The kinetics of monocryst. Si deposition on slightly misoriented working fluids and the rates of rotation, temp, differences and phase compns. was systematically investigated, through characterization by x-ray diffraction, polarized reflected light microscopy, and electron microprobe anal. Guidelines are discussed for generalization of a concept of the growth of single crystals of semiconductor Si and GaAs on Si and GaAs substrates. A continuous refractometric method with a He-Ne laser at λ = 6328 μm is employed for investigating stirred crystal growth solns. A modified Bridgman technique by a new method of crystal growth is designed, which allows in situ nondestructive characterization of 0.01 cm³ cell thermostated at ±0.01°. The theore. refractive index of the soln. is determined at λ = 6326 μm, while the temp. difference from room temp. is negligible. Only long time reproducibility considerations lead to an actual result. Only long time reproducibility considerations lead to an actual result.

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The Preparation of BP Single Crystals by High Pressure Flux Method

Yukinobu KUMASHIRO*, Shunji MISAWA*, and Shun-ichi GONDA*

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Fig. 1 Schematic illustration of crystal growth apparatus

Fig. 2 BP single crystals by CuP (a) and Ni₃P₅ flux (b)
Fig. 3 Etching patterns of BP single crystals by optical microscope and scanning electron microscope. (a) Cu-P flux (b) Ni$_3$P$_5$ flux. Also line profiles of B and P are shown.

Fig. 4 Cathodoluminescence spectra of BP single crystals.