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论文

含环糊精的温度敏感性聚合物的合成及自组装

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摘要:

合成了侧基含环糊精的聚异丙基丙烯酰胺(PnipamCD), 该聚合物在水溶液中具有较高的最低临界溶解温度(LCST). 快速升温到溶液的LCST以上可形成球形胶束, 慢速升温到LCST以上可形成空心囊泡. 在PNIPAM的选择性溶剂中, PnipamCD形成棒状组装体.

关键词: 环糊精聚合物; 温度敏感性; 自组装

Synthesis and Self-assembly of Thermo-sensitive β-Cyclodextrin Containing Copolymers

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Abstract:

A novel thermo-sensitive β-cyclodextrin pendent poly(N-isopropylacrylamide)(PnipamCD) was prepared, which had a higher lower critical solution temperature(LCST) than that of pure poly(N-isopropylacrylamide)(PNIPAM). In its aqueous solution, spherical micelles were obtained as temperature increased rapidly while hollow vesicles were obtained as temperature increased slowly. In addition, rod-like aggregates were achieved in acetone, a selective solvent of PNIPAM.

Keywords: β-Cyclodextrin-containing polymer; Thermo-sensitivity; Self-assembly

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