

# NSLS-II meV-IXS Program Overview

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The meV-IXS program at NSLS-II is served by beamline 10-ID dedicated for studies of atomic dynamics in materials systems of both applied and fundamental interest. The key instrument is a novel spectrometer with analyzer optics based on the combination of post-sample collimation and highly dispersive flat crystal optics that produces  $\sim$ meV energy resolution at a medium energy of 9.13 keV with sharp tails and high momentum resolution. It offers unique strengths on soft materials with mesoscopic heterogeneity and complexity. Furthermore, the medium operation energy intrinsically provides enhanced surface sensitivity that is most suitable for systems of reduced dimensionalities (e.g., phonons on surfaces of single crystals, thin films, confined liquids, and HP DAC samples). In this overview, the current performance of the spectrometer will be presented and plan for future upgrades briefly discussed.