

Metastable Solvent Epitaxy of SiC

Shigeto R. Nishitani and Tadaaki Kaneko

Silicon carbide (SiC) is a promising material for next-generation high-power devices, but the high cost of forming wafers is causing a bottleneck in the replacement of Si with SiC. We report a new solution growth process that exhibits potential for the growth of SiC for industrial applications. The driving force of this new process is the chemical potential difference between 3C- and 4H-SiC polytypes and is explained using a stable and metastable double-phase diagram.

Key words:

PACS: 81.30.Fb, 81.15.Lm, 81.05.Hd