

## Application of Electric Field to Grow Bulk Single Crystals

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Large-diameter, high-quality Si wafers are required to the advancement of ultra-large-scale-integrated circuit (ULSI) device processing. Therefore, new crystal growth technique is needed to obtain large-diameter, high-quality Si crystals containing homogeneously distributed oxygen in the concentration required for ULSI device processing. To address this requirement, a new crystal growth technique using electromagnetic force has been studied by recent crystal growth researchers.

In this work, the variation of electrical resistance in bulk crystal growth configuration with the application of electric field has been studied with prototype experiment and mathematical model.