

International Conference on

Smart Materials & Structures

June 15 -17, 2015 Las Vegas, USA

Dielectric properties of Ba(Zr_{0.4}Ti_{0.6})O₃ thin films deposited on MgO and LaAlO₃ single crystal substrates

Hyun Suk Hwang², Feel-Soon Kang¹, Yeun-Ho Joung¹, Won Seok Choi¹ and Hyun-Il Kang¹

¹Hanbat National University, Republic of Korea

²SeoilUniversity, Republic of Korea

In this paper, we present the correlation between microstructure and dielectric properties of Ba(Zr_{0.4}Ti_{0.6})O₃ (BZT) thin films deposited by RF magnetron sputtering on MgO and LaAlO₃ single crystal substrates for the microwave tunable devices application. The crystallinity and morphology of the thin films were analyzed by x-ray diffraction (XRD) and transmission electron microscopy (SEM), respectively. The dielectric constants and dielectric loss were measured from 100 Hz to 1 MHz at room temperature using a Boonton 7200 capacitance meter. The measured the maximum tunability of BZT thin films on MgO and LaAlO₃ are 48% and 52%, respectively.

Biography

Hyun-Suk Hwang received his PhD degree from Sungkyunkwan University, Seoul, Korea, in 2007. He is the Professor of Seoil University, Seoul, Korea. He has published more than 30 papers in reputed journals and has been serving as an operation committee member of KIEE.

konae@seoil.ac.kr

Notes: