



LATE NEWS—HOT TOPIC ABSTRACTS

ACCEPTED SEPTEMBER 4–18, 2019

Fall Meeting registrations include MRS Membership January – December 2020

BROADER IMPACT

BI01 Materials Data Science—Transformations in Interdisciplinary Education

ELECTRONIC, PHOTONIC AND MAGNETIC MATERIALS

- EL01 Emerging Material Platforms and Approaches for Plasmonics, Metamaterials and Metasurfaces
EL02 Molecular and Organic Ferro- and Piezoelectrics—Science and Applications
EL03 Multiferroics and Magnetolectrics
EL04 Emerging Chalcogenide Electronic Materials—From Theory to Applications
EL05 Diamond and Diamond Heterojunctions—From Growth and Technology to Applications

ENERGY AND ENVIRONMENT

- EN01 Challenges in Battery Technologies for Next-Generation Electric Vehicles and Grid Storage Applications
EN02 Materials for High-Energy and Safe Electrochemical Energy Storage
EN03 Green Electrochemical Energy Storage Solutions—Materials, Processes and Devices
EN04 Advanced Membranes for Energy-Efficient Molecular Separation and Ion Conduction
EN05 Chemomechanical and Interfacial Challenges in Energy Storage and Conversion—Batteries and Fuel Cells
EN06 Development in Catalytic Materials for Sustainable Energy—Bridging the Homogeneous/Heterogeneous Divide
EN07 Materials Science for Efficient Water Splitting
EN08 Halide Perovskites for Photovoltaic Applications—Devices, Stability and Upscaling
EN09 Advances in the Fundamental Science of Halide Perovskite Optoelectronics
EN10 Emerging Light-Emitting Materials and Devices—Perovskite Emitters, Quantum Dots and Other Low-Dimensional Nanoscale Emitters
EN11 Silicon for Photovoltaics
EN12 Structure–Function Relationships and Interfacial Processes in Organic Semiconductors for Optoelectronics
EN13 Flexible and Miniaturized Thermoelectric Devices Based on Organic Semiconductors and Hybrid Materials
EN14 Thermoelectric Energy Conversion (TEC)—Complex Materials and Novel Theoretical Methods
EN15 Nanomaterials for Sensing and Control of Energy Systems—Processing, Characterization and Theory
EN16 Advanced Materials, Fabrication Routes and Devices for Environmental Monitoring
EN17 Structure–Property Processing Performance Relationships in Materials for Nuclear Technologies

FABRICATION OF FUNCTIONAL MATERIALS AND NANOMATERIALS

- FF01 Beyond Graphene 2D Materials—Synthesis, Properties and Device Applications
FF02 2D Nanomaterials-Based Nanofluidics
FF03 Building Advanced Materials via Particle-Based Crystallization and Self-Assembly of Molecules with Aggregation-Induced Emission
FF04 Crystal Engineering of Functional Materials—Solution-Based Strategies
FF05 Advanced Atomic Layer Deposition and Chemical Vapor Deposition Techniques and Applications
FF06 Advances in the Fundamental Understanding and Functionalization of Reactive Materials

MATERIALS FOR QUANTUM TECHNOLOGY

- MQ01 Coherent and Correlated Magnetic Materials for Hybrid Quantum Interfaces
MQ02 Materials for Quantum Computing Applications
MQ03 Predictive Synthesis and Advanced Characterization of Emerging Quantum Materials

MATERIALS THEORY, COMPUTATION AND CHARACTERIZATION

- MT01 Advanced Atomistic Algorithms in Materials Science
MT02 Closing the Loop—Using Machine Learning in High-Throughput Discovery of New Materials
MT03 Automated and Data-Driven Approaches to Materials Development—Bridging the Gap Between Theory and Industry
MT04 Advanced Materials Exploration with Neutrons
MT05 Emerging Prospects and Capabilities in Focused Ion-Beam Technologies and Applications
MT06 *In Situ* Characterization of Dynamic Phenomena During Materials Synthesis
MT07 *In Situ/Operando* Studies of Dynamic Processes in Ferroelectric, Magnetic and Multiferroic Materials

MECHANICAL BEHAVIOR AND STRUCTURAL MATERIALS

- MS01 Extreme Mechanics
MS02 Mechanically Coupled and Defect-Enabled Functionality in Atomically Thin Materials
MS03 Mechanics of Nanocomposites and Hybrid Materials
MS04 High-Entropy Alloys and Other Novel High-Temperature Structural Alloys

SOFT MATERIALS AND BIOMATERIALS

- SB01 Multifunctional Materials—From Conceptual Design to Application-Motivated Systems
SB02 Multiscale Materials Engineering Within Biological Systems
SB03 Smart Materials, Devices and Systems for Interface with Plants and Microorganisms
SB04 Hydrogel Materials—From Theory to Applications via 3D and 4D Printing
SB05 Light–Matter Interactions at the Interface with Living Cells, Tissues and Organisms
SB06 Bringing Mechanobiology to Materials—From Molecular Understanding to Biological Design
SB07 Bioelectrical Interfaces
SB08 Advanced Neural Materials and Devices
SB09 Interfacing Bio/Nano Materials with Cancer and the Immune System
SB10 Electronic Textiles
SB11 Multiphase Fluids for Materials Science—Droplets, Bubbles and Emulsions

mrs.org/fall2019

Meeting Chairs

Bryan D. Huey University of Connecticut
Stéphanie P. Lacour École Polytechnique Fédérale de Lausanne
Conal E. Murray IBM T.J. Watson Research Center
Jeffrey B. Neaton University of California, Berkeley, and Lawrence Berkeley National Laboratory
Iris Visoly-Fisher Ben-Gurion University of the Negev

Don't Miss These Future MRS Meetings!

2020 MRS Spring Meeting & Exhibit
April 13–17, 2020, Phoenix, Arizona

2020 MRS Fall Meeting & Exhibit
November 29–December 4, 2020, Boston, Massachusetts

FOLLOW THE MEETING!

#F19MRS  

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1 H 1.00794 Hydrogen																	2 He 4.002602 Helium
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 32.065 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 47.867 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) 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 140.90765 Praseodymium	60 Nd 144.242 Neodymium	61 Pm (145) 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 174.9668 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	

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