

Préparation et caractérisation des nanoparticules de ferrite de nickel dopée au Cérium par la méthode de coprécipitation

A. TALBI, A. SALHI

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Abstract: Nanocrystalline powders of cerium-doped nickel ferrite were synthesised by the coprecipitation method and the effect of the non-magnetic cerium content on the structural and magnetic properties was studied. X-ray diffraction (XRD) was used to determine the structure of NiFe₂O₄ nanoparticles. The surface morphology and chemical composition of the NiFe₂O₄ nanoparticles were obtained by scanning electron microscope analysis. The magnetic properties were studied by Vibrating Sample Magnetometry (VSM). Magnetic hysteresis cycles were measured with a maximum applied magnetic field of ? 1000Oe

Keywords : NiFe₂O₄, cerium, co-precipitation, Magnetic Properties, DRX, SEM, VSM