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# 文献

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**Temperature dependent model dielectric function of highly disordered Ga0.52In0.48P**

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**抄録 (Abstract)**
We report on the temperature dependence of the dielectric function of Ga0.52In0.48P from room temperature to 500°C, and for photon energies from 0.75 eV to 5 eV. The undoped, highly disordered Ga 0.52In0.48P thin film was grown by metal-organic vapor phase epitaxy lattice matched onto a (001) GaAs substrate. The dielectric function of Ga0.52In0.48P was measured by in-situ spectroscopic ellipsometry, and analyzed using Adachi's composite critical point model. We provide a second-order temperature expansion parameter set for calculation of the Ga0.52In0.48P dielectric function and its temperature dependence, and which may become useful for in situ growth control or optoelectronic device performance evaluation at elevated temperatures. We discuss the temperature-induced shift of critical point transition energy parameters. © 2010 Elsevier B.V. All rights reserved.

**著者キーワード**
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