

## 테라헤르츠 영역에서의 BST 박막의 유전 특성 평가

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### Terahertz dielectric characteristics of (Ba,Sr)TiO<sub>3</sub> thin films

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**Abstract** : Ferroelectric (Ba<sub>0.5</sub>Sr<sub>0.5</sub>)TiO<sub>3</sub> (BST) thin films of thickness 500 nm were deposited on LaAlO<sub>3</sub> (LAO) substrates by at 800 °C. BST films were characterized for structure using X-ray diffraction (XRD). The surface morphology and thickness of BST the films were characterized by atomic force microscopy (AFM) and field emission scanning electron microscope (FESEM). We measured the dielectric properties at microwave frequencies (1~3 GHz) using a symmetrical stripline resonator with shorted ends and terahertz frequencies (0.2~2.5 THz) using a time-domain terahertz spectroscopy. The real and imaginary parts of the complex dielectric constant of the BST thin films on LAO substrates were in agreement with those previously reported.