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PETN crystals decomposition at heat treatment up to melting point

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Abstract

The absorption spectra of single crystals of PETN in a wide spectral range from 190 to 3300 nm, and the luminescence spectra before and after annealing of single crystals are measured. We conducted the measurements of absorption spectra in the heating process at certain temperatures up to the melting point. The absorption spectrum of the melt and the luminescence of the melted PETN were measured. This allowed to make a supposition about the mechanism of the slow decomposition of PETN during thermal treatment.