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Optical properties of InGaAsP quantum well for infrared emission investigated by modulation spectroscopy

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Abstract

Modulation spectroscopy, *i.e.*, photoreflectance (PR) and contactless electroreflectance (CER) are very powerful techniques to investigate optical properties of nanostructures. These techniques together with photoluminescence spectroscopy were used for investigation of optical properties of InGaAsP quantum well with infrared emission at 1.55 μm . Samples used in this study were grown by gas source molecular beam epitaxy (MBE) on *n*-doped (100) InP substrate. Based on the numerical calculations the origin of observed optical transitions has been explained and the energy structure of the investigated samples has been proposed.



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