

## Accepted Manuscript

Structural, Morphological and Magnetic Properties of  $\text{Sr}_{0.3}\text{La}_{0.48}\text{Ca}_{0.25n}[\text{Fe}_{(2-0.4/n)}\text{O}_3]\text{Co}_{0.4}$  ( $n= 5.5, 5.6, 5.7, 5.8, 5.9, 6.0$ ) Hexaferrites Prepared by Facile Ceramic Route Methodology

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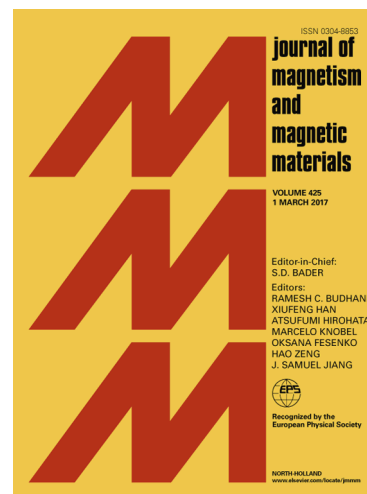
PII: S0304-8853(17)31155-1  
DOI: <https://doi.org/10.1016/j.jmmm.2017.10.051>  
Reference: MAGMA 63265

To appear in: *Journal of Magnetism and Magnetic Materials*

Received Date: 11 April 2017  
Revised Date: 12 October 2017  
Accepted Date: 12 October 2017

Please cite this article as: K.M.U. Rehman, X. Liu, Y. Yang, S. Feng, J. Tang, Z. Ali, Z. Wazir, M.W. Khan, M. Shezad, M.S. Iqbal, C. Zhang, C. Liu, Structural, Morphological and Magnetic Properties of  $\text{Sr}_{0.3}\text{La}_{0.48}\text{Ca}_{0.25n}[\text{Fe}_{(2-0.4/n)}\text{O}_3]\text{Co}_{0.4}$  ( $n= 5.5, 5.6, 5.7, 5.8, 5.9, 6.0$ ) Hexaferrites Prepared by Facile Ceramic Route Methodology, *Journal of Magnetism and Magnetic Materials* (2017), doi: <https://doi.org/10.1016/j.jmmm.2017.10.051>

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**Structural, Morphological and Magnetic Properties of  $\text{Sr}_{0.3}\text{La}_{0.48}\text{Ca}_{0.25n}[\text{Fe}_{(2-0.4/n)}\text{O}_3]\text{Co}_{0.4}$** **( $n= 5.5, 5.6, 5.7, 5.8, 5.9, 6.0$ ) Hexaferrites Prepared by Facile Ceramic Route****Methodology**

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**Abstract**

In present work, M-type strontium hexaferrite with chemical composition of  $\text{Sr}_{0.3}\text{La}_{0.48}\text{Ca}_{0.25n}[\text{Fe}_{(2-0.4/n)}\text{O}_3]\text{Co}_{0.4}$  ( $n=5.5, 5.6, 5.7, 5.8, 5.9, 6.0$ ) 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

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