

SPECTROSCOPIC STUDY OF SECOND-ORDER
RAMAN SCATTERING AND DETERMINATION
OF THE TWO-PHONON STATE DENSITY
EXTREMES IN ZnO CRYSTALS

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S u m m a r y

The polarized second-order Raman spectra of ZnO crystals have been studied and interpreted on the basis of the group-theoretic analysis of selection rules and critical points in the phonon dispersion which had been obtained using the mathematical apparatus of projective representations. The Γ , A , M , L , K , H , Δ , Σ , and T points of the Brillouin zone have been studied. The trend of the phonon dispersion curve in the Γ - A , Γ - Σ - M (K - M - Σ) directions has been corrected. The manifestation of the contributions of phonons from the Γ - T - K direction to the second-order Raman spectra has been observed.