FiB SEM
Program

May 6 - 7, 2025

Science and Engineering Hall
George Washington University
Washington, DC

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TED PELLA, INC. Microscopy Products for Science and Industry
CCEM Canadian Centre for Electron Microscopy
CMMS Chesapeake Microscopy & Microanalysis Society

FULL MEETING OVERVIEW

Tuesday, May 6, 2025

8:30 AM	Check-in and Breakfast
9:30 AM	Welcome and Housekeeping
9:40 AM	Plenary
10:20 AM	Biological/Organic Sciences
11:00 AM	Break
11:30 AM	CryoFIB and Specimen Prep
12:40 PM	Lunch and Poster Session
2:45 PM	CryoFIB and Specimen Prep
3:30 PM	Break
4:00 PM	Material Sciences
5:00 PM	Happy Hour @ CIRCA Foggy Bottom

Wednesday, May 7, 2025

8:30 AM	Check-in and Breakfast
9:30 AM	Welcome and Housekeeping
9:40 AM	Material Sciences
11:00 AM	Break
11:30 AM	Material Sciences
12:30 PM	Lunch and Poster Session
2:00 PM	Semiconductors
2:40 PM	Break
3:10 PM	Roundtable Discussion: Semiconductors
5:00 PM	Wrap-up

Tuesday, May 6, 2025

Time	Presenter	Title
8:30 AM EST		Check-in and Breakfast
9:30 AM		Welcome and Housekeeping
9:40 AM	Alex deMarco, NYSBC	OpenFIBSEM
10:20 AM	Anastas Popratiloff, GWU	Integration of scalable 2D and serial FIBSEM block face imaging for precise targeting and co-registration of 2D and 3D data for systemic reconstruction of synaptic architecture
10:40 AM	Eran Ittah, McGill University	FIB-SEM Enables a Nanoscale 3D Reconstruction of the Zebrafish Cornea Across Its Full Thickness
11:00 AM		Break
11:30 AM	Geoff Perumal, TFS	Generating the highest quality cryo-lamellae with the Arctis cryo PFIB
12:00 PM	Valerie Brogden, U of OR	Increasing TEM Prep Throughput with an Extendable Manipulator Tip
12:20 PM	Lucille A. Giannuzzi, TESCAN	Automated and Semi-Automated Methods and Applications For S/TEM Specimen Preparation
12:40 PM		Lunch and Poster Session
2:00 PM	Guillaume Audoit, Carl Zeiss	Cryo FIB-SEM Processing For Artifact-Free Sample Preparation of Beam-Sensitive Materials
2:30 PM	Joe Durk, ConnectomX	Complementary Use of FIB-SEM and Serial Block-Face SEM: Quantifying Sectioning Limits and Targeting Regions of Interest in a CLEM Workflow
2:50 PM	Rick Passey, TFS	Automatic for the People: Addressing the TEM Lamella Preparation Needs of Diverse FIB Users
3:10 PM	Parham Kabirifar, UMD	A Novel FIB Milling Technique for Micromechanical Characterization of Shape Memory Alloys
3:30 PM		Break

Tuesday, May 6, 2025

Continued

Time	Presenter	Title
4:00 PM	Joseph Deering, McMaster	Tomography and 3D EDS of Meteorite Microstructure: Insights from a Correlative Workflow
4:20 PM	Vladimir P. Oleshko, NIST	Integrated Model-Based SEM/STEM Metrology Platform for Future Microelectronics Manufacturing
4:40 PM	Sebastian Lech, JHU	3D FIB-SEM Tomography as a Characterization Method for Corrosion Science
5:00 PM		Wrap-up
5:00 PM		Happy Hour @ CIRCA Foggy Bottom

Wednesday, May 7, 2025

Time	Presenter	Title
8:30 AM		Check-in and Breakfast
9:30 AM		Welcome and Housekeeping
9:40 AM	Peter Gnauck, Raith	Advanced FIB-SIMS for High-Resolution Chemical Imaging for Materials and Life Science Applications
10:00 AM	Bita Pourbahari, McMaster	3D-Advanced Correlative Microscopy for Crack Analysis: Bridging the Centimeter to Atomic Scales
10:20 AM	Mike Marsh, Math2Market	FIB-SEM for 3D Digital Twins and Digital “Siblings” Explores Critical Material Properties
10:40 AM	J. Luis Carrillo, NRL	Investigating Chemo-mechanical Degradation in V2O5 Positive Electrodes
11:00 AM		Break
11:30 AM	Robert Brandom, Bruker	eWARP – The fastest, most signal efficient EBSD detector ever
11:50 AM	Mark E. Twigg, NRL	EBSD and ECCI analysis of boundaries in CsPbBr3 inorganic halide perovskite
12:10 PM	Oytun Tasgit, 3D Micromac	Advancing FIB-SEM Sample Preparation with Laser Technology for Semiconductor and Materials Applications
12:30 PM		Lunch and Poster Session
2:00 PM	David MacMahon, Micron	To the Moon: Failure analysis of issues in Bipolar Junction Transistors circuit using Electron Beam Induced Current technique
2:20 PM	Steve Herschbein, Retired	The CHIPS Act and its Impact on the Semiconductor Industry and Analytical Labs – An Update
2:40 PM		Break

Wednesday, May 7, 2025

Continued

Time	
3:10 PM	**Roundtable Discussion on instrumentation and analysis needs for Failure Analysis** Moderator: Nabil Bassim, CCEM, McMaster University Panelists: Umberto Celano, Arizona State University (On-line) Lynne Gignac, IBM T. J. Watson Research Center (On-line) Steve Herschbein, Retired, GlobalFoundries David McMahon, Micron Technology Will Osborn, NIST Comments from panelists followed by general discussions
5:00 PM	Wrap-up

Posters

Session	Presenter	Title
Mat Sci	Shweta Joshi. GWU	FIB-SEM Benefits for Research and Education in CMOS + X integration
Mat Sci	Nabil Bassim, McMaster	Dopant Distribution in Ga-Implanted CdO – A Correlative Microcopy and Molecular Dynamics Study
Mat Sci	Bradley T De Gregorio, NRL	Metalens Fabrication for Vertical-Cavity Surface-Emitting Laser Design for Neural Therapeutics
Mat Sci	Matt Nowell, Gatan	3D Plasma FIB-based EBSD-EDS Characterization of Additively Manufactured Inconel 718 Microstructure

Meeting Notes

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