

587d Polymer-Surfactant Complexes: Structure Affected by Solvent Properties

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Polymer-surfactant complexes are widely used in aqueous media to provide structure, solubilization domains, and/or colloidal stability. Underlying these functions are inter- and intra-molecular interactions which depend on (i) the nature of the polymers, (ii) the type of surfactants, (iii) solution conditions (e.g., salinity, pH), and (iv) external stimuli (e.g., temperature, shear). The solution behavior and interactions of associating polymers with surfactants can be profoundly affected by the presence in water of polar organic solvents (cosolvents) which are ubiquitous in coating and pharmaceutical formulations. This presentation will discuss cosolvent effects in terms of changes in the polymer conformation and the surfactant self-assembly obtained from small-angle neutron scattering measurements and complementary techniques.