

APS Workshop 6: X-ray Scattering of Emergent Quantum Phenomenon in 2-D Layered Materials

Wednesday, May 11, Morning

- 9:00 – 9:15 Jong-Woo Kim (Argonne National Laboratory)
Introduction and Welcome
- 9:15 – 9:45 Philip Ryan (Argonne National Laboratory)
Current and Future Developments of Strain Capabilities at APS
- 9:45 – 10:15 Seo Hyeong Chang (Chung-Ang University)
Visualizing Antiferromagnetic Domain Using Full-field Resonant X-ray Magnetic Diffraction Microscopy
- 10:15 – 10:30 Break
- 10:30 – 11:00 Jian Liu (University of Tennessee)
Giant Responses and Emergent Spin Modulation of Antiferromagnetic Square-lattice Iridates
- 11:00 – 11:30 Ambrose Seo (University of Kentucky)
Emergent Magnetic Order in $Sr_2IrO_4/Ca_3Ru_2O_7$ Heterostructures
- 11:30 – 12:00 Wrap-up and Discussion
- 12:00 – 1:00 Lunch Break

Wednesday, May 11, Afternoon

- 1:00 – 1:30 Connor Occhialini (Massachusetts Institute of Technology)
Spontaneous Orbital Anisotropy in the Nematic State of FeSe Probed by Elasto X-ray Linear Dichroism
- 1:30 – 2:00 Min Gyu Kim (University of Wisconsin, Milwaukee)
Real-space Observation of Antiferromagnetic Domains
- 2:00 – 2:30 Riccardo Comin (Massachusetts Institute of Technology)
RIXS for Quantum Materials: From Bulk to Monolayer
- 2:30 – 3:00 Alberto De la Torre Duran (Brown University)
Cooling Rate Dependence of the Charge Density Wave Order in $1T-TaS_2$
- 3:00 – 3:15 Break
- 3:15 – 3:45 Anisha Singh (Stanford University)
Tuning Charge Density Wave Order in RTe_3 with Uniaxial Strain

- 3:45 – 4:15 Shane Lindemann (University of Wisconsin, Madison)
Assembled Functional Oxide Membrane Heterostructures
- 4:15 – 5:00 Srinivasa Rao Singamaneni (University of Texas at El Paso)
Tuning the Magnetic Properties of Quasi-2D Layered van der Waals Crystals
- 5:00 – 5:10 Wrap-up and Discussion
- 5:10 Adjourn