

The concentration dependence of the Curie temperature of the colossal magnetoresistance perovskite $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$

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Abstract: The concentration dependence of the Curie temperature of the colossal magnetoresistance perovskite $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ was studied. A phenomenological model was used for interacting electronic and magnetic-phase transitions. The results shows that in the doping range most of these perovskites undergo a paramagnetic (PM) insulator/semiconductor to ferromagnetic (FM) metal phase transition upon cooling.

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