



# CALL FOR PAPERS

**Abstract Submission Opens**  
May 11, 2020

**Abstract Submission Deadline**  
June 11, 2020

Fall Meeting registrations include MRS Membership January – December 2021

## NEW! GENERAL INTEREST

GI01 Materials Opportunities in Medicine and Public Health

## BROADER IMPACT

BI01 Early-Career Development—Insights from Academia and Industry

## ELECTRONICS AND OPTICS

- EL01 Diamond and Diamond Heterojunctions—From Growth to Applications
- EL02 Emerging Light-Emitting Materials and Devices—Halide Perovskites, Quantum Dots and Other Nanoscale Emitters
- EL03 Emerging Low-Dimensional Chalcogenides for Electronics and Photonics
- EL04 Beyond Graphene 2D Materials—Synthesis, Properties and Device Applications
- EL05 Putting Photons to Work—Progress in Photomechanical Materials and Applications
- EL06 Contacting Materials and Interfaces for Optoelectronic Devices
- EL07 Coulomb Interactions in Functional Organic Materials and Devices—A Curse or a Blessing?
- EL08 Frontiers of Halide Perovskites—Linking Fundamental Properties to Devices

## ENERGY

- EN01 Emerging Dielectric Materials—Applications in Energy Transmission, Storage and Conversion
- EN02 Silicon for Photovoltaics
- EN03 Overcoming the Challenges with Metal Anodes for High-Energy Batteries
- EN04 Beyond Lithium-Ion Batteries—Materials, Architectures and Techniques
- EN05 Redox Flow Batteries—Materials, Methods and Devices
- EN06 Advancement of Lithium-Based High-Energy Density Batteries at Multiple Scales, Factoring in Safety
- EN07 Innovative Materials and Cell Design, Processing and Manufacturing Strategies for Solid-State Batteries
- EN08 Scientific Basis for Nuclear Waste Management
- EN09 Developing *In Situ* and *Operando* Methodology for Observation of Energy Conversion, Storage and Transport Processes in Materials and Devices

## FLEXIBLE, WEARABLE ELECTRONICS, TEXTILES AND SENSORS

- FL01 Bioelectronic Materials for Neural Interfaces—Stimulation, Sensing, Power and Packaging
- FL02 Advanced Neural Interfacing Materials, Devices and Microsystems
- FL03 Flexible, Wearable Electronics and Textiles

## MATERIALS THEORY, CHARACTERIZATION AND DATA SCIENCE

- MT01 Advanced *In Situ* Characterization of Materials Kinetics
- MT02 Multimodal, Functional and Smart Scanning Probe Microscopies for Characterization and Fabrication
- MT03 Frontiers of Imaging and Spectroscopy in Electron Microscopy
- MT04 Using Machine Learning and Multiscale Modeling to Study Soft Materials and Interfaces
- MT05 Advancing Materials Characterization Through Atom Probe Tomography
- MT06 Strain and Defect-Driven Transport Properties in van der Waals Solids
- MT07 Data Science and Automation to Accelerate Materials Development and Discovery

## NANOMATERIALS AND QUANTUM MATERIALS

- NM01 Nanophotonics—Emerging Hybrid Platforms, Materials and Functions
- NM02 Advanced Linear/Nonlinear, Tunable and Quantum Materials for Metasurfaces, Metamaterials and Plasmonics
- NM03 Nanotubes, Graphene and Related Nanostructures
- NM04 Material Systems for Manipulating and Controlling Magnetic Skyrmions
- NM05 Emerging Materials for Quantum Information Technologies
- NM06 Spin Dynamics in Materials for Quantum Sensing, Optoelectronics and Spintronics
- NM07 Progress in Neuromorphic Computing Materials, Devices and Systems

## SOFT MATERIALS AND BIOMATERIALS

- SM01 Lessons from Nature—From Biology to Bioinspired Materials
- SM02 Hydrogel Technology for Humans and Machines
- SM03 Materials and Mechanics Challenges in Haptics for Human–Machine Interfaces
- SM04 Degradable and Self-Healing Electronic Materials for Biological Interfaces
- SM05 Brain-Inspired Information Processing—From Novel Material Concepts for Neuromorphic Computing to Sensing, Manipulation and Local Processing of Biological Signals
- SM06 Biofabrication for Emulating Biological Tissues
- SM07 Biomaterials for Studying and Controlling the Immune System
- SM08 Regenerative Engineering and Synthetic Biology

## STRUCTURAL AND FUNCTIONAL MATERIALS

- SF01 Materials for Extreme Conditions (MEC)
- SF02 Bulk Metallic Glasses
- SF03 New Frontiers in the Design, Fabrication and Application of Metamaterials
- SF04 Solution-Processed Semiconductors and Devices for Form-Free Displays, Logic and Sensors
- SF05 Advanced Materials for Additive Manufacturing
- SF06 High-Entropy and Compositionally Complex Alloys
- SF07 Processing Structure–Property Relationship of Advanced Intermetallic-Based Alloys for Structural and Functional Applications
- SF08 Defect-Dominated Plasticity and Chemistry in Metals and Alloys

### Meeting Chairs

Michael E. Flatté The University of Iowa  
Michael P. Rowe Toyota Research Institute of North America  
Sabrina Sartori University of Oslo  
Prasad Shastri University of Freiburg  
Chongmin Wang Pacific Northwest National Laboratory

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

**2021 MRS Spring Meeting & Exhibit**  
April 18–23, 2021, Seattle, Washington

**2021 MRS Fall Meeting & Exhibit**  
November 28–December 3, 2021, Boston, Massachusetts

### FOLLOW THE MEETING!

#F20MRS  

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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 24.304 Magnesium											13 Al 26.9815385 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 (98.9) 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 140.90768 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 174.967 Lutetium			
87 Fr (223) Francium	88 Ra (226) Radium	89 Ac (227) Actinium	90 Th 232.03772 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			
																		117 Ts (210) Tennessine	118 Og (284) Oganesson

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