

Abstract Submitted  
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**Organic Molecules and Network Polymers of Intrinsic Microporosity: Structural Characterization via X-ray Scattering and Simulations**<sup>1</sup> AMANDA G. MCDERMOTT, LAUREN J. ABBOTT, Penn State University, ANNALaura DEL REGNO, University of Manchester, KADHUM J. MSAYIB, BADER S. GHANEM, RUPERT TAYLOR, MARIOLINO CARTA, NEIL B. MCKEOWN, Cardiff University, PETER M. BUDD, FLOR R. SIPERSTEIN, University of Manchester, CORAY M. COLINA, JAMES RUNT, Penn State University — Like polymers of intrinsic microporosity (PIMs), organic molecules of intrinsic microporosity (OMIMs) are glassy solids featuring a large concentration of pores smaller than 2 nm and large internal surface area as measured by gas sorption experiments. OMIMs are oligomers designed to fill space inefficiently, consisting of several rigid segments joined at one vertex to produce concave faces. Both X-ray scattering patterns and simulations provide insight into the packing geometry and short-range order of these molecules. We also discuss the interpretation of scattering patterns from two- and three-dimensional network PIMs.

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