

STUDY OF PHOTOLUMINESCENCE
AND OPTICAL ABSORPTION EDGE
IN SEMICONDUCTING CRYSTALS
OF γ_1 -(Ga_xIn_{1-x})₂Se₃ SOLID SOLUTIONS

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S u m m a r y

Experimental studies of photoluminescence and optical absorption edge in γ_1 -(Ga_xIn_{1-x})₂Se₃ crystals with $x = 0.1 \div 0.4$ have been carried out. The exciton- and impurity-related bands in the photoluminescence spectra, as well as the exponential shape of the absorption edge, have been revealed at the temperature $T = 77$ K. The compositional dependences of the spectral position of the photoluminescence band, its halfwidth, the optical pseudogap, and the absorption edge energy width have been investigated. The influence of various types of disordering in a crystal lattice on the processes of optical absorption and photoluminescence in γ_1 -(Ga_xIn_{1-x})₂Se₃ solid solutions has been studied.