

**EFFECT OF SINTERING DURATION ON MAGNETIC PROPERTIES OF  
La<sub>0.67</sub>Sr<sub>0.33</sub>MnO<sub>3</sub> PEROVSKITE**

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**ABSTRACT**

La<sub>0.67</sub>Sr<sub>0.33</sub>MnO<sub>3</sub> (LSMO) powder has been prepared by conventional solid state method. The evolution of structure formation on magnetic properties via single-stage and multi-stage sintering process were studied. X-ray diffraction (XRD), scanning electron microscopy (SEM) and vibrating sample magnetometer (VSM) analysis showed that better crystallinity was observed in multi-stage sintered sample. The enhancement of crystallinity in multi-stage sintered sample is due to intermediate grinding process which provides more homogenous size, better diffusion and grain connection between particles. The increasing of crystallinity enhanced the magnetization for multi-stage sintered sample.

Keywords: crystallinity; magnetization; grain size

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