

Abstract Submitted
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Effect of nickel doping on the magneto-transport properties of $\text{Sm}_{0.55}\text{Sr}_{0.45}\text{MnO}_3$ manganites MAHER ABDELHADI, University of Hail — We studied the effects of nickel (Ni) doping on the magneto-transport properties of $\text{Sm}_{0.55}\text{Sr}_{0.45}\text{MnO}_3$ manganites near the metal-insulator transition. Various concentrations of Ni-doped $\text{Sm}_{0.55}\text{Sr}_{0.45}\text{MnO}_3$ samples up to 5% were prepared (Ni was partially substituted at the Mn-site). The temperature dependence of resistivity and magnetoresistance were measured as a function of Ni concentrations. We observed a nonlinear reduction of the metal-insulator transition temperature (MIT) and a decrease in the width of the peaks in the temperature dependence of resistivity with increasing concentration of Ni. The peaks become sharper at high Ni concentration. The resistivity peaks at various magnetic fields collapses on themselves at the high temperature ends above the MIT.

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