

## **APS Workshop 9: Accelerated Advances in Energy Storage Systems Enabled by APS and APS-U**

### **Thursday, May 12, Morning**

- 8:45 – 9:00 Shirley Meng (University of Chicago) and Uta Ruett (Argonne National Laboratory)  
*Welcome*
- 9:00 – 9:15 George Crabtree (Argonne National Laboratory)  
*Introduction and Welcome*
- 9:15 – 9:45 Jun Lu (Argonne National Laboratory)  
*Understanding Cobalt Roles towards Developing Co-free Ni-rich Cathodes for Rechargeable Batteries*
- 9:45 – 10:15 Dorthe Ravnsbaek (Aarhus University)  
*Operando X-ray Scattering of Battery Electrodes: Probing Average and Local Atomic Structure*
- 10:15 – 10:30 Break
- 10:30 – 11:00 Hans Georg Steinrueck (University Paderborn)  
*Understanding Ion Transport by Bathing Electrolytes in Coherent X-rays*
- 11:00 – 11:30 Maria Chan (Argonne National Laboratory)  
*Theory and ML-assisted Characterization of Battery Materials*
- 11:30 – 12:00 Mathew Cherukara (Argonne National Laboratory)  
*Artificial Intelligence-enabled X-ray Science at the Advanced Photon Source*
- 12:00 – 1:00 Lunch Break

### **Thursday, May 12, Afternoon**

- 1:00 – 1:30 Hui (Claire) Xiong (Boise State University)  
*Understanding Order/Disorder in Metal Oxide Electrode Materials through Synchrotron Techniques*
- 1:30 – 2:00 Karena Chapman (State University of New York, Stony Brook)  
*Unraveling Multiscale Phenomena: Harnessing Large Volumes of Multi-modal Data*
- 2:00 – 2:30 Tim Fister (Argonne National Laboratory)  
*Imaging Electrode and Electrolyte Heterogeneity with High-energy X-rays*
- 2:30 – 3:00 Feng Lin (Virginia Tech)  
*The Power of Synchrotron Analytical Tools to Guide the Development of Low-cost and Sustainable Batteries*

3:00 – 3:15	Break
3:15 – 3:45	Jordi Cabana (University of Illinois at Chicago) <i>Framing Questions in Battery Research Across Scales of Space, Chemistry, and Time</i>
3:45 – 4:15	Hua Zhou (Argonne National Laboratory) <i>Multimodal Surface X-ray Probes Revealing Fundamental Processes across Electrochemical Interfaces: Now and Post APS-U</i>
4:15 – 4:45	Kamila Wiaderek (Argonne National Laboratory) <i>Current and Future Opportunities for Energy Storage Research at APS</i>
4:45 – 5:00	Wrap-up and Discussion
5:00	Adjourn