HIGH-TEMPERATURE THERMAL CONDUCTIVITY OF SOLID SF_6

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S u m m a r y

The numerical analysis of high-temperature thermal conductivity deviations of solid SF_6 in the plastic phase from the $1/T$ law within the relaxation model is carried out. The competition of the contributions of various mechanisms to heat transfer is discussed. Phonon and libron interactions and thermal expansion are admitted to be the main among those mechanisms. The contribution of thermal expansion to elastic properties of a lattice is calculated. In thermal conductivity, it changes phonon velocities and the volume thermal capacity due to the deformation of oscillatory spectra. The results are compared with experimental data. Within the framework of the existing theoretical representations, the opportunity for thermal pressure to influence the isochoric thermal conductivity and the way to consider the libron-phonon scattering are discussed.