

Abstract Submitted  
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**Organic semiconductor material structure measurement by Polarized Resonant Soft X-ray Scattering** DEAN DELONGCHAMP, NIST - Natl Inst of Stds Tech , BRIAN COLLINS, Washington State University, ELIOT GANN, DANIEL FISCHER, NIST - Natl Inst of Stds Tech — The quest for structure-property relationships in organic semiconductors has driven significant advances in soft matter characterization techniques over the past decade. Despite this progress, surprisingly little consensus has been reached on what aspects of organic semiconductor film structure affect electronic properties. Although order and orientation must matter, at what length scales are they relevant? A molecular-scale picture – the most difficult to obtain, particular in soft materials - may ultimately be required. I will describe our approach to resonant soft X-ray scattering, which combines principles of spectroscopy, small-angle scattering, real-space imaging, and molecular simulation to produce a molecular scale structure measurement for soft materials and complex fluids.

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