Full Paper

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The effect of temperature fluctuations of the nucleus on the nucleation rate of the new phase

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Abstract

The formula has been derived for the stationary nucleation rate (nucleation) with the account of temperature fluctuations in the of new phase nuclei.

It is shown that the germ temperature fluctuations results in decreasing the nucleation rate by several orders of magnitude and therefore they must be taken into account when calculating the nucleation rate.