LUMINESCENCE CENTERS IN THIN FILMS OF BISMUTH-CONTAINING TUNGSTATES

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S u m m a r y

The photo-excitation spectra and spectra of the luminescence of Bi_2WO_6, $Bi_2W_2O_9$, and $CdWO_4$:Bi thin films have been investigated. A decomposition of the luminescence spectra into elementary components has been carried out using the Alentsev—Fock method. The bands with the maxima at 2.93 eV in the spectrum of the luminescence of Bi_2WO_6, 2.43 eV in that of $Bi_2W_2O_9$, and 2.47 eV in the spectrum $CdWO_4$:Bi are assigned to the emission of the self-trapped Frenkel excitons. The bands with the maxima at 2.35 and 1.90 eV in the spectrum of Bi_2WO_6, 2.10 and 1.90 eV in that of $Bi_2W_2O_9$, as well as 2.15 and 1.88 eV in the spectrum of $CdWO_4$:Bi, respectively, are concluded to be associated with oxygen vacancies.