

عنوان مقاله:

(Synthesis and swelling behavior of superabsorbent composite hydrogels in present of nanoclay (Na-montmorillonite

محل انتشار:

هفتمین کنگرہ ملی مہندسی شیمی (سال: 1390)

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نویسندگان: g Bagherimarandi - *Department of Chemistry, Karaj Branch, Islamic Azad University, Karaj, Iran*

g beheshtirouzbahani - Department of Chemistry, Karaj Branch, Islamic Azad University, Karaj, Iran

I mahmoodpoorsharabian - Department of Chemistry, Karaj Branch, Islamic Azad University, Karaj, Iran

خلاصه مقاله:

Superabsorbent polymers are three dimensional hydrophilic networks that can absorb and preserve large amount of water and physiologic solutions. In addition, a good superabsorbent must have enough strength also. In this research, composite superabsorbent hydrogels based on gelatin were prepared by grafting acrylamide & acrylic acid as monomers in the presence of methylene bisacrylamid(MBA) as crosslinking agent and amunium persulfate(APS) as an initiator, also nanoclay(Na-montmorillonite) substances were used Under the optimized conditions the maximum capacity of swelling in de-ionized water was found to be 380 g/g. Most hydrogels are sensitive to acidic and basic pHs, but these composites don't show remarkable change in wide range of pH, the swelling and deswelling rate of them were also determined in H20 and salt solution. Chemical structure of the hydrogel was characterized by means .(of (FTIR) spectroscopy, and morphology of the sample was examined by (SEM

کلمات کلیدی: hydrogel,gelatin,composite,acrylic acid ,acrylamid

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