

Recent Developments in Monolithic Integration of InGaAsP/InP Optoelectronic Devices

U. Koren, S. Margalit, T.R. Chen, K.L. Yu, A. Yariv, N. Bar-Chaim, K.Y. Lau and I. Ury. "Recent Developments in Monolithic Integration of InGaAsP/InP Optoelectronic Devices." 1982 Transactions on Microwave Theory and Techniques 30.10 (Oct. 1982 [T-MTT] (Special Issue on Optical Guided Wave Technology)): 1641-1650.

Monolithically integrated optoelectronic circuits combine optical devices such as light sources (injection lasers and light emitting diodes) and optical detectors with solid-state semiconductor devices such as field effect transistors, bipolar transistors, and others on a single semiconductor crystal. Here we review some of the integrated circuits that have been realized and discuss the laser structures suited for integration with emphasis on the InGaAsP/InP material system. Some results of high frequency modulation and performance of integrated devices are discussed.

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