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The uniformity optimization of La-doped BaSnO<sub>3</sub> film via Multistep Spin coating

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In this study we discovered that annealing treatment in nitrogen atmosphere can significantly enhance the electron mobility of La-doped BaSnO<sub>3</sub>(LBSO) thin films. In the range of 600°C to 900°C, the crystallinity of the powder increases with increasing temperature. In order to fabricate uniform and high transmittance LBSO thin films, the films were fabricated by multistep spin coating method. Experiments showed that multistep spin coating method can not only improve the uniformity and continuity effectively, but also reduce the thickness of the LBSO thin films. It is also showed that there was a progressive increase in conductivity for thin films of LBSO with increasing La doping concentration.