

## **EPR in La<sub>1-x</sub>CaxMnO<sub>3</sub>: Relaxation and bottleneck**

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### **Abstract**

Recent EPR and susceptibility measurements in La<sub>1-x</sub>CaxMnO<sub>3</sub> support the existence of a bottleneck EPR regime up to 1000 K quantitatively. The EPR linewidth and electrical conductivity follow the same temperature dependence in the range of 250 to 650 K predicted by the small polaron hopping model. This indicates that spin-lattice relaxation in manganates is due to the relaxation of spins of eg Jahn-Teller polarons to the lattice. ©2000 The American Physical Society.

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