

APS Workshop 8: Materials for Neuromorphic Computing: *Operando* Studies to Optimize Performance

Wednesday, May 4, Afternoon

- 1:00 – 1:30 Fangfang Xia (Data Science and Learning Division, Argonne National Laboratory)
Co-design Opportunities in Neuromorphic Computing
- 1:30 – 2:00 Yoeri van de Burgt (Microsystems and Eindhoven Artificial Intelligence Systems Institute, Eindhoven University of Technology)
Organic Neuromorphic Electronics and Biohybrid Systems
- 2:00 – 2:30 Bryan D. Paulsen (Northwestern University)
In Situ and Operando Characterization of Organic Mixed Ionic-electronic Conductors for Neuromorphics, Bioelectronics, and Beyond
- 2:30 – 2:45 Break
- 2:45 – 3:00 Joseph Strzalka (X-ray Science Division, Argonne National Laboratory)
Preview of GIXS and Surface XPCS Capabilities at APS-U Beamline 9-ID
- 3:00 – 3:30 A. Alec Talin (Sandia National Laboratory)
Electrochemical Random Access Memory (ECRAM) for Neuromorphic Computing
- 3:30 – 4:00 Sihong Wang (Pritzker School of Molecular Engineering, University of Chicago and Nanoscience and Technology Division, Argonne National Laboratory)
Skin-like Neuromorphic Devices for Intelligence and Personalized Wearable Technology
- 4:00 - 4:15 Discussion
- 4:15 Adjourn