Stanislav Lilov, *Tomoaki Furusho*, *Shigehiro Nishino.* GROWTH OF SILICON CARBIDE LAYERS BY SUBLIMATION EPITAXY

Study on the epitaxial growth of hexagonal silicon carbide (SiC) from cubic SiC by sublimation epitaxy at different growth conditions is carried out. The limited stages of the crystallization process have been determined. It was made a calculation of the growth rate of the epitaxial layers in vacuum and gas atmosphere (argon) for the system α–SiC–β–SiC on the basis of the carried out modeling of SiC growth at very small temperature gradient. The obtained experimental results are in a good agreement with the calculated ones. On the basis of the experimental results it has been shown that the used growth technique (sublimation epitaxy) is very useful for filling out the micropipes in SiC substrates in case of growth on off-axis substrates towards <1120> direction.

Keywords: silicon carbide, growth, layers, epitaxy, sublimation, gas phase
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