



2018 **MRS**® SPRING MEETING & EXHIBIT  
April 2–6, 2018 | Phoenix, Arizona

# CALL FOR PAPERS

**Abstract Submission Opens**  
September 29, 2017

**Abstract Submission Deadline**  
October 31, 2017

## CHARACTERIZATION, MODELING AND THEORY

- CM01 Exploring Nanoscale Physical Properties of Materials via Local Probes
- CM02 *In Situ* TEM Characterization of Dynamic Processes During Materials Synthesis and Processing
- CM03 Investigating Nanostructures with X-Rays—Fundamentals and Applications
- CM04 *In Situ* and *Operando* Characterization of Materials and Devices by X-Ray and Neutron
- CM05 Strain Localization, Avalanches and Intermittent Deformation Mechanisms
- CM06 Frontiers in Functional Imaging in Aberration-Corrected Electron Microscopy

## ELECTRONIC AND PHOTONIC MATERIALS

- EP01 Materials for Beyond the Roadmap Devices in Logic, Memory and Power
- EP02 Excitonic Materials—Physics, Characterization and Devices
- EP03 Materials and Processes for Nonlinear Optics and Nonlinear Photonics
- EP04 Reliability and Materials Issues of Semiconductor Optical and Electron Devices and Materials
- EP05 Emerging Light-Emitting Materials and Devices—Halide Perovskite and Low-Dimensional Nanoscale Emitters
- EP06 Materials, Devices and Systems for Machine Learning and Neuromorphic Computing
- EP07 Phase-Change Materials and Their Applications—Memories, Photonics, Displays and Non-von Neumann Computing
- EP08 Advanced Polymer Semiconductors—Key Properties and High-Performance Electronics

## ENERGY MATERIALS AND TECHNOLOGIES

- EN01 Solid-Solid Interfaces in Batteries, Energy Storage and Conversion—Diagnostic and Modeling
- EN02 Advances in Perovskite Solar Cell Devices and Applications
- EN03 Superconducting Materials—From Basic Science to Applications
- EN04 Advanced Materials for Carbon Capture and Other Important Gas Separations
- EN05 Field-Responsive Composites for Sustainable Energy
- EN06 Safer and More Energy-Dense Rechargeable Batteries
- EN07 Issues, Challenges and Opportunities in Actinide Materials
- EN08 Low-Cost Tandem Photovoltaic Cells
- EN09 Materials and Systems for Grid Energy Storage—Redox Flow Batteries
- EN10 Thermoelectric Materials, Devices and Applications
- EN11 Nanomaterials for the Water and Energy Nexus
- EN12 Hierarchical Materials for Nuclear Waste Management
- EN13 Capacitive Energy Storage—Fundamentals, Materials and Devices
- EN14 Materials Science and Device Engineering for Safe and Long-Life Electrochemical Energy Storage
- EN15 Novel Materials Physics of Perovskite Semiconductors
- EN16 Combining Materials, Technologies and Societal Awareness to Harvest Natural and Human-Made Energy Sources
- EN17 Fundamental Materials Science to Enable the Performance and Safety of Nuclear Technologies
- EN18 Multiscale Designing and Constructing Photocatalytic Materials for Solar Fuels
- EN19 Novel Inorganic Semiconductors for Optoelectronics and Solar Energy Deposition, Transformation and Reaction at Functional Interfaces for Electrochemical Energy Systems
- EN21 Next-Generation Solid-State Super Ion Conductors

## MANUFACTURING

- MA01 Advanced Materials for Analog and Digital Functional Printing
- MA02 Organic Electronics—Processing, Microstructure and Multifunctioning
- MA03 Directed Matter—Atom-by-Atom Assembly with Electron Beams and Scanning Probes
- MA04 Advances in Additive Manufacturing—Materials, Processes and Devices
- MA05 Dynamic Materials and Textiles for Next-Generation Clothing

## NANOMATERIALS

- NM01 Nanomaterials and Devices by Cluster Beam Deposition
- NM02 Active Colloids with Order
- NM03 Rational Designed Hierarchical Nanostructures for Photocatalytic Systems
- NM04 Porous Materials and Nanocomposites for Catalysis
- NM05 Colloidal Nanoparticles—From Synthesis to Applications
- NM06 Nanodiamonds—Synthesis, Characterization, Surface Chemistry and Applications
- NM07 Nanoscale Magnetic Structures and Materials
- NM08 Graphene Oxide Liquid Crystals and 2D Soft Material Systems
- NM09 Novel Approaches and Material Platforms for Plasmonics and Metamaterials
- NM10 Nanometallic Materials by Design
- NM11 Deformable Atomically Thin Materials—Mechanics, Materials and Devices
- NM12 Transitioning Quantum Dots from Benchtop to Industry
- NM13 Functionalization of Topological Materials

## SOFT MATERIALS AND BIOMATERIALS

- SM01 Soft Materials, Sensors, Electronics, Displays and Actuators—Functional Components for Soft Machines and Robots
- SM02 Immune Modulatory Materials—From Design to Translational Applications
- SM03 Engineered Functional Biointerfaces—From Electronics and Nanomaterials to Biocircuits and Bionanomaterials
- SM04 Understanding and Controlling the Structure and Function of Biomolecules at Material Interfaces
- SM05 Biomaterials for Tissue Interface Regeneration
- SM06 The Future of Neuroengineering—Relevant *In Vivo* Technology
- SM07 Functional (Bio)polymers in Energy and Environment Applications
- SM08 Smart Hydrogels and Living Materials

### Meeting Chairs

**Edward Botchwey** Georgia Institute of Technology/Emory University  
**Catherine Dubourdieu** Helmholtz-Zentrum Berlin  
**Quanxi Jia** University at Buffalo, The State University of New York/  
Los Alamos National Laboratory  
**Shane Kennett** Exponent Failure Analysis Associates  
**Cheolmin Park** Yonsei University

[www.mrs.org/spring2018](http://www.mrs.org/spring2018)

### Don't Miss These Future MRS Meetings!

**2018 MRS Fall Meeting & Exhibit**  
November 25–30, 2018, Boston, Massachusetts

**2019 MRS Spring Meeting & Exhibit**  
April 22–26, 2019, Phoenix, Arizona

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