

Analytical model of indium antimonide absorption

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The existing analytical models for calculating the absorption coefficient are analysed. Their advantages and disadvantages are highlighted. A new analytical model of the absorption coefficient of indium antimonide, which takes into account the Burstein-Moss effect Urbach's rule and temperature dependence of the interband absorption, has been developed. A comparative analysis of the experimental transmission and absorption spectra of InSb with the calculation results has been carried out.

Keywords: InSb, absorption coefficient, Urbach's rule, Burstein-Moss effect.

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