

عنوان مقاله:

Fabrication and magnetic properties of Polyimide/Nickel Oxide nanocomposite

محل انتشار:

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خلاصه مقاله:

Polyimide/Nickel oxide (polyimide/NiO) nanocomposite was successfully synthesized by sol gel technique, using Pyromellitic dianhydride (PMDA), ۴,۴-oxydianiline (ODA) and N,N-dimethylacetamide (DMAC) and ۱۰ wt% Nickel titanate nanopowders (NPs). Fourier transform infrared spectrometry (FTIR), X-ray diffraction (XRD), scanning electron microscopy (SEM), and vibrating sample magnetometer (VSM) were used to characterize the structure and properties of the obtained nanocomposite. The results indicated that the average size of polyimide/NiO nanocomposite were estimated ۶۵nm. Saturation magnetizations results indicate that by adding of NiO nanoparticles in polyimide matrix, magnetization decreases. The superparamagnetic behavior for NiO nanoparticles and polyimide/NiO nanocomposite of ۱۰ wt% is reported whereas Polyimide has diamagnetic behavior

کلمات کلیدی:

Nanocomposite, Polyimide, Polymer, XRD, SEM, VSM

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