

LUMINESCENCE CENTERS IN BISMUTH ORTHOGERMANATE

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S u m m a r y

The luminescence and photoexcitation spectra of single crystals, ceramics, and thin films of $\text{Bi}_4\text{Ge}_3\text{O}_{12}$ are studied. The decomposition of the luminescence spectra into elementary components by the Alentsev-Fock method showed that they consist of three bands with maxima at 2.7, 2.4, and 2.05 eV. The bands with maxima at 2.7 and 2.4 eV are assigned to the emission of self-trapped Frenkel excitons describing the excited state of a $(\text{BiO}_6)^{9-}$ molecular ion. Emission bands with maxima at 2.05 eV are assigned to recombination on traps caused by structural defects.