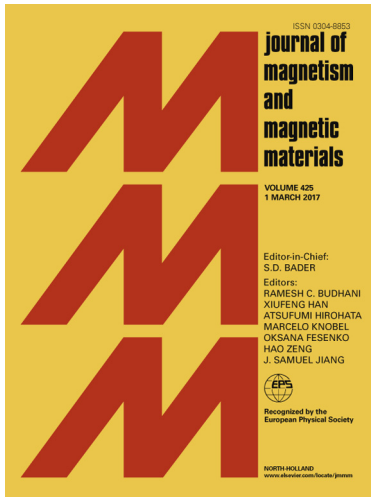

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Hybridization of electronic states and magnetic properties of self-doped $La_{1-x}MnO_{3+\delta}$ ($0 \le x \le 0.15$) perovskites: XANES study

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Abstract. Electron structure of self-doped $La_{1-x}MnO_{3+\delta}$ perovskites is studied with x-ray absorption spectroscopy by measuring the spectra at manganese *L*-edges and oxygen *K*-edge, and analyzing the results for Mn *K*-edge spectra and magnetization data. The observed change of Curie temperature is explained by the change of level of hybridization of Mn 3*d* states and the O 2*p* states, which was manifested by the parallel change of $2p_{3/2}$ and $2p_{1/2}$ spectra with x and T_C.