文献

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Critical point transitions of wurtzite indium nitride
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抄録 (Abstract)
The optical transmission, photoluminescence, and reflection spectra have been measured on a high-quality wurtzite indium nitride (InN) single crystal in the range of 0.5-20.0 eV. The fundamental bandgap of intrinsic InN has been extracted by taking into account the Burstein-Moss shift, bandgap renormalization and Urbach band tail effects, and found to be very close to the recent strongly re-established value of ~1.2 eV. With the aid of Adachi's dielectric function model for the vacuum ultraviolet reflection spectra and the empirical pseudopotential method approach for the electron band-structure, we are able to identify up to nine electronic transitions, showing clear picture for the critical point transitions in InN. The temperature dependence of these interband transitions has also been revealed.

著者キーワード
A. Indium nitride; A. Wurtzite; D. Critical point transitions

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