

## Monday, August 6, 2007

### PLATFORM SESSIONS (MONDAY 8:00 AM–12:00 NOON)

<b>Atom Probe Tomography: An Evolving Technique for Nanostructural Characterization</b>	8:00 AM	Rm 125	(Page 85)
<b>Cryo-SEM for Biological and Materials Samples</b>	8:15 AM	Rm 118	(Page 85)
<b>FIB Instrumentation and Application Advances for Physical and Biological Sciences</b>	8:00 AM	Rm Palm B	(Page 86)
<b>Variable Pressure Electron Microscopy and Electron Beam Assisted Deposition</b>	9:00 AM	Rm 316	(Page 86)
<b>Biomaterials</b>	9:00 AM	Rm 208	(Page 87)
<b>Imaging in Cancer Biology</b>	8:00 AM	Rm 203	(Page 87)
<b>Macromolecular Complexes as Visualized by Cryo-EM</b>	8:00 AM	Rm 122	(Page 88)
<b>Advances in High-Resolution Electron Microscopy: James Hillier Memorial</b>	8:15 AM	Rm 315	(Page 88)
<b>IMS Henry Clifton Sorby Award and Lecture</b>	8:00 AM	Rm 124	(Page 89)
<b>Metallographic Techniques and Material Characterization</b>	9:00 AM	Rm 124	(Page 89)
<b>Microscopy in Nanotechnology</b>	8:00 AM	Rm Palm A	(Page 89)
<b>Technologists' Forum Symposia Main Platform Session: Biophotonics</b>	9:00 AM	Rm 114	(Page 90)

### MSA PRESIDENTIAL HAPPENING

12:15–1:30 PM Rm 304 *MSA Presidential Happening*

### PLATFORM SESSIONS (MONDAY 1:30–3:30 PM)

<b>Atom Probe Tomography: An Evolving Technique for Nanostructural Characterization</b>	1:30 PM	Rm 125	(Page 90)
<b>Electron Holography</b>	1:30 PM	Rm 305	(Page 90)
<b>FIB Instrumentation and Application Advances for Physical and Biological Sciences</b>	1:30 PM	Rm Palm B	(Page 91)
<b>Variable Pressure Electron Microscopy and Electron Beam Assisted Deposition</b>	1:30 PM	Rm 316	(Page 91)
<b>Imaging in Cancer Biology</b>	1:30 PM	Rm 203	(Page 91)
<b>Macromolecular Complexes as Visualized by Cryo-EM</b>	1:30 PM	Rm 122	(Page 92)
<b>Advances in High-Resolution Electron Microscopy: James Hillier Memorial</b>	1:30 PM	Rm 315	(Page 92)
<b>Metallographic Techniques and Material Characterization</b>	1:30 PM	Rm 124	(Page 92)
<b>Microscopy in Nanotechnology</b>	1:30 PM	Rm Palm A	(Page 92)
<b>Technologists' Forum Symposia Main Platform Session: Biophotonics</b>	1:30 PM	Rm 114	(Page 93)
<b>It's a Family Affair</b>	1:30 PM	Rm 222	(Page 93)
<b>M&amp;M Workshop: Scanning Electron Microscopy (SEM) and X-ray Energy Dispersive Spectrometry (XEDS)—The Characterization Tools for Nanotechnology</b> (Additional fee, visit the Megaboath for information)	1:30 PM	Rm 208	(Page 93)

**POSTER PRESENTATIONS (MONDAY 3:30–5:00 PM) EXHIBITION HALL**

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**Atom Probe Tomography: An Evolving Technique for Nanostructural Characterization** (Page 93)

**Cryo-SEM for Biological and Materials Samples** (Page 94)

**FIB Instrumentation and Application Advances for Physical and Biological Sciences** (Page 94)

**Variable Pressure Electron Microscopy and Electron Beam Assisted Deposition** (Page 94)

**Biomaterials** (Page 95)

**Macromolecular Complexes as Visualized by Cryo-EM** (Page 95)

**Advances in High-Resolution Electron Microscopy: James Hillier Memorial** (Page 96)

**Metallographic Techniques and Material Characterization** (Page 96)

**Microscopy in Nanotechnology** (Page 97)

**IMPORTANT EVENTS****The Henry Clifton Sorby Award Lecture**

8:00 AM, Room 124

**MSA Presidential Happenings**

12:15–1:30 PM, Room 304

**M&M Workshop**

1:30–3:30, Room 208

Fee required (visit MSA Megabooth for information)

## Tuesday, August 7, 2007

### PLATFORM SESSIONS (TUESDAY 8:00 AM–12:00 NOON)

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<b>Atom Probe Tomography: An Evolving Technique for Nanostructural Characterization</b>	8:00 AM	Rm 125	(Page 99)
<b>Electron Microscopy Research in an Aberration-Free Environment: Applications</b>	8:15 AM	Rm Palm B	(Page 99)
<b>Scanning Probe Microscopy for Nanoscale Characterization of Functional Materials and Electronic Devices</b>	9:00 AM	Rm 305	(Page 100)
<b>Spectral Imaging and Data Analysis: Where Are We Now and Where Are We Going?</b>	8:00 AM	Rm 304	(Page 100)
<b>Stereology and 3D Digital Imaging</b>	8:00 AM	Rm 222	(Page 101)
<b>Advanced Light Microscopy Applications for Biological Questions</b>	8:30 AM	Rm 118	(Page 101)
<b>Macromolecular Complexes as Visualized by Cryo-EM</b>	8:00 AM	Rm 122	(Page 102)
<b>Multiscale Imaging of the Nervous System</b>	8:45 AM	Rm 203	(Page 102)
<b>Vascular Corrosion Casting</b>	10:30 AM	Rm 221	(Page 103)
<b>Advances in High-Resolution Electron Microscopy: James Hillier Memorial</b>	8:30 AM	Rm 315	(Page 103)
<b>Failure Analysis: Real-world Applications and Case Studies</b>	8:30 AM	Rm 208	(Page 103)
<b>High-Resolution Characterization of Materials for the Current- and Future-Generation Nano-Electronics</b>	8:00 AM	Rm 316	(Page 104)
<b>Metallographic Techniques and Material Characterization</b>	8:30 AM	Rm 124	(Page 104)
<b>Microscopy in Nanotechnology</b>	8:00 AM	Rm Palm A	(Page 105)
<b>Joint Tutorial: Creating a Successful Scientific Presentation</b>	9:00 AM	Rm 114	(Page 105)
<b>Joint Tutorial: Playing the Grant Game to get the Toys (Instruments) We Want</b>	10:30 AM	Rm 114	(Page 105)

### MAS PRESIDENTIAL HAPPENING

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12:15–1:30 PM Rm 315 *MAS Presidential Happening*

### PLATFORM SESSIONS (TUESDAY 1:30–3:30 PM)

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<b>Electron Microscopy Research in an Aberration-Free Environment: Applications</b>	1:30 PM	Rm Palm B	(Page 105)
<b>ImageJ and Applications in Microscopy</b>	1:30 PM	Rm 118	(Page 106)
<b>Scanning Probe Microscopy for Nanoscale Characterization of Functional Materials and Electronic Devices</b>	1:30 PM	Rm 305	(Page 106)
<b>Spectral Imaging and Data Analysis: Where Are We Now and Where Are We Going?</b>	1:30 PM	Rm 304	(Page 106)
<b>Ask the Experts: Live Cell Imaging</b>	1:30 PM	Rm 122	(Page 107)
<b>Vascular Corrosion Casting</b>	1:30 PM	Rm 221	(Page 107)
<b>High-Resolution Characterization of Materials for the Current- and Future-Generation Nano-Electronics</b>	1:30 PM	Rm 316	(Page 107)
<b>Metallographic Techniques and Material Characterization</b>	1:30 PM	Rm 124	(Page 108)
<b>Microscopy in Nanotechnology</b>	1:30 PM	Rm Palm A	(Page 108)
<b>Technologists' Forum Symposia Special Topic: Microscopy and Microanalysis in Marine Biology</b>	1:30 PM	Rm 114	(Page 108)
<b>Biological Tutorial: A Novel Sample Freezing Method</b>	1:30 PM	Rm 113	(Page 109)
<b>It's a Family Affair</b>	1:30 PM	Rm 222	(Page 109)
<b>M&amp;M Workshop: Scanning Electron Microscopy (SEM) and X-ray Energy Dispersive Spectrometry (XEDS)—The Characterization Tools for Nanotechnology</b> (Additional fee, visit the Megaboath for information)	1:30 PM	Rm 208	(Page 109)

**POSTER PRESENTATIONS (TUESDAY 3:30–5:00 PM) EXHIBITION HALL**

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**Contamination Control in Electron and Ion Microscopy** (Page 109)

**Electron Microscopy Research in an Aberration-Free Environment: Applications** (Page 109)

**Scanning Probe Microscopy for Nanoscale Characterization of Functional Materials and Electronic Devices** (Page 109)

**Spectral Imaging and Data Analysis: Where are We Now and Where are We Going?** (Page 110)

**Advanced Light Microscopy Applications for Biological Questions** (Page 110)

**Structural Analysis of Biological Systems: An Integrative Understanding of Organellar, Cellular, and Organismal Function** (Page 110)

**Vascular Corrosion Casting** (Page 112)

**Failure Analysis: Real-World Applications and Case Studies** (Page 112)

**High-Resolution Characterization of Materials for the Current- and Future-Generation Nano-Electronics** (Page 112)

**Microscopy in Nanotechnology** (Page 113)

**Oxidation/Corrosion** (Page 114)

**IMPORTANT EVENTS****MAS Presidential Happenings**

12:15–1:30 PM, Room 315

***M&M Workshop***

1:30–3:30 PM, Room 208

Fee required (visit MSA Megabooth for information)

## Wednesday, August 8, 2007

### PLATFORM SESSIONS (WEDNESDAY 8:00 AM–12:00 NOON)

<b>Advances in Electron Energy Loss Spectroscopy and Energy-Filtered Imaging</b>	8:15 AM	Rm 315	(Page 115)
<b>Electron Microscopy Research in an Aberration-Free Environment: Applications</b>	8:30 AM	Rm Palm B	(Page 115)
<b>Microscopy, Microanalysis and Image Analysis in the Pharmaceutical Sciences</b>	8:45 AM	Rm 122	(Page 116)
<b>Quantitative X-ray Microanalysis</b>	8:00 AM	Rm 305	(Page 116)
<b>Techniques and Applications of Confocal Microscopy</b>	8:00 AM	Rm 125	(Page 116)
<b>Tomography in Physical and Biological Sciences</b>	9:00 AM	Rm 114	(Page 117)
<b>X-ray Microscopy in Physical and Biological Sciences</b>	8:30 AM	Rm 118	(Page 117)
<b>Cell Pathology</b>	9:00 AM	Rm 203	(Page 118)
<b>Microscopy and Paleontology: Digging Deeper into Dinosaurs</b>	8:30 AM	Rm 221	(Page 118)
<b>Muscle and Motility</b>	10:30 AM	Rm 222	(Page 118)
<b>EBSD: Traditional and Advanced Applications</b>	8:00 AM	Rm 304	(Page 119)
<b>High-Resolution Characterization of Materials for the Current- and Future- Generation Nano-Electronics</b>	8:00 AM	Rm 316	(Page 119)
<b>Large Chamber Scanning Electron Microscopy</b>	10:30 AM	Rm 208	(Page 120)
<b>Metallography, History and the Fine Arts</b>	8:00 AM	Rm 124	(Page 120)
<b>Microscopy in Nanotechnology</b>	8:00 AM	Rm Palm A	(Page 120)
<b><i>Biological Tutorial: High Pressure Freezing for Electron Microscopy of Biological Specimens</i></b>	8:00 AM	Rm 113	(Page 121)
<b><i>Biological Tutorial: Freeze Substitution Method</i></b>	9:00 AM	Rm 113	(Page 121)

### PLATFORM SESSIONS (WEDNESDAY 1:30–3:30 PM)

<b>Advances in Electron Energy Loss Spectroscopy and Energy-Filtered Imaging</b>	1:30 PM	Rm 315	(Page 121)
<b>Microscopy, Microanalysis and Image Analysis in the Pharmaceutical Sciences</b>	1:30 PM	Rm 122	(Page 121)
<b>Quantitative X-ray Microanalysis</b>	1:30 PM	Rm 305	(Page 122)
<b>Techniques and Applications of Confocal Microscopy</b>	1:30 PM	Rm 125	(Page 122)
<b>Tomography in Physical and Biological Sciences</b>	1:30 PM	Rm 114	(Page 122)
<b>Muscle and Motility</b>	1:30 PM	Rm 222	(Page 122)
<b>Characterization of Oxides</b>	1:30 PM	Rm 221	(Page 123)
<b>EBSD: Traditional and Advanced Applications</b>	1:30 PM	Rm 304	(Page 123)
<b>Large Chamber Scanning Electron Microscopy</b>	1:30 PM	Rm 208	(Page 123)
<b>One-Dimensional Nanomaterials: Microscopy and Nano-Measurements</b>	1:30 PM	Rm 316	(Page 124)
<b><i>Physical Tutorial: LACSBI: Incoherent Imaging for Quantitative TEM</i></b>	1:30 PM	Rm 113	(Page 124)
<b><i>Joint Tutorial: X-ray MicroCT Principles and Examples</i></b>	2:30 PM	Rm 113	(Page 124)

**POSTER PRESENTATIONS (WEDNESDAY 3:00–5:00 PM) EXHIBITION HALL**

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**Aberration Correction in the Electron Microscope** (Page 124)  
**Advances in Electron Energy Loss Spectroscopy and Energy-Filtered Imaging** (Page 124)  
**Core Facility Management** (Page 125)  
**Microscopy, Imaging, and Training in the Digital Age** (Page 125)  
**Microscopy, Microanalysis and Image Analysis in the Pharmaceutical Sciences** (Page 125)  
**Quantitative X-ray Microanalysis** (Page 125)  
**Tomography in Physical and Biological Sciences** (Page 126)  
**Biological Sciences—General** (Page 126)  
**Cell Pathology** (Page 126)  
**Microscopy and Paleontology: Digging Deeper into Dinosaurs** (Page 127)  
**EBSD: Traditional and Advanced Applications** (Page 127)  
**Electron Crystallography and Precession Electron Diffraction** (Page 127)  
**Large Chamber Scanning Electron Microscopy** (Page 128)  
**Metallography, History and the Fine Arts** (Page 128)  
**One-Dimensional Nanomaterials: Microscopy and Nano-Measurements** (Page 128)

**IMPORTANT EVENTS****IMS General Members Meeting**

12:15–1:30 PM, Room 124

**MSA Business Meeting**

12:15–1:30 PM, Floridian Room A

**MAS Business Meeting**

5:00–6:00 PM, Room 305

**MAS Members Social**6:00 PM (ticket required, visit MAS Booth  
for information)**IMS Awards Banquet**6:30 PM (ticket required, visit IMS Booth  
for information)

## Thursday, August 9, 2007

### PLATFORM SESSIONS (THURSDAY 8:00 AM–12:00 NOON)

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<b>Aberration Correction in the Electron Microscope</b>	8:00 AM	Rm Palm B	(Page 130)
<b>Advances in Electron Energy Loss Spectroscopy and Energy-Filtered Imaging</b>	8:00 AM	Rm 315	(Page 130)
<b>Core Facility Management</b>	8:30 AM	Rm 118	(Page 131)
<b>Microscopy, Imaging, and Training in the Digital Age</b>	8:00 AM	Rm 125	(Page 131)
<b>New Phase Contrast Methods for TEM</b>	9:00 AM	Rm 122	(Page 131)
<b>Quantitative X-ray Microanalysis</b>	8:00 AM	Rm 305	(Page 132)
<b>Tomography in Physical and Biological Sciences</b>	10:30 AM	Rm 114	(Page 132)
<b>Advances in Biological Microanalysis: A Symposium Dedicated to the Memory of Andrew Somlyo</b>	8:30 AM	Rm 304	(Page 132)
<b>Structural Analysis of Biological Systems: An Integrative Understanding of Organellar, Cellular, and Organismal Function</b>	8:30 AM	Rm 222	(Page 133)
<b>Electron Crystallography and Precession Electron Diffraction</b>	8:00 AM	Rm 221	(Page 133)
<b>Metallography, History and the Fine Arts</b>	8:30 AM	Rm 124	(Page 134)
<b>Microscopy in Nanotechnology</b>	8:00 AM	Rm Palm A	(Page 134)
<b>One-Dimensional Nanomaterials: Microscopy and Nano-Measurements</b>	8:00 AM	Rm 316	(Page 135)
<b>Physical Tutorial: Atomic Force Microscopy (AFM) and Related Microscopy Techniques and Applications</b>	9:00 AM	Rm 113	(Page 135)

### PLATFORM SESSIONS (THURSDAY 1:30–3:30 PM)

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<b>Advances in Electron Energy Loss Spectroscopy and Energy-Filtered Imaging</b>	1:30 PM	Rm 315	(Page 135)
<b>Microscopy, Imaging, and Training in the Digital Age</b>	1:30 PM	Rm 125	(Page 136)
<b>New Phase Contrast Methods for TEM</b>	1:30 PM	Rm 122	(Page 136)
<b>Quantitative X-ray Microanalysis</b>	1:30 PM	Rm 305	(Page 136)
<b>Ask-the-Experts: High-Resolution TEM</b>	2:00 PM	Rm 118	(Page 136)
<b>Advances in Biological Microanalysis: A Symposium Dedicated to the Memory of Andrew Somlyo</b>	1:30 PM	Rm 304	(Page 136)
<b>Structural Analysis of Biological Systems: An Integrative Understanding of Organellar, Cellular, and Organismal Function</b>	1:30 PM	Rm 222	(Page 137)
<b>Characterization of Oxides</b>	1:30 PM	Rm 221	(Page 137)
<b>Microscopy in Nanotechnology</b>	1:30 PM	Rm Palm A	(Page 137)
<b>One-Dimensional Nanomaterials: Microscopy and Nano-Measurements</b>	1:30 PM	Rm 316	(Page 138)
<b>Physical Tutorial: Electron Tomography for Materials Science</b>	1:30 PM	Rm 113	(Page 138)