

Growth Technology and Optical Properties of Bulk Crystalline Gallium Oxide

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Abstract. In this paper we report on the bulk β -Ga₂O₃ crystals growth from the melt. Czochralski technique with different configurations of the growth zone was used. It has been shown that the magnitude of the vertical temperature gradient near the melt/crystal interface is crucial for the stability of the growth process and the quality of the growing crystal. In addition, it is necessary to add oxygen to the atmosphere of the growth chamber for stable crystal growth. The optical properties of the grown β -Ga₂O₃ crystals were investigated.

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