Abstract Submitted
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Deuteration and neutron scattering: a powerful pair in polymer characterizations[1] KUNLUN HONG, Oak Ridge National Lab — The complete characterization of a polymeric material in solution, as well as in bulk or thin films, requires an array of analytical techniques. Scattering techniques, including light, neutrons, and X-Rays, have proven to be essential analytical tools in characterizing polymers because they provide a non-invasive probe of structure, interactions, and dynamics of polymers over a wide range of length and timescales. The basic scattering techniques are well-established, and there are numerous reports about scattering in polymers. Here we show the use of neutron scattering techniques coupled with precise synthesis, especially with selective deuteration, to understand the structures of poly(3-alkylthiophene) derivatives.

[1]This research was conducted at the Center for Nanophase Materials Sciences, which is a DOE Office of Science User Facility.

Kunlun Hong
Oak Ridge National Lab

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