ROLE OF THE THERMOACTIVATED AND TUNNEL ELECTRON RELAXATIONS OF RADIATION DEFECTS IN INITIATION OF ISOTHERMAL EXOEMISSION CURRENT

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S u m m a r y

The paper presents the results of investigations of the isothermal exoelectron emission (EEE) in alkaline-halide crystals (AHC), which occurs in the process of crystal irradiation and immediately after its cessation, accompanying the relaxation of the excited surface. The work is aimed at understanding the role of the thermoactivated and tunnel electron relaxations of the complementary pairs of radiation defects in the EEE phenomenon. Values of the isothermal EEE current components, both the temperature-dependent and temperature-independent ones, and the characteristic decay times are evaluated. The contributions of thermoactivated and tunnel recombinations to the resulting current of the isothermal EEE are compared. It is shown that, for the decay times comparable with the characteristic ones, the temperature-dependent component of the current, which originates from the thermoactivated relaxations of the complementary pairs of radiation defects, is predominant.