

FACTORIZATION TECHNIQUES FOR THE NONLINEAR MODEL OF QUASI-STATIONARY PROCESSES IN CRYSTALLINE SEMICONDUCTORS

BEATRIZ JUAREZ-CAMPOS, ELENA I. KAIKINA, PAVEL I. NAUMKIN
AND HECTOR F. RUIZ-PAREDES

Abstract. We consider the question of global existence and asymptotics of small solutions of a certain pseudoparabolic equation in one dimension. This model is motivated by the wave equation for media with a strong spatial dispersion, which appear in the nonlinear theory of the quasi-stationary processes in the electric media. We develop the factorization technique to study the large time asymptotics of solutions.

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