



Polymers under Multiple Constraints

Polymer- & Soft-Matter-Seminar

Special Event

Dr. Clemens Liedel

Cornell University, Department of Materials Science and Engineering, Ithaca, USA

“Influences on the Structure Formation in Electro-Responsive and Redox-Active Polymers”

While block copolymers can self-assemble into ordered structures with dimensions of up to a few micrometers, grains with different orientation prevent macroscopic ordering. Larger patterns are only accessible using external directing forces, for example patterned surfaces or electric fields. Additives like solvents or nanoparticles further influence the kinetics of structure formation and the kind and order of the formed morphologies. For processing polymeric materials or even in the final applications, however, additives and solvents often play a crucial role. Polymers with redox-active side groups, for example, may be used in energy applications but need to be blended with additives and other polymers to influence their conductivity and solubility. By using block copolymers, some of these limitations may be circumvented, and patterning of redox-active groups is possible. This presentation will describe influences of solvents and nanoparticles on the structure formation of conventional and redox-active block copolymers.

Friday
6th February
2015

at: 9.15 am

VSP1 1.27,
Von-
Seckendorff-
Platz 1,
06120 Halle