

Abstract Submitted  
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**Magnetic Properties of  $\text{La}_{0.7}\text{Sr}_{0.3}\text{Mn}_{1-x}\text{Ni}_x\text{O}_3$  Perovskites** RUBEN MEDINA, CSU Dominguez Hills, H. BLACKSTEAD, B.W. BENAPFL, University of Notre Dame du Lac, THOMAS F. CREEL, Missouri University of Science and Technology, JINBO B. YANG, MEHMET KAHVECI, JAGAT LAMSAL, SATISH K. MALIK<sup>1</sup>, University of Missouri, S. QUEZADO, International Institute of Physics, O.A. PRINGLE, WILLIAM B. YELON, WILLIAM J. JAMES, Missouri University of Science and Technology — Using a SQUID magnetometer, we have studied the magnetic properties of  $\text{La}_{0.7}\text{Sr}_{0.3}\text{Mn}_{1-x}\text{Ni}_x\text{O}_3$  ( $x = 0.05, 0.10, 0.20$  and  $0.30$ ) perovskites. Both temperature dependent and field dependent magnetic measurements show that the Curie temperature decreases as a function of doping, ranging from 380K in  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$  to 300K in  $\text{La}_{0.7}\text{Sr}_{0.3}\text{Mn}_{0.7}\text{Ni}_{0.3}\text{O}_3$ . Both magnetic measurements and neutron-diffraction refinements indicate long-range magnetic ordering in samples at low temperature. Transition phases from paramagnetic to ferromagnetic to antiferromagnetic ordering in samples at room temperature.

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