



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

# 2016 MRS FALL MEETING SYMPOSIA

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## 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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**Silvija Gradečak**, Massachusetts Institute of Technology  
**Sarah Heilshorn**, Stanford University  
**Ralph Spolenak**, ETH Zürich  
**T. Venky Venkatesan**, National University of Singapore

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

#### 2017 MRS Spring Meeting & Exhibit

April 17 – 21, 2017  
Phoenix, Arizona

#### 2017 MRS Fall Meeting & Exhibit

November 26 – December 1, 2017  
Boston, Massachusetts

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The Society's interdisciplinary approach to the exchange of technical information is qualitatively different from that provided by single-discipline professional societies because it promotes technical exchange across the various fields of science affecting materials development. MRS sponsors two major international annual meetings encompassing many topical symposia, as well as numerous single-topic scientific meetings each year. It recognizes professional and technical excellence, conducts tutorials, and fosters technical exchange in various local geographical regions through Section activities and Student Chapters on university campuses.

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