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Synthesis and Characterization of Polyaniline-Ferric Ammonium Sulphate Nanocomposites

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Abstract: Polyaniline based nanocomposites containing Ferric ammonium sulphate nanocomposites were synthesized by using potassium persulphate as oxidizing agent for polymerization. Polyaniline-Ferric ammonium sulphate nanocomposites were synthesized using 0.1M aniline dissolved in 50mL 1M HCl, 0.01M ferric ammonium sulphate and 0.25M potassium persulphate as oxidizing agent. The prepared samples were characterized using some techniques such Fourier transform infrared (FTIR), X-ray diffraction (XRD), scanning electron microscopy (SEM). X-ray diffraction (XRD) and Fourier transform infrared (FT-IR) spectra studies indicated the presence of Fe-polyaniline bond. XRD spectra indicate the amorphous nature of this nanocomposites.

Keywords: Polyaniline, Ferric ammonium sulphate, Polymerization, aniline hydrochloride.

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