ABNORMAL DAMPING OF OPTIC PHONONS IN SILICONE CARBIDE

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Polarized Raman spectra of single 6H SiC crystals were studied. Scattering geometries were used which enable observing phons propagating both along crystallographic axes, and at angle of 45 to them. In parallel with the well-known polarized bands, a wide depolarized wing of the exciting line has been observed. It is established that the distribution of intensity of the given wing can be satisfactorily described by the response function of a super-damping vibration f=235 1/cm. Based on the measuring of Raman cross-section it is shown that the contribution of super-damping oscillation into linear electrooptic effect is decisive.