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Program
MÖSSBAUER STUDIES FOR La-Co SUBSTITUTED STRONTIUM FERRITE

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La-Co substituted Sr-ferrite \(((\text{La-Co})_x\text{Sr}_{1-x}\text{Fe}_{12-x}\text{O}_{19})\) \((x = 0.0 \sim 0.4)\) powders synthesized by sol-gel process were investigated magnetic properties. The crystalline structures were characterized by x-ray diffractometer (XRD), and magnetic properties were measured by vibrating sample magnetometer (VSM) and Mössbauer spectrometer. The crystalline structure of \(((\text{La-Co})_x\text{Sr}_{1-x}\text{Fe}_{12-x}\text{O}_{19})\) \((x = 0.0 \sim 0.4)\) was single M-type hexagonal phase. Magnetization under an applied maximum field of 15 kOe was measured 63.9 emu/g for \(x = 0.0\), and decreased gradually with increasing \(x\). Coercivity, \(H_c\) was measured 6,256 Oe for \(x = 0.0\), and then increased up to 7,462 Oe of maximum value for \(x = 0.2\), and decreased over \(x = 0.2\). We studied magnetization and coercivity with La-Co substituted strontium ferrite by Mössbauer spectroscopy. As substituted La-Co ions on the iron site, Mössbauer spectra were shown that the relative intensities of 4f, 12k sites were obviously decreased.

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Oral  Poster  Invited Talk

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