

Рентгенолюминесценция материалов на основе силикатов гадолиния и европия

С.Ф. Бурачас, Н.Н. Кухтина, В.П. Мартынов, В.Д. Рыжиков, А.М. Кудин, В.Ф. Ткаченко

Институт монокристаллов АН Украины, г. Харьков

The materials on the basis of gadolinium and europium silicates were investigated to find compositions deciding x-ray luminescence optimum parameters. The colorless $Gd_2SiO_5(Eu)$ single crystals were obtained by Chochralski method. Their optical and scintillation homogeneity was provided by the proximity of europium distribution coefficient along the ingot to one. Concentration dependence of x-ray luminescence intensity was studied in the $Gd_2SiO_5 - Eu_2SiO_5$ system. Effective x-ray luminescence was demonstrated to have the solid solutions of europium oxoorthosilicate (to 10 mol.%) in gadolinium oxoorthosilicate.

X-ray luminescence of Gadolinium and Europium Silicate-based materials

S.F. Burachas, N.N. Kukhtina, V.P. Martynov, V.D. Ryzhikov, A.M. Kudin, V.F. Tkachenko

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