

Untersuchungen zum chemischen Transport intermetallischer Phasen, I: GeTe, SnTe, PbTe

Investigations on the Chemical Transport of Intermetallic Phases, I: GeTe, SnTe, PbTe
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Chemical Transport Reactions, Total Pressure Measurement, Calculation of CTR,
Thermodynamic Data

GeTe, SnTe, and PbTe have been prepared by chemical transport reactions with iodine as transport agent in the temperature range between T_2 (800 - 700 °C) and T_1 (700 - 500 °C). The effective transport equilibria were determined. Total pressure measurements in the system Ge-Te-I give the coexistence equilibria for condensed phases, and also for the gasphase equilibria. GeTe_4 exists only as a metastable phase at lower temperatures and decomposes near 260 °C in GeTe and Te.

Thermodynamic calculations show satisfactory agreement between calculation and experiment.