

Inelastic X-Ray Scattering Studies for Soft Matter and Bioinorganic Chemistry at the APS

E. E. Alp, A. Alatas, J. Zhao, M. Hu, T. S. Toellner, A. Said, and B. Leu
Advanced Photon Source, Argonne National Laboratory
Argonne, IL

Applications of high-resolution inelastic x-ray scattering techniques to study collective and localized excitations in soft matter with biological relevance have gained significant interest in the last decade. Two beamlines at the APS, 3-ID and 30-ID have some unique and dedicated capabilities: two spectrometers (HERIX-3 and HERIX-30) with an overall resolution of 2.2 and 1.5 meV are combined with sub-meV nuclear resonant scattering studies. Recent research results will be presented.

Work performed in collaboration with T. Sage (Northeastern U), S. Cramer (UC Davis), E. Solomon (Stanford), R. Scheidt (Notre Dame), N. Lehnert (Michigan) and S. H. Chen (MIT), and their collaborators.

Use of the APS is supported by DOE under contract No: DE-AC02-06CH11357.