

Synthesis and Characterization of Polycaprolactone/Cellulose Acetate by Electrospinning for Wound Dressing Applications

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ABSTRACT

Cellulose as a renewable material has received enormous interest in recent time with an effort to minimize the environmental load from mining earthborn functional materials as well as reducing carbon footprint. This work demonstrates that high quality cellulose could be produced from empty fruit bunch of oil palm plantation and could be developed into nanofibers. A small amount of poly(ϵ -caprolactone) (PCL) was added to the EFB driven cellulose acetate (CA) to develop them as nanofibers by electrospinning technique; this composition was further enhanced by adding curcumin, which is a natural anti-inflammatory, and compared their morphology, structure, mechanical and surface properties.

KEYWORDS: Electrospinning, cellulose acetate, bio-scaffolds nanofibers

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