

عنوان مقاله:

Preparation of Microencapsulated Paraffin Wax by in situ Polymerization

محل انتشار:

دومین کنفرانس بین المللی یافته های نوین پژوهشی در شیمی و مهندسی شیمی (سال: 1395)

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خلاصه مقاله:

The microencapsulation of phase change material (Paraffin Wax) by a emulsion polymerization of styrene (St) has been studied. Styrene was used for the shell polymerization. Sodium dodecyl sulfate was used as the emulsifier. The thermal properties, morphology and chemical composition of the microcapsules were characterised by differential scanning calorimetry (DSC), scanning electron microscopy (ESEM) and Fourier transform infrared spectroscopy (FT-IR). The SEM analysis indicated that the microcapsules had general size of about 18 μm and the core material was well encapsulated. Also, the results shows that the microcapsules could be applied for thermal energy storage and heat transfer enhancement.

کلمات کلیدی:

Thermal energy storage, Phase change material, Microencapsulation, Emulsion Polymerization, Paraffin wax

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