2022 MRS SPRING MEETING & EXHIBIT

May 8–13, 2022 | Honolulu, Hawai'i
May 23–25, 2022 | Virtual

CALL FOR PAPERS

Abstract Submission Opens
September 23, 2021

Abstract Submission Deadline
October 28, 2021

CHARACTERIZATION

- CH01 Frontiers of *In Situ* Materials Characterization—From New Instrumentation and Method to Imaging Aided Materials Design
- CH02 Ultrafast Probes in Emerging Materials
- CH03 Advances in *In Situ* and *Operando* TEM Methods for the Study of Dynamic Processes in Materials

MATERIALS THEORY, COMPUTATION AND DATA

- DS01 Integrating Machine Learning and Simulations for Materials Modeling, Design and Manufacturing
- DS02 Advanced Manufactured Materials—Innovative Experiments, Computational Modeling and Applications
- DS03 Phonon Properties of Complex Materials—Challenges in Data Generation, Data Availability and Machine Learning Approaches
- DS04 Recent Advances in Data-Driven Discovery of Materials for Energy Conversion and Storage

ENERGY AND SUSTAINABILITY

- EN01 Silicon for Photovoltaics
- EN02 III-V Semiconductors for Energy Conversion Technologies
- EN03 Emerging Inorganic Semiconductors for Solar Energy and Fuels
- EN04 Next-Generation Organic Photovoltaics—Fundamentals and Applications for Flexible, Stretchable and Wearable Devices
- EN05 Emerging Materials for Electrochemical Energy Storage Devices—Degradation and Failure Characterization— From Composition, Structure and Interfaces to Deployed Systems
- EN06 Solid-State Batteries—From Electro-Chemo Mechanics to Devices
- EN07 Sustainable Polymeric Materials by Green Chemistry—Degradability and Resilience

ELECTRONICS, OPTICS AND PHOTONICS

- EQ01 Ultra-Wide Bandgap Materials and Devices
- EQ02 Harnessing Functional Defects in Energy and Electronic Materials
- EQ03 Next-Generation Organic Semiconductors—Materials, Fundamentals and Applications
- EQ04 Advanced Soft Materials and Processing Approaches for Flexible and Printed Optoelectronic Devices
- EQ05 Semiconductor Physics of Halide Perovskites—From Fundamentals to Devices
- EQ06 Surfaces and Interfaces in Electronics and Photonics
- EQ07 Emerging Opto-Magnetic Materials—Advances, Trends and Challenges at the Interface Between Optics and Magnetism
- EQ08 Quantum Dot Optoelectronics and Low-Dimensional Semiconductor Electronics
- EQ09 Emerging Light Emitters for Photonics and Optoelectronics—Hybrid Perovskites and Other Low-Dimensional Emitters
- EQ10 Advances in Metasurfaces, Metamaterials and Plasmonics—Materials Design, Manufacturing, Applications and Industrial Aspects
- EQ11 Neuromorphic Computing and Biohybrid Systems—Materials and Devices for Brain-Inspired Computing, Adaptive Biointerfacing and Smart Sensing

MANUFACTURING

- MF01 Cutting-Edge Plasma Processes Contributing to Sustainable Development Goals
- MF02 3D Printing of Passive and Active Medical Devices
- MF03 Materials and Methods for Fabricating Flexible and Large-Area Electronics

NANOMATERIALS

- NM01 Beyond Graphene 2D Materials—Synthesis, Properties and Device Applications
- NM02 Reconfiguring the Properties of 2D Materials by Post-Synthesis Design
- NM03 2D MXenes—Synthesis, Properties and Applications
- NM04 Nanotubes and Related Low-Dimensional Nanostructures
- NM05 Advances in Nanodiamonds for Sensing, Biomedical and Other Novel Applications
- NM06 Nanoscale Mass Transport Through 2D and 1D Nanomaterials

QUANTUM

- QT01 Applications and Characterization of Nonequilibrium Electron, Phonon and Polariton Dynamics
- QT02 Quantum and Topological Phenomena in Two-Dimensional Systems
- QT03 Higher-Order Topological Structures—From Charge to Spin
- QT04 Topology and Exotic Quantum Phases in 3D Materials
- QT05 2D Topological Materials—Growth, Theoretical Models and Applications
- QT06 Recent Developments on the Properties of Emergent Layered 2D Quantum Magnetic Materials and Heterostructures
- QT07 Atomic and Molecular Quantum Systems and Defect Engineering for Quantum Technologies
- QT08 Group IV Quantum Engineering
- QT09 Light-Matter Strong Coupling in the Infrared and THz—Materials, Methods and New Phenomena
- QT10 Emerging Phenomena in Moiré Materials
- QT11 Superconducting Materials and Applications

BIOMATERIALS AND SOFT MATERIALS

- SB01 Organic Electronics—Multimodal Characterization and Computation-Driven Material Design and Performance
- SB02 Materials, Power Sources, Sensors, Actuators and Mechanics for Untethered Soft Robots
- SB03 Robotic Materials for Advanced Machine Intelligence
- SB04 Advanced Soft Materials for Bioelectronic Interfaces
- SB05 Tissue-Like Bioelectronics and Living Bioelectronic Interfaces
- SB06 Bioelectronic Materials and Devices for *In Vitro* Systems
- SB07 Bioresponsive Nanotheranostics
- SB08 Soft Embodiments of Electronics and Devices for Healthcare Applications
- SB09 Genetically-Encoded and Bioinspired Materials Science
- SB10 Complex States in the Observation, Control and Utilization of Biomimetic Functionalities—From Fundamentals to Applications

STRUCTURAL AND FUNCTIONAL MATERIALS

- SF01 Materials Research Needs to Advance Nuclear Fuels, Structural Materials and Wasteforms
- SF02 Actinide Materials—From Basic Science to Applications
- SF03 Paper-Based Packaging—21st Century Perspectives on an Ancient Material
- SF04 Progress in Materials Genomics, Synthesis and Characterization of Functional Polymers and Polymer Nanocomposites
- SF05 Autonomous Materials for the Next-Generation of Smart Systems
- SF06 Recent Advances in Structural Materials from Bulk to Nanoscale
- SF07 *In Situ* Material Performance and Dynamic Structure Characterization Under Coupled Extremes
- SF08 Far from Equilibrium Microstructure Evolution in Metals
- SF09 High Entropy Materials II—From Fundamentals to Potential Applications
- SF10 Emerging Functional Oxides and Interfaces
- SF11 Advances in Design, Synthesis and Characterization of Functional Heteroanionic Materials
- SF12 Bioinspired Structural Composites—Advances in Experiments, Simulations and AI-Based Design
- SF13 From Actuators and Energy Harvesting Storage Systems to Living Machines
- SF14 Novel Frontiers in 3D and 4D Multi-Photon Micro-Fabrication—Materials, Methods and Applications
- SF15 Thermal Processes and Management Under Unconventional Conditions
- SF16 Advanced Materials for Antibacterial, Antiviral and Antifungal Applications—From Micro to Nano

mrs.org/spring2022

Meeting Chairs

Manish Chhowalla University of Cambridge
Eunjoo Jang Samsung Electronics
Prineha Narang Harvard University
Tsuyoshi Sekitani Osaka University
Vanessa Wood ETH Zürich

Don't Miss These Future MRS Meetings!

2022 MRS Fall Meeting & Exhibit
November 27–December 2, 2022
Boston, Massachusetts

2023 MRS Spring Meeting & Exhibit
April 10–14, 2023
San Francisco, California

FOLLOW THE MEETING!

#S22MRS

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Spring Meeting registrations include MRS Membership from July 1, 2022 – June 30, 2023