

Abstract Submitted  
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**Ion Conduction in Polymerized Ionic Liquid Thin Films** JAE-HONG CHOI, Department of Materials Science and Engineering, University of Pennsylvania, YUESHENG YE, Department of Chemical and Biological Engineering, Drexel University, MATTHEW D. GREEN, Department of Chemical Engineering, Macromolecules and Interfaces Institute, Virginia Tech, YOSSEF A. ELABD, Department of Chemical and Biological Engineering, Drexel University, TIMOTHY E. LONG, Department of Chemistry, Macromolecules and Interfaces Institute, Virginia Tech, KAREN I. WINEY, Department of Materials Science and Engineering, University of Pennsylvania — The ion conductivity in thin films is typically assumed to be isotropic. We have developed methods to measure in-plane and through-plane ionic conductivity in thin homopolymer and block copolymers. Specifically, we are studying the conductivity in imidazolium-containing polymerized ionic liquids as a function of film thickness. These data will be compared to conductivity measurements in a triblock copolymer with a polymerized ionic liquid midblock.

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