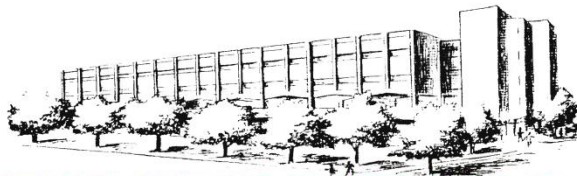


UNIVERSITY OF CONNECTICUT



INSTITUTE OF MATERIALS SCIENCE

POLYMER PROGRAM SEMINAR

“Polymer Nanocomposites: Bimodal and Block Copolymer Grafted Brushes to Control Functionality”

**Prof. Linda Schadler
Rensselaer Polytechnic Institute**

**Friday, April 10, 2015
11:00 AM, IMS Room 20**

Polymer nanocomposites exhibit unique combinations of properties not achievable with traditional fillers, and can lead to significant changes in properties even at small loadings. A key challenge in both the commercialization of these materials and the optimization of multifunctionality is control over the filler / matrix interface. Through our NSF funded Nanoscale Science and Engineering Center, we have developed grafted brush modified particles that lead to tailored dispersion (including the formation of strings and sheets of particles) through control over brush graft density and molecular weight. Lately, we have used this understanding to develop optimized materials for use in motor insulation, higher efficiency light emitting diodes, and field grading materials. This talk will focus on: our ability to predict the dispersion in ligand modified nanoparticles, our progress creating high index of refraction, transparent, and phosphorescent materials for use in light emitting diodes, and our progress in creating new motor insulation materials with high ductility and high breakdown strength.

**For further information, please contact YH Chudy ychudy@ims.uconn.edu*

Polymer Program, Institute of Materials Science, University of Connecticut, Storrs, CT 06269-3136 www.polymer.ims.uconn.edu

