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Rediscovery of lost art in Reflectometry - using Maximum Entropy to study 'diffuse' systems

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Many innovative data analysis approaches have been developed since the inception of the reflectometry technique. Unfortunately many of them have fallen out of active use due to the lack of software tools implementing those approaches.
In this talk we'll explore some historical approaches used for the freeform modelling of 'diffuse' (continuously varying) scattering length density profiles, including Cubic-B-Splines and Maximum Entropy. We'll then explain why we've resurrected them, how they're particularly useful for modelling polymer brush systems, and their general applicability across a wide range of 'diffuse' systems where the structure may not be known a-priori.

Topics

Neutron Instruments and Techniques

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