 1, Hall B	CFN
<b>Defect Engineering of Graphene Using Electron-Beam Chemistry with Radiolized Water</b>	Ahmad Islam	December 2	8:30 - 8:45 am	Hynes, Level 1, Room 108	CFN
<b>Deterministic Motion of Ferroelastic Domain Walls in Ferroelectric Bilayers</b>	Yangyang Zhang	December 4	1:45 - 2:00 pm	Hynes, Level 2, Room 205	CFN
<b>New Generation of Flexible Energy Storage Devices and Humidity Sensors on Reinforced Carbon Fiber Textile</b>	Vladimir Samuilov	December 3	11:30 - 11:45 am	Hynes, Level 3, Room 300	CFN
<b>Nanocarbon Icing Sensor and Dew Point Hygrometer</b>	Vladimir Samuilov	December 4	2:00 - 2:15 pm	Sheraton, Third Floor, Gardner AB	CFN
<b>Room Temperature Synthesis, Self-Assembly and Anion Exchange of Nano to Micron Scale Lead Chalcogenide Particles</b>	Swapnil Deshmukh	December 3	4:15 - 4:30 pm	Hynes, Level 3, Room 311	CFN
<b>Fabrication of Single Atom Devices by Direct Write Nanofabrication</b>	Edward Bielejec (CINT)	December 3	9:30 - 10:00 am	Hynes, Level 2, Room 204	CINT
<b>Design and Fabrication of Large-Scale Defect-Free Arrays of Artificial Atoms Coupled to Photonic Waveguides</b>	Tsung-Ju Lu (MIT)	December 3	9:30 am	Hynes, Level 2, Room 202	CINT

<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>A 72-Channel Diamond Quantum Memory Array Integrated in a Microphotonic Chip</b>	Noel Wan (MIT)	December 3	11:15 am	Hynes, Level 2, Room 202	CINT
<b>Experimental Determination of the Ionization Energies of MoSe<sub>2</sub>, WS<sub>2</sub> and MoS<sub>2</sub> Using Photoemission Electron Microscopy</b>	Taisuke Ohta (CINT)	December 3	4:00 - 4:15 pm		CINT
<b>Perfect Absorption in All-Dielectric Photoconductive Metasurfaces for Fast Optoelectronic Switching</b>	Igal Brener (CINT)	December 3	11:45 – noon	Hynes, Level 1, Room 102	CINT
<b>High Harmonic Generation with Semiconductor Metasurfaces and Epsilon Near-Zero Materials</b>	Igal Brener (CINT)	December 4	10:45 - 11:15 am	Hynes, Level 1, Room 102	CINT
<b>Ultrasensitive Nanoscale Calorimetry for the Characterization of Emerging Quantum Materials</b>	Tom Harris (CINT)	December 2	2:30 - 2:45 pm	Hynes, Level 2, Room 205	CINT
<b>2D/3D van der Waals heterostructures prepared by chemical vapor deposition</b>	Jinkyong Yoo (CINT)	December 5	8:30 - 9:00 am	Hynes, Level 1, Room 108	CINT
<b>Temperature Dependent Morphology of Immiscible Binary Alloys for Applications of High Strain Rate Deformation</b>	Max Powers (University of Michigan)	December 6	11:30 am	Hynes Level 1, Room 109	CINT
<b>Specific Heat Measurements on USi from 2.4 K to 398 K</b>	Jason L. Baker (LANL)	December 2	10:45 am	Sheraton, 3 <sup>rd</sup> Floor, Hampton	CINT
<b>Metal-ion-controlled Growth of Topologically complex Cu/Fe Thin Film Morphologies</b>	Benjamin Derby (University of Michigan)	December 6	10:30 am	Hynes, Level 1, Room 109	CINT
<b>Single crystal growth and low-temperature characterization of nonsymmorphic Ca<sub>2</sub>Pt<sub>2</sub>Ga</b>	Frederico Benedetto Santos (LANL)	December 5	11:30 - 11:45 am	Hynes, Level 2, Room 203	CINT
<b>Study of Pseudomorphically Transformed bcc Mg in Mg/Nb Multilayer Nanocomposite under Extreme Conditions</b>	Sid Pathak (UNR)	December 5	11:00 - 11:15 am	Hynes, Level 1, Room 109	CINT
<b>Bioinspired Routes to Damage Tolerant</b>	Sid Pathak (UNR)	December 5	9:15 - 9:30 am	Hynes, Level 1, Room 103	CINT

<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>Materials—Unique Microstructure and Fracture Properties of Enamel in the Mammal-Like Grinding Dentition of the Hadrosaurid Dinosaur</b>					
<b>Improving the Accuracy of Coupled Spin and Lattice Simulations</b>	Julien Tranchida (SNL)	December 3	2:45 - 3:00 pm	Hynes, Level 2, Room 206	CINT
<b>Toughening in Cu/Mo Hierarchical Nanocomposite Tested by In Situ Bending in SEM</b>	Yuchi Cui (University of Michigan)	December 2	9:45 - 10:00 am	Hynes, Level 1, Room 103	CINT
<b>Interplay of Symmetry, Phonons, Electronic State and Excitons in Los Dimension Perovskites and Nanostructures</b>	Jacky Even	December 5	8:15 am	Sheraton, 2 <sup>nd</sup> Floor, Constitution B	CINT
<b>Poster: Solutional Nanoparticle Syntheses of Layered Ternary Copper Selenides of Mo/W</b>	Miller Li	December 3	8:00 - 10:00 pm	Hynes, Level 1, Hall B	CINT
<b>Investigation of Helium Precipitates in Ta(Ti)/Zr(Ti) Nanocomposites</b>	Kelvin Xie (TAMU)	December 4	9:45 am	Sheraton, 3 <sup>rd</sup> floor, Hampton	CINT
<b>Healing of nano-cracks in metals due to stresses induced by mechanically-driven grain boundary migration</b>	Michael Demkowicz (TAMU)	December 4	9:15 am	Hynes, Level 1, Room 109	CINT
<b>Er Doped Y2O3 on Silicon—Development and Characterization of a Scalable Quantum Memory Platform</b>	Abhinav Prakas	December 3	8:15 am	Hynes, Level 2, Room 202	CNM
<b>First Principles Modeling of Water-Induced Polymer Encapsulant Degradation in Silicon Modules</b>	Arun Kumar Mannodi Kanakkithodi	December 3	4:15 pm	Symposium EN11 (Silicon for Photovoltaics)	CNM
<b>Nickel-Rich Cathode Material Synthesized by Flame Spray Pyrolysis</b>	Yujia Liang	December 3	11:30 am	Session FF04.03: Coating Methods—Functional Materials	CNM
<b>Microsecond Lifetime of Defect-Bound Excitons in Single-Layer WSe<sub>2</sub> with Focused Ion Beam Irradiation</b>	Qingkai Qian	December 2	4:00 pm	Hynes, Level 1, Room 108	CNM

Talk Title	Speaker	Date	Time	Location	Facility
<b>Structural Design of Two-Dimensional Lead Halide Hybrid Perovskites for Optoelectronics</b>	Xiaotong Li	December 2	8:00 pm	Hynes, Level 1, Hall B	CNM
<b>Metrology Driven Development of Point Defect Synthesis and Localization</b>	Nazar Deegan	December 3	4:00 pm	Hynes, Level 1, Room 107	CNM
<b>Impurity and Dynamic Properties of Perovskites from First Principles</b>	Maria Chan	December 2	9:00 am	Sheraton, 2nd Floor, Constitution B	CNM
<b>Determining Nanoscale Structures from Experimental Data Using FANTASTX</b>	Maria Chan	December 4	4:00 pm	Hynes, Level 2, Room 206	CNM
<b>Exploring the Local Behavior of Magnetic Nanomaterials Using <i>In Situ</i> Lorentz TEM</b>	Amanda Petford Long	December 5	1:30 pm	Hynes, Level 2, Room 203	CNM
	Laura Schelhas				SSRL
<b>Superconductivity in an Infinite-Layer Nickelate Oral</b>	Dafeng Li	December 4	8:00 - 8:30 am	Hynes, Level 2, Room 203	SSRL
	Kyuho Lee				SSRL
	Seungsae Hong				SSRL
<b>Thermally Driven Chemomechanical Interplay in High Energy Density Cathode Materials Talk</b>	Shaofeng Li, Stanford/SLAC (Yijin Liu)	December 3	8:30 - 9:00 am	EN05: Chemomechanical and Interfacial Challenges in Energy Storage and Conversion—Batteries and Fuel Cells	SSRL
<b>Mechanism of Additive-Assisted Room-Temperature-Processing of Perovskite Thin Films Revealed by In-Situ X-Ray Scattering Oral</b>	Maged Abdelsamie, Stanford/SLAC	December 4	4:45 - 5:00 pm	Sheraton, 2nd Floor, Constitution B Session Title: EN09.09: Thin-film Formation, Meso- and Nanoscale Structuring	SSRL
<b>Impact of Processing Strategies on Phase Evolution of <math>\text{Cs}_x\text{FA}_{1-x}\text{PbI}_3</math> Perovskite Solar Cells—<i>In Situ</i> Monitoring of</b>	Maged Abdelsamie, Stanford/SLAC	December 2	8:00 - 10:00 am	Hynes, Level 1, Hall B Session Title: EN09.09: Thin-film Formation, Meso- and	SSRL

<b>Talk Title</b>	<b>Speaker</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Facility</b>
<b>Crystallization Pathways During Film Formation</b> <b>Poster</b>				Nanoscale Structuring	
<b>A-Site Cation Composition Effects in Organic-Inorganic Metal Halide Perovskite Quantum Dots— Crystallographic Phase and Particle Ordering</b> <b>Oral</b>	Julian Vigil, Stanford/SLAC	December 4	11:15 - 11:30 am	Sheraton, 2nd Floor, Constitution B	SSRL
<b>In Situ Characterization of Heterogeneity in Parasitic Li Plating During Extreme Fast Charging in Lithium-Ion Batteries</b> <b>Oral</b>	Partha Paul, Stanford/SLAC	December 3	9:15 - 9:30 am	Sheraton, 2nd Floor, Independence East	SSRL
<b>Multimodal X-Ray Characterization of Interfacial Chemistry in Li-Ion and Multi-Valent Batteries</b> <b>Oral</b>	Johanna Nelson Weker, Stanford/SLAC	December 4	4:00 pm	Sheraton, 2nd Floor, Republic B	SSRL