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Effect of prefiring temperature on the texture and optical property of $\text{Bi}_4\text{Ti}_3\text{O}_{12}/\text{MgO}(100)$ prepared by using a metal naphthenate precursor

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Keywords

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Abstract

The effect of prefiring temperature on the crystal structure and optical property of the $\text{Bi}_4\text{Ti}_3\text{O}_{12}$ films on MgO substrates by using a metal naphthenate precursor was investigated. As-deposited films were prefired at 300 °C, 400 °C and 500 °C for 10 min, followed by annealing at 750 °C for 30 min. According to the pole-figure analysis, texture of the annealed films was found to depend on prefiring temperature. Transmittance and the variation of band gap with prefiring temperature were studied.



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