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Phenomena of radiative recombination in single crystals of cadmium thiogallate with cadmium (cdGa2S4:Cd) or Sulfur (CdGa2S4:S) Excess

Abstract

The experimental results related to the influence of non-stoichiometry on the emission spectra of CdGa2S4 single crystals exited by accelerated electrons are presented. Cadmium thiogallate single crystals with the excess of cadmium or sulfur were prepared by the method of chemical transport reactions with iodine, and the cathodoluminescence spectra of CdGa2S4:Cd and CdGa2S4:S were studied. A model of

energy levels and optical transitions for this compound is proposed.