

عنوان مقاله:

Synthesis Of γ -Fe₂O₃ Nanoparticles Capped With Oleic Acid And Their Magnetic Characterization

محل انتشار:

دومین سمپوزیوم بین المللی سرطان نسترن (سال: 1395)

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خلاصه مقاله:

In this article, γ -Fe₂O₃ magnetic nanoparticles (maghemite) were prepared by a coprecipitation approach. Oleic acid, a monounsaturated fatty acid were used as the capping and stabilizing agent during the synthesis of the magnetic nanoparticles. The nanoparticles were characterized using powder x-ray diffraction (PXRD) measurement, field emission scanning electron microscopy (FESEM), fourier transform infrared spectra (FTIR), and vibrating sample magnetometer (VSM). The crystalline size of γ -Fe₂O₃ nanoparticles was achieved in the range between 16.2 and 26.8 nm. The FE-SEM demonstrated the regular spheres of γ -Fe₂O₃ nanoparticles. The obtained maghemite nanoparticles were coated with oleic acid demonstrating by FTIR experiment. The resulted nanoparticles showed superparamagnetic properties (~52 emu/g) even after coating with oleic acid which make them appropriate candidates for theranostic application in future studies.

کلمات کلیدی:

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