Colloidal properties of block copolymers based on 2-(acetoacetoxy)ethyl methacrylate: Organic–inorganic hybrid materials

POLY 572

Theodora Krasia and **Helmut Schlaad**. Colloid Chemistry, Max Planck Institute of Colloids and Interfaces, Am Mühlenberg 1, Golm, 14476, Germany

This paper describes colloidal properties of a poly(*n*-butyl methacrylate)$_{342}$-block-poly[2-(acetoacetoxy)ethyl methacrylate]$_{39}$ (PBMA-*b*-PAEMA) copolymer in dilute cyclohexane solution. Spherical micelles of this block copolymer consist of a PAEMA core and a PBMA solvating corona (NMR and Light Scattering, DLS and SLS). The PAEMA core of the micelles could be loaded with metal ion salts (Fe^{3+}, Co^{2+}, Pd^{2+}, etc.) (UV/visible spectroscopy and Analytical Ultracentrifugation, AUC) to yield stable organic-inorganic colloidal dispersions. These dispersions were used for the fabrication of ordered arrays of metal ions on a solid mica substrate (Atomic Force Microscopy, AFM).

Metal-Containing and Metallo-Supramolecular Polymers and Materials
1:30 PM-5:35 PM, Wednesday, March 31, 2004 Coast -- Plaza A, Oral

Division of Polymer Chemistry

The 227th ACS National Meeting, Anaheim, CA, March 28-April 1, 2004