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研究简报

# 微波法制备聚(苯乙烯-*N*-异丙基丙烯酰胺)热敏性微球

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摘要

关键词 微波辐射 微球 无皂乳液聚合 *N*-异丙基丙烯酰胺

分类号

# THERMOSENSITIVE P(St-*co*-NIPAM) PARTICLES PREPARED BY EMULSIFIER-FREE EMULSION POLYMERIZATION WITH MICROWAVE IRRADIATION

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**Abstract** The emulsifier-free emulsion polymerization of styrene and *N*-isopropylacrylamide(NIPAM) was successfully carried out with microwave irradiation,and the thermosensitive particles with diameters in the range 130～150 nm were prepared. The effect of temperature on the hydrodynamie diameter of particles was characterized by PCS the diameter of particles was decreased as the temperature increased from 25℃ to 40℃. and the particles showed thermo-reversible phase transition phenomenon at 32℃. The morphology,size and size distribution of the particles were characterized by SEM and PCS. The ordered two-dimensional films were prepared by using the capillary force method on the clean glassware wafers,and the molpbology of two-dimensional films was studied by AFM.

**Key words** Microwave irradiation Particle Emulsifier-Free emulsion polymerization *N*-isopropylacrylamide

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