



2016 **MRS**<sup>®</sup> FALL MEETING & EXHIBIT  
November 27 – December 2, 2016 | Boston, Massachusetts

# CALL FOR PAPERS

**Abstract Submission Opens**  
May 16, 2016

**Abstract Submission Deadline**  
June 16, 2016

## BROADER IMPACT

- BI1 Today's Teaching and Learning in Materials Science—Challenges and Advances
- BI2 The Business of Materials Technology

## BIOMATERIALS AND SOFT MATERIALS

- BM1 Spatiotemporally and Morphologically-Controlled Biomaterials for Medical Applications
- BM2 Stimuli Responsive Organic and Inorganic Nanomaterials for Biomedical Applications and Biosafety
- BM3 Biomaterials for Regenerative Medicine
- BM4 Materials and Manufacturing of Biointerfaces Devices and Stretchable Electronics
- BM5 Materials for Biointegrated Photonic Systems
- BM6 Fabrication, Characterization and Applications of Bioinspired Nanostructured Materials
- BM7 Functional Nanostructured Polymers for Emerging Energy Technologies

## ELECTROCHEMISTRY

- EC1 Redox Activity on the Molecular Level—Fundamental Studies and Applications
- EC2 Facilitating Charge Transport in Electrochemical Energy Storage Materials
- EC3 Catalytic Materials for Energy and Sustainability
- EC4 Material, Devices and Systems for Sustainable Conversion of Solar Energy to Fuels
- EC5 Proton Transfer and Transport—From Biological Systems to Energy Applications

## ELECTRONICS, MAGNETICS AND PHOTONICS

- EM1 Materials Issues for Quantum Computing
- EM2 Rare-Earths in Advanced Photonics and Spintronics
- EM3 Electronic and Ionic Dynamics at Solid-Liquid Interfaces
- EM4 Structure-Property Relationships of Organic Semiconductors
- EM5 Materials and Mechanisms of Correlated Electronic Phenomena in Oxide Heterostructures
- EM6 Thin-Film Transistors—New Materials and Device Concepts
- EM7 Functional Plasmonics
- EM8 Spin Dynamics in Nonmagnetic Materials and Devices
- EM9 Materials and Nanostructures for Magnetic Skyrmions
- EM10 Emerging Materials and Technologies for Nonvolatile Memories
- EM11 Wide-Bandgap Materials for Energy Efficiency—Power Electronics and Solid-State Lighting
- EM12 Diamond Electronics, Sensors and Biotechnology—Fundamentals to Applications

## ENERGY AND SUSTAINABILITY

- ES1 Materials Science and Chemistry for Grid-Scale Energy Storage
- ES2 Materials Challenges for Flow-Based Energy Conversion and Storage
- ES3 Perovskite Solar Cell Research from Material Properties to Photovoltaic Function
- ES4 Thermoelectric Polymers and Composites—Nontraditional Routes to High Efficiency
- ES5 Materials Research and Design for A Nuclear Renaissance
- ES6 Scientific Basis for Nuclear Waste Management

## MECHANICAL BEHAVIOR AND FAILURE MECHANISMS OF MATERIALS

- MB1 Intermetallic-Based Alloys—From Fundamentals to Applications
- MB2 Materials under Mechanical Extremes
- MB3 High-Entropy Alloys
- MB4 Glassy, Nanocrystalline and Other Complex Alloy Systems and Their Applications
- MB5 Size Effects and Small-Scale Mechanical Behavior of Materials
- MB6 Cyclic Deformation and Fracture at the Nanoscale
- MB7 Shear Transformation Mechanisms and Their Effect on Mechanical Behavior of Crystalline Materials

## NANOMATERIALS

- NM1 Semiconducting Nanowires, Nanoribbons and Heterostructures—Synthesis, Characterizations and Functional Devices
- NM2 2D Layers and Heterostructures beyond Graphene—Theory, Preparation, Properties and Devices
- NM3 Nanotubes and Related Nanostructures
- NM4 Nanomaterials-Based Solar Energy Conversion
- NM5 Nanomembrane Materials—From Fabrication to Application
- NM6 Nanoscale Materials and Devices by High-Temperature Gas-Phase Processes

## PROCESSING AND MANUFACTURING

- PM1 Ion Beam-Enabled Nanoscale Fabrication, Modification and Synthesis
- PM2 Plasma Processing via Liquid for Life Sciences and Environmental Applications
- PM3 Science-Enabled Advances in Materials- and Manufacturing-Technologies
- PM4 Novel Materials, Fabrication Routes and Devices for Environmental Monitoring
- PM5 Hierarchical, Hybrid and Roll-to-Roll Manufacturing for Device Applications

## THEORY, CHARACTERIZATION AND MODELING

- TC1 *In Silico* Materials Chemistry
- TC2 Design, Discovery and Understanding of Materials Guided by Theory, Computation and Data Mining
- TC3 Materials Issues in Art and Archaeology
- TC4 Advances in Spatial, Energy and Time Resolution in Electron Microscopy

[www.mrs.org/fall2016](http://www.mrs.org/fall2016)

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