



# 2017 **MRS**<sup>®</sup> FALL MEETING & EXHIBIT

November 26–December 1, 2017 | **Boston, Massachusetts**

# CALL FOR PAPERS

**Abstract Submission Opens**  
May 15, 2017

**Abstract Submission Deadline**  
June 15, 2017

## BROADER IMPACT

- BI1 Community College and University Partnerships as Catalysts for Promoting Materials Science Education
- BI2 Materials Innovation for Sustainable Agriculture and Energy

## BIOMATERIALS AND SOFT MATERIALS

- BM1 Multiscale Mechanobiology and Biomechanics—Theory, Experiments, Computations
- BM2 Multiphase Fluids for Materials Science—Droplets, Bubbles and Emulsions
- BM3 Biological and Bioinspired Materials for Photonics and Electronics—From Living Organisms to Devices
- BM4 Biomaterials for Regenerative Engineering
- BM5 Polymer Gels in Materials Science—3D/4D Printing, Fundamentals and Applications
- BM6 2D Nanomaterials in Health Care
- BM7 Emerging Materials and Devices for Engineering Biological Function and Dynamics
- BM8 Materials Design for Neural Interfaces
- BM9 Stretchable Bioelectronics—From Sensor Skins to Implants and Soft Robots
- BM10 Bioinspired Interfacial Materials with Superwettability
- BM11 Modeling, Characterization, Fabrication and Applications of Advanced Biopolymers—Where Form Meets Function
- BM12 Biomolecular Self-Assembly for Materials Design

## ELECTRONICS, MAGNETICS AND PHOTONICS

- EM1 Organic Semiconductors—Surface, Interface, Bulk Doping and Charge Transport
- EM2 Multiferroics and Magnetolectrics
- EM3 Novel Materials and Architectures for Plasmonics—From the Ultraviolet to the Terahertz
- EM4 Wide- and Ultra-Wide-Bandgap Materials and Devices
- EM5 Oxide Interfaces—Lattice and Electronic Defect Interactions
- EM6 Diamond Electronics, Sensors and Biotechnology—Fundamentals to Applications
- EM7 Materials, Devices and Architectures for Neuromorphic Engineering and Brain-Inspired Computing
- EM8 Emerging Materials for Quantum Information
- EM9 Electronic and Ionic Dynamics at Solid-Liquid Interfaces
- EM10 Solution-Processed Inorganics for Electronic and Photonic Device Applications

## ENERGY AND SUSTAINABILITY

- ES1 Perovskite Materials and Devices—Progress and Challenges
- ES2 On the Way to Sustainable Solar Fuels—New Concepts, Materials and System Integration
- ES3 Earth Abundant Metal Oxides, Sulphides and Selenides for Energy Systems and Devices
- ES4 Interfaces in Electrochemical Energy Storage
- ES5 Materials and Design for Resilient Energy Storage
- ES6 Alkali Solid Electrolytes and Solid-State Batteries
- ES7 Chromogenic Materials and Devices
- ES8 Advanced Nuclear Materials—Design, Development and Deployment
- ES9 Thermal Energy—Transfer, Conversion and Storage
- ES10 Materials Efficiency to Enable a Circular Materials Economy
- ES11 Silicon for Photovoltaics

## NANOMATERIALS

- NM1 Carbon Quantum Dots—Emerging Science and Technology
- NM2 Anisotropic Carbon Nanomaterials—Frontiers in Basic and Applied Research
- NM3 Progress in Developing and Applications of Functional One-Dimensional Nanostructures
- NM4 Atomically Thin, Layered and 2D Non-Carbon Materials and Systems
- NM5 Nanomaterials, Nanoparticles and Nanostructures Produced by Plasmas—Synthesis, Characterization and Applications
- NM6 Semiconductor Nanocrystals, Plasmonic Nanoparticles and Metal-Hybrid Structures
- NM7 Nanostructure-Based Optical Bioprobes—Advances, Trends and Challenges in Optical and Multimodal Bioimaging and Sensing
- NM8 Defect-Induced Phenomena and New States of Matter at the Nanoscale

## PROCESSING AND MANUFACTURING

- PM1 Explore New Frontiers in Materials Design Using Plasmas—Synthesis, Processing and Characterization
- PM2 Advances and Upcoming Research Strategies in Reactive Materials
- PM3 Interfaces and Interface Engineering in Inorganic Materials
- PM4 Micro-Assembly Technologies—Fundamentals to Applications

## THEORY, CHARACTERIZATION AND MODELING

- TC1 Multifunctional and Multifrequency Scanning Probe Microscopy
- TC2 *In Situ* Studies of Materials Transformations
- TC3 Emerging Prospect and Capabilities in Ion Beam Technology and Applications
- TC4 Advanced Atomistic Algorithms in Materials Science
- TC5 Uncertainty Quantification in Multiscale Materials Simulation
- TC6 Mechanical Behavior at the Micro and Nanoscale—Bridging Between Computer Simulations and Experiments
- TC7 Design, Control and Advanced Characterization of Functional Defects in Materials

## Meeting Chairs

**Ilke Arslan** Pacific Northwest National Laboratory  
**Jason A. Burdick** University of Pennsylvania  
**Tao Deng** Shanghai Jiao Tong University  
**James B. Hannon** IBM T.J. Watson Research Center  
**Sanjay Mathur** University of Cologne

[www.mrs.org/fall2017](http://www.mrs.org/fall2017)

## 2017 iMatSci Innovator Showcase

**CALL FOR EARLY-STAGE STARTUPS**  
Submission Site Opens: June 1, 2017

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

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