



2nd Annual (MC)² Users Meeting
November 22nd 2024
NCRC B10, South Atrium

8:30 am: Continental breakfast

8:55 am: Welcome: Bobby Kerns

Session I: TEM / STEM

Session Chair: Tao Ma

9:00 am: Nishkarsh Agarwal, “Unconventional Lattice Reconstruction in Twisted Multilayer CrI₃” (PhD Candidate, MSE, Hovden Group)

9:15 am: Abby Liu, “Probing Topological Surface States and Conduction Through Extended Defects in (Bi_{1-x}Sb_x)₂Te₃” (PhD Candidate, MSE, Goldman Group)

9:30 am: Joshua Hazelnis, “Synthesis of Modulated Fe_xGa_{1-x} and (FeCo)_xGa_{1-x} Structures at Liquid Ga/Water Interfaces” (PhD Candidate, Chemistry, Maldonado Group)

Session II: XPS, 3D X-ray tomography, microscopy

Session Chair: Nancy Muyanja

9:45 am: Benjamin Rorem, “XPS Characterization of Electron-Beam Evaporated Metal Oxide Thin Films for Optical Applications” (PhD Candidate, Applied Physics, Guo Group)

10:00 am: Shanmukha Kiran Aramanda, “Monotectic solidification patterns using Xradia 3D imaging” (Postdoc, MSE, Shahani Group)

10:15 am: Sudipta Mondal, “Plasma Enhanced Atomic Layer Deposition of Indium Chalcogenide Thin Films and their Application in Field Effect Transistor Devices” (PhD Candidate, Chemistry, Bol Group)

10:30 – 11:00 am Break

Session III: TEM / STEM

Session Chair: Kai Sun

11:00 am Justin Hamil, “Machine Learning Applications for Helium Bubble Growth Tracking of In-Situ Annealed 316L-SS” (PhD Candidate, NERS, Field Group)

11:15 am Jason Manassa, “Recovering Stoichiometry via Multi-Modal Fused Electron Tomography” (PhD Candidate, MSE, Hovden Group)

11:30 am Arkajit Ghosh, “Discovery of new Aluminum-Germanium intermetallic phases using transmission electron microscopy” (PhD Candidate, MSE, Misra Group)

11:45 am Dulanjan Harankahage, “Quantum Shell Architecture Improves Multi-exciton Dynamics Vis-NIR” (PhD Candidate, Photochemical Sciences, Zamkov Group, Bowling Green State University)

12:00 – 1 pm: **Lunch**, Users’ Q&A with (MC)² staff

Session IV: FIB/SEM

Session Chair: Allen Hunter

1:00 pm Lucero Lopez, “Electron Backscattered Electron (EBSD) Preparation Best Practices” (PhD Candidate, Mechanical Engineering, Gordon Group)

1:15 pm Panithi Sireesha, “Characterization of AA6082 extruded alloys” (Postdoc, MSE, Allison Group)

1:30 pm Jinhong Min, “Micro-sized particle electrochemistry using microelectrode array and electron beam Pt deposition” (PhD Candidate, MSE, Li Group)

Session V: AFM/SEM/TEM

Session Chair: Haiping Sun

1:45 pm Jeff Raymond, “PF-QNM imaging mode on Bruker AFMs” (Program Manager, NSF COMPASS)

2:00 pm Abha Kumari, “Scanning electron microscope (using TFS Helios 650 Nanolab and TFS Nova 200 Nanolab) to image extracellular vesicles on PDMS and glass” (PhD Candidate, Chemical Engineering, Nagrath Group)

2:15 pm Hailey McKenna, “Indium nanoparticle arrays for plasmonics and droplet epitaxy: formation and transformation” (PhD Candidate, MSE, Goldman Group)

2:30 pm Jaime Perez Coronado, “Developing Banding Microstructures in Directional Solidification of Aluminum Alloys” (PhD Candidate, MSE, Taub Group and Shahani Group)

2:45 – 3:15 pm Break

Session VI: New techniques

Session Chair: Bobby Kerns

3:15 pm Sam Frisone, “Defect Characterization via Cathodoluminescence Spectroscopy and Electron Channeling Contrast Imaging” (PhD Candidate, MSE, Goldman Group)

3:30 pm Yimin Zhou, “Pool boiling heat transfer enhancement using surface microstructures” (PhD Candidate, Mechanical Engineering, Adera Group)

3:45 pm Final Remarks, Q&A

4:00 pm Adjourn