

Polaronic Correction on Absorption Coefficient in GaAs / Al_xGa_{1-x}As Single Quantum Well

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Abstract : Polaronic effect on the optical absorption coefficient is studied theoretically. In a rectangular quantum well based on AlGaAs/GaAs heterostructures. The electron-phonon interaction term modifies the electron wave function which affects the dipole matrix elements. The modified dipole matrix elements lower the total optical absorption coefficient due to increase in the nonlinear term.

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