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Fabrication and Testing of Substrates Made from Bulk Gallium Oxide Crystals by the Cleavage Method

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Abstract. The paper proposes a method for fabricating gallium oxide substrates from bulk β-Ga_2O_3 crystals by the cleavage method. Layers of β-Ga_2O_3, β-$(Al_xGa_{1-x})_2O_3$ and structures of β-Ga_2O_3/β-$(Al_xGa_{1-x})_2O_3$ are grown on the prepared substrates by the MOCVD method. The surface morphology of the layers and growth regimes are analyzed. The fundamental possibility of using gallium oxide substrates obtained by the cleavage method for the subsequent epitaxy is shown.

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