

Abstract Submitted  
for the MAR17 Meeting of  
The American Physical Society

**Polymer Dynamics of Grafted Nanoparticle Composites.** STEVEN LEE, WEI PENG, RAHMI OZISIK, Department of Materials Science and Engineering; Rensselaer Polytechnic Institute — The viscoelastic properties of nanoparticles containing two types of grafted chain components in linear polymer composites were investigated via Molecular Dynamics simulations. Two component grafts were simulated at different graft densities and molecular weights using bead-spring model. Static and dynamic properties of graft and matrix chains were analyzed as a function of deformation parameters. Results are compared to experimental observations obtained from literature.

Steven Lee  
Rensselaer Polytechnic Institute

Date submitted: 20 Nov 2016

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