

Structural Studies on Soft Matter Self-Assembly with Small-Angle X-ray Scattering

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Self-assembling is a major method to generate nanoscale soft matters with greater structural and functional complexity, aiming for a variety of applications. Accurate and detailed structure information of these self-assemblies is crucial to understand and tune the property and fulfill the desired application. Synchrotron based X-ray scattering measures a wide structural length covering from a few Angstroms to a few hundred nanometers, and has become a very powerful structural tool in nanomaterial study. In the presentation, structural studies with small angle x-ray scattering will be discussed on a few peptide-based and other organic motif based self-assemblies. The setup and capability for such study at Beamline 12-ID-B of Advanced Photon Source will also be presented.