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苯乙烯在MCM-41介孔材料中聚合的研究

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摘要 The polymerization of styrene in the media of MCM-41 is carried out by means of host-guest polymerization of styrene in MCM-41 mesoporous material with the aim to investigate the effects of interface and confinement of MCM-41 on host-guest interactions. Detailed physical properties of the mesoporous MCM-41 material containing polystyrene is characterized by XRD(X-ray diffraction), FT-IR(Fourier transform infrared), TGA(thermal gravimetric analysis), and nitrogen adsorption-desorption isotherms. We also find a great increase in the glass transition temperature of guest polystyrene influenced by the confined geometry of the host by differential scanning calorimetry (DSC).

关键词 [MCM-41](#) [host-guest polymerization](#) [polystyrene](#) [glass transition temperature](#)

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Studies on the Polymerization of Styrene in the MCM-41 Phase

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Abstract The polymerization of styrene in the media of MCM-41 is carried out by means of host-guest polymerization of styrene in MCM-41 mesoporous material with the aim to investigate the effects of interface and confinement of MCM-41 on host-guest interactions. Detailed physical properties of the mesoporous MCM-41 material containing polystyrene is characterized by XRD(X-ray diffraction), FT-IR(Fourier transform infrared), TGA(thermal gravimetric analysis), and nitrogen adsorption-desorption isotherms. We also find a great increase in the glass transition temperature of guest polystyrene influenced by the confined geometry of the host by differential scanning calorimetry (DSC).

Key words [MCM-41](#); [host-guest polymerization](#); [polystyrene](#); [glass transition temperature](#)

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