عنوان مقاله:

Optimizing the electrospinning process conditions of produce Sodium Alginate/poly(vinyl alcohol) blend nanofibers

محل انتشار:

دهمین سمینار بین المللی علوم و تکنولوژی پلیمر (سال: 1391)

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خلاصه مقاله:

Electrospinning technique is a simple and a low cost method for making nanofibers with ultra-small diameters. Because of their high specific surface area and porous structure, the electrospunnonwoven fabrics consisting of ultrafine fibers find applications in various areas such asbiomedical engineering, filtration, breathablebarrier and sensors [1-4]. Alginate has some desirable properties such as non-toxicity, biocompatibility, biodegradability, hydrophilic property, andrelatively low cost. Also alginate has high water absorbency and it can absorb water up to 200-300 times of its weight. It is an important biopolymer which is used in biomedical application such as wound dressing, tissue engineering scaffold, drug deliverycarrier, etc [5,6]. In this paper production an optimization of nanofiber webs from Sodium alginate and poly(vinyl alcohol) is reported. Variousparameters such as blending ratio, tip-to-collector distance (TCD), voltage and flow rate which affects the diameter of the fibers have been investigated. The optimum condition for producing fibers with desirable diameter and morphology have been obtained

کلمات کلیدی: