# Influence of Ga Concentration on the Ordering Process of $Ga_xIn_{1-x}P$ Grown on GaAs

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# Influence of Ga Concentration on the Ordering Process of $Ga_xIn_{1-x}P$ Grown on GaAs

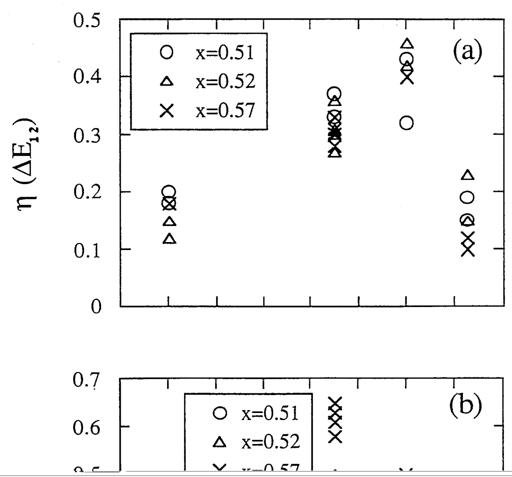
A. EYAL, R. BESERMAN, S. H. WEI[1], Alex ZUNGER[1], E. MAAYAN[2],
O. KREININ[2], J. SALZMAN[2], R. WESTPHALEN[3] and K. HEIME[3]

direct band gap and of the SO splitting, respectively. We temperature using the $Ar^+$ 5145 Å line with 15 mW power as an exciting source and analyzed using Dilor's micro-Raman spectrograph with an accuracy of $\cong 1.0$ meV on the value of $\Delta E_{12}$. The concentration $x$ was determined from Raman scattering with an accuracy $\Delta x \cong 1\%$.

## 4. Results and Conclusion

Figure (3) displays the LRO parameter $\eta$ vs growth temperature where $\eta$ was extracted by fitting the measured $\Delta E_{12}$ to eq. (5) [Fig. 3(a)], and the measured $\Delta E_g(\eta)$ to eq. (4) [Fig. 3(b)]. We observe the usual[2] nonmonotonic behavior of $\eta$ vs $T_g$ in both cases. Composition variations have a small effect on $\Delta E_{12}$ and $\Delta E_g$, as predicted by the theory of Wei *et al.*[4,5] (Fig. 1 and eq. (4)).

The symbols of Fig. 2 gives the experimental depend-



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