

Название публикации:

Mathematical Model of Qualitative Properties of Exciton Diffusion Generated by Electron Probe in a Homogeneous Semiconductor Material

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Аннотация:

The qualitative properties of the two-dimensional mathematical model of excitons diffusion excited by an electron beam in a semiconductor material are investigated. For the studied model proved continuous dependence of the solution from the input data. It is shown that the model can be applied to estimate the diffusion coefficient and the mobility of excitons on the results of experimental measurements. In the simulation are used parameters that are typical for gallium nitride.

Ключевые слова:

Cauchy problem; mathematical model; diffusion; uniqueness; continuous dependence on data