

PHOSPHORESCENCE OF
CRYSTALLOPHOSPHORS
UNDER X-RAY EXCITATION

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S u m m a r y

For the kinetic model of X-ray luminescence, the calculational system for the dynamics of the average initial statistic spatial distribution of charge carriers over centers under the decay of phosphorescence is elaborated. Two models are examined: when the accumulated light sum is fully radiated and when very deep traps are present in the crystallophosphor and the light sum does not reduce to zero. It is found that the form of the phosphorescence function is greatly affected by the spatial distribution of the localized carriers of different signs. Phosphorescence under X-ray excitation is adequately described by the suggested kinetic model, which allows us to receive hyperbolic curves of attenuation with exponents from 0,8 to 2.