

Abstract

American Physical Society Meeting
Minneapolis MN, 20-24 March, 2000

Sorting Category 4.1

Poster

Investigation of the Effect of an Alkali Salt on the Conformation of Poly(ethylene oxide) in the Melt by Small Angle Neutron Scattering and Molecular Dynamics Simulation*

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Recent molecular dynamics simulations of poly(ethylene oxide) (PEO)/LiI melts predict a decrease in the radius of gyration of the PEO chains due to changes in conformation as a result of the complexation of Li^+ with the ether oxygens. Small angle neutron scattering (SANS) measurements from PEO and PEO/LiI melts at 361K with an ether oxygen atom to LiI ratio of 15:1 are shown to verify the prediction. The characteristic ratio for the chains in a pure PEO melt was also found to be in accord with updated calculations and a previous SANS study.

* Sponsored by the Division Materials Sciences, Office of Basic Energy Sciences, U. S. Department of Energy, under contract DE-AC05-96OR22464 with Oak Ridge National Laboratory, and by the National Science Foundation, Division of Materials Research, through NSF CAREER award DMR 96-24475, and by gift from the Eveready Battery Company..

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