



2015 **MRS**[®] SPRING MEETING & EXHIBIT
April 6–10, 2015 | San Francisco, California

CALL FOR PAPERS

Abstract Submission Deadline October 23, 2014

Energy

- A Emerging Silicon Science and Technology
- B Thin-Film Compound Semiconductor Photovoltaics
- C Perovskite Solar Cells
- D Organic-Based Photovoltaics
- E Advanced Solar Cells—Components to Systems
- F Biohybrid Solar Cells—Photosynthesis-Based Photovoltaics and Photocatalytic Solar Cells
- G Next-Generation Electrochemical Energy Storage and Conversion Systems—Synthesis, Processing, Characterization and Manufacturing
- H Mechanics of Energy Storage and Conversion—Batteries, Thermoelectrics and Fuel Cells
- I High Capacity Anode Materials for Lithium Ion Batteries
- J Latest Advances in Solar Water Splitting
- K The Development of Oxygen Reduction Reaction (ORR) and Oxygen Evolution Reaction (OER) Materials in Energy Storage and Conversion Systems

Nanomaterials

- L Bioinspired Micro- and Nano-Machines—Challenges and Perspectives
- M Nanoscale Heat Transport—From Fundamentals to Devices
- N From Molecules to Colloidal Compound Semiconductor Nanocrystals—Advances in Mechanism-Enabled Design and Syntheses
- O Emerging Non-Graphene 2D Materials
- P Nanogenerators and Piezotronics
- Q Externally Actuated Responsive Nanomaterials—Design, Synthesis, Applications and Challenges
- R Photoactive Nanoparticles and Nanostructures
- S Semiconductor Nanowires and Devices for Advanced Applications
- T Graphene and Carbon Nanotubes

Electronics and Photonics

- U The Interplay of Structure and Carrier Dynamics in Energy-Relevant Nanomaterials
- V Resonant Optics—Fundamentals and Applications
- W Light-Matter Processes in Molecular Systems and Devices
- Y Phase-Change Materials for Data Storage, Cognitive Processing and Photonics Applications
- Z Plasmonics and Metamaterials—Synthesis, Characterization and Integration
- AA Materials for Beyond the Roadmap Devices in Logic, Power and Memory
- BB Innovative Interconnects/Electrodes for Advanced Devices, Flexible and Green-Energy Electronics
- CC Reliability and Materials Issues of Semiconductors—Optical and Electron Devices and Materials III
- DD Tailored Disorder—Novel Materials for Advanced Optics and Photonics
- EE Quantum Photonics, Information Technology and Sensing
- FF Defects in Semiconductors—Relationship to Optoelectronic Properties

Soft and Biomaterials

- GG Foundations of Bio/Nano Interfaces—Synthesis, Modeling, Design Principles and Applications
- HH Supramolecular Materials—Assembly and Dynamics
- II Organic Bioelectronics—Materials, Processes and Applications
- JJ Exploiting Bioinspired Self-Assembly for the Design of Functional and Responsive Materials

- KK Nanomaterials in Translational Medicine
- LL Soft Electronics—From Electronic Skin to Reliable Neural Interfaces
- MM Crystal Engineering—Design, New Materials and Applications

General—Fabrication and Characterization

- NN Adaptive Architecture and Programmable Matter—Next-Generation Building Skins and Systems from Nano to Macro
- OO Metal-Assisted Chemical Etching of Silicon and Other Semiconductors
- PP Gold-Based Materials and Applications
- QQ Plasma-Based Materials Science and Engineering
- RR Solution Syntheses of Inorganic Functional/Multifunctional Materials
- SS Oxide Thin Films and Nanostructures for Advanced Electrical, Optical and Magnetic Applications
- TT Metal Oxides—From Advanced Fabrication and Interfaces to Energy and Sensing Applications
- UU Titanium Oxides—From Fundamental Understanding to Applications
- VV Science and Technology of Superconducting Materials
- WW Ultrafast Dynamics in Complex Functional Materials
- XX Multiscale Modeling and Experiments on Microstructural Evolution in Nuclear Materials
- YY Insights for Energy Materials Using *In-Situ* Characterization
- ZZ Materials Information Using Novel Techniques in Electron Microscopy

www.mrs.org/spring2015

Meeting Chairs

- Artur Braun** Swiss Federal Laboratories for Materials Science and Technology
- Hongyou Fan** Sandia National Laboratories
- Ken Haenen** Hasselt University and IMEC vzw
- Lia Stanciu** Purdue University
- Jeremy A. Theil** QuantaScapes, Inc.

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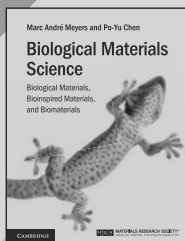
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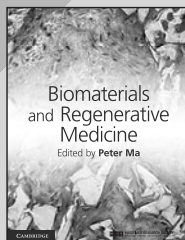
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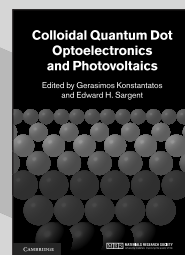
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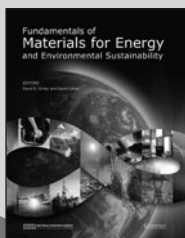
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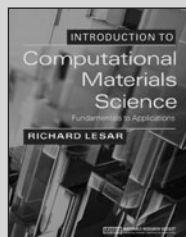
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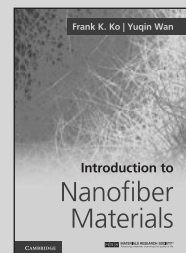
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MEETING SYMPOSIA



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www.mrs.org/fall2014

Preregistration Deadline—November 14, 2014

BIOMATERIALS AND SOFT MATERIALS

- A Organic Bioelectronics
- B Multifunctional Polymeric and Hybrid Materials
- C Medical Applications of Noble Metal Nanoparticles (NMNPs)
- D Materials and Concepts for Biomedical Sensing
- E Hard-Soft Interfaces in Biological and Bioinspired Materials—Bridging the Gap between Theory and Experiment
- F Reverse Engineering of Bioinspired Nanomaterials
- G Plasma Processing and Diagnostics for Life Sciences
- H Micro/Nano Engineering and Devices for Molecular and Cellular Manipulation, Stimulation and Analysis
- I Emerging 1D and 2D Nanomaterials in Health Care

ELECTRONICS AND PHOTONICS

- J Emerging Non-Graphene 2D Atomic Layers and van der Waals Solids
- K Graphene and Graphene Nanocomposites
- L Optical Metamaterials and Novel Optical Phenomena Based on Nanofabricated Structures
- M Materials and Technology for Nonvolatile Memories
- N Frontiers in Complex Oxides
- O Oxide Semiconductors
- P Hybrid Oxide/Organic Interfaces in Organic Electronics
- Q Fundamentals of Organic Semiconductors—Synthesis, Morphology, Devices and Theory
- R Diamond Electronics and Biotechnology—Fundamentals to Applications

ENERGY AND SUSTAINABILITY

- S Advances in Materials Science, Processing and Engineering for Fuel Cells and Electrolyzers
- T Wide-Bandgap Materials for Solid-State Lighting and Power Electronics
- U Organic Photovoltaics—Fundamentals, Materials and Devices
- V Sustainable Solar-Energy Conversion Using Earth-Abundant Materials
- W Perovskite-Based and Related Novel Material Solar Cells
- Y Technologies for Grid-Scale Energy Storage
- Z Materials Challenges for Energy Storage across Multiple Scales
- AA Synthesis, Processing and Mechanical Properties of Functional Hexagonal Materials for Energy Applications
- BB Molecular, Polymer and Hybrid Materials for Thermoelectrics
- CC Advanced Materials and Devices for Thermoelectric Energy Conversion
- DD Materials for Advanced Nuclear Technologies
- EE Scientific Basis for Nuclear Waste Management XXXVIII
- FF Materials as Tools for Sustainability

NANOMATERIALS AND SYNTHESIS

- GG Nanomaterials for Harsh Environment Sensors and Related Electronic and Structural Components—Design, Synthesis, Characterization and Utilization
- HH Flame and High-Temperature Synthesis of Functional Nanomaterials—Fundamentals and Applications
- II Semiconductor Nanocrystals, Plasmonic Metal Nanoparticles, and Metal-Hybrid Structures
- JJ 3D Mesoscale Architectures—Synthesis, Assembly, Properties and Applications
- KK Directed Self-Assembly for Nanopatterning
- LL Semiconductor Nanowires—Growth, Physics, Devices, and Applications

THEORY, CHARACTERIZATION AND MODELING

- MM Carbon Nanotubes—Synthesis, Properties, Functionalization and Applications
- NN Mathematical and Computational Aspects of Materials Science
- OO *In Situ* Characterization of Dynamic Processes during Materials Synthesis and Transformation
- PP Advances in Scanning Probe Microscopy for Multimodal Imaging at the Nanoscale
- QQ Advances in Nanoscale Subsurface, Chemical and Time-Resolved Studies of Soft Matter
- RR Scaling Effects in Plasticity—Synergy between Simulations and Experiments
- SS Informatics and Genomics for Materials Development
- TT Advanced Materials Exploration with Neutrons and X-Rays—The State-of-the-Art in the International Year of Crystallography

GENERAL

- UU Structure-Property Relations in Amorphous Solids
- VV Recent Advances in Reactive Materials
- WW Defects and Radiation Effects in Advanced Materials
- XX Bridging Scales in Heterogeneous Materials
- YY Advanced Structural and Functional Intermetallic-Based Alloys
- ZZ Hierarchical, High-Rate, Hybrid and Roll-to-Roll Manufacturing
- AAA Undergraduate Research in Materials Science—Impacts and Benefits

Meeting Chairs

- Husam N. Alshareef** King Abdullah University of Science and Technology
- Amit Goyal** Oak Ridge National Laboratory
- Gerardo Morell** University of Puerto Rico
- José A. Varela** University of São Paulo State - UNESP
- In Kyeong Yoo** Samsung Advanced Institute of Technology

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