Monday, August 3

10:00 AM - 5:00 PM
Central Time

Pre-Meeting Congress

X60 - Annual Pre-Meeting Congress for Students, Post-Docs, and Early Career Professionals in Microscopy & Microanalysis

10:30 AM - 2:05 PM Central Time

Pre-Meeting Congress

X61 - Current Status and Horizons of Electron Microscopy in Liquids and Gases

5:00 PM - 6:00 PM

Lens On... Embracing Diversity within MM

A multi-dimensional safe space to virtually meet and mingle with other microscopists from underrepresented groups as well as voice comments and concerns for change in the demographics of attendees at MM.

Tuesday, August 4

10:00 AM - 11:35 PM Central Time

M&M 2020 Plenary Session

Opening Welcome

The Executive Program Committee is pleased to present lectures from Dr. Maria McNamara, a paleobiologist and Senior Lecturer in Geology at University College Cork, Ireland; and Dr. Yi Cui, a Professor in the Department of Materials Science and Engineering at Stanford University and a world-renowned scholar.

Maria McNamara, Ph.D. | Palaeobiologist and Senior Lecturer in Geology, University College Cork, Ireland Melanin through Deep Time: Experimental and Analytical Approaches to Decoding the Fossil Record of Melanin

Plenary Talk #2:

Yi Cui, Ph.D | Stanford University, Stanford Institute for Materials and Energy Sciences and SLAC National **Accelerator Laboratory**

In-situ and Cryogenic Electron Microscopy for Energy Materials

11:35 AM – 12:00 PM

Break

12:00 PM - 2:00 PM

Exhibit Hall Staffed Hours

12:00 PM - 1:00 PM

MAS Mentor/Mentoree Panel

1:30 PM - 2:45 PM

P.M. Symposia & Sessions*

- * Individual presentations are pre-recorded and available for on-demand watching. Session time(s) are designed to allow time (60 minutes) for watching all session presentations, plus an additional exclusive 15 minutes for Q&A. All sessions feature a 75-minute live text chat/Q&A with speakers and session organizers.
- A01.1 Advances in Modeling, Simulation, and Artificial Intelligence in Microscopy and Microanalysis for Physical and Biological Systems
- A02.1 Four-Dimensional Scanning Transmission Electron Microscopy (4D-STEM): New Experiments and Data Analyses for Determining Materials Functionality and Biological Structures
- A05.1 Crystallography at the Nanoscale and MicroED with Electrons and X-rays
- A07.1 Advances in Quantitative Electron Beam Microanalysis (EDS and WDS)
- A08.1 X-ray, Electron and Synchrotron-Based X-ray Imaging and Analysis
- A09.1 Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
- A13.1 Microscopy and Microanalysis of Biomineralized and Biomimetic Materials and Structures
- A14.1 Vendor Symposium
- B01.1 3D Structures: From Macromolecular Assemblies to Whole Cells (3DEM FIG)
- **B04.1** Jim Pawley Memorial Symposium
- **B10.1** 3D Scanning Electron Microscopy Imaging of Biological Samples
- B12.1 Illuminating Health and Disease at New Frontiers of Spatiotemporal Resolution and Adaptive Microscopy
- P01.1 Advances in Electron Microscopy to Characterize Materials Embedded in Devices
- P02.1 New Frontiers in Electron Microscopy of Two-Dimensional Materials
- P04.1 Advanced Characterization of Nuclear Fuels and Materials





Tuesday, August 4 (Cont'd.)

:30 PM – 2:45 PM	P.M. Symposia & Sessions continued*
	* Individual presentations are pre-recorded and available for on-demand watching. Session time(s) are designed to allow time (60 minutes) for watching all session presentations, plus an additiona exclusive 15 minutes for Q&A. All sessions feature a 75-minute live text chat/Q&A with speakers and session organizers.
	P07.1 - FIB-SEM Technology and Electron Tomography for Materials Science and Engineering
	P08.1 - Approaching operando Imaging of Functional Materials
	P09.1 - Electron Pulses as an Ultrafast Probe for Non-Equilibrium Processes
2:15 PM – 2:30 PM	After-Session Video Chats with Speakers and Organizers All are welcome—check schedule for sessions that are holding these.
2:00 PM – 2:30 PM	Exhibitor Spotlights Sessions
3:00 PM – 4:15 PM	P.M. Symposia & Sessions*
	* Individual presentations are pre-recorded and available for on-demand watching. Session time(s are designed to allow time (60 minutes) for watching all session presentations, plus an additiona exclusive 15 minutes for Q&A. All sessions feature a 75-minute live text chat/Q&A with speakers and session organizers.
	A01.2 - Advances in Modeling, Simulation, and Artificial Intelligence in Microscopy and Microanalysis for Physical and Biological Systems
	A02.2 - Four-Dimensional Scanning Transmission Electron Microscopy (4D-STEM): New Experiments and Data Analyses for Determining Materials Functionality and Biological Structures
	A03.1 - Impact of Recent Advancement in Instrumentation/Detectors on Electron Energy Loss Spectroscopy for Physical and Biological Sciences
	A05.2 - Crystallography at the Nanoscale and MicroED with Electrons and X-rays
	A07.2 - Advances in Quantitative Electron Beam Microanalysis (EDS and WDS)
	A08.2 - X-ray, Electron and Synchrotron-Based X-ray Imaging and Analysis
	A09.2 - Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
	A13.2 - Microscopy and Microanalysis of Biomineralized and Biomimetic Materials and Structures
	A14.2 - Vendor Symposium
	B01.2 - 3D Structures: From Macromolecular Assemblies to Whole Cells (3DEM FIG)
	B07.1 - Biomedical and Pharmaceutical Research on the Development, Diagnosis, Prevention, and Treatment of Diseases
	B10.1 - 3D Scanning Electron Microscopy Imaging of Biological Samples
	B11.1 - Advances in Imaging Approaches for Plant Biology
	B12.2 - Illuminating Health and Disease at New Frontiers of Spatiotemporal Resolution and Adaptive Microscopy
	P01.2 - Advances in Electron Microscopy to Characterize Materials Embedded in Devices
	P02.2 - New Frontiers in Electron Microscopy of Two-Dimensional Materials
	P04.2 - Advanced Characterization of Nuclear Fuels and Materials
	P07.2 - FIB-SEM Technology and Electron Tomography for Materials Science and Engineering
	P08.2 - Approaching <i>operando</i> Imaging of Functional Materials
	P09.2 - Electron Pulses as an Ultrafast Probe for Non-Equilibrium Processes
4:15 PM – 4:30 PM	After-Session Video Chats with Speakers and Organizers All are welcome—check schedule for sessions that are holding these.
3:00 PM – 3:30 PM	Exhibitor Spotlight Sessions

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Tuesday Poster Presentations*

Exhibitor Spotlight Sessions

Tuesday, August 4 (Cont'd.)

4:30 PM - 6:00 PM

4:30 PM - 5:00 PM

lesday Poster Presentations*

- * Individual poster presentations are available on demand. Each presentation includes a short "flash talk" video (pre-recorded and available for on-demand watching) in addition to the downloadable PDF of the poster. Poster presenters in the following Poster Sessions are available during this 90-minute session for live text chat/Q&A.
- **A01.P1** Advances in Modeling, Simulation, and Artificial Intelligence in Microscopy and Microanalysis for Physical and Biological Systemss
- **A02.P1** Four-Dimensional Scanning Transmission Electron Microscopy (4D-STEM): New Experiments and Data Analyses for Determining Materials Functionality and Biological Structures
- A05.P1 Crystallography at the Nanoscale and MicroED with Electrons and X-rays
- **A10.P1** Structural Changes in Hard, Soft, and Biological Samples During Imaging: From Transmission Electron to Helium Ion Microscopy
- A13.P1 Microscopy and Microanalysis of Biomineralized and Biomimetic Materials and Structures
- **B01.P1** 3D Structures: From Macromolecular Assemblies to Whole Cells (3DEM FIG)
- **B04.P1** Jim Pawley Memorial Symposium
- **B11.P1** Advances in Imaging Approaches for Plant Biology
- P01.P1 Advances in Electron Microscopy to Characterize Materials Embedded in Devices
- P04.P1 Advanced Characterization of Nuclear Fuels and Materials
- P07.P1 FIB-SEM Technology and Electron Tomography for Materials Science and Engineering
- P07.P2 FIB-SEM Technology and Electron Tomography for Materials Science and Engineering
- P09.P1 Electron Pulses as an Ultrafast Probe for Non-Equilibrium Processes

6:00 PM - 7:30 PM

Student Mixer

6:30 PM - 8:00 PM

Vendor Tutorials

Wednesday, August 5

10:00 AM - 11:15 AM

A.M. Symposia & Sessions*

- * Individual presentations are pre-recorded and available for on-demand watching. Session time(s) are designed to allow time (60 minutes) for watching all session presentations, plus an additional exclusive 15 minutes for Q&A. All sessions feature a 75-minute live text chat/Q&A with speakers and session organizers.
- X30 DIY: Microscopy-Inspired Mkrspace 3D Printing
- A01.3 Advances in Modeling, Simulation, and Artificial Intelligence in Microscopy and Microanalysis for Physical and Biological Systems
- A02.3 Four-Dimensional Scanning Transmission Electron Microscopy (4D-STEM): New Experiments and Data Analyses for Determining Materials Functionality and Biological Structures
- A03.2 Impact of Recent Advancement in Instrumentation/Detectors on Electron Energy Loss Spectroscopy for Physical and Biological Sciences
- A05.3 Crystallography at the Nanoscale and MicroED with Electrons and X-rays
- A07.3 Advances in Quantitative Electron Beam Microanalysis (EDS and WDS)
- A09.3 Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimen
- A13.2 Microscopy and Microanalysis of Biomineralized and Biomimetic Materials and Structures
- A14.3 Vendor Symposium
- B01.3 3D Structures: From Macromolecular Assemblies to Whole Cells (3DEM FIG)
- **B07.2** Biomedical and Pharmaceutical Research on the Development, Diagnosis, Prevention, and Treatment of Diseases
- **P01.3** Advances in Electron Microscopy to Characterize Materials Embedded in Devices
- **P02.3** New Frontiers in Electron Microscopy of Two-Dimensional Materials
- **P04.3** Advanced Characterization of Nuclear Fuels and Materials

Wednesday, August 5 (Cont'd.)

10:00 AM – 11:15 AM	A.M. Symposia & Sessions (Cont'd.)
	P06.1 - In situ TEM at the Extremes
	P07.3 - FIB-SEM Technology and Electron Tomography for Materials Science and Engineering
	P08.3 - Approaching operando Imaging of Functional Materials
	P09.3 - Electron Pulses as an Ultrafast Probe for Non-Equilibrium Processes
11:15 AM – 11:30 AM	After-Session Video Chats with Speakers and Organizers All are welcome—check schedule for sessions that are holding these.
11:30 AM – 12:45 PM	Midday Symposia & Sessions*
	* Individual presentations are pre-recorded and available for on-demand watching. Session time(s are designed to allow time (60 minutes) for watching all session presentations, plus an additional exclusive 15 minutes for Q&A. All sessions feature a 75-minute live text chat/Q&A with speakers and session organizers.
	X41 - Physical Sciences Tutorial: Entrepreneurship in the Microscopy Community
	A01.4 - Advances in Modeling, Simulation, and Artificial Intelligence in Microscopy and Microanalysis for Physical and Biological Systems
	A02.4 - Four-Dimensional Scanning Transmission Electron Microscopy (4D-STEM): New Experiments and Data Analyses for Determining Materials Functionality and Biological Structures
	A03.3 - Impact of Recent Advancement in Instrumentation/Detectors on Electron Energy Loss Spectroscopy for Physical and Biological Sciences
	A04.1 - Pushing the Limits of Detection in Quantitative (S)TEM Imaging, EELS, and EDX
	A05.4 - Crystallography at the Nanoscale and MicroED with Electrons and X-rays
	A07.4 - Advances in Quantitative Electron Beam Microanalysis (EDS and WDS)
	A08.3 - X-ray, Electron and Synchrotron-Based X-Ray Imaging and Analysis
	A09.4 - Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimen
	B01.4 - 3D Structures: From Macromolecular Assemblies to Whole Cells (3DEM FIG)
	B07.3 - Biomedical and Pharmaceutical Research on the Development, Diagnosis, Prevention, and Treatment of Diseases
	P01.4 - Advances in Electron Microscopy to Characterize Materials Embedded in Devices
	P02.4 - New Frontiers in Electron Microscopy of Two-Dimensional Materials
	P04.4 - Advanced Characterization of Nuclear Fuels and Materials
	P06.2 - In situ TEM at the Extremes
	P07.4 - FIB-SEM Technology and Electron Tomography for Materials Science and Engineering
	P08.4 - Approaching operando Imaging of Functional Materials
12:30 PM – 12:45 PM	After-Session Video Chats with Speakers and Organizers All are welcome—check schedule for sessions that are holding these.
12:00 PM – 2:00 PM	Exhibit Hall – Staffed Hours
1:00 PM – 2:00 PM	Lunch Break
1:00 PM – 1:30 PM	DSA Awardee Session
1:30 PM – 2:00 PM	Exhibitor Spotlight Sessions
2:00 PM – 3:15 PM	P.M. Symposia & Sessions
2.00 FIN = 3.13 FINT	* Individual presentations are pre-recorded and available for on-demand watching. Session time(s are designed to allow time (60 minutes) for watching all session presentations, plus an additional exclusive 15 minutes for Q&A. All sessions feature a 75-minute live text chat/Q&A with speakers and session organizers.
	X34 - Management and Operation of Microscopy and Microanalysis Facilities
	X44 - Biological Sciences Tutorial: Optimization of Cryo-EM Data Collection using Advanced Direct Detectors
	A01.5 - Advances in Modeling, Simulation, and Artificial Intelligence in Microscopy and Microanalysis

for Physical and Biological Systems

2020 VIRTUAL Week At-A-Glance

Wednesday, August 5 (Cont'd.)

2:00 PM – 3:15 PM	P.M. Symposia & Sessions (Cont'd.)
	A02.5 - Four-Dimensional Scanning Transmission Electron Microscopy (4D-STEM): New Experiments and Data Analyses for Determining Materials Functionality and Biological
	A03.4 - Impact of Recent Advancement in Instrumentation/Detectors on Electron Energy Loss Spectroscopy for Physical and Biological Sciences
	A05.5 - Crystallography at the Nanoscale and MicroED with Electrons and X-rays
	A06.1 - Direct Phase Imaging with Coherent Electron Beam in TEM
	A07.5 - Advances in Quantitative Electron Beam Microanalysis (EDS and WDS)
	A09.5 - Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
	A14.4 - Vendor Symposium
	B03.1 - Methods and Applications in Localization-Based Super-Resolution Microscopy
	B07.4 - Biomedical and Pharmaceutical Research on the Development, Diagnosis, Prevention, and Treatment of Diseases
	P01.5 - Advances in Electron Microscopy to Characterize Materials Embedded in Devices
	P02.5 - New Frontiers in Electron Microscopy of Two-Dimensional Materials
	P03.1 - Energy and Soft Materials and the Development of Cryogenic Techniques for Studying Them
	P06.3 - In situ TEM at the Extremes
	P07.5 - FIB-SEM Technology and Electron Tomography for Materials Science and Engineering
	P08.5 - Approaching operando Imaging of Functional Materials
45 DM - 2 20 DM	After-Session Video Chats with Speakers and Organizers
:15 PM – 3:30 PM	All are welcome—check schedule for sessions that are holding these.
:30 PM – 3:00 PM	Exhibitor Spotlight Sessions
:30 PM – 4:00 PM	Exhibitor Spotlight Sessions
:30 PM – 6:00 PM	Tuesday Poster Presentations*
	* Individual poster presentations are available on demand. Each presentation includes a short "flash talk" video (pre-recorded and available for on-demand watching) in addition to the downloadable PDF of the poster. Poster presenters in the following Poster Sessions are available during this 90-minute session for live text chat/Q&A.
	A01.P2 - Advances in Modeling, Simulation, and Artificial Intelligence in Microscopy and Microanalysis for Physical and Biological Systemss
	A04.P1 - Pushing the Limits of Detection in Quantitative (S)TEM Imaging, EELS, and EDX
	A08.P1 - X-ray, Electron and Synchrotron-Based X-Ray Imaging and Analysis
	B01.P2 - 3D Structures: From Macromolecular Assemblies to Whole Cells (3DEM FIG)
	B07.P1 - Biomedical and Pharmaceutical Research on the Development, Diagnosis, Prevention, and Treatment of Diseases
	B10.P1 - 3D Scanning Electron Microscopy Imaging of Biological Samples
	B12.P1 - Illuminating Health and Disease at New Frontiers of Spatiotemporal Resolution and Adaptive Microscopy
	P01.P2 - Advances in Electron Microscopy to Characterize Materials Embedded in Devices
	P06.P1 - In situ TEM at the Extremes
	FOO.F1- III Situ 1 Livi di tile Extremes
	P08.P1 - Approaching operando Imaging of Functional Materials
5:00 PM	P08.P1 - Approaching operando Imaging of Functional Materials
	P08.P1 - Approaching operando Imaging of Functional Materials P09.P1 - Electron Pulses as an Ultrafast Probe for Non-Equilibrium Processes MSA Student Council Meeting
	P08.P1 - Approaching operando Imaging of Functional Materials P09.P1 - Electron Pulses as an Ultrafast Probe for Non-Equilibrium Processes
5:00 PM 5:00 PM – 5:45 PM 5:15 PM – 6:30 PM	P08.P1 - Approaching operando Imaging of Functional Materials P09.P1 - Electron Pulses as an Ultrafast Probe for Non-Equilibrium Processes MSA Student Council Meeting Lens On Retention of Underrepresented Groups at MM This session will focus on voicing ideas on what can be done to reach out to and retain attendance of

Thursday, August 6

10:00 AM - 11:15 AM

A.M. Symposia & Sessions*

- * Individual presentations are pre-recorded and available for on-demand watching. Session time(s) are designed to allow time (60 minutes) for watching all session presentations, plus an additional exclusive 15 minutes for Q&A. All sessions feature a 75-minute live text chat/Q&A with speakers and session organizers.
- X31 Technologists' Forum Roundtable: Commercial Technical Careers in Microscopy No PhD? No Worries
- **A01.6** Advances in Modeling, Simulation, and Artificial Intelligence in Microscopy and Microanalysis for Physical and Biological Systems
- A02.6 Four-Dimensional Scanning Transmission Electron Microscopy (4D-STEM): New Experiments and Data Analyses for Determining Materials Functionality and Biological
- A04.1 Pushing the Limits of Detection in Quantitative (S)TEM Imaging, EELS, and EDX
- A06.2 Direct Phase Imaging with Coherent Electron Beam in TEM
- A07.6 Advances in Quantitative Electron Beam Microanalysis (EDS and WDS)
- A09.6 Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
- A10.1 Structural changes in Hard, Soft, and Biological Samples During Imaging: From Transmission Electron to Helium Ion Microscopy
- **B02.1** Vendor Symposium
- **B03.2** Methods and Applications in Localization-Based Super-Resolution Microscopy
- **B05.1** Microbes in Focus
- **B09.1** Image Processing Developments in Cryo-EM
- P03.2 Energy and Soft Materials and the Development of Cryogenic Techniques for Studying Them
- P06.4 In situ TEM at the Extremes
- P07.6 FIB-SEM Technology and Electron Tomography for Materials Science and Engineering
- **P08.6** Approaching operando Imaging of Functional Materials
- P10.1 Call of the Wild: Advances in Microanalysis and Microscopy of Geological and Extraterrestrial Materials
- P12.1 Collaborative Analysis Using Atom Probe Tomography Including TEM/APT Characterization of Metal Alloys and Other Material Systems

12:30 PM - 12:45 PM

After-Session Video Chats with Speakers and Organizers

All are welcome—check schedule for sessions that are holding these.

11:30 AM - 12:45 PM

Midday Symposia & Sessions*

- * Individual presentations are pre-recorded and available for on-demand watching. Session time(s) are designed to allow time (60 minutes) for watching all session presentations, plus an additional exclusive 15 minutes for Q&A. All sessions feature a 75-minute live text chat/Q&A with speakers and session organizers.
- X32 Technologists' Forum Negative Staining of Small Molecules in Non-CryoEM Facilities
- X40 Physical Sciences Tutorial: Advanced Cryo-FIB Specimen Preparation and Handling of Environmentally Sensitive Materials for APT and TEM Analysis
- X45 Biological Sciences Tutorial: CryoEM Sample Preparation: Problems and Potential Solutions
- X91 Microscopy Explorations for Families and Kids of All Ages (formerly "Family Affair)
- A01.7 Four-Dimensional Scanning Transmission Electron Microscopy (4D-STEM): New Experiments and Data Analyses for Determining Materials Functionality and Biological
- A03.5 Impact of Recent Advancement in Instrumentation/Detectors on Electron Energy Loss Spectroscopy for Physical and Biological Sciences
- A04.2 Pushing the Limits of Detection in Quantitative (S)TEM Imaging, EELS, and EDX
- A06.3 Direct Phase Imaging with Coherent Electron Beam in TEM
- A09.7 Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
- A10.2 Structural changes in Hard, Soft, and Biological Samples During Imaging: From Transmission Electron to Helium Ion Microscopy
- A12.1 High-Resolving Power, Multi-Modal and Correlative SIMS Imaging in Biology, Geology and Materials



Thursday, August 6 (Cont'd.)

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11:30 AM – 12:45 PM	Midday Symposia & Sessions (Cont'd.)
	B02.2 - The Promise of Cryo-Electron Tomography
	B05.2 - Microbes in Focus
	B09.2 - Image Processing Developments in Cryo-EM
	P03.3 - Energy and Soft Materials and the Development of Cryogenic Techniques for Studying Them
	P05.1 - Advances in Microscopy for Quantum Information Sciences
	P06.5 - In situ TEM at the Extremes
	P08.7 - Approaching operando Imaging of Functional Materials
	P10.2 - Call of the Wild: Advances in Microanalysis and Microscopy of Geological and Extraterrestrial Materials
	P11.1 - Bridging the Fundamental Electron Dose Gap for Observing Atom Processes in Complex Materials in their Native Environments
	P12.1 - Collaborative Analysis Using Atom Probe Tomography Including TEM/APT Characterization of Metal Alloys and Other Material Systems
12:30 PM – 12:45 PM	After-Session Video Chats with Speakers and Organizers
12.50 FW = 12.45 FW	All are welcome—check schedule for sessions that are holding these.
12:00 PM – 2:00 PM	Exhibit Hall – Staffed Hours
l:00 PM – 2:00 PM	MSA Members Meeting
1:30 PM – 2:00 PM	Exhibitor Spotlight Sessions
2:00 PM – 3:15 PM	P.M. Symposia & Sessions *
	* Individual presentations are pre-recorded and available for on-demand watching. Session time(s) are designed to allow time (60 minutes) for watching all session presentations, plus an additional exclusive 15 minutes for Q&A. All sessions feature a 75-minute live text chat/Q&A with speakers and session organizers.
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	X42 - TriBeam Tomography for 3D Data Acquisition
	X43 - Biological Sciences Tutorial: Liquid Cell TEM Imaging Techniques and Optimization for Biological Samples
	A01.8 - Advances in Modeling, Simulation, and Artificial Intelligence in Microscopy and Microanalysis for Physical and Biological Systems
	A03.6 - Impact of Recent Advancement in Instrumentation/Detectors on Electron Energy Loss Spectroscopy for Physical and Biological Sciences
	A04.3 - Pushing the Limits of Detection in Quantitative (S)TEM Imaging, EELS, and EDX
	A09.8 - Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
	A10.3 - Structural changes in Hard, Soft, and Biological Samples During Imaging: From Transmission Electron to Helium Ion Microscopy
	A12.2 - High-Resolving Power, Multi-Modal and Correlative SIMS Imaging in Biology, Geology and Materials
	B02.3 - The Promise of Cryo-Electron Tomography
	B05.3 - Microbes in Focus
	B06.1 - Correlative and Multimodal Microscopy and Imaging of Physical, Environmental, and Biological Sciences
	B08.1 - Biological Soft X-ray Tomography
	P03.4 - Energy and Soft Materials and the Development of Cryogenic Techniques for Studying Them
	P05.2 - Advances in Microscopy for Quantum Information Sciences
	P06.6 - In situ TEM at the Extremes
	P10.3 - Call of the Wild: Advances in Microanalysis and Microscopy of Geological and Extraterrestrial Materials
	P11.2 - Bridging the Fundamental Electron Dose Gap for Observing Atom Processes in Complex Materials in their Native Environments
	P12.3 - Collaborative Analysis Using Atom Probe Tomography Including TEM/APT Characterization of Metal Alloys and Other Material Systems
12:30 PM – 12:45 PM	After-Session Video Chats with Speakers and Organizers All are welcome—check schedule for sessions that are holding these.

Thursday, August 6 (Cont'd.)

3:30 PM – 4:00 PM	Break
4:00 PM – 5:30 PM	Thursday Poster Sessions*
	* Individual poster presentations are available on demand. Each presentation includes a short "flash talk" video (pre-recorded and available for on-demand watching) in addition to the downloadable PDF of the poster. Poster presenters in the following Poster Sessions are available during this 90-minute session for live text chat/Q&A.
	A06.P1 - Direct Phase Imaging with Coherent Electron Beam in TEM
	A07.P1 - Advances in Quantitative Electron Beam Microanalysis (EDS and WDS)
	A09.P1 - Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
	B03.P1 - Methods and Applications in Localization-Based Super-Resolution Microscopy
	B07.P2 - Biomedical and Pharmaceutical Research on the Development, Diagnosis, Prevention, and Treatment of Diseases
	B09.P1 - Image Processing Developments in Cryo-EM
	P02.P1 - New Frontiers in Electron Microscopy of Two-Dimensional Materials
	P03.P1 - Energy and Soft Materials and the Development of Cryogenic Techniques for Studying Them
	P06.P2 - In situ TEM at the Extremes
	P08.P2 - Approaching operando Imaging of Functional Materials
5:00 PM – 5:30 PM	Exhibitor Spotlight Sessions
5:30 PM – 7:00 PM	MAS Members Meeting
6:00 PM – 8:00 PM	Vendor Tutorials

Friday, August 7

9:00 AM – 10:00 AM	Lens On My Microscopist Looks Like Me
	An informal chat about representation and how important it is to see a demographic change within MM.
10:00 AM – 11:15 PM	A.M. Symposia & Sessions*
	* Individual presentations are pre-recorded and available for on-demand watching. Session time(s) are designed to allow time (60 minutes) for watching all session presentations, plus an additional exclusive 15 minutes for Q&A. All sessions feature a 75-minute live text chat/Q&A with speakers and session organizers.
	A01.9 - Advances in Modeling, Simulation, and Artificial Intelligence in Microscopy and Microanalysis for Physical and Biological Systems
	A04.4 - Pushing the Limits of Detection in Quantitative (S)TEM Imaging, EELS, and EDX
	A09.9 - Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
	B02.4 - The Promise of Cryo-Electron Tomography
	B06.2 - Correlative and Multimodal Microscopy and Imaging of Physical, Environmental, and Biological Sciences
	B08.2 - Biological Soft X-ray Tomography
	P03.5 - Energy and Soft Materials and the Development of Cryogenic Techniques for Studying Them
	P05.3 - Advances in Microscopy for Quantum Information Sciences
	P06.7 - In situ TEM at the Extremes
	P10.4 - Call of the Wild: Advances in Microanalysis and Microscopy of Geological and Extraterrestrial Materials
	P11.3 - Bridging the Fundamental Electron Dose Gap for Observing Atom Processes in Complex Materials in their Native
11:15 PM – 11:30 PM	After-Session Video Chats with Speakers and Organizers

All are welcome—check schedule for sessions that are holding these.

Friday, August 7 (Cont'd.)

11:30 AM – 12:45 PM	Midday Symposia & Sessions*
	* Individual presentations are pre-recorded and available for on-demand watching. Session time(s) are designed to allow time (60 minutes) for watching all session presentations, plus an additional exclusive 15 minutes for Q&A. All sessions feature a 75-minute live text chat/Q&A with speakers and session organizers.
	A04.5 - Pushing the Limits of Detection in Quantitative (S)TEM Imaging, EELS, and EDX
	B06.3 - Correlative and Multimodal Microscopy and Imaging of Physical, Environmental, and Biological Sciences
	B08.3 - Biological Soft X-ray Tomography
	P03.6 - Energy and Soft Materials and the Development of Cryogenic Techniques for Studying Them
	P05.4 - Advances in Microscopy for Quantum Information Sciences
	P10.5 - Call of the Wild: Advances in Microanalysis and Microscopy of Geological and Extraterrestrial Materials
	P11.4 - Bridging the Fundamental Electron Dose Gap for Observing Atom Processes in Complex Materials in their Native
12:30 PM – 1:00 PM	Exhibitor Spotlight Sessions
12:30 PM – 12:45 PM	After-Session Video Chats with Speakers and Organizers All are welcome—check schedule for sessions that are holding these.
1:00 PM – 2:30 PM	Friday Poster Presentations*
	* Individual poster presentations are available on demand. Each presentation includes a short "flash talk" video (pre-recorded and available for on-demand watching) in addition to the downloadable PDF of the poster. Poster presenters in the following Poster Sessions are available during this 90-minute session for live text chat/Q&A.
	A03.P1 - Impact of Recent Advancement in Instrumentation/Detectors on Electron Energy Loss Spectroscopy for Physical and Biological Sciences
	A09.P2 - Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens
	A14.P1 - Vendor Symposium
	B02.P1 - The Promise of Cryo-Electron Tomography
	B05.P1 - Microbes in Focus
	B06.P1 - Correlative and Multimodal Microscopy and Imaging of Physical, Environmental, and Biological Sciences
	B08.P1 - Biological Soft X-Ray Tomography
	P03.P2- Energy and Soft Materials and the Development of Cryogenic Techniques for Studying Them
	P05.P1 - Advances in Microscopy for Quantum Information Sciences
	P10.P1 - Call of the Wild: Advances in Microanalysis and Microscopy of Geological and Extraterrestrial Materials
	P12.P1 - Collaborative Analysis Using Atom Probe Tomography Including TEM/APT Characterization of Metal Alloys and Other Material Systems
2:30 PM – 3:00 PM	Exhibitor Spotlight Sessions