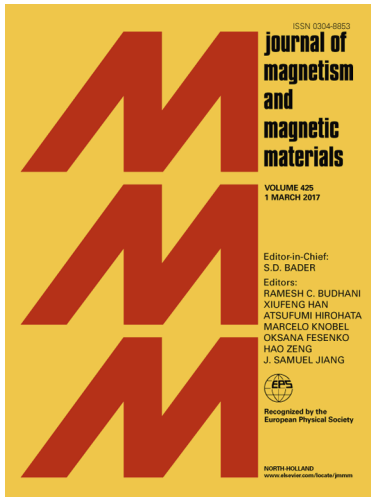

Structural, Morphological and Magnetic Properties of $Sr_{0.3}La_{0.48}Ca_{0.25}n[Fe_{(2-0.4/n)}O_3]Co_{0.4}$ (n= 5.5, 5.6,5.7,5.8, 5.9, 6.0) Hexaferrites Prepared by Facile Ceramic Route Methodology

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Structural, Morphological and Magnetic Properties of $Sr_{0.3}La_{0.48}Ca_{0.25}n[Fe_{(2-0.4/n)}O_3]Co_{0.4}$ (*n*= 5.5, 5.6,5.7,5.8, 5.9, 6.0) Hexaferrites Prepared by Facile Ceramic Route Methodology

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Abstract

In present work, M-type strontium hexaferrite with chemical composition of $Sr_{0.3}La_{0.48}Ca_{0.25}n[Fe_{(2-0.4/n)}O_3]Co_{0.4}$ (n=5.5, 5.6, 5.7, 5.8, 5.9, 6.0) magnetic powder were synthesized by using facile ceramic route methodology. The structural, morphological and magnetic properties of the products were investigated by using X-rays diffraction (XRD), Scanning Electron Microscopy (SEM) and Vibrating Sample Magnetometer (VSM) techniques, respectively.There is a single magnetoplumbite phase in the magnetic powders containing ($5.5 \leq n \leq 5.8$) and ($n \geq 5.9$) magnetic some impurities begin to seem in the structure. The magnets have shaped hexagonal structures. Magnetic properties of the samples were metric by permanent magnetic measuring equipment Vibrating Sample Magnetometer, respectively. We report our investigation of *n*-aggregation iron content on crystalline size characterization and magnetic properties of the specimen. It is originate that the desirable