

A New Initiative for Undergraduate Students to Learn Advanced Scattering Techniques

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Abstract:

Since the discovery of x-rays by Röntgen, x-ray scattering methods have been at the forefront of materials research. Over the last few decades, there have been tremendous advances in scattering science and instrumentation, in particular the development of third-generation synchrotron light sources and powerful neutron sources. In fact, more than 20 Nobel Prizes in physics have been awarded for x-ray scattering studies alone. We would like to create a new website addressing the capabilities of advanced scattering methods and describing the information one can get from a variety of scattering techniques. This website will provide information about the limitations of x-ray over neutron scattering techniques and vice versa. Also, we would like to provide undergraduate students with the opportunity to gain hands-on experience with an advanced dynamic light scattering instrument to study molecular dynamics in liquids.