

Instrumentation and applications of simultaneous SAXS/WAXS at the LiX beamline

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At the Life Science X-ray Scattering (LiX) beamline at NSLS2, we have developed instrumentation to collect scattering data that covers an extended range of scattering vectors (q). This is accomplished using a custom C-shaped wide-angle detector along side the small-angle detector, providing a combined q -range of ~ 0.006 - 3.2 \AA^{-1} in routine data collection, with reasonable coverage of azimuthal angles. I will describe the technical details in data processing to produce the combined SAXS/WAXS data. I will then discuss applications of the wide-angle data in user research, for both solution scattering and characterization of structures in biological tissues.