

Optoelectronic properties of GaAs and AlAs under temperature effect

Abstract

An application study of optoelectronic properties as a function of the temperature for GaAs and AlAs according to our model has been presented using empirical pseudopotential method (EPM). The structural phase transition can be seen easily from behavior of the bonding character. The results are compared with the experimental data with reasonable agreement.

Keywords

Empirical Pseudopotential Method; III-V semiconductors; Temperature effect