IR luminescence of Fe$^{2+}$ : ZnSe single crystals excited by an electron beam

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Abstract

Spectral-kinetic characteristics of the cathodoluminescence of Fe$^{2+}$ : ZnSe single crystals are studied at T="300" and 80 K. These characteristics correspond to the IR luminescence spectrum and kinetics of Fe$^{2+}$ ions in ZnSe crystals optically excited into the impurity absorption band. The obtained results open a real possibility of pumping Fe$^{2+}$ : ZnSe lasers by hot electrons.