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### 크롬 이온 도핑된 SrZrO<sub>3</sub> perovskite 박막의 Resistive Switching 과 메카니즘 The Resistive Switching Behavior and Mechanism of SrZrO<sub>3</sub>:Cr Perovskite Thin Films

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Cr-doped SrZrO<sub>3</sub> thin films/SrRuO<sub>3</sub> bottom electrode structure was fabricated on various substrates using pulsed laser deposition. After deposition of some kinds of top metal electrodes, electrical resistive switching behaviors and memory effects of the fabricated structure were investigated. We found that deposition conditions and kind of the top electrode highly affect on the switching behavior. It may be because the interface between the top electrode and SrZrO<sub>3</sub>:Cr perovskite plays an important role in the resistive switching mechanism. From I-V characteristics, a typical ON state resistance of 2-8 kΩ and a typical OFF state resistance of 100-350 kΩ were observed, but even ON/OFF resistance ratio higher than 10000 could be achieved when we used suitable substrates and fabrication conditions. These transition metal-doped perovskite thin films are expected for memory device applications due to their high ON/OFF ratio, simple device structure, and non-volatility.