

APS Training #10: Data Analysis School on X-ray Scattering from Liquid Interfaces

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Synchrotron x-ray scattering is the most powerful probe of the near-atomic-level structure at liquid-vapor and liquid-liquid interfaces. Over the past 20 years, x-ray scattering from liquid interfaces has led to many key discoveries in physical, chemical, biological, and technological systems. However, the complex data analysis combined with the lack of a standard software package has prevented its expansion into more general scientific communities. Therefore, we are organizing this workshop with an emphasis on using NSF's ChemMatCARS data analysis package to analyze synchrotron x-ray scattering data from liquid surfaces and interfaces.

This school is intended primarily for graduate students, postdoctoral researchers, and young scientists. The enrollment is limited with priority given to applicants who have prior experience in the study of liquid interfaces and currently use or plan to use liquid interface scattering in their research. Prior to attending the school, participants are required to install and familiarize themselves with the data analysis software developed by NSF's ChemMatCARS. We will provide a combination of interactive lectures and student activities. Topics include the theory underlying both measurement techniques and data analysis, application of analysis techniques to real data, and experimental methodology.