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Spray-Pyrolysis Fabrication and Quality Study of β-Ga_2O_3 Thin Films

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Abstract. In this paper, we report on the successful fabrication of β-Ga_2O_3 thin films by spray-pyrolysis technique. We provide the data on the dependence of the quality of the β-Ga_2O_3 films on the regimes and parameters of fabrication. Scanning electron microscopy, atomic force microscopy and optical spectroscopy are used to analyze film properties. X-ray diffraction phase analysis of the films after heat treatment at 900°C confirms the formation of β-Ga_2O_3 crystallites.

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