Bi_2

Bi_2 (г) (Термод. ф.) 2468.

739 – III – ЛКВ

Юнгман В.С.

Термодинамические функции
Bi_2 (газ) (С, S, Н–Н). – 3 с.

II-1330

1889

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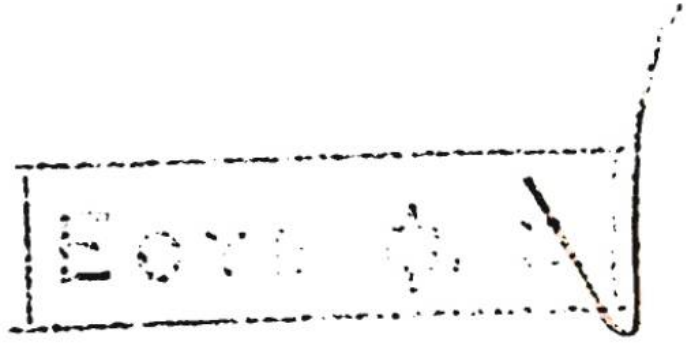
Bi ;
Bi_2 ;] r, ΔH_f°

Circ. 500

10, K



III-1325

I889

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1.Ber.22, 725 (I889)

Bi ; r., ΔH_f°

Bi_2; r., ΔH_f°

+0

Circ.500

Есть ф. п.

нО, К

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Sparks F. M.,
Phys. Rev. 1933, 44, 365

Bi (P) III 2520 1934

Bi_2 (D)

Ko C. C.

J. Franklin Inst. 1934, 217, 173-99

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Б, По,

C.A., 1934, 2605 2

III ~~337~~ 1610

1935

Kelley

19. U.S. Bur. Mines, Bull. 383 (1935)

Bi_2; г.; ΔH_f^o

Circ. 500

W, K M Б

~~III 27~~ III 27

1936

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Circ.500

K, M, Ю, В

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Herzberg 1939

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Circ.500

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1947

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Circ.500

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Aldred A. T., Proll J. N

J. Chem. Phys., 1963, 38, N5, 1085-1087 (англ.)

Vapor pressure of Liquid bismuth.

РЖ Хим., 1964, 25389

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J. Chem. Phys., 1966, 45, N11, 4141-4145 (англ.)

Measurement of enthalpies of evaporation of Bi and Bi_2 by an optical absorption technique.

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ΔH_s (Bi, Bi_2, Bi_3; Bi_4) 9, 13 1967

D_0 (Bi_2, Bi_3, Bi_4, $BiPb$)

I (Bi, Bi_2, Pb, Bi_3, Bi_4)

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Rovner L., Drowart A., Drowart J.

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вып
в зая
есть

РЖФиз, 1968, 7Д205 5 Ю, М, Б

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Воронин Г.Ф.,

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Nezumi T., Yazawa A., J. MD

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Thermodynamic study of liquid

copper alloys. II. Activities of bismuth

and antimony in liquid copper-

base alloys by vapor pressure

$\underline{Bi_2}$, } (терм. данные, ΔH ат., XIII 1652 1967

Bi_4 } ΔHs)

Б Kohl F. J., Uy O. M., Carlson K. D.

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Cross sections for electron-impact fragmentation and dissociation energies of the dimer and tetramer of bismuth

Ф 6 10

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1969

Bi
Th

Pure.

42020z Dissociation pressure of bismuth in the bismuth–thorium system. Dahlke, Olaf; Gans, Wigbert; Knacke, Ottmar; Mueller, Franz (Tech. Hochsch. Aachen, Aachen, Ger.). *Z. Metallk.* 1969, 60(5), 465–8 (Ger). Bi-rich Th–Bi alloys were subjected to vacuum evapn. in a Knudsen cell at 600–1400°. The equil. formed were then studied as previously described for the Th–Pb system (W. Gans, *et al.*, 1966). From the heterogeneous equil. of melt–$ThBi_2$, the new equil. $ThBi_2$–Th_3Bi_4 resulted. Both phases do not form solid solns. Lattice const. measurements obtained from x-ray data are given for both phases, agreeing well with values published earlier (R. Ferro, 1957). For the ThBi phase a narrow range of homogeneity is indicated, located between $ThBi_{1.08}$ and $ThBi_{0.8}$. Based on effusion measurements, the Th_2Bi phase could not be identified. The log of the equil. partial pressure of Bi, the log of ($p_{Bi} + p_{Bi_2}$) from the Bi vapor reaction $2\,Bi = Bi_2$ over the various ThBi phase equil., and activities in the Th–Bi system are given. Ernst M. Goldstein

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10Б854

Б, 10 Ф

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Partial pressures of monomer and dimer species over liquid bismuth

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M, 10 (P)

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(cu. Bi; I)

Bi_2

(*9 - 18949)

1977

Prasad Rajendra etal

J. Chem. Thermodyn. 1977,

$(P, \Delta H, \Delta H_{дис})$ 9(6), 593-601 (Eng).

см. Bi - I

1979

Bi_2

Sb_2

Sb_4

93: 120502g An analytical method to calculate partial pressures of polymer vapor species using transpiration technique. Prasad, Rajendra; Venugopal, V.; Sood, D. D. (Radiochem. Div., Bhabha At. Res. Cent., Bombay, 400085 India). *Prepr. – Int. Conf. Adv. Chem. Metall.* 1979, 2, Paper 41, 16 pp. (Eng). Bhabha At. Res. Cent.: Bombay, India. An anal. method for detn. of partial pressure of assocd. species in metallic vapors by using the transpiration technique is described. The method uses data on mass of the metal transported per unit vol. of carrier gas i transpiration expts. with pure metal or an alloy of the metal in which its activity is known. Transpiration data from Bi and Mg–Bi and Pb–Bi alloys were used to calc. partial pressures of Bi (g) and Bi_2 (g) at 1073–1323 K. Similarly, transpiration data from studies on Sb and Cu–Sb alloy were used to calc. partial pressures of Sb_2 (g) and Sb_4 (g) at 1070–1265 K. The results are compared with literature data.

(P)

(+2)

CA 1980 93 v 12

Bi_2
O_2
BiO
Bi_xO_y
(ΔH_f)

1980

94: 37357p Mass spectrometric investigation of gas-phase equilibriums over bismuth trioxide. Sidorov, L. N.; Minaeva, I. I.; Zasorin, E. Z.; Sorokin, I. D.; Borshchevskii, A. Ya. (Dep. Chem., Moscow State Univ., 117234 Moscow, USSR). *High Temp. Sci.* 1980, 12(3), 175–96 (Eng). The compn. was detd. of the gas phase above Bi_2O_3 at 1003–1193 K. The satd. vapors contain Bi_4O_6, Bi_3O_4, Bi_2O_3, Bi_2O, Bi_2, BiO, Bi, and O_2 mols.; the partial pressure are given. When passing from Langmuir to Knudsen evapn. conditions, the total vapor pressure grows 3-fold on account of increases in the partial pressures of the dissocn. products. The heats of formation of gaseous Bi oxides and the heats of sublimation and evapn. of Bi_2O_3 and Bi_4O_6 were estd. The thermodn. functions of all the gaseous Bi oxides were calcd. on the basis of the estd. mol. consts., structures, and symmetries.

(+3)

(+1)

Bi_xO_y (mg op)

C.A. 1981. 94, 186

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Marschman S.C., Lynch D.C.,

Kp, $\Delta_f G$, $\Delta_f H$,

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1984, 62, 875–879.

Bi

1986

Allen G. L., Bayles R. A., et al.

Tm;

Thin Solid Films

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(cu. Pb; I)

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Takes F., et al.,

u.n. Mol. Phys., 1996, 87, N4,
725-733

Electronic states of Bi_2

Bi_2 | Om. 41682 | 1996

Barrow R.F et al.,

Mol. Phys., 1996, 87,
N 4, 725-733.

Electronic states of Bi_2

Bi2

2000

132: 314382n **Vapor pressure measurements of lanthanum–bismuth alloys by mass–spectrometric method.** Shoji, Y.; Matsui, T.; Nagasaki, T.; Kurata, M.; Inoue, T. (Department of Quantum Engineering, Graduate School of Engineering, Nagoya University, Nagoya, Japan 464–8603). *Int. J. Thermophys.* 2000, 21(2), 585–591 (Eng), Kluwer Academic/Plenum Publishers. Vapor pressures of $Bi_2(g)$ over $La_{0.03}$-$Bi_{0.97}$ and two–phase mixts. of Bi + $LaBi_2$, $LaBi_2$ + LaBi, LaBi + La_4Bi_3, La_4Bi_3 + La_5Bi_3, and La_5Bi_3 + La_2Bi were measured in the temp. range from 795 to 1066 K with a time–of–flight mass spectrometer equipped with a tungsten Knudsen cell. The vapor pressure of $Bi_2(g)$ over the two–phase mixts. of La_2Bi + La could not be detected exptl. in this temp. range. The thermodn. activity of bismuth was detd. from the vapor pressure of $Bi_2(g)$. Thermodn. activities of lanthanum over alloys were derived from those of bismuth in the alloys in this study and that of lanthanum in the bismuth in a previous study by graphic integration of the Gibbs–Duhem equation. Thermodn. quantities such as Gibbs free energy of formation, excess enthalpy, etc., were also calcd. from the thermodn. activities.

(p)

(H)

C-A-2000, 132, 123.

La–Bi (ΔG_f, H–H и др.)