

文献

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Optical and X-ray characterization of ferroelectric strontium-bismuth-tantalate (SBT) thin films
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抄録 (Abstract)

Metal-organic chemical vapor deposition (MOCVD) made layers of strontium-bismuth-tantalate (SBT) were characterized by spectroscopic ellipsometry (SE) using the Adachi model [S. Adachi, Phys. Rev. B 35 (1987) 7454-7463]. The evaluated optical parameters were correlated with the physical and chemical behavior examined by X-ray diffraction (XRD). As a result, it was possible to fit the measured spectra with the Adachi model in a wide range covering the region of the band gap. The Adachi model provides electronic layer parameters like the transition energy E_0 and broadening Γ . Our investigations established a correlation between XRD-determined average grain size and the electronic layer parameters. © 2006 Elsevier B.V. All rights reserved.

著者キーワード

Ferroelectric materials; Grain size; Spectroscopic ellipsometry; X-ray diffraction

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