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**BOOK
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ABSTRACTS**



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MAGNETIC PROPERTIES OF PEROVSKITE La-Ba-Mn-O DEPOSITED FILMS AS SURFACE STATE

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La-Ba-Mn-O thin films were prepared by RF magnetron sputtering with various substrate temperature(T_s) from 600 to 770°C on Si(100) substrate and were annealed at 800°C for 30 min in ambient. The structures, compositions and magnetic properties with surface state of La-Ba-Mn-O thin films have been studied with X-ray diffraction, X-ray photoemission spectroscopy, Rutherford back-scattering spectroscopy, vibrating sample magnetometer, atomic force microscope and scanning electron microscope. The deposited films were polycrystalline with (100) and (110) orientations and showed pseudocubic perovskite structure. We determined the out-of-plane lattice parameters of deposited films to be 3.93~3.885Å . The thickness of films were determined to be 500~700Å . The grain morphology of thin films was increased as deposited temperature increased. The temperature dependence of the resistance for deposited thin film at 680°C under 0 and 1.5T applied field is shown that a maximum magnetoresistance ratio, defined as: $MR = [\rho_0 - \rho_H] / \rho_0$, was about 60 % at 220K.

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