

# FIB SEM

## Program

May 22 - 23, 2024

KOSSIAKOFF CENTER, APL  
11100 JOHNS HOPKINS ROAD, LAUREL, MD



# FULL MEETING OVERVIEW

## Wednesday, May 22, 2024

8:30 AM	Check-in and Breakfast
9:30 AM	Welcome and Housekeeping
9:35 AM	Plenary
10:20 AM	Instrumentation
11:00 AM	Break
11:30 AM	Instrumentation Continued
12:30 PM	Lunch and Poster Session
2:00 PM	Tutorial
2:45 PM	Biological/Organic Sciences
3:25 PM	Break
3:55 PM	Biological/Organic Sciences Continued
5:00 PM	Happy Hour

## Thursday, May 24, 2024

8:30 AM	Check-in and Breakfast
9:30 AM	Welcome and Housekeeping
9:35 AM	Tutorial
10:20 AM	Material Sciences
11:00 AM	Break
11:30 AM	Material Sciences Continued
12:30 PM	Lunch and Poster Session
2:00 PM	Semiconductors
3:00 PM	Break
3:30 PM	Tutorial
4:00 PM	Semiconductors Continued
4:40 PM	Wrap-up

# Wednesday, May 22, 2024

Time	Presenter	Title
8:30 AM		Check-in and Breakfast
9:30 AM		Welcome and Housekeeping
9:35 AM	Jacques Gierak	Ion source development with an eye towards exciting advances in new Ga and ionic liquid emitters designs
10:20 AM	Peter Gnauck	High resolution ion imaging and SIMS nano-analytics facilitated by Liquid Metal Alloy Ion Sources
10:40 AM	Jeremie Silvent	A new tool to perform hot ion implantation for the creation of dense NV ensembles in diamond
11:00 AM		Break
11:30 AM	Akshay Agarwal	Introducing quantitative secondary electron imaging to ion beam microscopy
11:50 AM	Rick Passey	Advancing Scanning Electron Microscopy Imaging with Direct Electron Detection
12:10 PM	Cheryl Hartfield	Frontiers of Ga <sup>+</sup> FIB-SEM Applications
12:30 PM		Lunch and Poster Session
2:00 PM	Kedar Narayan	Volume EM (vEM): Concepts, Correlations, & Computations
2:45 PM	Shize Yang	Improving TEM sample preparation through training and automation
3:05 PM	Patrick Soucy	DNA tug of war
3:25 PM		Break
3:55 PM	Tengteng Tang	Multiscale structure characterization of human trabecular bone through integrated X-ray tomography with LaserFIB and plasma FIB-SEM
4:15 PM	Jamie Ford	Measuring Particle Spacing in Concentrated Polystyrene Sphere Solutions with Cryo-FIB
4:35 PM	Lucille Giannuzzi	Cryo-EXLO Workflows for Vitreous, Particle Beam- or Air-Sensitive Materials
4:55 PM		Wrap-up
5:00 PM		Happy Hour @ K-Center

# Thursday, May 23, 2024

Time	Presenter	Title
8:30 AM		Check-in and Breakfast
9:30 AM		Welcome and Housekeeping
9:35 AM	Steve Herschbein	The CHIPS Act and a Look at the State of the Semiconductor Industry
10:20 AM	Lucille Giannuzzi	Optimizing S/TEM Specimen Preparation: Methods and Applications
10:40 AM	Valerie Brogden	Noble Dome: A Novel Air-Free Transfer System
11:00 AM		Break
11:30 AM	Steve Kelly	Battery Workflows at the Convergence of Modern FIB-SEM, X-ray, and Software Technologies
11:50 AM	Vladimir Oleshko	A Versatile FIB/SEM/STEM SRM Foundry and Metrology Platform
12:10 PM	Bhavesh Kamaliya	Self-Organization, Kirigami and Localized Defect Engineering by FIB on vdW Materials
12:30 PM		Lunch and Poster Session
2:00 PM	Travis Casagrande	Enabling Correlative Microscopy Applications by the LaserFIB Fabrication of Customized FIB Grids
2:20 PM	Hannah Matos-Pimente	Micro and nanostructural analysis of a Cu-Ag composite
2:40 PM	Alex Hall	Interactive Deep Learning Segmentation for FIB-SEM Data
3:00 PM		Break
3:30 PM	Steve Herschbein	Justification, Design & Construction of an Appropriate Analytical Laboratory for High Tech Imaging & Processing Tools
4:00 PM	David MacMahon	FIB-SEM Tomography Semiconductor Manufacturing Case Studies: Better Late than Never
4:20 PM	Michael DiBattista	Advantages of Chemically Assisted- Argon Focused Ion Beam Processing for Full Chip Delayering Requirements
4:40 PM	Adam Steele	High-Resolution FIB and SIMS with a Cesium Low Temperature Ion Source
5:00 PM		Wrap-up

# Posters

Session	Presenter	Title
Mat Sci	Matt Nowell	Improving EBSD Pattern Indexing Performance on FIB Surfaces Using Forward Modeling-Based Spherical Indexing
Mat Sci	Betty Huang	Micro-Tensile Specimen Fabrication Using Plasma-FIB and Fs-Laser
Mat Sci	Rachel Ord	A new path to writable 2D materials
Bio/Organic	Madeline Barry	empanada: Deep Learning segmentation for Electron Microscopy data
Bio/Organic	Alyssa Williams	3D FIB-SEM Nanotomography Calibration for Dual Beam Microscopes for Life Science Applications

