EPR study of La Sr (Ba,Ca) MnO manganites: Adiabatic polaron hopping model

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Abstract: The electron paramagnetic resonance (EPR) study of La_{0.6}Sr_{0.2}(Ba,Ca)_{0.2}MnO₃ manganites was presented. The temperature dependence of EPR line intensity was described by the Curie-Weiss law. It was shown that the expression between I(T) and exp(E/kT) based on adiabatic polaron hopping model and Curie-Weiss law is very closed at high temperature, but near the Curie temperature only the first one is valid. Index Keywords: Magnetic susceptibility; Paramagnetic resonance; Polarons; Synthesis (chemical); Manganites; Lanthanum compounds

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