

Characteristics of Resistance Change in Post-annealed $\text{Pr}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ Films

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The resistance change behavior of a perovskite material has been studied. Particularly, $\text{Pr}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ (PCMO) films deposited on the Pt bottom electrode by using rf-magnetron sputtering system showed a resistance switching behavior at room temperature⁽¹⁾. We deposited PCMO films on the different oriented Pt bottom electrodes by using rf-magnetron sputtering. After the deposition, post-annealing process is performed at 500~900°C in O₂ atmosphere. The resistance ratio between high and low resistance states was about 100. These high and low resistance states are reproducible and nonvolatile, so that the PCMO is applicable for the active material in a nonvolatile memory device⁽²⁾.

[참고문헌]

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