

Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

Miscibility studies on blends containing telechelic supramolecular polymers MICHELLE WRUE, MITCHELL ANTHAMATTEN, University of Rochester — The incorporation of associating end groups influences the phase behavior of polymer blends. We are studying the effects of the incorporation of strong, site-selective, hydrogen-bonding groups in various polymer blend systems. We have synthesized several telechelic ureidopyrimidone (UPy) functionalized polymers. These self-complimentary functional groups have the ability to form four hydrogen bonds. When these groups are incorporated into a polymer blend, the miscibility is altered. Laser light scattering has been employed to study the phase behavior of these systems. Data from systems in which only one polymer was functionalized indicate a reduced miscibility when compared with the unfunctionalized parent blend. We are also investigating the effect of functionalizing both polymers of the blend with UPy end groups. We predict enhanced miscibility in such systems.

Michelle Wrue
University of Rochester

Date submitted: 14 Nov 2006

Electronic form version 1.4