

## 高電子移動度透明酸化物半導体LaドーピングBaSnO<sub>3</sub>薄膜を バッファ層なしで作製することに成功

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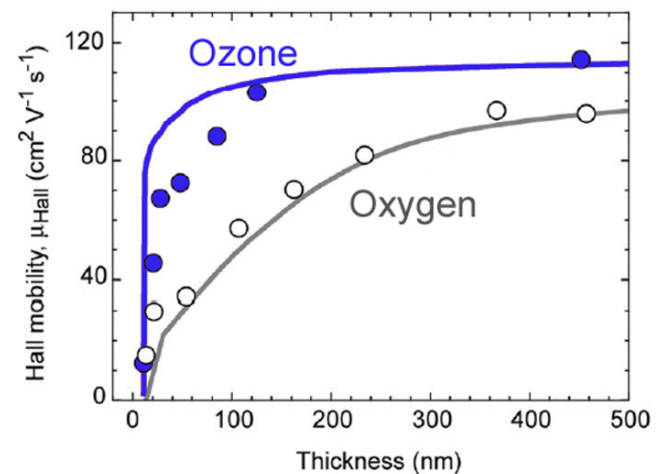
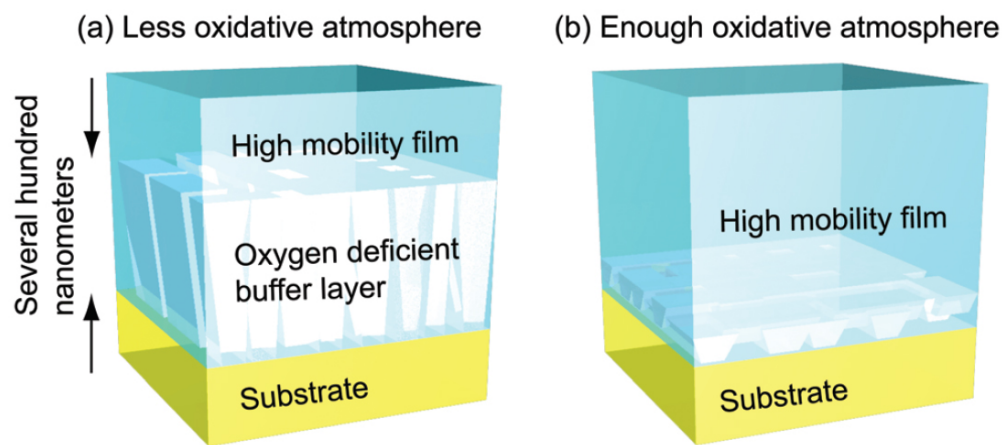
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## Buffer layer-less fabrication of a high-mobility transparent oxide semiconductor, La-doped BaSnO<sub>3</sub>

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透明酸化物半導体LaドーピングBaSnO<sub>3</sub>を高酸化雰囲気O<sub>3</sub>中で成膜することにより、バッファ層なしで高移動度薄膜を作製することに成功した。We show that the electron mobility of the La-doped BaSnO<sub>3</sub> (LBSO) films can be improved without the insertion of any buffer layers if the films are grown under highly oxidative ozone atmospheres. The resultant O<sub>3</sub>-LBSO films show improved mobility values up to 115 cm<sup>2</sup> V<sup>-1</sup> s<sup>-1</sup>, which are among the highest values reported for the LBSO films on SrTiO<sub>3</sub> substrates and comparable to those of the LBSO films with buffer layers.