

Dr. Jessica McChesney



Jessica McChesney received her B.S. from West Virginia University (2000) and her Ph.D. from the University of Wisconsin, Madison (2004) where she investigated the physical and electronic structure of self-assembled nanowires on Si(111) using angle resolved photoemission (ARPES). During her post-doctoral experience at the Advanced Light Source, Lawrence Berkeley National Lab, she continued her interest in using ARPES to investigate electron confinement and many-body physics, including chemically doped graphene. In 2011 she joined the Advanced Photon Source, Argonne National Laboratory as a beamline scientist to build the intermediate-energy (250-2500 eV) x-ray beamline, which utilizes resonant soft x-ray scattering (RSXS) and ARPES measurements to probe the electronic properties of materials exhibiting collective phenomena. At the APS her research continues to focus on using x-ray techniques to study the electronic properties of quantum transport materials. She is particularly interested in systems that are relevant to nanoelectronics and energy storage needs, like topological insulators, complex oxides, and low-dimensional systems.