substance: $IrSb_2$
property: structure, physical properties

semiconductor [63H].

magnetic susceptibility

χ_m	$179 \cdot 10^{-6}$ $cm^3\ mol^{-1}$	T = 80...1000 K	χ in CGS-emu; sintered polycrystal	71K

far infrared absorption for spectrum in the range 50...400 cm^{-1}, see [83L].

peritectic temperature

T_{perit}	> 1373 K?	from tentative phase diagram	57K, 60Z

lattice parameter $a(T)$, $b(T)$, $c(T)$, $\beta(T)$ in the range 300...1340 K: Fig. 1 [77K].

volume expansion coefficient

β	$2.4 \cdot 10^{-5}$ K^{-1}	T = 300 K	unit-cell volume linear in T in the range 300...800 K	77K
	$0.9 \cdot 10^{-5}$ K^{-1}	T = 1000 K	unit-cell volume linear in T in the range 900...1300 K	

arsenopyrite → loellingite transition estimated at $T_{tr} \approx 1425$ K [77K].

Comparative tables on structural data of transition metal dipnictides:

structure, chemical bond see document ,

crystallographical dat of compounds with octahedrally coordinated cations, see document ,

interatomic distance in arsenopyrite-type phases, see document .

References:

57K Kuz'min, RN., Zhdanov, G. S., Zhuravlev, N. N.: Kristallografiya 2 (1957) 48; translation: Sov. Phys. Cryst. 2 (1957) 42.

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Fig. 1.

$IrSb_2$. Lattice parameters vs. temperature [77K].