

Abstract Submitted
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Phase Behavior and Electrochemical Performance of Solid-State Magnesium Ion Electrolytes from Diblock Copolymers¹ JACOB THELEN, University of California Berkeley; Lawrence Berkeley National Laboratory, SEB-NEM INCEOGLU, Lawrence Berkeley National Laboratory, NITASH BALSARA, University of California Berkeley; Lawrence Berkeley National Laboratory — Batteries utilizing magnesium metal anodes are considered a promising candidate for the next generation of energy storage with performance beyond lithium ion technology. The development of a safe, stable magnesium ion-conducting electrolyte represents one of the major barriers to the advancement of magnesium battery technology. One approach to increasing the safety and stability of electrolytes is to replace flammable organic solvents with more stable polymeric species. We report on the phase behavior and electrochemical performance of solid-state magnesium ion electrolytes derived from diblock copolymers.

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