2006, Volume 45, Number 11, pag. 8724-8727

Excitonic Polaritons in $ZnAs_2$

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https://doi.org/10.1143/jjap.45.8724

Abstract

The allowed exciton transitions n=1,2,3 were revealed in the reflection spectra of ZnAs2 monocrystals at 10 K. Transverse and longitudinal exciton energies, longitudinal splitting value, translation and reduced exciton masses, electron and hole effective masses were revealed from fitting of the exciton spectra. Absorption spectra and absorption interference were studied for E∥c and E⊥c polarizations for thin samples. The polariton branches of exciton polaritons were calculated from the experimental results.