



# CALL FOR PAPERS

**Abstract Submission Opens**  
September 26, 2019

**Abstract Submission Deadline**  
October 31, 2019

Spring Meeting registrations include MRS Membership July 1, 2020 – June 30, 2021

## CHARACTERIZATION AND THEORY

- CT01 Artificial Intelligence for Material Design, Processing and Characterizations
- CT02 Halide Perovskites—  
From Lead-Free Materials to Advanced Characterization and Deposition Approaches
- CT03 Expanding the Frontiers of Actinide Materials Science  
Through Experiment and Theory
- CT04 Tailored Interphases for High Strength and Functional Composites—  
Advances in Experiments, Simulations and AI-Based Design
- CT05 Defects, Order and Disorder in Structural and Functional Fluorite-Related Compounds
- CT06 Local and Global Fluctuations in Plasticity
- CT07 Micro-Assembly Technologies and Heterogeneous Integration—  
Fundamentals to Applications
- CT08 Crystallization via Nonclassical Pathways in Synthetic, Biogenic  
and Geologic Environments

## ELECTRONICS AND PHOTONICS

- EL01 Surfaces and Interfaces in Electronics and Photonics
- EL02 Advanced Manufacturing of Mixed Dimensional Heterostructures
- EL03 Novel Approaches and Material Platforms for Enhanced Light–Matter Interaction,  
Plasmonics and Metasurfaces
- EL04 Materials for Nonlinear and Nonreciprocal Photonics
- EL05 Scalable Photonic Material Platforms—Applications and Manufacturing Advances
- EL06 Photonic Materials for Information Processing and Computing
- EL07 Fundamental Mechanisms and Materials Discovery for Brain-Inspired Computing—  
Theory and Experiment
- EL08 Neuromorphic Materials and Devices for Bioinspired Computing  
and Artificial Intelligence
- EL09 Phase-Change Materials for Electronic and Photonic Nonvolatile Memory  
and Neuro-Inspired Computing
- EL10 Electroactive Ceramics for Information Technologies and Flexible Electronics
- EL11 Lead-Free Ferroelectrics and Their Emerging Applications
- EL12 Ferroc Materials and Heterostructures for Electronics and Data Storage
- EL13 Processing, Microstructure and Multifunctioning of Organic Semiconductors
- EL14 New Materials Design for Organic Semiconductors Through Multimodal  
Characterization and Computational Techniques
- EL15 Ultra-Wide Bandgap Materials, Devices and Systems

## ENERGY, STORAGE AND CONVERSION

- EN01 Next Steps for Perovskite Photovoltaics and Beyond
- EN02 Caloric Materials for Sustainable Cooling Applications
- EN03 Solar-Energy Conversion for Sustainable Water-Energy-Environmental Nexus
- EN04 Dual-Ion Batteries as an Emerging Technology for Sustainable Energy Storage—  
Anion Storage Materials and Full Dual-Ion Battery Devices
- EN05 Low-Cost Aqueous Rechargeable Battery Technologies
- EN06 Rational Designed Hierarchical Nanostructures for Photocatalytic System
- EN07 Next-Generation Electrical Energy Storage—Beyond Intercalation-Type Lithium Ion
- EN08 Multivalent-Based Electrochemical Energy Storage
- EN09 Flow-Based Open Electrochemical Systems
- EN10 Emerging Inorganic Semiconductors for Solar-Energy Conversion
- EN11 Materials, Modeling and Technoeconomic Impacts for Large-Scale  
Hydrogen and Energy Applications
- EN12 Materials for Safe and Sustainable Electrochemical Energy Storage

## NANOSCALE AND QUANTUM MATERIALS

- NM01 Nanodiamonds—Synthesis, Properties and Applications
- NM02 Colloidal Nanoparticles—From Synthesis to Applications
- NM03 Nanomanipulation of Materials
- NM04 Nanosafety
- NM05 1D Carbon Electronics—From Synthesis to Applications
- NM06 Theory and Characterization of 2D Materials—  
Bridging Atomic Structure and Device Performance
- NM07 Two-Dimensional Quantum Materials Out of Equilibrium
- NM08 2D Atomic and Molecular Sheets—  
Electronic and Photonic Properties and Device Applications
- NM09 Layered van der Waals Heterostructures—  
Synthesis, Physical Phenomena and Devices
- NM10 Synthesis, Properties and Applications of 2D MXenes
- NM11 Topological and Quantum Phenomena in Oxides and Oxide Heterostructures
- NM12 Synthesis and Control of Dirac or Topological Materials

## SOFT MATERIALS AND BIOMATERIALS

- SM01 Organ-on-a-Chip—Toward Personalized Precision Medicine
- SM02 Progress in Open-Space Microfluidics—  
From Nanoscience, Manufacturing to Biomedicine
- SM03 Flexible, Stretchable Biointegrated Materials, Devices and Related Mechanics
- SM04 Fundamental Materials, Devices and Fabrication Innovations for  
Biointegrated and Bioinspired Electronics
- SM05 Engineered Functional Multicellular Circuits, Devices and Systems
- SM06 Soft Organic and Hybrid Materials for Biointerfacing—  
Materials, Processes and Applications
- SM07 Bioinspired Synthesis and Manufacturing of Materials
- SM08 Emerging Strategies and Applications in Drug Delivery
- SM09 Advances in 3D Printing for Medical Applications

### Meeting Chairs

- Qing Cao** University of Illinois at Urbana-Champaign
- Miyoung Kim** Seoul National University
- Rajesh Naik** Air Force Research Laboratory
- James M. Rondinelli** Northwestern University
- Hong Wang** Southern University of Science and Technology

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

**2020 MRS Fall Meeting & Exhibit**  
November 29–December 4, 2020, Boston, Massachusetts

**2021 MRS Spring Meeting & Exhibit**  
April 19–23, 2021, Seattle, Washington

### FOLLOW THE MEETING!

#S20MRS  

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