

عنوان مقاله:

Novel injectable and biocompatible supramolecular hydrogels engineered by highly-charged natural polysaccharides

محل انتشار:

دوازدهمین سمینار بین المللی علوم و تکنولوژی پلیمر (سال: 1395)

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خلاصه مقاله:

Hydrogels are water-swallowable polymers that have been cross-linked such that they absorb large quantities of water but are not water-soluble. The network in hydrogels may be formed by covalent crosslinks, supramolecular physical crosslinks, or both. Physical hydrogels that have been of particular interest for us. This research reports a new kind of hydrogels based on polysaccharides. In This study we approach to the one kind of novel physical hydrogels prepared by sulfated sodium alginate and acidified chitosan under mild conditions and in the absence of organic solvents and toxically crosslinking agents. The hydrogels showed outstanding self-healing capability and good cytocompatibility. In addition, the hydrogel exhibits good cytocompatibility as demonstrated by three dimensional cell encapsulation. With these superior properties, the developed hydrogel holds great potential for applications in various biomedical fields, e.g., as cell or drug delivery carriers.

کلمات کلیدی:

hydrogel, self- healing, alginate, drug delivery, tissue engineering

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