PHONON SCATTERING IN $({\rm InSb})_{2(1-x)}$ — $({\rm In_2GeTe})_x$ SOLID SOLUTION

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Summary

The thermal conductivity of $(InSb)_{2(1-x)}$ — $(In_2GeTe)_x$ (with $0 \le x \le 0.1$) solid solutions at temperatures between 80 and 300 K has been studied. Experimental data has been analyzed on the basis of the existing theories of solid-state thermal conductivity. The essential role of N processes in the phonon scattering in $(InSb)_{2(1-x)}$ — $(In_2GeTe)_x$ solid solution has been established. The observed dip in the temperature dependence of thermal conductivity is explained by the phonon resonance scattering by various complexes.