

# APS Workshop 1: Multi-modal X-ray Imaging Using Multiple APS Beamlines: Current Status and Future Upgrades

## Monday, May 2, Morning

- 8:30 – 8:40 Organizers Olga Antipova, Yanqi Luo, and Jorg Maser (Argonne National Laboratory)  
*Welcome*
- 8:40 – 8:55 Olga Antipova (Argonne National Laboratory)  
*Overview of Multimodal X-ray Imaging at APS*
- 8:55 – 9:20 Stuart Stock (Northwestern University)  
*Multimode Synchrotron X-ray Studies of Shark Vertebrae*
- 9:20 – 9:50 Yanqi Luo (Argonne National Laboratory)  
*A Reliable Workflow for Improving Nanoscale X-ray Fluorescence Tomographic Analysis on Nanoparticle Treated HeLa Cells*
- 9:50 – 10:20 Sarah Wiegold (Argonne National Laboratory)  
*Investigating the Effect of Electric Fields and Illumination on the Stability of Lead Halide Perovskites*
- 10:20 – 10:40 Break
- 10:40 – 11:05 Feng Lin (Virginia Tech)  
*The Electrochemical Interface as a Reactive Environment to Resynthesize Electrode Surface Chemistry Using the Dissolution-redeposition Dynamics*
- 11:05 – 11:30 Hao Zheng (Argonne National Laboratory)  
*Hierarchical Quantum Matter: A Glimpse with Bragg's Microscope*
- 11:30 – 11:55 Burak Guzelturk (Argonne National Laboratory)  
*Visualizing the Evolution of Polaronic Lattice Deformations in Semiconductors*
- 12:00 Adjourn Session 1

## Tuesday, May 3, Morning

- 8:55 – 9:00 Yanqi Luo (Argonne National Laboratory)  
*Welcome*
- 9:00 – 9:20 Michael Stuckelberger (Deutsches Elektronen-Synchrotron DESY)  
*(Issues with) Data Stitching and Feature Recognition for the In Situ Synthesis of Nanoparticles in Scanning X-ray Nanoscopes*

- 9:20 – 9:40 Xiaojing Huang (National Synchrotron Light Source II, Brookhaven National Laboratory)  
*Multi-modal Microscopy on Functional Materials at Nanoscale*
- 9:40 – 10:00 Julia Parker (Diamond Light Source)  
*In Situ Studies at Diamond's Hard X-ray Nanoprobe: Multi-modal Mapping of Structural and Chemical Changes*
- 10:00 – 10:15 Break
- 10:15 – 10:45 Matt Newville (GSECARS, University of Chicago)  
*Enabling Micro-scale XRF, XAS, and XRD at GSECARS X-ray Microprobe, 13-ID-E*
- 10:45 – 11:15 Ross Harder (Argonne National Laboratory)  
*Opportunities for Multi-modal Experiments with Coherent Diffraction Imaging*
- 11:15 – 11:45 Jorg Maser (Argonne National Laboratory)  
*The In Situ Nanoprobe for the APS Upgrade*
- 11:45 – 12:00 Wrap-up/Discussion (Jorg Maser)
- 12:00 Adjourn