# Birefringence in quantum wells of heterostructures $In_{0.68}Al_{0.1}Ga_{0.13}As/In_{0.42}Al_{0.22}Ga_{0.24}As/InP$

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## Abstract

The polarization dependences of reflection and wavelength modulated reflection spectra of quantum wells $In_{0.68}Al_{0.1}Ga_{0.13}As/In_{0.42}Al_{0.22}Ga_{0.24}As$ were investigated. Spectral dependences of refractive indices, extinction coefficients, real and imaginary parts of dielectric constants of quantum wells structures for different polarizations were calculated by the Kramers−Kronig analysis. A phenomenon of birefringence and an interference of polarized light waves in quantum wells were researched. The isotropic wavelength $\lambda_0=1.246\mu m$ was found out. Interference spectra changes the density of fringes and refractive indices ($\Delta n^i$, $\Delta n^{KK}=n^{P,P}-n^{S,S}$) intersect zero axis at energy of isotropic wavelength (0.955eV).