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عنوان مقاله:
Fabrication and Properties of Microcapsules and Nanocapsules containing PCM

محل انتشار:
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خلاصه مقاله:
The preparation of micro and nano capsules of phase change material (PCM) by an electrospray methodwas investigated. Encapsulation of n-nonadecane with sodium alginate and chitosan has been carried out by meltcoaxial electrospray. The encapsulated phase change material was characterized using optical microscopy (OM),scanning electron microscopy (SEM), and Fourier transform infrared (FTIR) spectroscopy. The OM image showed thatthe core-shell capsules were successfully produced with a narrow diameter distribution. The SEM photographs showedthat the diameter of microcapsules and nanocapsules were controlled in the range of 20-40 μm and 100-300 nm,respectively by varying the parameters process, such as applied voltage, the needle to collector distance, the needlediameter, and the flow rate ratio. It has been proven that melt coaxial electrospray method is useful to prepare microand nano .capsules of PCM

کلمات کلیدی:
Alginate, Chitosan, Encapsulation, Phase change material , Nonadecane

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