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# ИССЛЕДОВАНИЕ НЕСТАЦИОНАРНОГО МЕТОДА ОПРЕДЕЛЕНИЯ КОЭФФИЦИЕНТА ТЕМПЕРАТУРОПРОВОДНОСТИ С УЧЕТОМ ТЕПЛООБМЕНА С ОКРУЖАЮЩЕЙ СРЕДОЙ

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## Abstract

We conducted a theoretic analytical study of a non-steady pulse heating technique, taking into account environmental heat transfer so as to determine thermal diffusivity of thin-film coatings that are particularly interesting in terms of intensifying heat transfer in the infrared range for temperatures of 300...1000 K. We present the following parameters as functions of thin film thickness: pulse duration, heating energy and power. We developed a technique for analysing thermophysical properties of thin coatings.

## Keywords

Thermal conductivity, thin coatings, pulse heating technique, thermal diffusivity

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