



# 2018 MRS® FALL MEETING & EXHIBIT

November 25–30, 2018 | Boston, Massachusetts

# CALL FOR PAPERS

**Abstract Submission Opens**  
May 14, 2018

**Abstract Submission Deadline**  
June 14, 2018

**Fall Meeting registrations include MRS Membership January – December 2019**

## **BROADER IMPACT**

- BI01 Sustainable Development in Materials Science and Related Societal Aspects
- BI02 The Future of Materials Science Academia—Preparing for a Career in Higher Education

## **BIOMATERIALS AND SOFT MATERIALS**

- BM01 3D Printing of Passive and Active Medical Devices
- BM02 Electronic and Coupled Transport in Biology
- BM03 Multiscale Modeling of Soft Materials and Interfaces
- BM04 Biomaterials for Regenerative Engineering
- BM05 Advanced Manufacturing Technologies for Emulating Biological Tissues
- BM06 Plasma Processing and Monitoring for Bioengineering and Biomedical Engineering
- BM07 Bioelectronics—Fundamentals, Materials and Devices
- BM08 Materials-to-Devices for Integrated Wearable Systems—Energy Harvesting and Storage, Sensors/Actuators and Integration
- BM09 Bioinspired Macromolecular Assembly and Inorganic Crystallization—From Tissue Scaffolds to Nanostructured Materials

## **CHARACTERIZATION, MECHANICAL PROPERTIES AND STRUCTURE–PROPERTY RELATIONSHIPS**

- CM01 Solid-State Chemistry of Inorganic Materials
- CM02 Structure–Property Relations in Non-Crystalline Materials
- CM03 *In Situ/Operando* Analysis of Electrochemical Materials and Interfaces
- CM04 Ultrafast Optical Probes for Advanced Materials Characterization and Development
- CM05 Fundamentals of Materials Property Changes Under Irradiation

## **ELECTRONIC, PHOTONIC AND MAGNETIC MATERIALS**

- EP01 New Materials and Applications of Piezoelectric, Pyroelectric and Ferroelectric Materials
- EP02 Materials for Manipulating and Controlling Magnetic Skyrmions
- EP03 Beyond-Graphene 2D Materials—Synthesis, Properties and Device Applications
- EP04 Novel Photonic and Plasmonic Materials Enabling New Functionalities
- EP05 Excitons, Electrons and Ions in Organic Materials
- EP06 Coherent Electronic Spin Dynamics in Materials and Devices

- EP07 Tailored Disorder—Novel Materials for Advanced Optics and Photonics
- EP08 Ultra-Wide-Bandgap Materials and Devices
- EP09 Diamond Electronics, Sensors and Biotechnology—Fundamentals to Applications

## **ENERGY—TRANSFER, STORAGE AND CONVERSION**

- ET01 Solid-State Batteries—Materials, Interfaces and Performance
- ET02 Silicon for Photovoltaics
- ET03 Application of Nanoscale Phenomena and Materials to Practical Electrochemical Energy Storage and Conversion
- ET04 Perovskite Solar Cells—Challenges and Opportunities
- ET05 Fundamental Aspects of Halide Perovskite (Opto)electronics and Beyond
- ET06 Advanced Materials and Chemistries for High-Energy and Safe Rechargeable Batteries
- ET07 Advanced Processing and Manufacturing for Energy Conversion, Storage and Harvesting Devices
- ET08 Emerging Materials and Characterization for Selective Catalysis
- ET09 Materials for Chalcogen Electrochemistry in Energy Conversion and Storage
- ET10 Redox Active Materials and Flow Cells for Energy Applications
- ET11 Emerging Materials and Device Concepts for Flexible, Low-Cost Photovoltaic Technologies
- ET12 Harvesting Functional Defects in Energy Materials
- ET13 Materials for Multifunctional Windows
- ET14 Materials Science Facing Global Warming—Practical Solutions for Our Future
- ET15 Scientific Basis for Nuclear Waste Management

## **GENERAL INTEREST**

- GI01 Machine Learning and Data-Driven Materials Development and Design
- GI02 Materials for Next-Generation Robotics

## **NANOMATERIALS**

- NM01 Carbon Nanotubes, Graphenes and Related Nanostructures
- NM02 Nanometal—Synthesis, Properties and Applications
- NM03 Nanowires and Related 1D Nanostructures—New Opportunities and Grand Challenges
- NM04 Nanomaterials and Nanomanufacturing for Sustainability

## **PROCESSING AND MANUFACTURING**

- PM01 Architected Materials—Synthesis, Characterization, Modeling and Optimal Design
- PM02 Conductive Materials Reliability in Flexible Electronics
- PM03 Hierarchical, Hybrid and Roll-to-Roll Manufacturing for Device Applications
- PM04 High-Entropy Alloys
- PM05 Electromagnetic Fields in Materials Synthesis—Far from Equilibrium Effects
- PM06 Advances in Intermetallic-Based Alloys for Structural and Functional Applications
- PM07 Plasma-Based Synthesis, Processing and Characterization of Novel Materials for Advanced Applications

## **THERMAL PROPERTIES AND THERMOELECTRIC MATERIALS**

- TP01 Caloric Materials for Highly Efficient Cooling Applications
- TP02 Thermal Analysis—Materials, Measurements and Devices
- TP03 Emerging Low-Temperature Thermal Energy Conversion Technologies

## **MEETING CHAIRS**

- Kristen H. Brosnan** GE Global Research
- David LaVan** National Institute of Standards and Technology
- Patrycja Paruch** University of Geneva
- Joan M. Redwing** The Pennsylvania State University
- Takao Someya** The University of Tokyo

[www.mrs.org/fall2018](http://www.mrs.org/fall2018)

## **2018 iMatSci Innovator Showcase**

### **CALL FOR EARLY-STAGE STARTUPS**

Submission Site Opens: June 1, 2018

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

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3 Li 6.941 Lithium	4 Be 9.012182 Beryllium	5 B 10.811 Boron	6 C 12.0107 Carbon	7 N 14.0067 Nitrogen	8 O 15.9994 Oxygen	9 F 18.9984032 Fluorine	10 Ne 20.1797 Neon										
11 Na 22.98976928 Sodium	12 Mg 24.305 Magnesium	13 Al 26.9815386 Aluminum	14 Si 28.0855 Silicon	15 P 30.973762 Phosphorus	16 S 32.06 Sulfur	17 Cl 35.453 Chlorine	18 Ar 39.948 Argon										
19 K 39.0983 Potassium	20 Ca 40.078 Calcium	21 Sc 44.955912 Scandium	22 Ti 47.887 Titanium	23 V 50.9415 Vanadium	24 Cr 51.9961 Chromium	25 Mn 54.938045 Manganese	26 Fe 55.845 Iron	27 Co 58.933195 Cobalt	28 Ni 58.6934 Nickel	29 Cu 63.546 Copper	30 Zn 65.38 Zinc	31 Ga 69.723 Gallium	32 Ge 72.64 Germanium	33 As 74.9216 Arsenic	34 Se 78.96 Selenium	35 Br 79.904 Bromine	36 Kr 83.798 Krypton
37 Rb 85.4678 Rubidium	38 Sr 87.62 Strontium	39 Y 88.90585 Yttrium	40 Zr 91.224 Zirconium	41 Nb 92.90638 Niobium	42 Mo 95.96 Molybdenum	43 Tc 98.0 Technetium	44 Ru 101.07 Ruthenium	45 Rh 102.9055 Rhodium	46 Pd 106.42 Palladium	47 Ag 107.8682 Silver	48 Cd 112.411 Cadmium	49 In 114.818 Indium	50 Sn 118.71 Tin	51 Sb 121.76 Antimony	52 Te 127.6 Tellurium	53 I 126.90447 Iodine	54 Xe 131.293 Xenon
55 Cs 132.9054 Cesium	56 Ba 137.327 Barium	57 La 138.90547 Lanthanum	58 Ce 140.12 Cerium	59 Pr 140.90766 Praseodymium	60 Nd 144.242 Neodymium	61 Pm 144.9128 Promethium	62 Sm 150.36 Samarium	63 Eu 151.964 Europium	64 Gd 157.25 Gadolinium	65 Tb 158.92535 Terbium	66 Dy 162.5 Dysprosium	67 Ho 164.93032 Holmium	68 Er 167.259 Erbium	69 Tm 168.93421 Thulium	70 Yb 173.054 Ytterbium	71 Lu 174.967 Lutetium	
87 Fr 223 Francium	88 Ra 226 Radium	89 Ac 227 Actinium	90 Th 232.03756 Thorium	91 Pa 231.03688 Protactinium	92 U 238.02891 Uranium	93 Np 237 Neptunium	94 Pu 244 Plutonium	95 Am 243 Americium	96 Cm 247 Curium	97 Bk 247 Berkelium	98 Cf 251 Californium	99 Es 252 Einsteinium	100 Fm 257 Fermium	101 Md 258 Mendelevium	102 No 259 Nobelium	103 Lr 262 Lawrencium	

72 Ce 140.116 Cerium	73 Pr 140.90766 Praseodymium	74 Nd 144.242 Neodymium	75 Pm 144.9128 Promethium	76 Sm 150.36 Samarium	77 Eu 151.964 Europium	78 Gd 157.25 Gadolinium	79 Tb 158.92535 Terbium	80 Dy 162.5 Dysprosium	81 Ho 164.93032 Holmium	82 Er 167.259 Erbium	83 Tm 168.93421 Thulium	84 Yb 173.054 Ytterbium	85 Lu 174.967 Lutetium
90 Th 232.03756 Thorium	91 Pa 231.03688 Protactinium	92 U 238.02891 Uranium	93 Np 237 Neptunium	94 Pu 244 Plutonium	95 Am 243 Americium	96 Cm 247 Curium	97 Bk 247 Berkelium	98 Cf 251 Californium	99 Es 252 Einsteinium	100 Fm 257 Fermium	101 Md 258 Mendelevium	102 No 259 Nobelium	103 Lr 262 Lawrencium



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