

عنوان مقاله:

Experimental investigation of surfactant effect on synthesis of polystyrene-Ag nanocomposite in microemulsion systems

محل انتشار:

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خلاصه مقاله:

Polymer-Noble metallic nanocomposites are of particular interest today due to their applications because of their versatility, and tunable characteristics including physical, chemical, biological and mechanical properties. In this research work polystyrene-silver nanocomposite has been produced using polymerization of w/o microemulsion system with various surfactants. In order to formation of microemulsion systems, AOT as anionic surfactant or Tween-80 as nonionic surfactant, isobuthanol as co-surfactant and styrene monomer as oil phase were used. The microemulsion system was polymerized by benzoyl peroxide initiator following formation of Ag nanoparticles in the fluid medium. The UV-vis absorption analysis has been used to trace the growth process in the microemulsion system. Scanning electron microscopy (SEM) was used to determine the morphology and particle size of the Ag particles in the synthesized nanocomposites.

کلمات کلیدی:

;microemulsion; surfactant; nanocomposite; nanoparticle

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