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POLYAMPHI

## MAKROMOLEKULARES KOLLOQUIUM

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Thema:

### **Micellar Interpolyelectrolyte Complexes of Ionic Amphiphilic Diblock Copolymers: Formation and Properties**

Zeit: Mittwoch, 08.12.2004, 17.00 Uhr s.t.

Ort: S 84, Makromolekulare Chemie (NW II)

#### **Abstract:**

The interaction of micelles generated in aqueous solutions of polyisobutylene-block-poly(methacrylic acid) diblock copolymers with linear cationic polyelectrolytes will be considered. This interaction was found to result in the formation of novel water-soluble interpolyelectrolyte complexes. Each particle of the formed interpolyelectrolyte complexes have been assumed to represent a peculiar “onion-like” (multilayer) micelle containing (i) a polyisobutylene core surrounded by (ii) a shell assembled from coupled fragments of the oppositely charged polymeric components and (iii) ionic corona formed by fragments of poly(methacrylic acid) blocks not involved in the complexation with cationic macromolecules. The effects of ionic strength and pH of the surrounding medium on the properties (colloidal stability in aqueous solutions and stability with respect to dissociation to original polymeric components) of such macromolecular “core-shell-corona” architectures will be discussed and compared with those typical for common water-soluble interpolyelectrolyte complexes resulting from the interaction of the corresponding oppositely charged linear homopolyelectrolytes.