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The effect of broadening on the optical dielectric function of GaAs and AIAs

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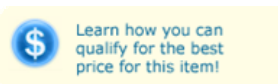
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ABSTRACT

Optical dielectric function model of Ozaki and Adachi [J. Appl. Phys. 78, 3380 (1995)] is augmented by introducing Gaussian-like broadening function instead of Lorentzian broadening. In this way a consistent and comparatively simple analytic formula has been obtained, which accurately describes the optical dielectric function of GaAs and AIAs in a wide spectral range between 0.1 and 6 eV

INDEX TERMS

IEEE Terms

Absorption , Charge carrier processes , Damping , Dielectrics , Differential equations , Frequency dependence , Gallium arsenide , Gaussian processes , Optical scattering , Particle scattering

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 ◦ **Controlled Indexing**

Gaussian distribution , III-V semiconductors , aluminium compounds , dielectric function , gallium arsenide

 ◦ **Non Controlled Indexing**

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