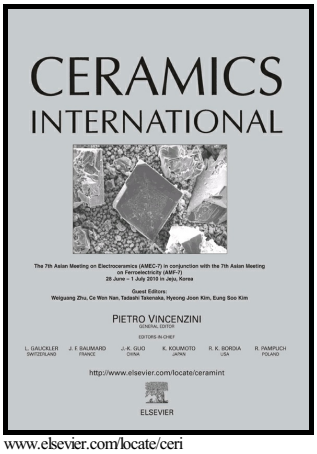

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Magnetic and magnetotransport properties of $La_{1-x}Sr_xMn_{0.5}Co_{0.5}O_3$ perovskites

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Abstract

$La_{1-x}Sr_xMn_{0.5}Co_{0.5}O_3$ ($x \leq 0.75$) perovskites have been studied as a function of temperature by neutron powder diffraction (NPD), magnetization and magnetoresistance measurements. The NPD data show that x=0.15 and 0.5 compounds are stoichiometric, so the Sr^{2+} doping transforms Co^{2+} ions into the Co^{3+} ones, whereas manganese ions remain in the 4+ oxidation state as in the parent ferromagnetic