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Birefractive Effects in Quantum Wells

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Reflective spectra had been researched in $\text{In}_{0.3}\text{Ga}_{0.7}\text{As}$ quantum layers, modulated by the reflection and transmittance wavelength at P, P (S, S) and 45° , 45° (135° , 135°) light-wave polarizations at an incident angle near to the normal and Brewster ones. Isotropic wavelengths λ_0 - $1.137 \mu\text{m}$ (1.09 eV), λ_{02} - $1.11 \mu\text{m}$ (1.12 eV) and λ_{03} - $0.932 \mu\text{m}$ (1.09 eV) had been revealed. The refractive indexes n for P, P (S, S) and 45° , 45° (135° , 135°) were intersecting for these wavelengths and their difference $\Delta n = n_{PP} - n_{SS}$ ($\Delta n = n(45^\circ) - n(135^\circ)$) intersects the null axis. The isotropic wavelength (λ_0) was shifted towards the long wavelength region at Brewster angle in reference to the case of perpendicular incidence of light ($\varphi = 7^\circ$) on the QW surface.