

Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Structural and Magnetic Properties of $\text{Ln}_2\text{CoMnO}_6$ (Ln = Dy and La) Produced by Combustion Synthesis¹ PEDRO LINHARES C. FILHO, UFPE, PETRUCIO BARROZO, UFS, N.R. DILLEY, Quantum Design, J. ALBINO AGUIAR, UFPE, UFPE TEAM, UFS COLLABORATION, QUANTUM DESIGN COLLABORATION — The lanthanum manganites have been intensively studied in recent years. These compounds present a wide variety of properties of great technological and scientific interest. The half-doped lanthanum manganite with Co in Mn site have ferroelectric and ferromagnetic properties with critical temperatures close to room temperature. The mechanisms responsible for magnetoelectric coupling in these materials are not yet understood. In this work we study the effect of Dy doping at La site in the structural and magnetic properties of lanthanum manganite half-doped with Co obtained by combustion method. The dark powder obtained was heat-treated in air and cooled slowly in the oven. The samples were characterized structurally by X-ray diffraction with Rietveld refinement analysis. Magnetization measurements as a function of temperature and the magnetic field were carried out on the SQUID magnetometer in temperature interval of 5 - 300 K and in magnetic fields up to 7T. The results show an decreases of the magnetic transition temperature when we substitute the La by Dy.

¹Work financed by CAPES, CNPq and FACEPE (Grant 0589-1.05/08).

J. Albino Aguiar
UFPE

Date submitted: 23 Nov 2011

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