

Relation between EPR spectra and electrical conductivity of $\text{Pr}_{1-x}\text{Pb}_x\text{MnO}_3$ perovskites

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Abstract: The correlation between structure, Curie temperature (T_C), line width of EPR spectra and electrical conductivity of $\text{Pr}_{1-x}\text{Pb}_x\text{MnO}_3$ ($x = 0.1, 0.2, 0.3, 0.4, \text{ and } 0.5$) perovskites is discussed. It was shown that both adiabatic small polaron and variable range hopping models are good for description of conductivity in paramagnetic region but the first one is more suitable for interpretation of temperature dependence of EPR line width in temperature range $1.2 T_C < T < 1.3 T_C$. © 2006 Elsevier B.V. All rights reserved.

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