

**Effects of lanthanum doping on ferroelectric properties of direct-patternable
 $\text{Bi}_{4-x}\text{La}_x\text{Ti}_3\text{O}_{12}$ films prepared by photochemical metal-organic deposition**

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Abstract : The ferroelectric and electric properties of UV-irradiated bismuth lanthanum titanate (BLT) films prepared using photosensitive starting precursors were characterized. The effects of lanthanum doping on ferroelectric and electric properties were investigated by polarization-electric field hysteresis loops and leakage current-voltage measurements. X-ray diffractometer and ellipsometry were served to provide the information about the crystalline structure and thickness of the films after annealing. The images of the surface microstructure and direct-patterned BLT films were observed by using scanning electron microscopy. The effects of lanthanum doping on the electric properties of direct-patternable BLT films and their direct-patterning were studied.

Key Words : BLT; Photochemical reaction; Direct-patterning; UV exposure