



Week At-A-Glance

Saturday, July 22

8:00 AM – 5:30 PM	MSA Council	Hilton Minneapolis Hotel
8:15 AM – 5:00 PM	Pre-Meeting Congress	
	X60 Annual Pre-Meeting Congress for Students, Post-Docs, and Early-Career Professionals in Microscopy & Microanalysis (<i>Organized by the MSA Student Council</i>)	
	X61 Advances in Focused Ion Beam Technologies	

Sunday, July 23

8:30 AM – 5:00 PM	Sunday Short Courses	
	X10 High Resolution Structure Determination by Cryo-EM	
	X11 Guidelines for Performing 4-D STEM Characterization from the Atomic to >Micrometer Scales: Experimental Considerations, Data Analysis and Simulation	
	X12 Biological EM Sample Processing – Part 2 (<i>Part 1 offered in 2022 – not a prerequisite</i>)	
	X13 Cryo-EM for Materials Sciences: Hardware, Applications, and Data Acquisition	
	X14 Transmission Electron Microscopy and Spectroscopy from First Principles	
	X15 Large-Area Hyperspectral Mapping, EBSD/EDS/TKD/STEM, Machine Learning Data Analysis, Oh My!	
8:30 AM – 5:00 PM	Pre-Meeting Congress	
	X62 Facilities Management: Skills, Strategies, and Best Practices	
	X63 Imaging in the Pharmaceutical, Biopharmaceutical, and Medical Health Products Industries	
	X64 Hardware and Software Developments in Electron Microscopy	
6:30 PM	M&M 2023 Welcome Reception	Hilton Minneapolis Hotel
8:00 PM	Symposium Organizers' Reception	Offsite (by invitation only)

Monday, July 24

7:15 AM – 8:15 AM	MSA Awards + Fellowship Committees	
7:15 AM – 8:15 AM	Technologists' Forum Board	
7:15 AM – 8:15 AM	Travel Awards Committee	
8:30 AM – 12:00 PM	M&M 2023 Plenary Sessions	Auditorium at the MCC
	Opening Welcome	
	Plenary Talk #1: Karin Sauer, PhD <i>Professor and Chair, Department of Biological Sciences, Binghamton University</i> <i>Co-Director, Binghamton Biofilm Research Center (BBRC)</i> <i>Co-Director, Microbial Biofilms REU</i> <i>Editor-in-Chief, FEMS Microbiology Reviews</i>	
	Biofilms – Life upon First Contact and Beyond	
	MAS Awards Presentation	
	MSA Awards Presentation	
	M&M Meeting Awards Presentation	
	Plenary Talk #2: Stefanie Milam, PhD <i>Deputy Project Scientist for Planetary Science</i> <i>James Webb Space Telescope (JWST)</i> <i>Astrochemistry Laboratory</i> <i>NASA Goddard Space Flight Center</i>	
	Revealing the Big and the Small with the James Webb Space Telescope: A Macroscopic Approach to Studying the Solar System	

Monday, July 24 (Cont'd.)

12:00 PM – 1:30 PM	Lunch Break in the Exhibit Hall	
12:00 PM – 5:30 PM	Exhibit Hall Open	
12:15 PM – 1:15 PM	MAS Meal with a Mentor	
12:15 PM – 1:15 PM	MSA International Committee	
12:15 PM – 1:15 PM	FIG: Pharmaceutical	
12:15 PM – 1:15 PM	FIG: Diagnostic & Biological Microscopy	
12:15 PM – 1:15 PM	FIG: Focused Ion Beam	
12:15 PM – 1:15 PM	FIG: Atom Probe Field Ion Microscopy	
12:15 PM – 1:15 PM	FIG: FOM Roundtable	
1:30 PM – 3:00 PM	P.M. Symposia & Sessions	
	A01.1	Microscopic Approach of Materials for Agri-Food Process
	A02.1	Microscopy and Microanalysis for Real World Problem Solving
	A04.1	The Praxis of 4D-STEM - Extracting Information from Biological and Functional Materials
	A06.1	Learning from Failure: Negative and Null Results in Microscopy
	A07.1	In Memoriam of David Joy: Scanning Electron and Ion Microscopy
	A08.1	Advances in Focused Ion Beam Instrumentation, Applications and Techniques in Materials and Life Sciences
	A11.1	Nanoscale Infrared Spectroscopy with Electrons and Photons
	A14.1	Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
	A15.1	Klaus Keil Memorial Symposium: Quantitative Microanalysis of Planetary Materials
	B01.1	Imaging Approaches for Plant Cell Biology, Agriculture, Ecology and Environment-Related Research
	B04.1	Development, Challenges and Biomedical Applications of Tissue Clearing, Super-resolution Microscopy and Tissue Imaging
	B09.1	Volume Electron Microscopy in Biological Research – Instrumentation, Sample Preparation and Data Handling
	P03.1	Theory and Applications of Advanced Electron Tomography
	P06.1	Imaging and Micro/Nano Analysis of Materials for Nuclear Applications
	P07.1	Prof. Wilbur C Bigelow Centenary Symposium-In situ Heating and Gas-Reaction Studies in Materials Sciences
P10.1	Advanced Imaging and Spectroscopy for Sensitive Materials and Interfaces	
3:00 PM – 5:00 PM	Monday Poster Presentations <i>Post-Deadline Posters will be presented on this day.</i>	
	A02.P1	Microscopy and Microanalysis for Real World Problem Solving
	A04.P1	The Praxis of 4D-STEM - Extracting Information from Biological and Functional Materials
	A06.P1	Learning from Failure: Negative and Null Results in Microscopy
	A07.P1	In Memoriam of David Joy: Scanning Electron and Ion Microscopy
	A11.P1	Nanoscale Infrared Spectroscopy with Electrons and Photons
	A15.P1	Klaus Keil Memorial Symposium: Quantitative Microanalysis of Planetary Materials
	B01.P1	Imaging Approaches for Plant Cell Biology, Agriculture, Ecology and Environment-Related Research
	B02.P1	3D Structures: from Macromolecular Assemblies to Whole Cells (3DEM FIG)
	P03.P1	Theory and Applications of Advanced Electron Tomography
	P06.P1	Imaging and Micro/Nano Analysis of Materials for Nuclear Applications
P10.P1	Advanced Imaging and Spectroscopy for Sensitive Materials and Interfaces	

Monday, July 24 (Cont'd.)

3:00 PM – 5:00 PM	Microscopy Today Editors' Meeting
3:30 PM – 4:30 PM	FIG: 3D EM in the Biological Sciences
3:30 PM – 5:00 PM	Technologists' Forum Business Meeting
4:30 PM – 6:00 PM	MSA Book Elements
5:00 PM – 5:30 PM	Student Poster Awards
5:30 PM – 6:30 PM	Student Mixer
5:45 PM – 6:45 PM	Vendor Tutorials <i>(Sign up at individual exhibitors' booths)</i>

Tuesday, July 25

7:15 AM – 8:15 AM	MSA Local Affiliated Societies & MAS Affiliated Regional Societies
7:15 AM – 8:15 AM	Microscopy Today Editorial Board Meeting
7:15 AM – 8:15 AM	FIG: Electron Microscopy in Liquids & Gases
8:30 AM – 10:00 AM	A.M. Symposia & Sessions
	X90.1 Outreach: Microscopy in the Classroom
	A01.2 Microscopic Approach of Materials for Agri-Food Proces
	A02.2 Microscopy and Microanalysis for Real World Problem Solving
	A04.2 The Praxis of 4D-STEM - Extracting Information from Biological and Functional Materials
	A06.2 Learning from Failure: Negative and Null Results in Microscopy
	A07.2 In Memoriam of David Joy: Scanning Electron and Ion Microscopy
	A08.2 Advances in Focused Ion Beam Instrumentation, Applications and Techniques in Materials and Life Sciences
	A11.2 Nanoscale Infrared Spectroscopy with Electrons and Photons
	A14.2 Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
	A15.2 Klaus Keil Memorial Symposium: Quantitative Microanalysis of Planetary Materials
	B02.1 3D Structures: from Macromolecular Assemblies to Whole Cells (3DEM FIG)
	B04.2 Development, Challenges and Biomedical Applications of Tissue Clearing, Super-resolution Microscopy and Tissue Imaging
	B09.2 Volume Electron Microscopy in Biological Research – Instrumentation, Sample Preparation and Data Handling
	C05.1 Vendor Symposium
	P03.2 Theory and Applications of Advanced Electron Tomography
	P06.2 Imaging and Micro/Nano Analysis of Materials for Nuclear Applications
	P07.2 Prof. Wilbur C Bigelow Centenary Symposium-In situ Heating and Gas-Reaction Studies in Materials Sciences
	P10.2 Advanced Imaging and Spectroscopy for Sensitive Materials and Interfaces
10:00 AM – 10:30 AM	Coffee Break in the Exhibit Hall
10:00 AM – 5:30 PM	Exhibit Hall Open
10:00 AM – 12:00 PM	M&M 2024 Symposium Organizers' Planning Meeting

Tuesday, July 25 (Cont'd.)

10:30 AM – 12:00 PM

A.M. Symposia & Sessions

- X90.2** Outreach: Microscopy in the Classroom
- A01.3** Microscopic Approach of Materials for Agri-Food Process
- A02.3** Microscopy and Microanalysis for Real World Problem Solving
- A04.3** The Praxis of 4D-STEM - Extracting Information from Biological and Functional Materials
- A06.3** Learning from Failure: Negative and Null Results in Microscopy
- A07.3** In Memoriam of David Joy: Scanning Electron and Ion Microscopy
- A08.3** Advances in Focused Ion Beam Instrumentation, Applications and Techniques in Materials and Life Sciences
- A11.3** Nanoscale Infrared Spectroscopy with Electrons and Photons
- A14.3** Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
- A15.3** Klaus Keil Memorial Symposium: Quantitative Microanalysis of Planetary Materials
- B02.2** 3D Structures: from Macromolecular Assemblies to Whole Cells (3DEM FIG)
- B06.1** Innovations in Light Microscopy: Revealing the Inner Workings of Life From Single Molecule to Whole Organisms
- B09.3** Volume Electron Microscopy in Biological Research – Instrumentation, Sample Preparation and Data Handling
- C03.1** Correlative and Multimodal Microscopy and Analysis
- C05.2** Vendor Symposium
- P03.3** Theory and Applications of Advanced Electron Tomography
- P06.3** Imaging and Micro/Nano Analysis of Materials for Nuclear Applications
- P07.3** Prof. Wilbur C Bigelow Centenary Symposium-In situ Heating and Gas-Reaction Studies in Materials Sciences
- P10.3** Advanced Imaging and Spectroscopy for Sensitive Materials and Interfaces

12:00 PM – 1:30 PM

Lunch Break in the Exhibit Hall

12:15 PM – 1:00 PM

MSA Distinguished Scientist Awardee Lecture

12:15 PM – 1:15 PM

Microscopy Today Editorial Board

12:15 PM – 1:15 PM

FIG: FOM FIG Lunch Meeting

12:15 PM – 1:15 PM

FIG: Cryo-Preparation

12:15 PM – 1:15 PM

FIG: Electron Crystallography

12:15 PM – 1:15 PM

FIG: MicroAnalytical Standards

12:15 PM – 1:15 PM

MSA Standards Committee

1:30 PM – 3:00 PM

P.M. Symposia & Sessions

- A02.4** Microscopy and Microanalysis for Real World Problem Solving
- A04.4** The Praxis of 4D-STEM - Extracting Information from Biological and Functional Materials
- A07.4** In Memoriam of David Joy: Scanning Electron and Ion Microscopy
- A08.4** Advances in Focused Ion Beam Instrumentation, Applications and Techniques in Materials and Life Sciences
- A11.4** Nanoscale Infrared Spectroscopy with Electrons and Photons
- A14.4** Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
- A15.4** Klaus Keil Memorial Symposium: Quantitative Microanalysis of Planetary Materials
- B02.3** 3D Structures: from Macromolecular Assemblies to Whole Cells (3DEM FIG)
- B06.2** Innovations in Light Microscopy: Revealing the Inner Workings of Life from Single Molecule to Whole Organisms
- B09.4** Volume Electron Microscopy in Biological Research – Instrumentation, Sample Preparation and Data Handling

Tuesday, July 25 (Cont'd.)

1:30 PM – 3:00 PM	P.M. Symposia & Sessions (Cont'd.)
	C03.2 Correlative and Multimodal Microscopy and Analysis
	C05.3 Vendor Symposium
	P07.4 Prof. Wilbur C Bigelow Centenary Symposium-In situ Heating and Gas-Reaction Studies in Materials Sciences
	P10.4 Advanced Imaging and Spectroscopy for Sensitive Materials and Interfaces
3:00 PM – 5:00 PM	Tuesday Poster Presentations <i>Exhibit Hall</i>
	X90.P1 Outreach—Microscopy in the Classroom
	A01.P1 Microscopic Approach of Materials for Agri-Food Process
	A02.P2 Microscopy and Microanalysis for Real World Problem Solving
	A04.P2 The Praxis of 4D-STEM—Extracting Information from Biological and Functional Materials
	A08.P1 Advances in Focused Ion Beam Instrumentation, Applications and Techniques in Materials and Life Sciences
	A14.P1 Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
	B02.P2 3D Structures: from Macromolecular Assemblies to Whole Cells (3DEM FIG)
	B04.P1 Development, Challenges and Biomedical Applications of Tissue Clearing, Super-resolution Microscopy and Tissue Imaging
	B06.P1 Innovations in Light Microscopy: Revealing the Inner Workings of Life from Single Molecule to Whole Organisms
	B09.P1 Volume Electron Microscopy in Biological Research—Instrumentation, Sample Preparation and Data Handling
	P07.P1 Prof. Wilbur C Bigelow Centenary Symposium-In situ Heating and Gas-Reaction Studies in Materials Sciences
	P10.P2 Advanced Imaging and Spectroscopy for Sensitive Materials and Interfaces
3:30 PM – 4:30 PM	FIG Business Meeting
3:30 PM – 4:30 PM	MSA Education Committee
5:00 PM – 5:30 PM	Student Poster Awards <i>Exhibit Hall Poster Stage</i>
5:30 PM – 7:00 PM	Post-Doctoral Researchers' Reception <i>(all post-doctoral fellows & researchers welcome!)</i>
5:45 PM – 6:45 PM	Vendor Tutorials <i>(Sign up at exhibitors' booths)</i>
6:30 PM	Presidents' Reception <i>(Invitation Only)</i> <i>Offsite</i>

Wednesday, July 26

7:15 AM – 8:15 AM	MaM Editorial Board
7:15 AM – 8:15 AM	MSA Certification Board
7:15 AM – 8:15 AM	MSA Membership Committee
8:30 AM – 10:00 AM	A.M. Symposia & Sessions
	X30 Technologists' Forum Symposia: Methods in Tissue Clearing and Expansion to Achieve Improved Resolution
	X40 Cross-Cut Physical-Biological Tutorial: Need for Speed: Imaging Biological Samples with the 64-Beams FAST-EM
	A02.5 Microscopy and Microanalysis for Real World Problem Solving
	A04.5 The Praxis of 4D-STEM—Extracting Information from Biological and Functional Materials
	A07.5 In Memoriam of David Joy: Scanning Electron and Ion Microscopy
	A11.5 Nanoscale Infrared Spectroscopy with Electrons and Photons
	A13.1 Computational Advances in Electron Microscopy

Wednesday, July 26 (Cont'd.)

8:30 AM – 10:00 AM	A.M. Symposia & Sessions
	A14.5 Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
	B02.4 3D Structures: from Macromolecular Assemblies to Whole Cells (3DEM FIG)
	B03.1 Machine Learning in Biological Imaging – How to Train Your Artificial Neural Network
	B08.1 Biological Soft X-ray Tomography
	C02.1 Extracting Information from Data: Applications of Artificial Intelligence in Microscopy
	C03.3 Correlative and Multimodal Microscopy and Analysis
	P01.1 Revealing the Working Morphology of Energy Materials and Its Impact on Performance
	P04.1 Correlative Microanalysis of Rapid Solidification Microstructures in Additive Manufacturing
	P05.1 Microscopy and Microanalysis of Materials under Multiple Environmental Extremes
	P10.5 Advanced Imaging and Spectroscopy for Sensitive Materials and Interfaces
10:00 AM – 10:30 AM	Coffee Break in the Exhibit Hall
10:00 AM – 5:30 PM	Exhibit Hall Open
10:30 AM – 12:00 PM	A.M. Symposia & Sessions (Cont'd.)
	X32 Tech Forum: 4D STEM Tips and Techniques [Partnering with A04]
	X41 Physical Tutorial: Specimen Preparation for in-situ Transmission Electron Microscopy Experiments
	A02.6 Microscopy and Microanalysis for Real World Problem Solving
	A03.1 Standards and Reference Materials and their Applications in Quantitative Microanalysis
	A05.1 Advanced Measurement Techniques in (S)TEM-EELS
	A13.2 Computational Advances in Electron Microscopy
	A14.6 Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
	B02.5 3D Structures: from Macromolecular Assemblies to Whole Cells (3DEM FIG)
	B03.2 Machine Learning in Biological Imaging – How to Train Your Artificial Neural Network
	B08.2 Biological Soft X-ray Tomography
	C02.2 Extracting Information from Data: Applications of Artificial Intelligence in Microscopy
	C03.4 Correlative and Multimodal Microscopy and Analysis
	P01.2 Revealing the Working Morphology of Energy Materials and Its Impact on Performance
	P04.2 Correlative Microanalysis of Rapid Solidification Microstructures in Additive Manufacturing
	P05.2 Microscopy and Microanalysis of Materials under Multiple Environmental Extremes
	P08.1 Atomic Scale Microscopy of Interfaces and Heterostructures with Correlated Phenomena
	P10.6 Advanced Imaging and Spectroscopy for Sensitive Materials and Interfaces
12:00 PM – 1:30 PM	Lunch Break in the Exhibit Hall
12:15 PM – 1:15 PM	FIG: Aberration-Corrected Microscopy
12:15 PM – 1:15 PM	MSA Members' Meeting
1:30 PM – 3:00 PM	P.M. Symposia & Sessions
	X31 Tech Forum: Tech Forum: New and Developing Technologies in Light Microscopy [Partnering with A06]
	X42 Biological Tutorial: CryoAPEX: Inception, Growth and Evolution of the Method
	X91 Microscopy Explorations (Outreach)
	A02.7 Microscopy and Microanalysis for Real World Problem Solving
	A03.2 Standards and Reference Materials and their Applications in Quantitative Microanalysis
	A04.6 The Praxis of 4D-STEM - Extracting Information from Biological and Functional Materials
	A05.2 Advanced Measurement Techniques in (S)TEM-EELS
	A13.3 Computational Advances in Electron Microscopy
	A14.7 Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens

Wednesday, July 26 (cont'd.)

1:30 PM – 3:00 PM

P.M. Symposia & Sessions (Cont'd.)

- B05.1** Technical Advances in cryoEM
- B07.1** Electron and Light Microscopy Research and Diagnosis of Diseases in Humans, Animals and Plants
- B08.3** Biological Soft X-ray Tomography
- C02.3** Extracting Information from Data: Applications of Artificial Intelligence in Microscopy
- C03.5** Correlative and Multimodal Microscopy and Analysis
- P01.3** Revealing the Working Morphology of Energy Materials and Its Impact on Performance
- P04.3** Correlative Microanalysis of Rapid Solidification Microstructures in Additive Manufacturing
- P05.3** Microscopy and Microanalysis of Materials under Multiple Environmental Extremes
- P08.2** Atomic Scale Microscopy of Interfaces and Heterostructures with Correlated Phenomena
- P09.1** Advances in Cryogenic Transmission Electron Microscopy and Spectroscopy for Quantum and Energy Materials

3:00 PM – 5:00 PM

Wednesday Poster Presentations

Post-Deadline Posters will be presented on this day

- A03.P1** Standards and Reference Materials and their Applications in Quantitative Microanalysis
- A05.P1** Advanced Measurement Techniques in (S)TEM-EELS
- B03.P1** Machine Learning in Biological Imaging – How to Train Your Artificial Neural Network
- B05.P1** Technical Advances in cryoEM
- B08.P1** Biological Soft X-ray Tomography
- C02.P1** Extracting Information from Data: Applications of Artificial Intelligence in Microscopy
- C03.P1** Correlative and Multimodal Microscopy and Analysis
- C04.P1** Lens on Diversity in the M&M Community
- P01.P1** Revealing the Working Morphology of Energy Materials and Its Impact on Performance
- P04.P1** Correlative Microanalysis of Rapid Solidification Microstructures in Additive Manufacturing
- P05.P1** Microscopy and Microanalysis of Materials under Multiple Environmental Extremes
- P10.P3** Advanced Imaging and Spectroscopy for Sensitive Materials and Interfaces

5:00 PM

Student Poster Awards

Exhibit Hall - Poster Area Stage

5:30 PM – 6:30 PM

MAS Business Meeting

5:30 PM – 6:30 PM

Diversity and Inclusion Mixer

5:45 PM – 6:45 PM

Vendor Tutorials *(Sign up at exhibitors' booths)*

MAS Members' Social *(See MAS Booth for Details—Offsite)*

Thursday, July 27

8:30 AM – 9:30 AM	M&M Sustaining Members Meeting
8:30 AM – 10:00 AM	A.M. Symposia & Sessions
	A04.7 The Praxis of 4D-STEM—Extracting Information from Biological and Functional Materials
	A05.3 Advanced Measurement Techniques in (S)TEM-EELS
	A09.1 Analytical Scanning Probe Microscopy
	A10.1 The Road to Atomic Scale Tomography
	A12.1 New Methods for Accessing the Structure, Chemistry and Effect on Dynamic Processes of Solid-liquid Interfaces
	A13.4 Computational Advances in Electron Microscopy
	B05.2 Technical Advances in cryoEM
	B07.2 Electron and Light Microscopy Research and Diagnosis of Diseases in Humans, Animals and Plants
	B10.1 Microscopy and Microanalysis of Interfaces and/or Interactions Among Organic and Inorganic Matter
	C01.1 Machine Intelligence in Action: Delivering Resilient, Sustainable, and Reconfigurable Microscope Ecosystems
	C03.6 Correlative and Multimodal Microscopy and Analysis
	P01.4 Revealing the Working Morphology of Energy Materials and Its Impact on Performance
	P02.1 Electron Beam Manipulation of Covalently Bound Materials
	P05.4 Microscopy and Microanalysis of Materials under Multiple Environmental Extremes
	P08.3 Atomic Scale Microscopy of Interfaces and Heterostructures with Correlated Phenomena
P09.2 Advances in Cryogenic Transmission Electron Microscopy and Spectroscopy for Quantum and Energy Materials	
10:00 AM – 12:00 PM	Coffee Break and Poster Session in the Exhibit Hall
10:00 AM – 2:00 PM	Exhibit Hall Open
10:00 AM – 12:00 PM	Thursday Poster Presentations
	A09.P1 Analytical Scanning Probe Microscopy
	A10.P1 The Road to Atomic Scale Tomography
	A12.P1 New Methods for Accessing the Structure, Chemistry and Effect on Dynamic Processes of Solid-liquid Interfaces
	A13.P1 Computational Advances in Electron Microscopy
	B05.P2 Technical Advances in cryoEM
	B07.P1 Electron and Light Microscopy Research and Diagnosis of Diseases in Humans, Animals and Plants
	B10.P1 Microscopy and Microanalysis of Interfaces and/or Interactions Among Organic and Inorganic Matter
	C01.P1 Machine Intelligence in Action: Delivering Resilient, Sustainable, and Reconfigurable Microscope Ecosystems
	C03.P2 Correlative and Multimodal Microscopy and Analysis
	P01.P2 Revealing the Working Morphology of Energy Materials and Its Impact on Performance
	P02.P1 Electron Beam Manipulation of Covalently Bound Materials
	P05.P2 Microscopy and Microanalysis of Materials under Multiple Environmental Extremes
	P08.P1 Atomic Scale Microscopy of Interfaces and Heterostructures with Correlated Phenomena
	P09.P1 Advances in Cryogenic Transmission Electron Microscopy and Spectroscopy for Quantum and Energy Materials
	12:00 PM
12:00 PM – 1:30 PM	Lunch Break in the Exhibit Hall

Thursday, July 27 (Cont'd.)

1:30 PM – 3:00 PM

P.M. Symposia & Sessions

A05.4 Advanced Measurement Techniques in (S)TEM-EELS

A09.2 Analytical Scanning Probe Microscopy

A10.2 The Road to Atomic Scale Tomography

A12.2 New Methods for Accessing the Structure, Chemistry and Effect on Dynamic Processes of Solid-liquid Interfaces

A13.5 Computational Advances in Electron Microscopy

B05.3 Technical Advances in cryoEM

B07.3 Electron and Light Microscopy Research and Diagnosis of Diseases in Humans, Animals and Plants

B10.2 Microscopy and Microanalysis of Interfaces and/or Interactions Among Organic and Inorganic Matter

C01.2 Machine Intelligence in Action: Delivering Resilient, Sustainable, and Reconfigurable Microscope Ecosystems

C03.7 Correlative and Multimodal Microscopy and Analysis

P01.5 Revealing the Working Morphology of Energy Materials and Its Impact on Performance

P02.2 Electron Beam Manipulation of Covalently Bound Materials

P05.5 Microscopy and Microanalysis of Materials under Multiple Environmental Extremes

P08.4 Atomic Scale Microscopy of Interfaces and Heterostructures with Correlated Phenomena

P09.3 Advances in Cryogenic Transmission Electron Microscopy and Spectroscopy for Quantum and Energy Materials

3:00 PM – 3:30 PM

Coffee Break

3:30 PM – 5:30 PM

Late P.M. Symposia & Sessions

A05.5 Advanced Measurement Techniques in (S)TEM-EELS

A09.3 Analytical Scanning Probe Microscopy

A10.3 The Road to Atomic Scale Tomography

A12.3 New Methods for Accessing the Structure, Chemistry and Effect on Dynamic Processes of Solid-liquid Interfaces

B05.4 Technical Advances in cryoEM

B07.4 Electron and Light Microscopy Research and Diagnosis of Diseases in Humans, Animals and Plants

B10.3 Microscopy and Microanalysis of Interfaces and/or Interactions Among Organic and Inorganic Matter

C01.3 Machine Intelligence in Action: Delivering Resilient, Sustainable, and Reconfigurable Microscope Ecosystems

P01.6 Revealing the Working Morphology of Energy Materials and Its Impact on Performance

P02.3 Electron Beam Manipulation of Covalently Bound Materials

P05.6 Microscopy and Microanalysis of Materials under Multiple Environmental Extremes

P08.5 Atomic Scale Microscopy of Interfaces and Heterostructures with Correlated Phenomena

P09.4 Advances in Cryogenic Transmission Electron Microscopy and Spectroscopy for Quantum and Energy Materials

4:30 PM – 5:30 PM

M&M 2023 Wrap-Up & Debrief *(Invitation only)*