

Synthesis and characterization of perovskite manganite

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Perovskite manganite have been extensively studied due to their half-metallic nature. This leads to large spin-polarized tunneling magnetoresistance and intrinsic colossal magnetoresistance, either by intergranular tunneling in a single manganite layer or by interlayer tunneling in magnetic tunnel junction. One of the most serious problems in the practical application for device is that the manganite materials remain to be their insufficient magnetoresistance response at room temperature in low applied magnetic fields. In this research the characterizaion and micromagnetic properties of perovskite manganite have been studied by x-ray diffraction, vibration sample magnetometer, thermogravimetric analysis, scanning electron microscopy and atomic force microscopy.