



**Abstract Submission
Opens
May 13, 2019**
**Abstract Submission
Closes
June 13, 2019**

CALL FOR PAPERS

Fall Meeting registrations include MRS Membership January – December, 2020

BROADER IMPACT

BI01 Materials Data Science—Transformations in Interdisciplinary Education

ELECTRONIC, PHOTONIC AND MAGNETIC MATERIALS

- EL01 Emerging Material Platforms and Approaches for Plasmonics, Metamaterials and Metasurfaces
- EL02 Molecular and Organic Ferro- and Piezoelectrics—Science and Applications
- EL03 Multiferroics and Magnetolectrics
- EL04 Emerging Chalcogenide Electronic Materials—From Theory to Applications
- EL05 Diamond and Diamond Heterojunctions—From Growth and Technology to Applications

ENERGY AND ENVIRONMENT

- EN01 Challenges in Battery Technologies for Next-Generation Electric Vehicles and Grid Storage Applications
- EN02 Materials for High-Energy and Safe Electrochemical Energy Storage
- EN03 Green Electrochemical Energy Storage Solutions—Materials, Processes and Devices
- EN04 Advanced Membranes for Energy-Efficient Molecular Separation and Ion Conduction
- EN05 Chemomechanical and Interfacial Challenges in Energy Storage and Conversion—Batteries and Fuel Cells
- EN06 Development in Catalytic Materials for Sustainable Energy—Bridging the Homogeneous/Heterogeneous Divide
- EN07 Materials Science for Efficient Water Splitting
- EN08 Halide Perovskites for Photovoltaic Applications—Devices, Stability and Upscaling
- EN09 Advances in the Fundamental Science of Halide Perovskite Optoelectronics
- EN10 Emerging Light-Emitting Materials and Devices—Perovskite Emitters, Quantum Dots and Other Low-Dimensional Nanoscale Emitters
- EN11 Silicon for Photovoltaics
- EN12 Structure–Function Relationships and Interfacial Processes in Organic Semiconductors for Optoelectronics
- EN13 Flexible and Miniaturized Thermoelectric Devices Based on Organic Semiconductors and Hybrid Materials
- EN14 Thermoelectric Energy Conversion (TEC)—Complex Materials and Novel Theoretical Methods
- EN15 Nanomaterials for Sensing and Control of Energy Systems—Processing, Characterization and Theory
- EN16 Advanced Materials, Fabrication Routes and Devices for Environmental Monitoring
- EN17 Structure–Property Processing Performance Relationships in Materials for Nuclear Technologies

FABRICATION OF FUNCTIONAL MATERIALS AND NANOMATERIALS

- FF01 Beyond Graphene 2D Materials—Synthesis, Properties and Device Applications
- FF02 2D Nanomaterials-Based Nanofluidics
- FF03 Building Advanced Materials via Particle-Based Crystallization and Self-Assembly of Molecules with Aggregation-Induced Emission
- FF04 Crystal Engineering of Functional Materials—Solution-Based Strategies
- FF05 Advanced Atomic Layer Deposition and Chemical Vapor Deposition Techniques and Applications
- FF06 Advances in the Fundamental Understanding and Functionalization of Reactive Materials

MATERIALS FOR QUANTUM TECHNOLOGY

- MQ01 Coherent and Correlated Magnetic Materials for Hybrid Quantum Interfaces
- MQ02 Materials for Quantum Computing Applications
- MQ03 Predictive Synthesis and Advanced Characterization of Emerging Quantum Materials

MATERIALS THEORY, COMPUTATION AND CHARACTERIZATION

- MT01 Advanced Atomistic Algorithms in Materials Science
- MT02 Closing the Loop—Using Machine Learning in High-Throughput Discovery of New Materials
- MT03 Automated and Data-Driven Approaches to Materials Development—Bridging the Gap Between Theory and Industry
- MT04 Advanced Materials Exploration with Neutrons
- MT05 Emerging Prospects and Capabilities in Focused Ion-Beam Technologies and Applications
- MT06 *In Situ* Characterization of Dynamic Phenomena During Materials Synthesis
- MT07 *In Situ/Operando* Studies of Dynamic Processes in Ferroelectric, Magnetic and Multiferroic Materials

MECHANICAL BEHAVIOR AND STRUCTURAL MATERIALS

- MS01 Extreme Mechanics
- MS02 Mechanically Coupled and Defect-Enabled Functionality in Atomically Thin Materials
- MS03 Mechanics of Nanocomposites and Hybrid Materials
- MS04 High-Entropy Alloys and Other Novel High-Temperature Structural Alloys

SOFT MATERIALS AND BIOMATERIALS

- SB01 Multifunctional Materials—From Conceptual Design to Application-Motivated Systems
- SB02 Multiscale Materials Engineering Within Biological Systems
- SB03 Smart Materials, Devices and Systems for Interface with Plants and Microorganisms
- SB04 Hydrogel Materials—From Theory to Applications via 3D and 4D Printing
- SB05 Light–Matter Interactions at the Interface with Living Cells, Tissues and Organisms
- SB06 Bringing Mechanobiology to Materials—From Molecular Understanding to Biological Design
- SB07 Bioelectrical Interfaces
- SB08 Advanced Neural Materials and Devices
- SB09 Interfacing Bio/Nano Materials with Cancer and the Immune System
- SB10 Electronic Textiles
- SB11 Multiphase Fluids for Materials Science—Droplets, Bubbles and Emulsions

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Meeting Chairs

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April 13–17, 2020, Phoenix, Arizona

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

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#F19MRS  

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