

Abstract Submitted
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Electronic and optical properties of dilute Bismide alloys¹ RAJEEV KINI, ANGELO MASCARENHAS, RYAN FRANCE, AARON PTAK, National Renewable Energy Laboratory, 1617 Cole Blvd, Golden, CO 80401, USA — We will present photoluminescence measurements of GaAs_(1-x)Bi_x thin films containing dilute concentration ($x \leq 0.045\%$) of isoelectronic impurity Bi. We observe that Bi induces strong perturbation to the host band structure even at these low concentrations and see no spectral evidence for isolated Bi forming a bound state in GaAs. Very similar to the case of Bi in GaP, we observed no Bi-Bi pair states. An ‘undulation’ spectrum is observed which we attribute to the vibronic levels of acceptors.

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