T6-46

TbS, TbSe, TbTe, TbP, TbAs, 1961

TbSb, TbBi VIII 4045

a, b, c

Olcese Giorgio L.

Atti Accad. naz. Lincei. Rend. Cl. sci. fis., mat. e natur., 1961, 30, N2, 195-20

Struttura e proprietà magnetiche dei composti MX del terbio con i metalloidi del 5° e 6° gruppo

PX, 1962

N65166 MP

VIII -5478 1969

$PrSb_2$, $GdSb_2$, $TbSb_2$, $DySb_2$, $HoSb_2$, $ErSb_2$,
$YbSb_2$ (T_{tr})

Eatough N.L., Hall H.T.,

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T ееъ ФК

TbSb

B9-XVIII-1214 1974

8N 28 5161 U.S.

50710v Magnetic excitations in terbium antimonide. Holden, T. M.; Svensson, E. C.; Buyers, W. J. L.; Vogt, O. (At. Energy Canada Ltd., Chalk River, Ont.). *Phys. Rev. B* 1974, 10(9), 3864–76 (Eng). The magnetic-excitation spectrum of the singlet-ground-state antiferromagnet TbSb was studied by neutron inelastic scattering. At 4.4°K, the dispersion relations for the 2 lowest branches of the spectrum were detd., and evidence was also obtained for transitions between the ground state and the 7th and 9th excited states of the Tb^{3+} ion. Measurements were also carried out at several other temps. both below and above the Neel point T_N (14.9 ± 0.2°K). At 4.4°K, the lowest branch has a large energy gap (frequency 0.54 ± 0.04 THz) caused by crystal-field effects. The gap decreases as the temp.

(T_{Neel})

C.A. 1975. 82 N8

is raised and near T_N the spin-wave scattering merges with a broad distribution of quasielastic crit. scattering whose intensity reaches a max. at T_N. Above T_N, the crit. scattering gradually decreases with increasing temp. The quasielastic scattering at the zone boundary has a somewhat larger frequency width than that at the zone center and also exhibits a weak shoulder in the temp. range 20–40°K. This behavior is inconsistent with current theories based on truncated-energy-level schemes, which predict that there should be a well-defined mode in the disordered phase whose frequency tends to the crystal-field splitting Δ at high temp. and to zero as $T \rightarrow T_N$. Exchange and crystal-field parameters for TbSb were obtained by analyzing the results at 4.4°K in terms of a pseudoboson theory which takes into account transitions between the ground state and all 12 excited states of the lowest spin-orbit multiplet of the Tb^{3+} ion ($J = 6$). A very good description of the obsd. frequencies and intensities is obtained.

1981

Tb_4Sb_3

TbSb

(Tt)

94: 163401m The terbium-antimony alloy system. Abdusa=lyamova, M. N.; Burnashev, O. R.; Mironov, K. E. (Inst. Chem., 734063 Dashanbe, USSR). *J. Less-Common Met.* 1981, 77(1), S1-S (Eng). A phase diagram is proposed for the Tb-Sb system on the basis of differential thermal, x-ray, chem., and microscopy analyses. A peritectic reaction develops as a result of Sb addns. and the transformation temp. of Tb is lowered by 25°. Eutectic reactions occur at 14 at.% Sb and 1130° and at >99.0 at.% Sb and 623°. There are 4 compds. in the system: $TbSb_3$ and Tb_4Sb_3 result from peritectic reactions at 1690 and 1770° while TbSb melts congruently at 2150°. The overall phase homogeneity range is no more than 1 at.%. Results for the formation of $TbSb_2$ at normal pressures are reported. $TbSb_3$ and TbSb exhibit polymorphic transformations.

CA-1981 94-N20

$Tb_3Sb_5O_{12}$ 1981

Venevtsev Yu. N.,
et al.

Ttr; Ferroelectrics, 1981, 36,
N 1-4, 474.

(see. $In_3Sb_5O_{12}$; I)

Tb_5Sb_3

1982

10 Е12. Исследование термических, магнитных и электрофизических свойств антимонида тербия. Абдусалямова М. Н., Абулхаев В. Д., Гончарова Е. В., Кутолин С. А. «Изв. АН ТаджССР. Отд-ние физ.-мат., хим. и геол. н.», 1982, № 3, 97—99 (рез. тадж.)

T_m, T_{tr};

Определены следующие характеристики: т-ра пл., коэф. теплового расширения, теплопроводность, магн. восприимчивость (в интервале т-р 77—800 К), электропроводность и термо-э. д. с. (в интервале т-р 10—800 К). Термо-э. д. с. во всей области т-р отрицательна; электропроводность выше 300 К металлическая, при низких т-рах имеет два излома, связанные по предположению с магн. переходами. Приведены численные значения характеристик для состава Tb_5Sb_3. В. Б. С.

Ф. 1983, 18, N10

Tb_5Sb_3 1984

Abulkhaev V. D.,
Kutolin S. A., et al.

(T_m, Θ_D) Zh. Fiz. Khim. 1984,
58(7), 1715–19.

(cer. Nd_5Sb_3; I)

Система
Sb_2Te_3-TbTe

1984

Русталев П.Г., Гейдарова Э.А.,

Журн. неорган. химии, 1984, 29, вып. 11, 2982–2984.

$TbSb_3$ 1985

Абдусалямова М. Н., Абулжаев В. Д. и др.

теплопроводность, уд. электросопротивл.

Изв. АН Тадж. ССР. Отд.-ние физ-мат., хим. и геол. н., 1985, N 1, 80 - 82. I

(см. Nd_5Sb_3; III)

TbSbTe3

1986

18 Б3058. Термодинамические свойства $TbSbTe_3$. Аббасов А. С., Багирова С. Д., Алиев И. Я. «Термодинам. и материаловед. полупроводников. 3 Всес. конф., май, 1986. Тез. докл. Т. 2». М., 1986, 137

Методом э. д. с. изучены термодинамич. св-ва $TbSbTe_3$ (I) в интервале 630—750 К. Рассчитаны энергия Гиббса, энтальпия и энтропия образования I из Tb_2Te_3 и Sb_2Te_3 при 690 К: $\Delta G° = -34{,}80 \pm 0{,}88$ кДж/моль, $\Delta H° = -45{,}52 \pm 4{,}9$ кДж/моль; $\Delta S° = -21{,}45 \pm 3{,}14$ Дж/моль·К. Из резюме

Х. 1986, 19, N 18

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Buschbeck A.,
Chojnowski Ch.,
et al.

Ttr; J. Magn. and Magn.
Mater., 1987, 69, N2,
171–182.
(см. TBP; I)

TbSb$_2$ 1988

Abdusalyamova M. N.,
Burnashev O. R., et al.

(Tm) Izv. Akad. Nauk SSSR,
Neorg. Mater. 1988, 24 (3),
495–8.

(cf. GdSb$_2$; I)

Tbb [om. 34859] 1990

Abdusalyamova M.N.,
Shokirov H.S., et al.,

(Tm, θD)

J. Less-Common Metals,
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