

THE FORM OF A SCINTILLATION IMPULSE
UNDER X-RAY EXCITATION
OF LUMINOPHORS

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S u m m a r y

For the kinetic model of X-ray luminescence, we propose a system of calculation of the dynamics of the spatial average statistical distribution of charge carriers over the centers of accumulation and recombination, which allows one to determine all parameters of scintillation and to get the initial conditions for the determination of the decay function of phosphorescence and the light sum accumulation by various traps. We establish that the form of scintillation pulses is mostly influenced by those traps, for which the probability of thermal delocalization is close to the probability of a spontaneous radiative transition of their excited state into the ground state of a luminescence center.