

INVESTIGATION OF THE SPECTRA OF HIGHLY ORIENTED PYROLYTIC GRAPHITE

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Today the knowledge of the thermoradiation properties of pyrolytic graphite at high temperatures is of great interest. The main reason for the lack of experimental data on these properties is the impossibility of carrying out stationary experimental studies of graphite at the temperatures above 3300 K, as well as the typical features of the material under study.

This work represents the results of the pulsed millisecond electrical heating experiments, such as radiation spectra of HOPG at the temperatures close to the melting point. The experiments were carried out at a static gas pressure of about 1 kbar, the spectral range of the obtained spectra was 0.25–0.8 μm . The spectra of thermal radiation of the heated samples allow obtaining the values of the thermoradiation properties of the sample surfaces parallel and perpendicular to the basal plane of pyrographite, such as the spectral emissivity at given temperatures.