CALL FOR PAPERS

2022 MRS Spring Meeting & Exhibit
April 18–23, 2021 | Seattle, Washington

Spring Meeting registrations include MRS Membership July 1, 2021 – June 30, 2022

MRS recognizes the global pandemic may have long-lasting effects on face-to-face meetings. We anticipate seeing you in Seattle, but be assured we will continue to comply with COVID-19 guidelines in 2021. Hybrid options will be considered as needed. Submit your abstract for review by the deadline and we will be in touch with authors on a timely basis as we determine the best – and safest – path forward.

BROADER IMPACT
BIO1 Incorporating Sustainability into Materials Science Education, Training and Public Outreach

CHARACTERIZATION AND MODELING
CT01 In Situ/Operando Characterization of Solid–Liquid Interfaces for Sustainable Energy, Water and Environment
CT02 In Situ TEM Characterization of Dynamic Processes During Materials Synthesis and Processing
CT03 Imaging Materials with X-Rays—Recent Advances with Synchrotron and Laboratory Sources
CT04 Predictive Synthesis and Decisive Characterization of Emerging Quantum Materials
CT05 Artificial Intelligence and Automation for Materials Design
CT06 From Quantum Mechanics to Materials Engineering—Recent Progress on the Development and Novel Applications of Ab Initio Methods in Materials Science
CT07 Excited-State Properties of Materials—Theory and Computation
CT08 Mechanochemical Coupling in Chemical Treatment and Materials Degradation—Modeling and Experimentation

ELECTRONICS AND OPTICS
EL01 Organic Semiconductors and Characterization Techniques for Emerging Electronic Devices
EL02 Fundamentals of Halide Semiconductors for Optoelectronics
EL03 Emerging Ionic Semiconductors—Research and Applications
EL04 Ultrawide Bandgap Materials, Devices and Systems
EL05 Advanced Functional, Linear/Nonlinear and Quantum Materials for Metasurfaces, Metamaterials and Nanophotonics
EL06 Molecular and Colloidal Plasmonics—Synthesis and Applications
EL07 Bioelectronics—Fundamentals and Applications
EL08 Next-Generation Interconnects—Materials, Processes and Integration
EL09 Ferroelectricity and Negative Capacitance—Fundamentals, Applications and Controversies

ENERGY AND SUSTAINABILITY
EN01 Sustainable Catalysis—Novel Materials for Energy Conversion Beyond Photocatalysis
EN02 Sustainable Routes to Fuels and Commodity Chemicals Production via Electrochemical Methods
EN03 Intercalation Energy Storage Materials and Systems for Beyond Li-Ion Batteries
EN04 Towards High Safety and High Energy Density—Solid-State Batteries
EN05 Materials Challenges and Opportunities in Concentrated Solar Power Technologies
EN06 Frontier Energy Sciences in Halide Perovskites
EN07 Thin-Film Compound Semiconductor Photovoltaics
EN08 Progress in Understanding Charge Transfer at Electrochemical Interfaces in Batteries
EN09 Advances in Conversion Electrodes for Reliable Electrochemical Energy Storage
EN10 Transformation, Reaction and Organization at Functional Interfaces for Sustainable Energy Systems and Environmental Management

NANOSCALE AND QUANTUM MATERIALS
NM01 Superconductors as Quantum Materials
NM02 Superconducting Materials and Applications
NM03 Topological and Quantum Phenomena in Intermetallic Compounds and Heterostructures
NM04 Magnetic Skyrmions and Topological Effects in Materials and Nanostructures
NM05 Functional Nanoparticle Materials—Synthesis, Property and Applications
NM06 Manipulation and Detection of Physical Properties of Two-Dimensional Quantum Materials
NM07 Beyond Graphene 2D Materials—Synthesis, Properties and Device Applications
NM08 Nanoscale Heat Transport—Fundamentals
NM09 Nanogenerators and Piezoelectronics

SOFT MATERIALS AND BIOMATERIALS
BM01 Materials Modulating Stem Cells and Immune Response
BM02 Next-Generation Antiinflammatory Materials—Combating Multidrug Resistance and Biofilm Formation
BM03 Advanced Neural Materials and Devices
BM04 Beyond Nano—Challenges and Opportunities in Drug Delivery Multifunctional Materials from Design to Applications
BM05 Progress in Multimaterials and Multiphase-Based Multifunctional Materials
BM06 Materials and Fabrication Schemes for Robotics
BM07 Building Advanced Materials by Self-Assembly
BM08 Next-Generation Materials and Technologies for 3D Printing and Bioprinting
BM09 Peptide and Protein Design for Responsive Materials
BM10 Progress in Green Chemistry Approaches for Sustainable Polymer Materials
BM11 Design and Analysis of Biderived and Bioinspired Multifunctional Materials
BM12 Bioinspired Macromolecular Assembly and Hybrid Materials—From Fundamental Science to Applications
BM13 Advances in Membrane and Water Treatment Materials for Sustainable Environmental Remediation

STRUCTURAL MATERIALS
ST01 Mechanical Behavior at Micro/Nano-Scale
ST02 In Situ Mechanical Testing of Materials at Small Length Scales, Modeling and Data Analysis
ST03 Design, Synthesis and Characterization of Architectured Materials for Structural Applications
ST04 High Entropy Materials—From Fundamentals to Potential Applications
ST05 Mechanics of Energy Storage Materials

MEETING CHAIRS
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