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Nonequilibrium statistical thermodynamics of displacement cascade thermalization in a solid. (English. Russian original) [Zbl 1189.82093](#)

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Summary: The thermalization of a low-energy displacement cascade in a solid is investigated in the framework of nonequilibrium statistical thermodynamics. The equation of the time evolution of the quasitemperature of the cascade particles is derived with allowance for inelastic scattering and also recombination of Frenkel' defects. This equation is solved for some definite energy dissipation mechanisms.

MSC:

82C35 Irreversible thermodynamics, including Onsager-Machlup theory

82C05 Classical dynamic and nonequilibrium statistical mechanics (general)

82D20 Statistical mechanical studies of solids

Full Text: [DOI](#)

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