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Synthesis of nanocrystalline nickel ferrite through soft chemistry method: A green chemistry approach using ginger extract

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The nanocrystalline nickel ferrites (NiFe_2O_4) were obtained through soft chemistry method. A green chemistry approach using aqueous extracts of Ginger was employed for the synthesis of nickel ferrite nanoparticles. The prepared nanoparticles were characterized by Thermogravimetry, X-ray diffraction (XRD), Fourier transforms infrared spectroscopy (FTIR) and UV-VIS spectroscopy. Thermal properties, phase identification, structural and optical properties of the obtained nickel ferrites were investigated. The results demonstrated that the use of aqueous ginger extracts in the green chemistry synthesis of NiFe_2O_4 nanoparticles is a promising and eco-friendly alternative. To the best of our knowledge, there are no literature data reported on the synthesis of NiFe_2O_4 using ginger root aqueous extracts.

Topics

[Ferromagnetic materials](#), [Fourier transform spectroscopy](#), [Materials properties](#), [Phase identification](#), [X-ray diffraction](#), [UV-visible spectroscopy](#), [Nanomaterials](#), [Nanoparticle](#), [Chemical engineering](#), [Transition metals](#)

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