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Characterization and magnetic study of new oleic acid-coated Gd-Sm-Er-doped Co-Nanoferrite $\text{CoFe}_{1,6}\text{Er}_{0,6}\text{Gd}_{0,6}\text{Sm}_{0,1}\text{O}_4$

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Oleic acid-coated nanoparticles were prepared by coprecipitation method in one step. The cationic distribution among tetrahedral and octahedral sites of Co^{2+} and Fe^{3+} was determined by Rietveld method and the inversion degree represented by concentration of Co^{2+} in tetrahedral site was found to be 0.4. Magnetic characterization at three different temperature revealed the super-paramagnetic behaviour.

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