

عنوان مقاله:

The Effect of Surface Modification on Stability of Bentonite Nanoclay particles in polyelectrolyte suspension

محل انتشار:

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خلاصه مقاله:

To investigat the stability of nanoclay particles in colloidal suspensions in high salt concentration based oil formation water TDS~130/000-260/000mg/lit is the main goal of this paper these colloids are sued in oil industries such as drilling fluids , water treatment and oil production. in aqueous suspension most clay particles aggregate and specially settled by increasing salt concentrations. the surface modification of Ca-bentonite nanoclays with water soluble copolymers are used to stabilize these polyelectrolyte suspensions. grafting of functional copolymers to the surface of the nanoclays can improve the interaction and balabce of attractive and repulsive forces between colloidal particles. in this study three types of copolymer are used for grafting and coating onto the nanoclay surfaces. the stability of modified nanoclays in polyelectrolyte suspension containing high salt concentration was determined by UV -photo spectroscopy. amount of grafting percentage was measured by tehrmal gravimetric analyzer and FTIR. maximum grafting ratio and better stability of colloids are obtained by grafting of viny polystyrene copolymer onto nanoclay .surface

کلمات کلیدی:

.surface modification of nanoclay - copolymer - stability , polyelectrolyte suspension , grafting

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