

Preparation of rare-earth manganite-oxide thin films by metalorganic aerosol deposition technique

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Abstract

A chemical deposition technique based on the use of solutions of metal-chelate coordination compounds has been applied to prepare rare-earth–manganite-oxide thin films. $\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3$ and $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ thin films have been grown epitaxially on $\text{MgO}(100)$ substrates and characterized by structural (x-ray diffraction analysis, atomic force microscopy) and magnetotransport ($T=4.2\text{--}300\text{K}$, and $B=0\text{--}5\text{T}$) measurements.

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