

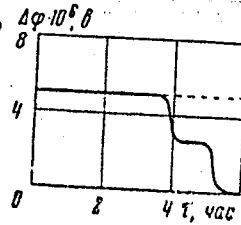
86699

S/180/60/000/006/009/030  
E111/E352

Solubility of Oxygen in Liquid Silicon

There are 3 figures and 7 references: 1 Soviet and 6 non-Soviet

SUBMITTED: May 30, 1960



Фиг. 2. Изменение электро-  
диффузионного потенциала в  
процессе диффузионного от-  
жига;  $t=0$  отвечает моменту  
установления постоянной тем-  
пературы (375° C)

Card 4/4

S/078/60/005/009/007/017  
B015/B064

AUTHORS: Abrikosov, N. Kh., Bankina, V. F., Kharitonovich, K. F.

TITLE: Investigation of the Phase Diagram of the System Bi-Se

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 9,  
pp. 2011-2016

TEXT: The system Bi-Se was examined in the range of from 0 to 37% Se by the methods of microstructural analysis, thermal analysis, and measurement of electrical conductivity, as well as of thermo-electromotive force. Thermal analysis was made with a Kurnakov pyrometer by recording the heating curves. The electrical conductivity and thermo-electromotive force were measured with a ППТВ-1 (PPTV-1) potentiometer. The microstructural analyses led to the finding of a new compound with the approximate composition  $Bi_2Se$ , which is formed as a result of a peritectic reaction at  $468^{\circ}C$ . A range of solid solutions forms on the basis of the compound  $BiSe$  at concentrations of from 21 to 32% Se. A peritectic reaction at  $607^{\circ}C$  corresponds to this range. The phase diagram (Fig. 5) of the system

Card 1/2

Investigation of the Phase Diagram of the  
System Bi-Se

S/078/60/005/009/007/017  
B015/B064

Bi-Se was recorded on the basis of the thermal- and microstructural analyses. The polymorphic transformation of BiSe assumed by Tomoshige (Ref. 4) was not proven, and the thermal effect is traced back to the formation of  $\text{Bi}_2\text{Se}_3$ . The measurements of the electrical conductivity and thermo-electromotive force (Table) show that at slight deviations from the stoichiometric composition of the compound  $\text{Bi}_2\text{Se}_3$  the electrical conductivity increases, while the thermo-electromotive force decreases. This is explained by a low solubility of bismuth and selenium in the compound  $\text{Bi}_2\text{Se}_3$ . S. A. Semiletov and P. P. Konorov are mentioned in the paper. ✓

There are 9 figures, 1 table, and 9 references: 2 Soviet, 2 US, 2 French, 2 Italian, and 1 Japanese.

SUBMITTED: May 6, 1959

Card 2/2

ABRIKOSOV, N.Kh., doktor khim. nauk, otv. red.; MEDER, V.M., red. izd-va;  
YEPIFANOVA, L.V., tekhn. red.

[Transaction of the Fourth Conference on Semiconductor Materials;  
Problems of the metallurgy and physics of semiconductors] Trudy  
4-go soveshchaniia po poluprovodnikovym materialam. Voprosy metal-  
lurgii i fiziki poluprovodnikov. Moskva, Izd-vo Akad. nauk SSSR,  
1961. 174 p. (MIRA 14:6)

1. Soveshchaniye po poluprovodnikovym materialam, 4th,  
(Semiconductors--Congresses)

S/137/62/000/002/055/144  
A006/A101

AUTHORS: Abrikosov, N. Kh., Zobnina, A. N.

TITLE: Investigation of tellurium and antimony compounds with iodine

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 37, abstract 2G292  
(V sb. "Vopr. metallurgii i fiz. poluprovodnikov", Moscow, AN SSSR, 1961, 110 - 112)

TEXT: Alloys were prepared with Cy -00 (Su-00) grade Sb, I "pure for analyses", and Te that was previously purified by double distillation in a vacuum. Specimens were prepared by alloying the components in evacuated sealed ampoules. Prior to taking the batches, Sb and Te were crushed in an agate mortar down to 40 mesh. I was taken in the form of individual crystals. The TeI, SbI<sub>3</sub>, SbTeI compounds obtained possessed the following properties, respectively: melting point - 184, 171, and 360°C; electric resistivity  $26 \cdot 10^6$ ,  $5 \cdot 10^5$  and  $1.6 \cdot 10^4$  ohm·cm; width of the forbidden zone - 1.1; 1.67, and 1.57 ev. ✓

[Abstracter's note: Complete translation]

B. Golovin

Card 1/1

VOL, Abram Yevgen'yevich; AGEYEV, N.V., red.; AFRIKOSOV, N.Kh., doktor  
khim.nauk, red.; KORNILOV, I.I., doktor khim.nauk, red.;  
SAVITSKIY, Ye.M., doktor khim.nauk, red.; OSIPOV, K.A., doktor  
tekh.nauk, red.; GUSEVA, L.N., kand.khim.nauk, red.;  
MIRGALOVSKAYA, M.S., kand.khim.nauk, red.; SHKLOVSKAYA, I.Yu.,  
red.; MURASHOVA, N.Ya., tekh.n.red.

[Structure and properties of binary metallic systems] Stroenie  
i svoistva dvoirnykh metallicheskih sistem. Pod rukovodstvom N.V.  
Ageeva. Moskva, Fizmatgiz. Vol.2. [Systems of vanadium, bismuth,  
hydrogen, tungsten, gadolinium, gallium, hafnium, germanium, holmium,  
dysprosium, europium, iron] Sistemy vanadiia, vismuta, vodoroda,  
vol'frama, gadolinia, gallia, gafnia, germania, gol'mia, dispro-  
ziia, evropia, zheleza. 1962. 982 p. (MIRA 15:5)

1. Chlen-korrespondent AN SSSR (for Ageyev).  
(Alloys) (Systems (Chemistry)) (Phase rule and equilibrium)

35187

S/078/62/007/004/006/016  
B110/B101

18.1200

AUTHORS: Abrikosov, N. Kh., Glazov, V. M., Liu Chen-yüan

TITLE: Investigation of the separate and joint solubility of aluminum and phosphorus in germanium and silicon

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 4, 1962, 831-835

TEXT: For investigating the separate and joint solubility of aluminum and phosphorus in germanium and silicon, binary and ternary alloys of germanium and silicon (both monocrystalline, impurities  $\leq 10^{-5}\%$ ) in phosphorus (chemically pure) and aluminum (99.998%) were prepared. Owing to the high vapor pressure of P at high temperatures, Si and Ge were gradually saturated with P by stepwise heating so as to prevent explosion danger. AlP was prepared for the production of ternary alloys situated on the quasi-binary Ge(Si)-AlP sections. Ge-Al-P alloys were prepared by stepwise heating for 8 hrs at 400°C, 24 hrs at 600°C, and 12 hrs at 800°C in the bottom part of the ampulla, and then remelted for 3-5 hrs at 1000°C under periodic shaking. The gradual saturation of Si or Si-Al alloys with P was carried out by heating for 8 hrs at 400°C, 24 hrs at 800°C and 12 hrs at 1000°C.

Card 1/3

Investigation of the separate ...

S/078/62/007/004/006/016  
B110/B101

Remelting was carried out in Ar atmosphere in corundum crucibles by high-frequency heating. Cooling took place in cold water or cold Ar stream. The cooling rate was  $> 1000^{\circ}\text{C}/\text{min}$ , so as to obtain homogeneous alloys. The ternary alloys had the ratios P : Al = 3 : 1, 1 : 1, 1 : 3. The cast Ge-Al-P samples were homogenized for 850, 700, 700, 500, 500 and 200 hrs at 500, 600, 700, 800, 850 and 900 $^{\circ}\text{C}$ , those from Si-Al-P for 850, 700, 700, 500, 500 and 200 hrs at 600, 700, 800, 900, 1000 and 1200 $^{\circ}\text{C}$ . Equilibrium was here ascertained by means of microscopic analysis and by measuring the microhardness of the structural constituents in the intermediate stages. Microhardness was determined with a ПМТ-3 (PMT-3) apparatus at a load of 50 g. The microhardness isotherms of the crystals of the solid solution in the system Ge-P and Si-P showed that maximum solubility ( $\sim 0.45$  atom %) of P in Ge exists at 600 $^{\circ}\text{C}$ , maximum solubility ( $\sim 0.5$  atom %) of P in Si at 1130 $^{\circ}\text{C}$ . Al addition causes considerable increase in solubility of P in Ge and in Si. At 800 $^{\circ}\text{C}$ , the solubility of P in Si rises in the presence of an equimolecular Al amount by more than three times, in Ge by five times. Maximum solubility of Al and P (1 : 1) in Ge and Si exists at the section Ge(Si)-AlP. Increase in Al and P solubility, when simultaneously present at a ratio of 1 : 1, and the maximum solubility in the Ge(Si)-AlP sections is caused by dissolution of the chemical compound AlP in Ge and Si. AlP is

Card 2/3



Investigation of the separate ...

S/078/62/007/004/006/016  
B110/B101

closer to the solvent with regard to type of bond and crystal lattice than its components, and dissolves, therefore, better. There are 3 figures and 2 tables. The most important English-language reference is: J. O. McCaldin, J. appl. Phys., 31, 89 (1960).

SUBMITTED: March 22, 1961

Card 3/3

L 18124-63

EWP(q)/EWT(m)/BDS AFFTC/ASD JD/RDW

ACCESSION NR: AP3003888

S/0181/63/005/007/1913/1916

AUTHORS: Novikova, S. I.; Abrikosov, N. Kh.

TITLE: Investigation of thermal expansion in PbS, PbSe, and PbTe

SOURCE: Fizika tverdogo tela, v. 5, no. 7, 1963, 1913-1916

60  
59

TCPIC TAGS: thermal expansion, Pb, S, Se, Te, Grüneisen constant, elongation

ABSTRACT: This work was undertaken because of meager study previously made on the thermodynamic properties of semiconductors. The authors devote themselves to an investigation of thermal expansion in the range from 20 to 400K. The coefficient of linear elongation was measured, and from this value the Grüneisen constant was computed. Figure 1 (see Enclosure 1) shows the dependence of linear elongation,  $\alpha$ , on temperature for PbS. The curves for PbSe and PbTe are very similar. Figure 2 (see Enclosure 2) shows the dependence of the Grüneisen constant,  $\gamma$ , on temperature for all three compounds. It is seen that  $\gamma$  increases with drop in temperature. "The authors thank Z. F. Gulnitsy\*n and L. Ye. Glukhikh for furnishing the samples." Orig. art. has: 4 figures, 1 table, and 4 formulas.

ASSOCIATION: Institut metallurgii im. A. A. Baykova AN SSSR, Moscow (Institute of

Card 1/1 METALLURGY, Academy of Sciences, SSSR

L 18722-63

EWP(q)/EWT(m)/BDS AFFTC/ASD RDW/JD

ACCESSION NR: AP3005320

S/0181/63/005/008/2138/2140

AUTHORS: Novikova, S. I.; Abrikosov, N. Kh.

61

TITLE: Thermal expansion of AlSb, GaSb, ZnTe, and HgTe at low temperatures

60

SOURCE: Fizika tverdogo tela, v. 5, no. 8, 1963, 2138-2140

TOPIC TAGS: thermal expansion, Al, Sb, Ga, Zn, Te, Hg, low temperature, solid state, interaction, zero vibration

ABSTRACT: The authors made their study of thermal expansion in the temperature range from 20 to 340K. They used coarsely crystalline material of irregular form, the greatest dimension ranging from 9.27 mm in ZnTe to 16.55 mm in AlSb. They established the fact that the coefficient of thermal expansion becomes negative at low temperature. This is most clearly shown in the behavior of AlSb, shown in Fig. 1 (see enclosure). The temperature values at which the coefficient changes sign are 85K for AlSb, 52K for GaSb, 46K for ZnTe, and 62K for HgTe. The authors have examined the solid-state equation for this reversal and have shown that when the coefficient is negative the interaction of atoms in a state of zero vibration must be at a minimum during any change in volume. Orig. art. has:

Card 1/02

L 18722-63

ACCESSION NR: AP3005320

4 figures and 6 formulas.

ASSOCIATION: Institut metallurgii im A. A. Baykova AN SSSR, Moscow (Institute of Metallurgy, Academy of Sciences, SSSR)

SUBMITTED: 21Mar63

DATE ACQ: 06Sep63

ENCL: 01

SUB CODE: PH

NO REF SOV: 004

OTHER: 000

Card 2/02

L 17010-63

EWP(q)/EWT(m)/BDS

AFFTC/ASD

RDW/JD

S/078/63/008/005/010/021

AUTHOR: Poretskaya, L. V., Abrikosov, N. Kh. and Glazov, V. M. 58  
57TITLE: A study of the Sb - Te system in the vicinity of  $Sb_2Te_3$ PERIODICAL: Zhurnal neorganicheskoy khimii, v. VIII, No. 5, May 1963,  
1196-1198

TEXT: The object of the authors' study was the thermal relationship between deviation and stichiometry of  $Sb_2Te_3$ . The alloys were studied both in the liquid and in the solid state. Up to a temperature of  $750^\circ$   $Sb_2Te_3$  appears to be a stable chemical compound. Above  $750^\circ$  partial dissociation of  $Sb_2Te_3$  occurs in the liquid state. There are 5 figures. The 1 English-language source reads as follows: G. Offergeld, Van Cakenbergh. Phys. Chem. Sol. Pergamon Press, 11, 310 (1959).

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR  
Institute for Metallurgy im. A.A. Baykov of the Academy of Sciences USSR

Card 1/2

L 12595-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD  
ACCESSION NR: AP3003488 8/0078/63/002/007/1792/1792

AUTHOR: Glukhikh, B. Ye.; Abrikosov, N. Ith.

54

TITLE: Analysis of the system Sn-Te within the area of the compound SnTe

SOURCE: Zhurnal neorganicheskoy khimii, v.8, no. 7, 1963, 1792

TOPIC TAGS: Sn, Te, lattice constant

ABSTRACT: Using precision X-ray analysis, lattice constants of the alloys annealed at 700-1000 are observed to decrease with increase in tellurium content and to remain unchanged with increase in tin content. Solubility of tellurium in SnTe apparently increases from stoichiometric composition to 50.8 at. % and depends little on temperature.

ASSOCIATION: none

SUBMITTED: 28Jan63

DATE ACQ: 02Aug63

ENCL: 00

SUB CODE: CH, ML

NO REF SOV: 001

OTHER: 002

Card 1/1

ABRIKOSOV, N. Kh.

TITLE: Seminar on refractory metals, compounds, and alloys (Kiev, April 1963).

SOURCE: Atomnaya energiya, v. 15, no. 3, 1963, 266-267.

ACCESSION NR: - AP3008085

Ye. I. Yelagina, N. Kh. Abrikosov. Synthesis and investigation of rhenium silicide.

G. P. Shveykin and others. Kinetics of niobium oxycarbide decomposition in vacuum, interaction of niobium and carbon monoxide, etc., in connection with the development of the carbothermal method of extraction of niobium from its oxides.

L. A. Nisel'son and others. Obtaining niobium, tantalum, and their alloys by reduction of gaseous chlorides with hydrogen on a heated surface.

G. V. Samsonov, S. N. L'vov, V. N. Paderno. Obtaining ZrC, HfC, NbC, and TaC solid solutions by hot compacting of mixtures of oxides with carbon.

V. F. Funke, V. I. Pshenichnyy. Study of conditions of obtaining TiC, ZrC, and VC from oxides.

V. N. Bondarev. Investigation of synthesis of transition-metal

Card 4/11

ACCESSION NR: AP4019819

S/0279/64/000/001/0180/0183

AUTHOR: Shel'mova, L. Ye. (Moscow); Abrikosov, N. Kh. (Moscow); Bessonov, V. I. (Moscow)

TITLE: The pseudo-binary systems GeTe-SiTe and GeTe-PbTe

SOURCE: AN SSSR. Izv. Metallurgiya i Gornoye delo, no. 1, 1964, 180-183

TOPIC TAGS: germanium telluride, silicon telluride, lead telluride, telluride phase study, telluride phase diagram, pseudo-binary system

ABSTRACT: The authors studied the phase diagrams of the systems GeTe-SiTe and GeTe-PbTe (see Figs. 1 & 2 in the Enclosure), as well as solid solutions based on these compounds. Test specimens spaced at 10 mol % were prepared from GeTe, SiTe, and PbTe. The results of microstructure studies were confirmed by thermal analysis and showed that GeTe is the initially crystallizing phase in alloys with up to 30 mol % SiTe. Alloys with 30 mol % SiTe are closest to eutectic character (m.p. 685C), while SiTe crystallizes first in trans-eutectic alloys. The solubility of SiTe in GeTe does not vary significantly with temperature, and the GeTe-based solid solution range is not large. The eutectic state for the system GeTe-PbTe occurs at 20 mol % PbTe, and the melting point is given as 695C. PbTe crystallizes first when its content is increased. The PbTe-based solid solution

Card 1/1



ACCESSION NR: AP4019819

range is wide, and the second phase was first noted at 60 mol % PbTe. The substantial solubility of GeTe in PbTe was confirmed by X-ray analysis (see Fig. 3 in the Enclosure). Orig. art. has: 5 graphs and 1 table.

ASSOCIATION: none

SUBMITTED: 06Jun63

DATE ACQ: 31Mar64

ENCL: 02

SUB CODE: ML

NO REF SOV: 001

OTHER: 005

Card

2/5

L-21755-65 EWT(m)/ENP(b)/T/ENP(t) IJP(i)/SSD/AEDC(a)/AFWL/BSO/ASD(a)-5/ASD(p)-3/  
AFETH/ESD(gs)/ESD(t) RDA/JD

ACCESSION NR: AP4029192

8/0078/64/009/004/0931/0936

AUTHOR: Bankina, V. F.; Abrikosov, N. Kh.

TITLE: The Bi<sub>2</sub>Te<sub>3</sub> - Bi<sub>2</sub>Se<sub>3</sub> system

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 4, 1964, 931-936

TOPIC TAGS: bismuth telluride, bismuth selenide, bismuth telluride bismuth selenide system, alloy microstructure, alloy phase transformation

ABSTRACT: The above system was investigated to settle a disagreement on the existence of Bi<sub>2</sub>Te<sub>2</sub>Se compound. Above 500C Bi<sub>2</sub>Te<sub>3</sub> and Bi<sub>2</sub>Se<sub>3</sub> were found to form a continuous series of solid solutions (Fig. 1). The thermal analysis of the alloys annealed at 500 and 300C showed no thermal effects indicating a decomposition of solid solution. However, the curves of the composition dependence of the thermal emf (Fig. 2), Vickers hardness (Fig. 3), microhardness (Fig. 4); heat conductivity (Fig. 5) and electric mobility (Fig. 6); indicated a formation of a compound at a bismuth selenide content of 33.4 mol %, which corresponds to Bi<sub>2</sub>Te<sub>2</sub>Se. The absence of thermal effects indicates that the compound may be formed by an ordering of solid solution, a second-type phase transformation. The nature of the

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L 21756-65

ACCESSION NR: AP4029192

electric conductivity-temperature curve (Fig. 7) shows the material to be a semi-conductor. Bi Te, Bi Se and Bi Te Se all have a hexagonal lattice, in which the lattice constant decreases continuously from Bi Te to Bi Se. In alloys annealed at 570, 500 or 300C and water-quenched, the magnitude of the lattice constant "a" was not changed but the constant "c" decreased with decreasing annealing temperature. Orig. art. has: 9 figures and 1 table.

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR (Institute of Metallurgy, Academy of Sciences, SSSR)

SUBMITTED: 21Feb63

ENCL: 04

STW CODE: MM, SS

NO REF SOV: 002

OTHER: 006

Card 2/6

REF ID: A523-65 REF(C)/INT(A)/1 M-6/17-8 D

ACCESSION NR: AP5001992

S/0020/64/159/006/1326/1329

25  
24  
B

AUTHOR: Ishyeva, V. I., Alifanov, N. M.

TITLE: Investigation of phase equilibria in systems formed by antimony chalcogenides

DATE: AN SSCR, Dzhidzha, 159, no. 4, 1984, 1196-1200

TOPIC TAGS: antimony chalcogenide, phase equilibrium, microhardness, heat conductivity, electrical conductivity

ABSTRACT: The phase equilibria and microhardness of the  $Sb_2S_3-Sb_2Se_3$  system were investigated. A minimum in the liquidus and solidus lines constructed from heating curves) All melts had the same structure. In melts with a composition corresponding to the minimum of solid solutions with a minimum was formed in the  $Sb_2S_3-Sb_2Se_3$  system (Fig. 1)

034523-65

ACCESSION NR: AP5001992

... (Fig. 2) ... liquidus constructed from cooling curves and solidus, from heating curves. The microhardness ... the composition containing 55 mol% SnTe. Heat conductivity and electrical conductivity ... property curves do not indicate the presence of ordered structures.

Orig. art. has: 3 figures.

ASSOCIATION : Institut metallurgii im A. A. Baykova (Institute of Metallurgy)

SUBMITTED: 16.Jun.64

ENCL: 03

SUB CODE: MM, 35

NR REF SOV: 002

OTHER: 004

Card 2/4

ACCESSION NR: AP6001992

ENCLOSURE 01

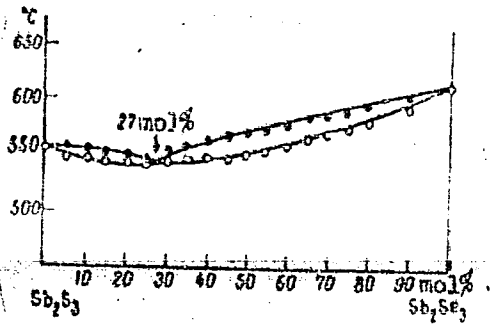
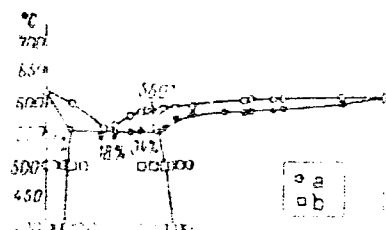


Fig. 1  
Phase diagram of the system  $Sb_2S_3$ - $Sb_2Se_3$

Card 3/4

ACCESSION NR: AP5001992

ENCLOSURE: 02



Phase diagram of the system  $Sb_2Se_3-Sb_2Te_3$   
a--monophase, b--two phase melts

Card 4/4

FORM 104 (REV. 5-22-64) EMI(A)/EMI(B)/I/EMP(L)/EMP(D)/EMA(D) Pz-5/Pab IJP(G) JD/A  
ACCESSION NR: AP5007602 8/0363/65/001/001/0011/0015

AUTHOR: Abrikosov, N. Kh.

32  
B

TITLE: Basic problems of alloying semiconductors

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, #. 1, no. 1, 1965, 11-15

TOPIC TAGS: semiconductor, semiconductor alloying, semiconductor performance

ABSTRACT: This is a general review of the recent literature in which the factors affecting performance of semiconductors are examined along broad lines. These factors include: the purity of the basic materials, selection of alloying elements, proper composition and concentration of alloying elements, their solubility limit and phase distribution coefficient, and the solution in a component of one of its constituents. Orig. art. has: 5 figures.

ASSOCIATION: Institut metallurgii im. A.A. Baykova (Metallurgical institute)

SUBMITTED: 06Oct64

ENCL: 00

SUB CODE: MM,EC

NO REF SOV: 004

OTHER: 001

Card 1/1



L 34070-65 EWA(c)/EWT(m)/EWC(m)/EWP(b)/T/EWP(t) IJP(c) RDM/JD  
ACCESSION NR: AF5007607 S/0363/65/001/001/0057/0059

AUTHOR: Abrikosov, N. Kh.; Danilova-Dobryakova, G. T.

TITLE: The phase diagram of the GeTe - bismuth telluride system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 1., 1965, 57-59

TOPIC TAGS: bismuth telluride, germanium telluride, phase diagram, semiconductor, solid solution

ABSTRACT: The phase diagram of the  $\text{Bi}_2\text{Te}_3$  - GeTe system (see Figure 1 of the Enclosure), drawn on the basis of thermal and metallographic studies, shows that on addition of up to 25 mol.% GeTe to  $\text{Bi}_2\text{Te}_3$  the temperature of incipient solidification decreases, after which it steadily increases up to GeTe. Solid solutions extend at 500C up to 17.4 mol.% GeTe. Three intermediate phases with  $\text{Bi}_2\text{Te}_3$  and GeTe in the ratios of 2:1, 1:1 and 1:3 are formed:  $\text{GeBi}_4\text{Te}_7$  by peritectic reaction at 564 C, providing a base for solid solutions extending from 30-35 mol.% GeTe;  $\text{GeBi}_2\text{Te}_4$  by degenerated peritectic reaction at 584C;  $\text{Ge}_3\text{Bi}_2\text{Te}_6$  also by a peritectic reaction at 650C. Orig. art. has: 1 table and 4 figures.

ASSOCIATION: Institut metallurgii im. A. A. Baykova (Metallurgical Institute)

Card 1/3

L 11331-65 EWT(m)/EWP(t)/EWP(b) RDW/JD  
ACCESSION NR: AP4043574

S/0078/64/009/008/1879/1882

AUTHOR: Shalimova, L. Ye; Abrikosov, N. Kh.

TITLE: The Sn-Te system in the region of the compound SnTe B

SOURCE: Zhurnal neorg. anicheskoy khimii, v. 9, no. 8, 1964, 1879-1882

TOPIC TAGS: tin tellurium system, tin telluride, tin telluride base alloy, alloy homogeneity region, alloy microstructure, alloy microhardness, alloy composition

ABSTRACT: Sn-Te alloys, in the composition region near the SnTe compound, containing from 49.5 to 51 at% Te with a 0.2-0.3 at% concentration interval were vacuum-melted from twice distilled Te and from Sn with an impurity content less than 0.003%, and homogenized in an argon atmosphere at a temperature ranging from 700 to 300C. Study of the alloy microstructure showed the SnTe compound, previously considered a constant composition compound with a 1:1 ratio of the components, to be a phase with a defective structure

Card 1/3

L 11339-65

ACCESSION NR: AP4043574

and varying composition whose narrow homogeneity region is at a maximum extending from  $50.1 \pm 0.1$  at% to  $50.9 \pm 0.1$  at% at 400C. With increasing Te content, the microhardness of alloys within the homogeneity region increases and remains constant in the two-phase region. As the Te content is increased above the stoichiometric, the alloy lattice constant increases, e.g., from  $6.308 \pm 0.002 \text{ \AA}$  to  $6.294 \pm 0.002 \text{ \AA}$  for alloys with 50 and 50.8 at% Te annealed at 700C. An increase in the Sn content above the stoichiometric, however, has no effect on the lattice constant. Alloys annealed at a lower temperature have an analogous composition dependence of the lattice constant; e.g., the constant decreases from 6.324 to  $6.302 \pm 0.002 \text{ \AA}$  for alloys with 49.9 and 50.9 at% Te, respectively, annealed at 400C. The increase in the lattice constant and the decrease in the microhardness with decreasing annealing temperature are ascribed to a decreasing number of vacancies in the alloy. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: none

Card 2/3

L 11383-55

ACCESSION NR: AP4043574

SUBMITTED: 28Aug63

ATD PRESS: 3106

ENCL: 00

SUB CODE: MM

NO REF SOV: 003

OTHER: 007

Card 3/3

SHELIMOVA, L.Ye.; ABRIKOSOV, N.Kh.

System Sn - Te in the region of SnTe compounds. Zhur. neorg.  
khim. 9 no.8:1879-1822 Ag '64.

(MIRA 17:11)

IVLIYEVA, V.I.; ABRIKOSOV, N. Kh.

Phase equilibrium in the systems formed by antimony chalcogenides.  
Dokl. AN SSSR 159 no.6:1326-1329 D '64 (MIRA 18:1)

1. Institut metallurgii im. A.A. Baykova. Predstavleno akademikom  
I.V. Tananayevym.

UGAY, Yakov Aleksandrovich; ABRİKOSOV, N.Kh., doktor khim. nauk,  
prof., reitsent; GÖRYUNOVA, M.I., doktor khim. nauk,  
prof., reitsent; FEDOROVA, T.P., red.

[Introduction to the chemistry of semiconductors] Vvedenie  
v khimiiu poluprovodnikov. Moskva, Vysshaya shkola, 1965.  
333 p. (MIRA 18:5)

1. Kafedra poluprovodnikovyykh materialov Leningradskogo  
politekhnikheskogo instituta im. M.I.Kalinina (for  
Goryunova).

ABRIKOSOV, N.Kh.

Basic problems on alloying semiconductors. Izv. AN SSSR. Naorg. mat.  
1 no.1:11-15 Ja '65. (MIRA 18:5)

1. Institut metallurgii imeni Baykova.



ABRIKOSOV, N.Kh.; DANILOVA-DOBRYAKOVA, G.T.

Phase diagram of the system  $\text{Bi}_2\text{Te}_3$  -  $\text{GeTe}$ . Izv. AN SSSR. Neorg.  
mat. 1 no.1:57-59 Ja '65. (MIRA 18:5)

/ 1. Institut metallurgii imeni Baykova.

I 55960-15 EWT(m)/EWG(m)/I/EWP(t)/EWP(b)/EWA(c) IJP(c) RDM/JD

ACCESSION NR: AP5009369

UR/0363/65/001/002/0204/0207  
546.86'241+546.289.241AUTHOR: Abrikosov, N. Kh.; Danilova-Dobryakova, G. T.TITLE: Study of the phase diagram of the antimony tritelluride-germanium telluride systemSOURCE: IN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 2, 1965, 204-207

TOPIC TAGS: tellurium compound, semiconductor material, phase diagram, thermal analysis

ABSTRACT: The  $Sb_2Te_3$ -GeTe system was investigated by means of thermal analysis and by microstructural analysis. The alloys were prepared from GeTe and  $Sb_2Te_3$ . The specimens were fused at  $10^{-4}$  mm residual pressure in sealed quartz ampules. Following this the alloys were annealed in sealed ampules filled with argon at 0.5 atm for 1000 hours at  $500^\circ C$ . For microstructural analysis the alloys were etched in a solution consisting of 1 cc HCl, 90 cc alcohol and 6 g of  $CuCl_2$ . On the basis of these studies a phase diagram was constructed for the  $Sb_2Te_3$ -GeTe system (see fig. 1 of the Enclosure). The electrical conductivity and the thermal-emf of the annealed

Card 1/32

L 55960-65

ACCESSION NR: AP5009369

alloys were investigated as a function of the composition of the alloy. The results of these measurements are shown in figs. 2 and 3 of the Enclosure. It was found that the solid solution exists on the  $Sb_2Te_3$  side of the diagram up to 10 mol %  $GeTe$ . The existence of three intermediate phases was also established:  $GeSb_4Te_6$ ,  $GeSb_2Te_4$ , and  $Ge_2Sb_2Te_5$ . Orig. art. has: 2 tables and 5 figures.

ASSOCIATION: Institut metallurgii Im. A. A. Baykova (Institute of Metallurgy)

SUBMITTED: 20Jun64

ENCL: 03

SUB CODE: MM, IC

NO REF SOV: 001

OTHER: 003

Card 2/5

L 55960-65

ACCESSION NR: AP5009369

ENCLOSURE: 01

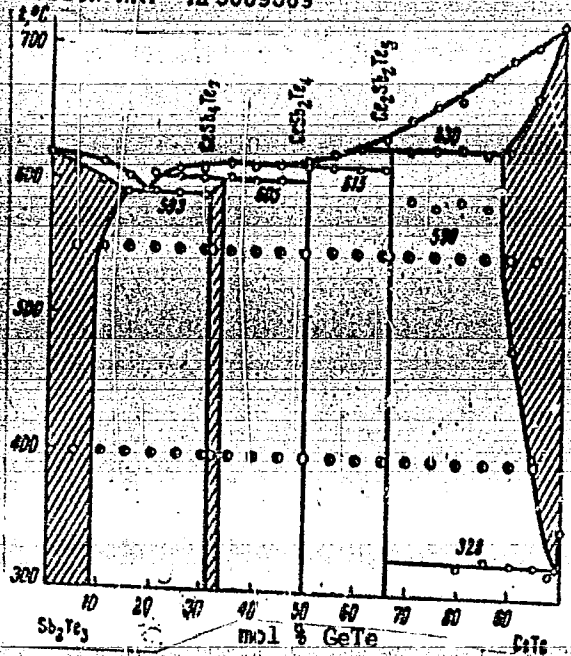


Fig. 1. Phase diagram of the  $Sb_2Te_3$ - $CeTe$  system.

Card 3/5

L 52069-65 ENT(m)/ENG(m)/T/EMP(t)/EMP(b)/EMA(c) IJP(c) RDW/JD

ACCESSION NR: AP5014080

UR/0363/65/001/004/0503/0510

AUTHOR: Abrikosov, N. Kh.; Poretskaya, L. V.

19  
18  
B

TITLE: Study of the Sb-Bi-Te ternary system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 4, 1965, 503-510

TOPIC TAGS: antimony alloy, bismuth alloy, tellurium alloy, thermal analysis, alloy

... methods of microanalysis and thermal analysis were used to study ...  
... section  $Sb_2Te_3 - Bi_2Te_3$ ; this deviation increases with decreasing temperature. As ...  
... binary gradually diminished. The peritectic section  $Sb_2Te_3 - Bi_2Te_3$  is not pseudo-  
binary at a constant Te content of 60 at. %. On this section the primary  $\delta$  phase  
on the  $Sb_2Te_3$  side undergoes a partial retrograde fusion, forming the two-phase

Card 1/2

L 52069-65

ACCESSION NR: AP5014080

field  $\delta + \lambda$ . The retrograde fusion ends at temperatures below 420°C, when the secondary crystallization of the eutectic  $\delta + \text{Te}$  begins in the three-phase volume  $\delta + \text{Te} + \lambda$ . The fusibility diagram of the Sb-Bi-Te system shows a region of maximum melting points which extends from the compound  $\text{Sb}_2\text{Te}_3$  to the compound  $\text{Bi}_2\text{Te}_3$ . There are two lines of a univariant equilibrium which extend from the Sb-Te system to the Bi-Te system: the line  $F_1 - F_2$  for initial formation of the eutectic  $\delta + \text{Te}$  and the line  $P_1 - P_2$  for initial formation of the  $\lambda$  phase via the peritectic reaction  $\delta + \lambda + \gamma$ . The isothermal section at 400°C shows two series of continuous solid solutions: the  $\delta$  phase--a narrow region between the compounds  $\text{Sb}_2\text{Te}_3$  and  $\text{Bi}_2\text{Te}_3$  which deviates on the side of the binary system Sb-Te from the stoichiometric section with a constant tellurium content of 60 at. % toward excess antimony, and the  $\gamma$  phase--a wide region of solid solutions between the  $\gamma$  phases of the binary systems. Orig. art. has: 12 figures.

ASSOCIATION: Institut metallurgii im. A. A. Baykova (Institute of Metallurgy)

SUBMITTED: 18Dec64

ENCL: 00

SUB CODE: IC, MM

NO FEY SOV: 009

OTHER: 009

*Art*  
*Obri* 2/2

L 52062-65 E/T(m)/EWG(m)/R/EMP(c)/SWP(b)/EWA(c) IJI(c) RDW/JD  
ACCESSION NR: AP5012971 UR/0076/65/010/005/1200/1205

AUTHOR: Shelimova, L. Ye.; Abrikosov, N. Kh.; Zhdanova, V. V. 18  
B

TITLE: The Ge-Te system in the region of the compound GeTe

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 5, 1965, 1200-1205

TOPIC TAGS: germanium telluride, germanium alloy, tellurium alloy, phase diagram, thermal analysis

ABSTRACT: The region of homogeneity of GeTe and the change in the temperature of transition from the rhombohedral to the cubic lattice as a function of composition were investigated in Ge-Te alloys containing from 49 to 52 at. % Te (with increments of 0.3-0.5 at. % Te). Photomicrography was used to identify the phases in the various alloys. Heating curves were recorded by differential thermal analysis after the alloys had been annealed for 970 hr at 400°C; distinct endothermic effects corresponding to the phase transition were displayed by these curves. The change in the phase transition temperature with composition was also determined dilatometrically by measuring the coefficient of thermal expansion as a function of temperature. On the basis of the thermal analysis, microstructural analysis, and

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L 52062-65

ACCESSION NR: AP5012971

thermal expansion data, a phase diagram of the Ge-Te system was plotted in the region of the GeTe compound (see fig. 1 of the Enclosure). The region of homogeneity of the high-temperature germanium telluride modification lies between  $50.3 \pm 0.1$  and  $51.5 \pm 0.2$  at. % Te ( $430^\circ\text{C}$ ). The region of homogeneity of the low-temperature modification is somewhat narrower; it ranges from  $50.2 \pm 0.1$  to  $50.9 \pm 0.1$  at. % Te. The temperature of the polymorphic transformation is  $430^\circ\text{C}$  on the germanium side and  $36^\circ\text{C}$  on the tellurium side. The eutectic GeTe + Te has a melting point of  $380^\circ\text{C}$ . X-ray diffraction was used to measure the lattice constant of the cubic modification of GeTe with the composition at  $600^\circ\text{C}$ . Orig. art. has: 5 figures and 4 tables.

ASSOCIATION: none

SUBMITTED: 10Apr64

ENCL: 01

SUB CODE: IC,70

NO REF SOV: 001

OTHER: 003

Card 2/3



L 52062-65

ACCESSION NR: AP5012971

ENCLOSURE: 01

0

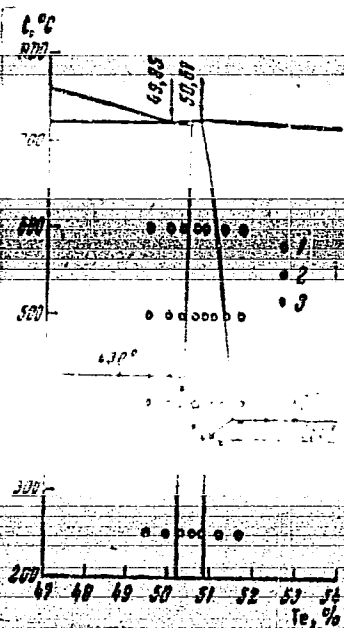


Fig. 1. Phase diagram of Ge-Te system  
in the region of the compound GeTe  
1--single-phase alloys; 2--two-phase  
alloys; 3--data of thermal analysis

Card 3/3

L 2790-66 EWT(m)/T/EWP(b)/EWP(b)/EWA(c) LJP(c) JD

ACCESSION NR: AP5022247

UR/0363/65/001/007/1021/1024  
546.86'191-165:536.495

43  
42  
B

AUTHOR: Abrikosov, N. Kh.; Tomtiyev, D.; Shakhtakhtinskiy, M. G.; Kuliyev, A. A.

TITLE: Thermoelectric properties of antimony-arsenic solid solutions

SOURCE: AN SSSR. Izvestiya, Neorganicheskiye materialy, v. 1, no. 7, 1965; 1021-1024

TOPIC TAGS: thermoelectromotive force, solid solution, antimony alloy, arsenic, bismuth alloy, electric conductivity, thermoelectric property

ABSTRACT: Antimony-arsenic solid solutions containing up to 19.5% As, prepared from the elements, were used to grow single crystals whose electrical conductivity  $\sigma$ , thermo-emf ( $\epsilon$ ), and Hall emf were measured. At room temperature, both  $\sigma$  and  $\epsilon$  decrease with rising arsenic concentration. Since in the Sb-As system the carrier concentration is virtually independent of composition, the drop in  $\sigma$  is due to a decrease in the carrier mobility, which in turn is caused by the distortion of the lattice by the arsenic. In contrast to Bi-Sb solutions, Sb-As solutions were found to have no magnetoresistance at low magnetic field strengths. In the 100-300K temperature range, the thermo-emf rises with the temperature in both pure antimony and the solid solutions, hole conduction being preserved. In Card 1/2

I. 2790-66

ACCESSION NR: AP5022247

contrast to the Bi-Sb system, no semiconducting properties are displayed by the Sb-As system down to the liquid nitrogen temperature; this difference may be due to the greater overlapping of the bands of arsenic and antimony, which may also account for the metallic nature of the conductivity in the temperature range studied. Orig. art. has: 5 figures.

ASSOCIATION: Institut fiziki Akademii nauk Azerb. SSR (Institute of Physics, Academy of Sciences, Azerb. SSR)

SUBMITTED: 06Feb65

ENCL: 00

SUB CODE: SS, IC

NO REF SOV: 005

OTHER: 005

BVK

Card 2/2

L 7912-66 EWT(m)/ETC/EWG(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) RDW/JD/JO  
ACC NR: AP3025779 SOURCE CODE: UR/0363/65/001/009/1462/1467

AUTHOR: Abrikosov, N. Kh.; Zargaryan, V. Sh.

ORG: Institute of Metallurgy im. A. A. Baykova (Institut metallurgii)

TITLE: Alloys and phase diagram of neodymium-tellurium systems

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9, 1965, 1462-1467

TOPIC TAGS: neodymium alloy, tellurium alloy, phase diagram

ABSTRACT: The materials investigated were synthesized from neodymium and tellurium, the impurities in which did not exceed 0.5 and 0.05%, respectively. The synthesis was carried out in two section quartz ampoules. One section was filled with finely ground metallic neodymium and the other with tellurium. This prevented direct contact of the reagents which could cause an explosion. After evacuation to  $10^{-4}$  mm Hg, the ampoule was sealed and placed in a horizontal tube furnace with two heating zones. The ampoule was rotated inside the furnace

Card 1/2

UDC:541.123, 2:546.657'24

42  
B

L 7912-66  
ACC NR: AP5025779

at 25-30 rev/min. The furnace temperature was raised slowly to 700-950 C at a rate of 200 degrees/hour. The zone of the furnace with the section of the ampoule containing the neodymium was at a temperature 100-120 C lower than that containing the part of the ampoule with the tellurium. The ampoule was rotated for 4-5 hours up to complete volatilization of the tellurium. The resulting powder appeared homogeneous; this was confirmed by x-ray analysis. The method permitted synthesis of compositions with up to 75 atom % tellurium. The powder was melted in tantalum crucibles to obtain solid samples for analysis. Solid samples of stoichiometric composition corresponding to the following compounds were obtained: NdTe, Nd<sub>3</sub>Te<sub>4</sub>, Nd<sub>2</sub>Te<sub>3</sub>, Nd<sub>4</sub>Te<sub>7</sub>, NdTe<sub>2</sub>, Nd<sub>2</sub>Te<sub>5</sub>, and NdTe<sub>3</sub>. Results of chemical analysis of these neodymium tellurides are shown in a table. The article also describes a method for thermal analysis of the neodymium-tellurium alloys using tungsten rhenium thermocouples; heating was done with a high frequency generator. Based on the results of the thermal analysis and a microstructural analysis, a diagram of state is constructed for the neodymium-tellurium system. Orig. art. has: 2 figures and 4 tables

SUB CODE: IC, MM/ SUBM DATE: 21May85/ ORIG REF: 002/ OTH REF: 005  
Card 2/2 (SU)

L 13566-66 EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD  
ACE NR: AP6001231 SOURCE CODE: UR/0363/65/001/012/2151/2153

AUTHOR: Abrikosov, N. Kh.; Yelagina, Ye. I.; Popova, M. A.

51B

ORG: Institute of Metallurgy im. A. A. Baykov (Institut metallurgii); Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Study of the  $PbTe-Sb_2Te_3$  system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965, 2151-2153

TOPIC TAGS: lead compound, antimony compound, tellurium compound, solid solution, PHASE DIAGRAM, THERMAL ANALYSIS

ABSTRACT: Microstructural and thermal analyses were used to study the  $PbTe-Sb_2Te_3$  system, and a phase diagram of the latter was plotted (see Fig. 1). It was shown that a

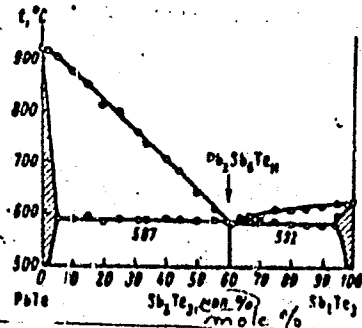


Fig. 1. Phase diagram of the  $PbTe-Sb_2Te_3$  system.

Card 1/2

UDC: 546.85'241+546.86'241

L 13566-66

ACC NR: AP6001231

single ternary compound  $Pb_3Sb_2Te_{11}$  is formed in the system at 587C. The composition corresponding to the peritectic point coincides with the composition of the compound. The ternary compound forms a eutectic with a solid solution based on  $Sb_2Te_3$  at an  $Sb_2Te_3$  content of 61 mole % and a temperature of 582C. The existence of regions of solid solutions of  $Sb_2Te_3$  (up to 3 mole %) in  $PbTe$  and solutions of  $PbTe$  (up to 2 mole %) in  $Sb_2Te_3$  at the same temperature was established. Some properties of the compound  $Pb_3Sb_2Te_{11}$  were determined: m.p. 587C;  $H_u$  51.0 kg/mm;  $\chi$   $6.1 \times 10^{-3}$  cal/cm sec g;  $\delta$  504  $ohm^{-1} cm^{-1}$ . Orig. art. has: 4 figures and 1 table.

SUB CODE: 07, 11 / SUBM DATE: 28Jul65 / ORIG REF: 006 / OTH REF: 005

Card 2/2

L 005/4-01 EWI(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6029315

SOURCE CODE: UR/0363/66/002/008/1416/1428

AUTHOR: Abrikosov, N. Kh.; Skudnova, Ye. V.; Poretskaya, L. V.; Pavlova, N. G. 40

ORG: Institute of Metallurgy im. A. A. Baykov (Institut metallurgii) B

TITLE: Investigation of the quaternary system In-Sb-Cd-Sn in order to determine the phase equilibria at the InSb-CdSnSb<sub>2</sub> cross section

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 8, 1966, 1416-1428

TOPIC TAGS: phase diagram, phase structure, phase equilibrium, phase analysis, indium, antimony, cadmium

ABSTRACT: The object of the study was to determine the phase equilibria at the cross section of the In-Sb-Cd-Sn system which involves InSb and an alloy composed of 50 mol % CdSb and 50 mol % SnSb. The composition of this alloy corresponds to CdSnSb<sub>2</sub>, a non-existent compound. The samples for the study were prepared by fusing mixtures of pure components in evacuated quartz ampoules at 700-800°C. Depending on specific composition, the alloy samples were homogenized by holding for at least 2000 hrs at 450, 400, 320, or 300°C. The phase diagrams are presented for all binary and ternary systems included in the In-Sb-Cd-Sn system. The results of the microstructure analysis and microhardness for all systems investigated are tabulated. The InSb-(CdSnSb<sub>2</sub>) and the CdSb-SnSb cross sections were found to be non-quasibinary. The CdSb-Sn alloy was found

Card 1/2

UDC: 546.682+546.86+546.811+546.48



L 06574-67

ACC NR: AP6029815

to be composed of two independent  $\beta$ -'phases: Sn-Sb and CdSb(Cd<sub>4</sub>Sb<sub>3</sub>). The analysis of the InSb-(CdSnSb<sub>2</sub>) cross section showed that at 300°C there exists an equilibrium among InSb,  $\beta$ -phase,  $\beta$ '-phase, and CdSb(Cd<sub>4</sub>Sb<sub>3</sub>). This cross section was found also to contain less than 1 mol % CdSnSb<sub>2</sub>. Orig. art. has: 11 figures, 3 tables.

SUB CODE: 11,20/

SUBM DATE: 01Feb66/

ORIG REF: 004/

OTH REF: 006

*me*  
Card 2/2

ACC NR: AP6056796

(A)

SOURCE CODE: UR/0363/66/002/011/2076/2077

AUTHOR: Abrikosov, N. Kh.; Bankina, V. F.

ORG: Metallurgical Institute im. A. A. Baykov AN SSSR (Institut metallurgii AN SSSR)

TITLE: Change in the heat conductivity of the crystal lattice during the ordering process in the compound  $\text{Bi}_2\text{Te}_2\text{Se}$

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 11, 1966, 2076-2077

TOPIC TAGS: bismuth containing compound, tellurium containing compound, selenium containing compound, heat conductivity, crystal lattice

ABSTRACT: The samples were prepared by melting, in evacuated quartz ampoules, the compounds  $\text{Bi}_2\text{Te}_3$  and  $\text{Bi}_2\text{Se}_3$  in a ratio of 2:1, with subsequent quenching in ice water. The alloys were then annealed in an argon atmosphere for a period of 1 month, and were again quenched in ice water. During this annealing the samples were brought into an equilibrium state and measurements were made of their heat conductivity, their electric resistance, and their thermo-emf. After this, the samples were subjected to low temperature annealing at 300, 200, and 100°C. After 1-2 hours, the samples were quenched in ice water, and their properties were again measured. It was established that there is a decrease in the heat conductivity of the crystal lattice of an alloy

Card 1/2

UDC: 546.3-19-87-24-23:536.2

ACC NR: AP7002396

SOURCE CODE: UR/0363/66/002/012/2103/2109

AUTHOR: Shelimova, L. Ye.; Abrikosov, N. Kh.; Zhdanova, V. V.; Sizov, V. V.

ORG: Institute of Metallurgy im. A. A. Baykov, Academy of Sciences, SSSR (Institut metallurgii Akademii nauk SSSR)

TITLE: Study of the systems PbSe-GeSe and GeSe-GeTe

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 12, 1966, 2103-2109

TOPIC TAGS: lead compound, selenide, telluride, germanium compound, phase transition

ABSTRACT: The phase equilibria and solid solutions in the systems PbSe-GeSe and GeSe-GeTe were studied by thermal, microstructural, x-ray and dilatometric analyses in the 20-620°C range. It was found that the PbSe-GeSe system is not a quasi-binary section of the ternary system Ge-Pb-Se. The polythermal section of GeSe-GeTe showed the existence of a continuous series of solid solutions at temperatures near the solidus. Phase transformations at low temperatures connected with the polymorphism of GeSe and GeTe were investigated, and the boundaries of solid solutions were determined in both systems. Orig. art. has: 7 figures and 2 tables.

SUB CODE: 07/ SUBM DATE: 25Dec65/ ORIG REF: 003/ OTH REF: 007

Cerd 1/1

UDC: 546.815'231+546.289'231  
546.289'231+546.289'241

"APPROVED FOR RELEASE: 06/05/2000    CIA-RDP86-00513R000100310002-4

ABRIKOSOV, S., GAMBURTSEVA, A., LACAREV, P. P. and SHAPOSHINKOV, B.

"The Effect of the Illumination of the Human Skin on the Adaptation of  
Peripheral Vision", Dokl AN SSSR, Vol. 2, No. 1/2, 1934.

APPROVED FOR RELEASE: 06/05/2000    CIA-RDP86-00513R000100310002-4"

ZASLAVSKIY, L.D.; ABRIKOSOV, S.Kh.

Arteriography in spontaneous gangrene during life. Vest. khir. 71 no.1:  
32-34 1951. (CLML 20:8)

1. Of the Faculty Surgical Clinic (Head--L.D. Zaslavskiy), Arkhangel'sk  
State Medical Institute (Director--S.N. Gil'denskiol'd).

PHASE I BOOK EXPLOITATION

SOV/5139

Abrikosov, S. V., A. P. Alekseyev, N. M. Zotov, G. F. Kudryashov,  
N. I. Lapov, V. P. Lebedev, and Ye. Ye. Chekmenev

Benzoelektricheskiye i dizel'-elektricheskiye agregaty moshchnost'yu ot 0.5 do 400 kvv; spravochnik (Gasoline- and Diesel-Engine Electric Generating Sets, 0.5 to 400 kw Capacity; Handbook) Moscow, Mashgiz, 1960. 543 p. Errata slip inserted. 7,000 copies printed.

Ed. (Title page): V. P. Lebedev, Engineer; Reviewer: Ye. A. Meyerovich, Engineer; Ed. of Publishing House: V. I. Rybakova; Tech. Ed.: T. F. Sokolova; Managing Ed. for Information Literature: I. M. Monastyrskiy, Engineer.

PURPOSE: This handbook is intended for technical personnel concerned with the design and operation of electric generating sets.

COVERAGE: The handbook contains technical data on gasoline- and Diesel-engine electric generating sets with a capacity of 0.5 to 400 kw. Prime movers, electric generators, and electrical

Card ~~1/6~~

86737

21.5300

S/120/60/000/006/012/045  
E032/E514

AUTHOR: Abrosimov, A.T.

TITLE: A Large-area Scintillation Counter for the  
Recording of Cosmic-ray Particles

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No. 6,  
pp. 48 - 51

TEXT: A description is given of a cosmic-ray particle counter using a polystyrene-base plastic scintillator. The plastic scintillator was in the form of a cylinder, 670 mm dia and 55 mm long. The scintillator had the following composition: ~ 99% polystyrene, 1% paraterphenyl and 0.03% 1.4-di-[2-(5-phenyloxazyl)]-benzene. In order to prepare plastic scintillators of such large dimensions, use was made of high-temperature polymerisation without catalysts and a special apparatus was built for preparing the scintillators under laboratory conditions. Special checks were made of the quality of the plastics by chemical analysis and the scintillations obtained by identical plastic scintillators were compared, using the method described by Medvedev et al (Ref. 6). Various reflectors were tried and  
Card 1/3

X

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S/120/60/000/006/012/045  
E032/E314

A Large-area Scintillation Counter for the Recording of  
Cosmic-ray Particles

agreement with the theoretical predictions for a "thin  
absorber" (Rossi, Ref. 9). Acknowledgments are expressed  
to G.B. Khristiansen for assistance and G.V. Bogoslovskiy  
for help in building the electronics apparatus.  
There are 4 figures and 10 references: 3 English and  
7 Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy  
fiziki MGU (Scientific Research Institute for  
Nuclear Physics of Moscow State University)

SUBMITTED: November 30, 1959

Card 3/3



ABRIKOSOV, Aleksey Ivanovich (1875-1955), akademik; STRUKOV, A.I., prof.,  
otv. red.; RYVKIND, A.V., prof., red.; SEROV, V.V., dotz., red.;  
ABRIKOSOVA, F.D., kand. med. nauk; KUSEVITSKIY, I.A., red. izd-  
va; UL'YANOVA, O.G., tekhn. red.

[Allergy and problems of pathology] Allergiya i voprosy patolo-  
gii. Moskva, Izd-vo Akad. nauk SSSR, 1963. 487 p. (MIRA 16:4)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for  
Strukov).

(ALLERGY) (PATHOLOGY)

VOINOV, M.S.; KIRILLOV, G.N.; KOZLOVA, M.M.; CHZHAO, A.Ye. [Chao, A.E.];  
~~ABRIKOSOVA, F.S., red.~~; AMBARTSUMYAN, Z.N., red.; VASILEVSKAYA,  
V.A., red.; DROZDOVA, N.N., red.; ZHAK, D.K., red.; KESSENIKH, V.N.,  
red.; KOPILOVA, G.I., red.; LEVASHOVA, Z.P., red.; SMIRNOVA, B.A.,  
red.; TIMOSHENKO, G.G., red.; KHRINKOVA, A.A., red.; KHELEMSKAYA,  
L.M., tekhn. red.

[Catalog for district libraries] Katalog raionnoi biblioteki.  
Sec.63. [Agriculture] Sel'skoe khoziaistvo. Izd.3., dop. 1  
perer. Moskva. 1957. 163 p. (MIRA 11:8)

1. Moscow. Publichnaya biblioteka.  
(Bibliography--Agriculture)

BRILAVENTSEVA, G.N., BOGATOVA, G.P., LEVINA, S.S., NASEDKINA, B.A., FOMINA, Ya.N.,  
red.; ABRIKOSOVA, F.S., red.; AMBARTSUMYAN, red.; VASILEVSKAYA, V.A.  
red.; DROZDOVA, N.N., red.; ZHAK, D.K., red.; KOPRELOVA, G.I., red.;  
LEVASHEVA, Z.P., red.; SMIRNOVA, B.A., red.; TIMOSHENKO, G.G., red.;  
KHRENKOVA, A.A., red.; KHELEMSKAYA, L.M., tekhn. red.

[Catalog for district libraries. Classes: Natural sciences - 5;  
Medicine - 61; Geography - 91] Katalog raionnoi biblioteki.  
Otdely: 5 estestvoznaniye, 61 meditsina, 91 geografia. Izd. 3.,  
dop. i perer. Moskva, 1958. 215 p. (MIRA 11:8)

1. Moscow. Publichnaya biblioteka.  
(Bibliography--medicine) (Bibliography--Geography)  
(Bibliography--Science)

ABRIKOSOVA, F.S.; AMBARTSUMYAN, Z.N.; VASILEVSKAYA, V.A.; DROZDOVA, N.N.;  
~~ZHAR, D.K.~~; KESSENIKH, V.H.; KOPKOVA, G.I.; LEVASHOVA, Z.P.;  
SMIRNOVA, B.A.; TIMOSHENKO, G.G.; KHRENKOVA, A.A.; KHOVANSKIY,  
I.P., tekhn.red.

[Catalog of a district library] Katalog raionnoi biblioteki.  
Section 6:[Technology] Tekhnika. Izd. 3., dop. i perer.  
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(Bibliography--Technology)

ABRIKOSOV, I.A., BEGISHEV, F.A., DENISEVICH, V.V., ZHUKOVSKIY, L.O.,  
KALININ, N.A., MIRCHINK, M.F., MUSTAFINOV, A.N., MALIVKIN, V.D.  
OGANESOV, G.N., ROVHIN, L.I., TROFIMUK, A.A.,

"New oil and gas regions in the USSR"

Abstract. In the introductory part of the report the progress in geological oil and gas exploration work in the USSR, objectives of oil and gas industry in the current Seven-Year Plan and in connection with the perspective plan up to 1980 inclusive have been briefly described. Further, characteristics of new oil and gas regions and new fields have been cited. New oil and gas regions of the Permian Pre-Ural, Bashkir ASSR, Tatar ASSR, Azerbaijan SSR, western part of Kozakh SSR, Turkmen SSR, Uzbek SSR, Siberia and the Far East, have been reviewed. Tectonic position of each of these regions as well as their stratigraphic characteristics and specific features of oil and gas bearing capacity have been considered. A brief description of some newly discovered oil and gas fields from the point of view of their position in the general tectonic plan have been given; a brief lithologic characteristic of rocks-collctors and conditions of occurrence of oil and gas (types of traps) has been brought in. The report points out the importance of each new oil and gas area and separate fields in the light of perspectives of further geological exploration work and increase in oil and gas production.

graphical characteristics and specific features of oil and gas bearing capacity have been considered. A brief description of some newly discovered oil and gas fields from the point of view of their position in the general tectonic plan have been given; a brief lithologic characteristic of rocks-collctors and conditions of occurrence of oil and gas (types of traps) has been brought in. The report points out the importance of each new oil and gas area and separate fields in the light of perspectives of further geological exploration work and increase in oil and gas production.

report to be submitted for the 6th World Petroleum Congress, Frankfurt, West Germany, 19-26 June 1963

*2*  
*11*  
*let. A* ABRIKOSOVA, I. I.

DERYAGIN AND I. I. ABRIKOSOVA. Letter in *Zh. Eksp. Teor. Fiz.*, 21, 945-6 (No. 8, 1951) In Russian.

A glass or quartz plate sheet was attached to one arm of a balance connected to a photoelectric cell. As a similar convex surface approached and receded, hysteresis effects were observed. During approach the law is  $F \propto H^{-1}$  ( $F$  = molecular attraction,  $H$  = least distance). I. JACOB

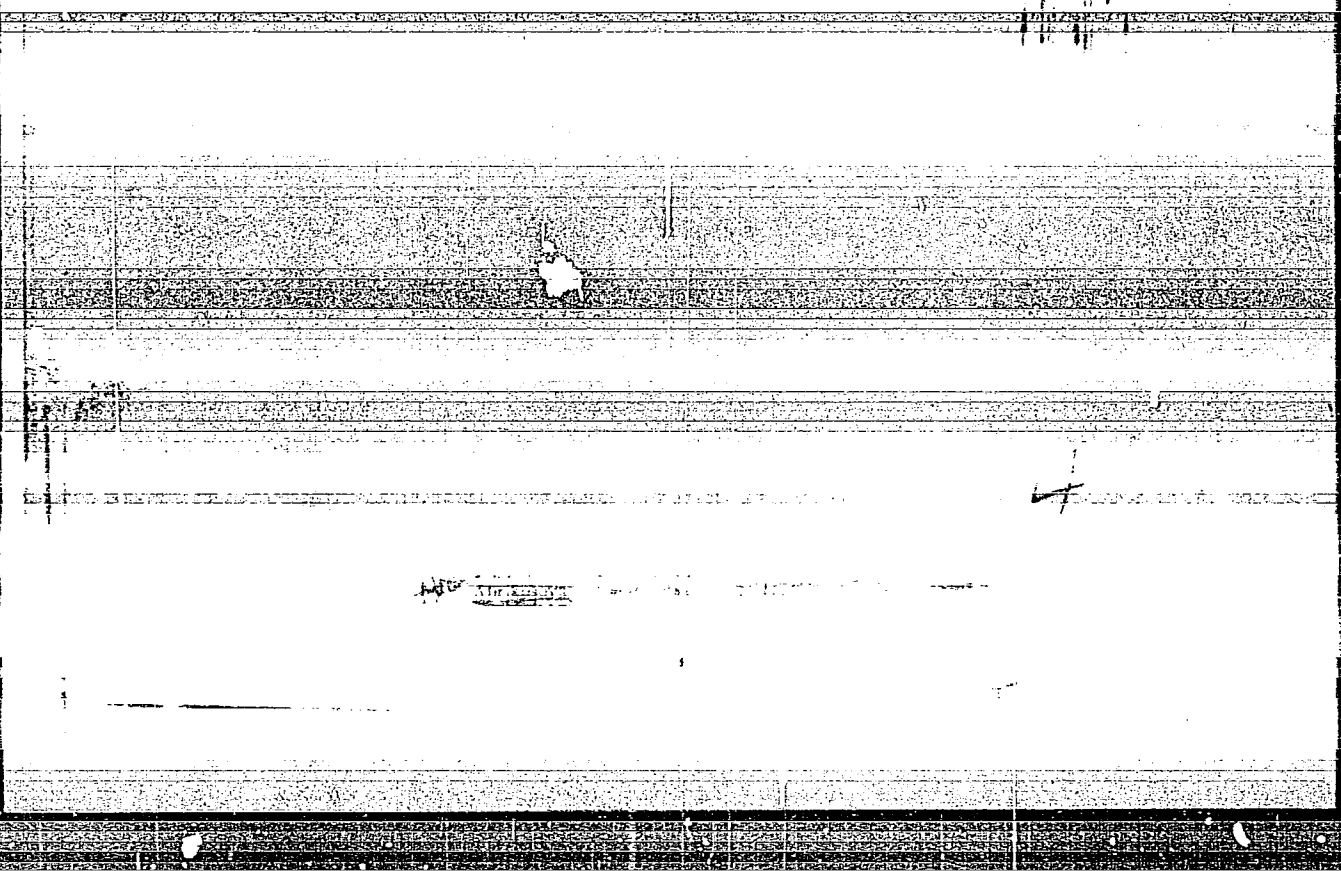
539.13  
5944. Direct measurement of the molecular attraction as function of distance between surfaces. B. V.

USSR

Application of feedback to analytical and microanalytical balances. B. V. Deryagin, K. K. Timofeev, I. I. Abrikosova and Yu. N. Sachkov. *Trudy Komiteta Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 5(8), 162-61(1964).--An elec. set-up which relates deflection of the analytical balance beam to elec. current is described. Euzila Mayerle

"APPROVED FOR RELEASE: 06/05/2000

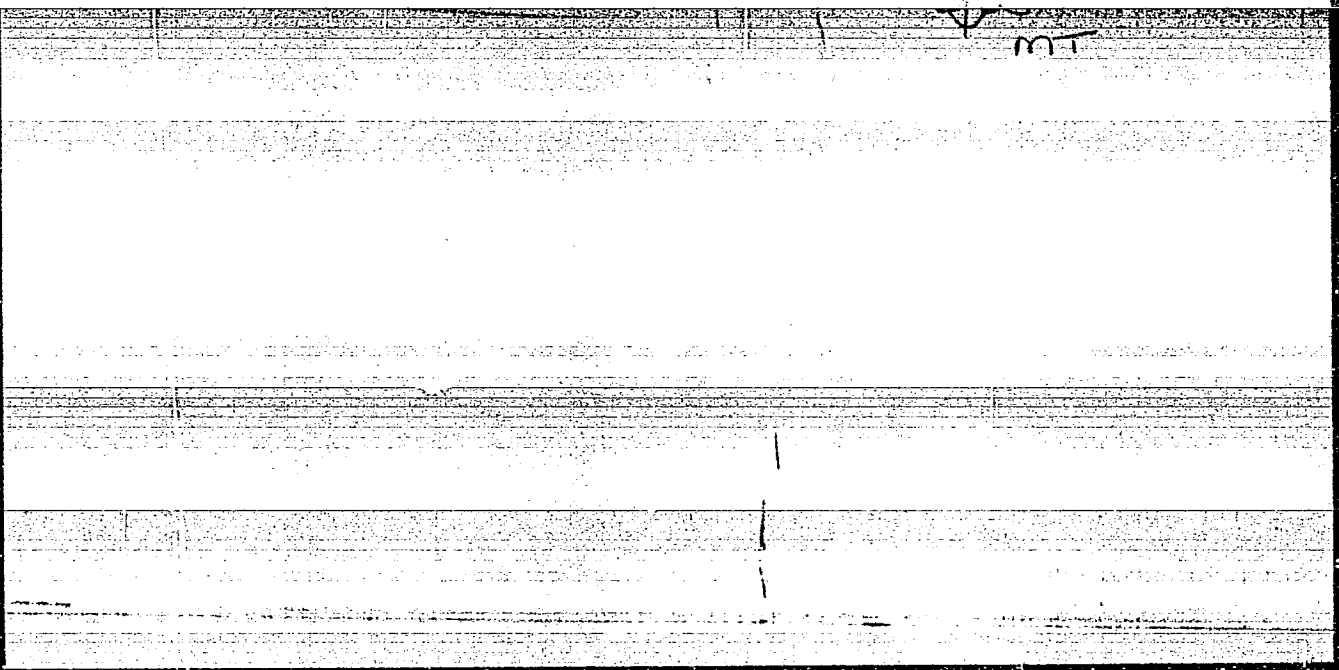
CIA-RDP86-00513R000100310002-4



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ABRIKOSOVA, I.I.

USSR / PHYSICS

CARD 1 / 2

PA - 1405

Žurn.eksp.i teor.fis, 30, fasc.6, 993-1006 (1956) CARD 2 / 2      PA - 1405

plane, the other had the shape of a spheri-<sup>1</sup> lens. Measuring was carried out in air and in vacuum, but measuring in a vacuum is of greater accuracy. The vacuum used corresponded to an air pressure of from  $1 \cdot 10^{-1}$  mm torr to several mm torr. The scales used should have a high directing moment and should nevertheless be very sensitive. This difficulty may be overcome by a method which resembles negative back-coupling. The shifting of the scale balance from the state of equilibrium generates an electric current. The latter causes electromagnetic reaction which forces the balance scale back into the state of equilibrium. Next, the scheme and the working principle of the device, above all of the scales and of the photoelectric transmitter, are described in detail on the basis of drawings. Molecular attraction is, owing to back-coupling, automatically put equal to the moment which acts upon the frame in the magnetic field and is proportional to amperage. By measuring amperage it is possible to determine the required force of molecular attraction. There follows a discussion of the following items: Regulation of distance, self-oscillations, constructional shape of the measuring device, and gauging of the scales.

INSTITUTION: Institute for Physical Chemistry of the Academy of Science in the USSR.

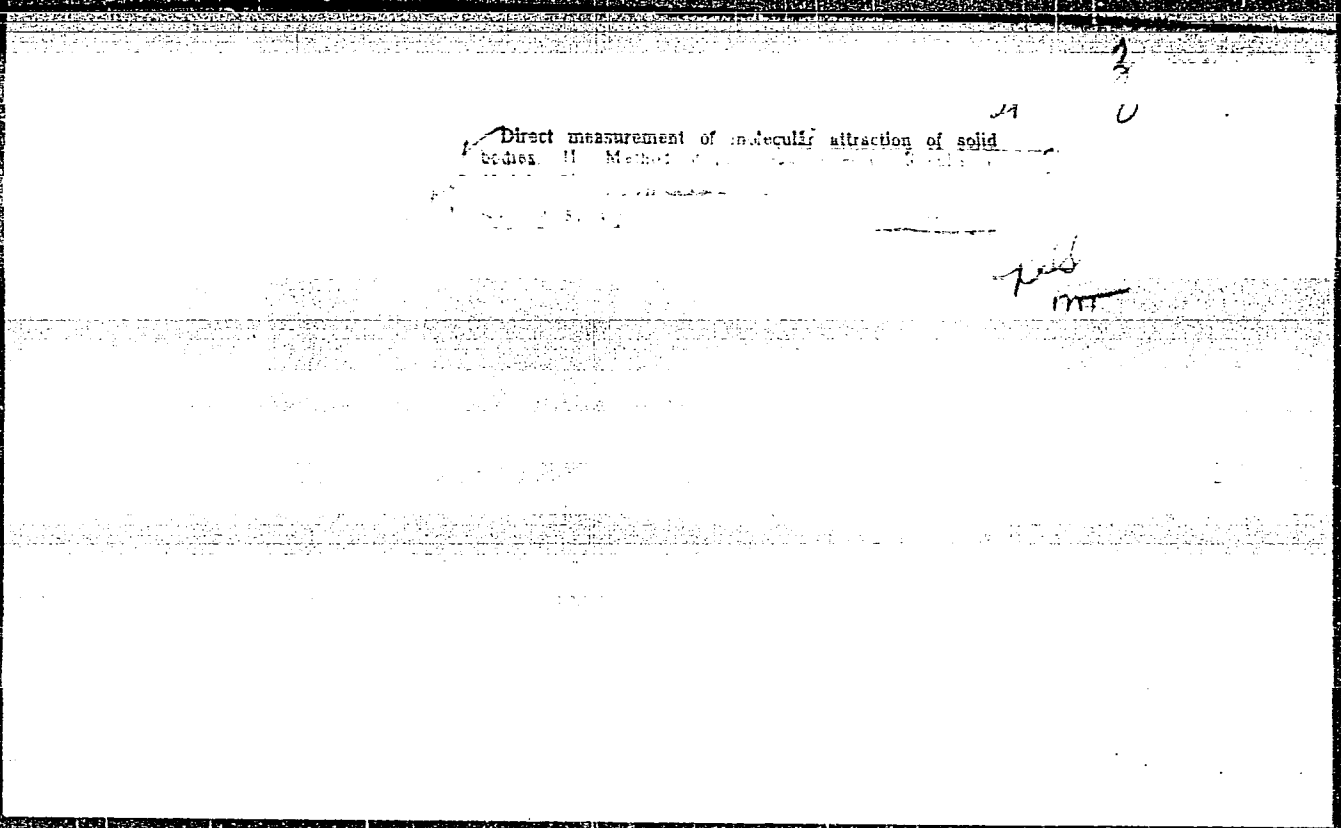
ABRIKOSOVA, I.I.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1386  
AUTHOR DERJAGIN, B.V., ABRIKOSOVA, I.I.  
TITLE Direct Measuring of the ~~molecular~~ Attraction among Solids in  
the Vacuum.  
PERIODICAL Dokl.Akad.Nauk, 108, fasc.2, 214-217 (1956)  
Issued: 7 / 1956 reviewed: 10 / 1956

Previous measuring of molecular attraction occurring between two solid bodies (plate and spherical lens) in air as a function of the interspace H between them was made very difficult by the viscosity of the air in the space between them. The cause of this is discussed on the basis of the equation of motion of the scale balance.

In spite of these difficulties a number of measurements was successfully carried out with a sufficient degree of reproducibility. The influence exercised by concussions was successfully reduced to a minimum by the erection of a device on an amortization platform which, in turn, was placed upon a cement base. In order to attain better stabilization of the interspace H, a two-mirror system was used. For the radical simplification of measuring and increasing its accuracy, a device for the carrying out of measurements in the vacuum was constructed. At from  $10^{-1}$  to 1-3 mm Hg it was possible to reduce the time constant to fractions of a second in spite of the fact that the damping necessary for the prevention of self-oscillations was conserved.

Measuring results are entered into a diagram (abscissa - lg H, ordinate - lg F). The reproducibility of measurings separated from one another by long periods



Molecular Forces Measured

25-7-16/51

ly as the two objects approach each other.  
The article contains 11 pictures and 1 photo.

ASSOCIATION: Institute of Physical Chemistry, USSR Academy of Sciences  
(Institut fizicheskoy khimii AN SSSR)

AVAILABLE: Library of Congress

Card 2/2

AUTHORS: Deryagin, B. V., Abrikosova, I. I. 76-32-2-31/38

TITLE: The Direct Measurement of the Molecular Attraction of Solids  
(Pryamyie izmereniya molekulyarnogo prityazheniya tverdykh tel )

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 2, pp. 442-453  
(USSR).  
Received: April 20, 1958.

ABSTRACT: Summarizing, the following is stated. 1. - The authors found a method for the measurement of the forces of interaction of comparatively smooth transparent solid bodies in dependence on the distance between them; this method is performed by means of beam microbalances with negative photoelectromagnetic feedback. The distance between the bodies is computed according to the diameters of Newton rings. The range of measured forces is  $1 - 2 \cdot 10^{-4} - 20$  dyn, the distance is  $10^{-5} - 10^{-3}$  cm. 2. - The molecular attraction between the quartzglass samples was stated and measured. The energy of attraction between two platelets  $u$  (H) per  $1 \text{ cm}^2$  changes with the distance H between them according to a law closely proportional to  $H^{-3}$  and amounts to about  $1 \cdot 10^{-5}$  erg at  $H = 1,5 \cdot 10^{-5}$  cm.

Card 1/4

The Direct Measurement of the Molecular  
Attraction of Solids

76-32-2-31/38

measurements (also within the limits of experimental errors) coincide with Ye. M. Lifshitz's theory. According to this the forces in these cases with the same distances are 4 - 5 times greater than in the case of the quartz-quartz pair. 8. - As long as the  $H^{-2}$  law for  $u(H)$  of London-Hamaker (references 4 and 7) follows as a boundary case from the theory of Ye. M. Lifshitz for small distances, where the electromagnetic retardation does not become manifest, the proof of this theory makes it possible to apply the corresponding  $H^{-2}$  law to small distances. The deviation from the  $H^{-2}$  law observed with great distances ( $10^{-5}$  cm) tending towards a decrease points at a small influence of molecular forces on the coagulation velocity of aerosols with a particle diameter exceeding  $3 \cdot 10^{-5}$  cm. 9. - The authors point out that the values of measurement for the forces of molecular attraction between the bodies in the experiments of J. Th. G. Overbeek and M. I. Sparnay (references 3 and 14) exceed the theoretical values as well as those of the authors by 3 - 4 orders of magnitude; this is apparently the case because in these measurements the effects not connected with molecular forces did not show

Card 3/4

The Direct Measurement of the Molecular  
Attraction of Solids

76-32-2-31/38

up. lo. - The results obtained with quartz samples coincide with the results of the measurements of Y. A. Kitchener and A. P. Prosser (carried out according to the method of Overbeek and Sparnay) (reference 15). There are 10 figures, and 24 references, 11 of which are Soviet.

ASSOCIATION: A S USSR, Institute for Physical Chemistry, Moscow  
(Akademiya nauk SSSR, Institut fizicheskoy khimii, Moskva)

SUBMITTED: June 10, 1957.

1. Solids--Theory
2. Molecules--Electromagnetic properties
3. Microbalances--Equipment

Card 4/4



53-64-3-5/8

AUTHORS: Deryagin, B. V., Abrikosova, I. I. Lifshits, Ye. M.

TITLE: The Molecular Attraction of Condensed Bodies (Molekulyarnoye prityazheniye kondensirovannykh tel)

PERIODICAL: Uspekhi Fizicheskikh Nauk, 1958, Vol. 64, Nr 3, pp. 493-528 (USSR)

ABSTRACT: The present survey is divided into: introduction, the theories of molecular interaction between micro-objects, and a critique of their use with macro-objects, the theory of molecular attraction between condensed bodies, the method of measurement (the principal scheme of measurement, the objects of measurement, the microweights with inverse binding for the measurement of the interaction force between solids, the beam of balance, compensating and follow-up systems, the constructive shape of the apparatus, the process of measurements, the adjusting, the regulation and calibration of weights, the method of measurement of the distance between the bodies to be investigated, the preparation of the surfaces to be investigated), the results of the measurements. The discussion of

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53-64-3-5/8

The Molecular Attraction of Condensed Bodies

the results (the analysis of the measuring results, the comparison with theory, a comparison with the macroscopic theory of molecular attraction, the use in the theory of coagulation and in the theory of dampening). There are 19 figures, 1 table, and 27 references, 12 of which are Soviet.

1. Molecules--Magnetic properties 2. Molecules--Theory

Card 2/2

Utilization of oxygen by marine invertebrates under certain conditions. O. G. Katenderova and M. A. Atrikova (M. V. Lomonosov State Univ., Moscow). *Doklady Akad. Nauk S.S.S.R.* 111, 1335-7(1956).—Expts. with *Mediola phaeolina* and *Balanus aburneus* at various temps. of the water and addns. to it of Et<sub>2</sub>O, caffeine, CCl<sub>4</sub>, and KCl showed that the latter substances are toxic and tend with increasing concn. to cause death of the organisms even after transfer to normal water, the toxic effect persists for many days. The process of normal metabolism is restored but very slowly and requires a supernormal utilization of O. The latter reaches a max. not immediately but a few days after exposure.

*Мискоцкий госуд. университет им. М. В. Ломоносова  
 Представлено академиком чл. С. Павловским.  
 (Invertebrates) (Marine fauna)*

ZHMUR, V.A., prof. (Moskva, B. Kaluzhskaya, ul. d.8), ~~ABRIKOSOVA, M.A.~~

Sphygmographic observations on arteriovenous anastomoses between  
the main blood vessels. Vest.khir. 81 no.9:140-143 S'58

(MIRA 11:11)

1. Iz Instituta grudnoy khirurgii (dir. - prof. A.N. Bakulev)  
AMN SSSR.

(FISTULA, ARTERIOVENOUS, physiology  
blood pressure measurements (Rus))

(BLOOD PRESSURE, in various diseases  
arteriovenous anastomoses between main blood vessels  
(Rus))

ABRIKOSOVA, M.A.; KARPMAN, V.L. (Moskva)

Normal standards of the sphygmogram and the velocity of the pulse  
wave in the peripheral vessels. Pat.fiziol. i eksp.terap. 3 no.6:  
47-53 N-D '59. (MIRA 13:3)

1. Iz laboratorii klinicheskoy fiziologii (zaveduyushchiy - akademik  
AN USSR prof. Ye. B. Babskiy) Instituta normal'noy i patologicheskoy  
fiziologii AMN SSSR).  
(PULSER)

ABRIKOSOVA, M.A. (Moskva, A-55, Novoslobodskaya ul., d.57/65, kv.39)  
~~KARPMAN, V.L.~~

Change in the hemodynamics of the greater circulation following  
mitral commissurotomy. Grud.khir. 2 no.2: 43-47 Mr-Apr'60.  
(MIRA 16:7)

1. Iz laboratorii klinicheskoy fiziologii (zav.-akademik AN UkrSSR  
Ye.B.Babskiy) Instituta normal'noy i patologicheskoy fiziologii AMN  
SSSR (dir.-deystvitel'nyy chlen AMN SSSR V.N.Chernigovskiy), fa-  
kul'tetskoy khirurgicheskoy kliniki (dir.akademik A.N.Bakulev)  
II Moskovskogo meditsinskogo instituta i Instituta grudnoy  
khirurgii AMN SSSR (dir.-prof. S.A.Kolesnikov)

(BLOOD—CIRCULATION, DISORDERS OF)  
(MITRAL VALVE—SURGERY)

ABRIKOSOVA, M.A.

Study of the pulse of the peripheral arteries in patients with  
obliterating endarteritis. Klin. med. 38 no. 2:105-110 F '60.  
(MIRA 14:1)

(ARTERIES--DISEASES) (PULSE)

ABRIKOSOVA, M.A.; KARPMAN, V.L. (Moskva)

Greater blood circulation and some mechanisms of compensation  
in patent ductus arteriosus. Pat. fiziol. i eksp. terap. 6  
no.1:22-28 Ja-F '62. (MIRA 15:3)

1. Iz laboratorii klinicheskoy fiziologii (zav. - deystvitel'nyy  
chlen AN USSR Ye.B. Babskiy) Instituta normal'noy i patologicheskoy  
fiziologii (dir. - deystvitel'nyy chlen AMN SSSR V.V. Parin) AMN  
SSSR i fakul'tetskoy khirurgicheskoy kliniki (dir. - akademik  
A.N. Fakulev) II Moskovskogo meditsinskogo instituta imeni N.I.  
Pirogova.

(DUCTUS ARTERIOSUS) (BLOOD---CIRCULATION)



ABRIKOVA, M.A.

Hemodynamic effect of surgical treatment of patent ductus arteriosus. Khirurgiia no.1:45-50 '62. (MIRA 15:11)

1. Iz laboratorii klinicheskoy fiziologii (zav. - akad. AN UkrSSR Ye.B. Babitskiy) Instituta normal'noy i patologicheskoy fiziologii (dir. - deystvitel'nyy chlen AMN SSSR V.V. Parin) AMN SSSR i fakul'tetskoy khirurgicheskoy kliniki II Moskovskogo gosudarstvennogo meditsinskogo instituta imeni N.I. Pirogova (zav. - akad. A.N. Bakulev).

(DUCTUS ARTERIOSUS--SURGERY) (BLOOD--CIRCULATION)

KARPMAN, V.L.; ABRIKOSOVA, M.A.; GLEZER, G.A.

Hydrodynamic mechanisms of increased arterial blood pressure in hypertension. Terap.arkh. 34 no.3:28-35 '62. (MIRA 15:3)

1. Iz laboratorii klinicheskoy fiziologii (zav. - akad. AN UkrSSR prof. Ye.B. Babskiy) Instituta normal'noy i patologicheskoy fiziologii (dir. - deystvitel'nyy chlen AMN SSSR prof. V.V. Parin) AMN SSSR i Instituta terapii (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A. Myasnikov) AMN SSSR.  
(HYPERTENSION)                      (BLOOD PRESSURE)

KARPMAN, V.L., kand.med.nauk; ABRIKOVA, M.A.; IOFFE, L.A.; OLENINA, K.S.;  
SADCVSKAYA, G.V.

Contractility of the myocardium in cardiac aneurysms.  
Kardiologiya 2 no.3:35-40 My-Je '62.      (MIRA 16:4)

1. Iz laboratorii klinicheskoy fiziologii (zav. - akademik  
AN UkrSSR Ye.B.Babakiy) Instituta normal'noy i patologicheskoy  
fiziologii (dir. - deystvitel'nyy chlen AMN SSSR V.V.Parin)  
AMN SSSR i Instituta terapii (dir. - deystvitel'nyy chlen AMN  
SSSR A.L.Myasnikov) AMN SSSR.  
(HEART--DISEASES)      (ANEURYSMS)

KARPMAN, V.L.; ABRIKOSOVA, M.A.

Study of the rate of the spread of the pulse wave in the human  
aorta. Biul. eksp. biol. i med. 54 no.8:111-114 Ag '62.

(MIRA 17:11)

1. Iz laboratorii klinicheskoy fiziologii (zav. - akademik AN  
UkrSSR Ye.B. Babskiy) Instituta normal'noy i patologicheskoy  
fiziologii (dir. - deys'vitel'nyy chlen AMN SSSR V.V. Parin)  
AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.V.  
Parinyam.

ABRIKOSOVA, M.A.; BREDIKIS, Yu.I.

Hemodynamic effect of electrical stimulation of the heart in pathologically low rhythms. Ter. arkh. 35 no.7:48-55 J1'63

(MIRA 17:1)

1. Iz kliniki fakul'tetskoy khirurgii imeni S.I.Spasokukotskogo (dir. - akademik A.N. Bakulev) II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova.

ABRIN, S. G.

Abrin, S. G. - "Clinical peculiarities of the stump at the middle and lower third of the hip from a prosthetic standpoint," Trudy Tsentr. nauch.-issled. in-ta protezirovaniya i protezostroyeniya, symposium: 3, 1949, p. 173-89

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)

ABRIN, S. G.

27960. ABRIN, S. G. -- Anatomo-fiziologicheskiye i klinicheskiye obosnovaniya k postroeniyu proteza bedra v sredney i nizhney treti yego. (Tezisy). Trudy pervoy nauch mezhresp. konf-tsii po lecheniyu invalidov otechestv voyny v sred. Azii. Tashkent, 1949, S. 273-74.

SO: Letopis' Zhurnal'nykh Statey. Vol. 37, 1949.

ABRIN, S.G.; LANEYEV, P.I.

[Prosthesis in femoral amputations; a practical manual] Protezirovani  
amputirovannykh s kul'tei; prakticheskoe posobie. Moskva, 1957.  
103 p. (MIRA 11:4)

(ARTIFICIAL LIMBS)



POPOV, B.P., prof.; DIKKERT, G.A., inzh., red.; ABRIN, S.G., dotsent, red.; KOBRINSKIY, A.Ye., doktor tekhn.nauk, red.; MOLODAYA, Ye.K., prof., red.; ROZHCHIN, G.I., dotsent, red.; SLAVUTSKIY, Ya.L., kand.biolog.nauk, red.; SHENK, N.A., prof., red.

[What one should know about prosthesis] Chto nuzhno znat' o protezirovanii. Moskva, M-vo sots.obespechenia RSFSR, 1959.  
66 p. (MIRA 13:6)

(PROSTHESIS)

ABRINSKIY, P.V.

6

Desulphurization in the Treatment of Cast Iron with Magnesium. By I. Vashchenko, P. V. Abrinskiy, and B. M. Tashkovskiy. (*Zhurnal Prikladnoi Khimii*, 1954, (1), 9-14). [In Russian]. After a consideration of the thermodynamic relationships involved in the treatment of cast iron with magnesium an account is given of experiments in which the desulphurizing action of this element was investigated. Samples of the iron were treated with magnesium at various temperatures (1300-1000° C.) followed by standing for 10-100 min. Desulphurization was also studied under production conditions in a 500-kg. ladle. Specimens of inoculated iron were examined microscopically and with the aid of sulphur prints. Distribution coefficients for carbon, silicon, manganese, phosphorus, sulphur, and magnesium between iron and slag of various compositions were measured.—S. S.

of  
MCT (2)

ABRITALIN, B.; MARKHILEVICH, K.; PYATKIN, I.

The antifoggant effect of benzotriazole. Sov.foto 18 no.12:48  
D '58. (MIRA 11:12)  
(Benzotriazole) (Photographic emulsions)

ARRITALIN, V.L.

Some new motion-picture films. Tekh.kino i telev. 4 no.4:74-81 Ap  
'60. (MIRA 13:9)

(Motion-picture photography--Films)

ABBITALIN, V., nauchnyy sotrudnik

"Watkins factor." Sov.foto 20 no.3:35-36 Mr '60.  
(MIRA 13:?)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut.  
(Photography--Developing and developers)

ABRITALIN, V., nauchnyy sotrudnik

Developer acting as a sensitiser. Sov.foto 20 no.7:25  
J1 '60. (MIRA 13:7)

1. Nauchno-issledovatel'skiy kinofotoinstitut.  
(Photography--Developing and developers)

S/081/62/000/004/063/087  
B150/138

AUTHORS: I - Markhilevich, K. I., Abritalin, V. L., Pyatkin, I. I.  
II - Markhilevich, K. I., Abritalin, V. L.

TITLE: Investigation of the process for treating a high-density panchromatic aerial film. I - The operating conditions for treating aerial film in a manual developing apparatus. II - Increasing the photosensitivity and uniformity of development by cyclic development of aerial film. III - Sensitometric investigation of the method of "hungry" development of aerial films.

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 457, abstract 4L429 (Tr. Vses. n.-i. kinofotoin-ta, no. 35, 1960, 110-116; 117-119; 120-125)

TEXT: The literature on the development of aerial films is reviewed in connection with the requirements for aerial photograph interpretation and to establish the dependence of resolution on the range of contrast. The

Card 1/2

Investigation of the process...

S/081/62/000/004/063/087  
B150/B138

appropriate length of aerial film and the developing time are established for a developing apparatus with manual rewinding. A method is suggested for cyclic development by continuous winding of the film from one spool to the other. It produces excellent results with regard to increasing the photosensitivity of the film and the uniformity of development. A sensitometric investigation is made, of a method of development which increases light-sensitivity and includes repeated steeping of the film in the developer with subsequent holding between glasses. [Abstracter's note: Complete translation.]

Card 2/2



S/081/62/000/006/065/117  
B149/B108

AUTHORS: Markhilevich, K. I., Arnol'd, Ts. S., Abritalin, V. L.

TITLE: Study of the treatment of highly sensitive panchromatic aerial film. IV. The influence of hydrazine on the developing process

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 505, abstract 6L450 (Tr. Vses. n-i k'no-fotoin-ta, no. 35, 1960, 126 - 136)

TEXT: The influence of various hydrazine derivatives added to metolo-hydroquinone developer on the photographic properties of aerial film has been investigated. Some of these derivatives increase the speed of development and the photosensitivity of the layer with a simultaneous increase in image granularity and fog density. It is possible to select such concentrations of hydrazine derivatives that the increase in photosensitivity is not followed by an increase in fog density or granularity. Report III, see RZhKhim, 4L429. [Abstracter's note: Complete translation.]

Card 1/1

ABRITALIN, V.L.; MARSHILEVICH, K.I.

Testing certain developers recommended as intensifiers of emulsion sensitivity. Zhur.nauch.i prikl.fot. i kin. 6 no.4:252-255 (1961)  
Jl-Ag '61.

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut (VNIIF).

(Photographic emulsions)

(Photography--Developing and developers)

ABRITALIN, V.

New methods, new possibilities; simultaneous developing and  
fixing of photographic materials. Sov.foto 21 no.7:36 J1 '61.  
(MIRA 14:7)

(Photography---Developing and developers)

ABBITALIN, V.

Phenidone developers. Sov.foto 21 no.12:26-27 D '61.  
(MIRA 14:12)  
(Photography--Developing and developers)