LiTaO3 단결정의 도메인 바운더리 관찰

정대용, 김진상, 박용욱*, 윤석진, Yasuo CHO** 한국과학기술연구원, 남서울대학교*, 동북대학교 전기통신연구소**

Observation of Nano-scale Domain Boundary in LiTaO₃ Single Crystals

Dae-Yong JEONG, Jin-Sang KIM, Young-Wook PARK*, Seok-Jin YOON, and Yasuo CHO**

KIST, NamSeoul Univ.*, RIEC Tohoku Univ.**

Abstract: LiTaO₃ single crystal has been studied for surface acoustic wave(SAW) applications. There are two kinds of LiTaO₃ single crystals, stoichiometric LiTaO₃ (SLT) and congruent LiTaO₃ (CLT). These two crystals show quite different dielectrical properties, which might be related with defects in crystals. In this study, we observed the domain boundary of SLT and CLT with scanning nonlinear dielectric microscopy and discussed the stress distribution in LiTaO₃ single crystals.

Key Words: LiTaO₃ Single Crystal, Nano-domain boundary