PACS: 42.79.Pw, 85.60.Gz, 07.57.Kp, 85.60.Dw

Heteroepitaxial CdHgTe structures width modeling effective band gap

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Received 26.04.2024; revised 14.05.2024; accepted 20.05.2024

An empirical approaching model of the band gap width of cadmium-mercury-tellurium solid alloys grown by molecular beam epitaxy and liquid phase epitaxy methods has been developed based on the statistical analysis of photoresponse characteristics measured by Fourier spectroscopy. The temperature dependences of the long-wavelength cutoff of MCT FPAs on the basis of grown by MBE and LPE structures have been investigated using the empirical approaching effective band gap models. The results are intended to improve the HgCdTe photodiode technology.

Keywords: CdHgTe, cutoff, bandgap, molecular-beam epitaxy, liquid-phase epitaxy.

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