"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

B-1-4

[redacted]

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

M

8

THE USES OF PALLADIUM AND PLATINUM FOR ELECTRODEPOSITS. MA.A KLOCHKO AND Z. S. MEDVEDVA (IZVEST. SEKT. PLATING , 1943, 19, 103-118)--(InRussian)
A review--NA

COMMON ELEMENTS

COMMON VARIABLES INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

AUTHOR INDEX

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDEVA, Z. S.

MEDVEDEVA, Z. S. - "Application of the Investigation of the Electromotive Forces and the Anode Behavior of Bimetallic Alloys as a Method of Physicochemical Analysis." Sub 14 May 52, Inst of General and Inorganic Chemistry imeni N. S. Kurnakov, Acad Sci USSR. (Dissertation for the Degree of Candidate in Chemical Sciences).

SO: Vechernaya Moskva January-December 1952

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDEVA, Z. S.

(2)

Anodic behavior of silver-palladium alloys in *N* nitric acid. M. A. Klochko and Z. S. Medvedeva. *Izvest. Sektora Fiz.-Khim. Anal., Akad. Nauk S.S.S.R.* 23, 131–8(1953).—Polarization curves were obtained for Ag, Pd, and 7 of their alloys contg. 10–73% Pd. As the potential of the external circuit rose, the anodic potential first changed rapidly without changing the current; then, as either the anode began to dissolve or O started to be evolved on it, the current rose sharply while the potential remained the same. The polarization curves formed 2 groups: (1) on Ag and alloys with up to 28% Pd, (2) Pd and alloys with more than 28% Pd. Alloys with up to 23% Pd dissolved in *N* HNO_3 with current. Alloys with higher Pd content were passive. In the course of electrolysis an anodic sludge formed, the compn. of which was the same as that of the anode.

M. Hosch

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

Z. S. MEDVEDEVA

Röntgenographic investigation of sludge from anodic solution of silver-palladium alloys in normal nitric acid.

M. A. Klochko, A. N. Khlapova, and Z. S. Medvedeva. *Izvest. Sektora Fiz.-Khim. Anal., Akad. Nauk S.S.S.R.* 23, 139-41(1953).—X-ray analysis of the anodic sludge formed during electrolytic dissolving of Ag-Pd alloys showed it to be the same solid soln. as the anode from which they formed. The sludge forms as a result of uneven dissolving of the surface of the anodes of which individual areas can have different electrode potentials. In the course of electrolysis these areas fall off the anode, forming the sludge.

M. Hosch

Inst Gen. + Inorganic Chem im N.S. Kurnakov

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

Z. S. MEDVEDEVA

USSR

Anodic behavior of silver-lead alloys in normal nitric acid. M. A. Klochko and Z. S. Medvedeva. *Izvest. Sektora Platiny i Drug. Blagorodnykh Metallov Instituta Obshchei i Neorg. Khim. Akad. Nauk S.S.S.R.* 28, 260-7(1954); cf. *C.A.* 48, 9842*d*.—The anodic behavior of Ag, Pb, and 14 intermediate alloys in *N* HNO_3 at room temp. and a c.d. of 25 ma./sq. cm. was studied. All alloys were anode sol. E.m.f. curves of Ag-Pb alloys in *N* $Pb(NO_3)_2$ and *N* HNO_3 had a sharp break at 3.3% Pb, indicating limit of solid soly. of Pb in Ag. H. W. Rathmann

Inst. Gen. & Inorg. Chem. im N. S. Kurnakov, AS USSR

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

Z. S. MEDVEDEVA

USSR.

Anodic behavior of palladium-lead alloys in normal nitric acid. M. A. Klochko and Z. S. Medvedeva. *Izvest. Sektora Platiny i Drug. Blagorodnykh Metallov Instituta Obshchei i Neorg. Khim. Akad. Nauk S.S.S.R.* 28, 268-73(1954); cf. *C.A.* 48, 9842d.—The anodic behavior of Pd, Pb, and alloys contg. 5.0, 21.3, 25.1, 26.6, 36.8, and 44.0 wt. % Pd was studied in *N* HNO_3 at room temp. and at c.d. of 25 ma./sq. cm. Alloys contg. 5.0-36.8% Pd dissolved in *N* HNO_3. E.m.f. curves in *N* $Pb(NO_3)_2$ and *N* HNO_3 had a break at 21.3% Pd, corresponding to the compd. Pb_3Pd.

H. W. Rathmann

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDEVA Z. S.

KLOCHKO, M.A.; MEDVEDEVA, Z.S.; MIRONOVA, M.Ye.

Anodic behavior of palladium in hydrochloric acid. Izv.Sekt. plat.i blag.met. no.28:274-276 '54. (MLRA 7:9)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova Akademii nauk SSSR.
(Palladium)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDEVA, Z. S.

Anodic behavior of alloys of palladium and nickel. M. A. Klochko and Z. S. Medvedeva. *Izvest. Sektora Fiz.-Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R.* 26, 82-90(1955).—The e.m.f. and anodic behavior of pure Ni and Pd and their alloys was detd. in Ni-salt solns., in N HNO_3, and in HCl. It was established that the relation of e.m.f. and anodic potential of annealed alloys of Ni and Pd to their compn. corresponded to the change of these properties in a continuous series of solid solns. In HNO_3 the alloys were passive but were anodically sol. in HCl.

V. N. Bednarski

Inst. Gen. & Inorg. Chem im N. S. Kurnakov AS USSR

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDEVA, Z. S.

USSR/Physical Chemistry - Thermodynamics Thermochemistry. B-8
Equilibrium. Physico-Chemical Analysis Phase Transitions

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3729

Author : Klochko M.A., Medvedeva Z.S.
Inst : Institute of General and Inorganic Chemistry, Academy of Sciences USSR
Title : Electrochemical Investigation of Silver-Tellurium Alloys

Orig Pub : Izv. Sektara fiz.-khim. analiza IONKh. AN SSSR, 1956, 27, 133-140.

Abstract : Electrochemical investigation of eight Ag-Te alloys, over the component concentration range from pure Ag to 37.2% by weight Te, corresponding to the composition of the compound Ag_2Te. Electrolysis was carried out in 1 N $AgNO_3$ acidified with 0.1 N solution of HNO_3, with determination of electrode potential by comparison with a saturated calomel electrode. Investigated were the products of electrolysis -- sludge, electrolyte,

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

USSR/Physical Chemistry . Thermodynamics. Thermochemistry. Equilibrium. Physico-Chemical Analysis. Phase Transitions B-8

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3729

cathodic precipitate, anode residues; determined were anodic and cathodic yields of Ag and Te, on the basis of the current; balance of electrolysis was established Results are presented in the form of tables and are compared with a diagram of state of Ag-Te alloys. All the investigated alloys are anode-soluble. Ag and partially the Te passed into solution, and concurrently a sludge was formed, while at the cathode there took place a deposition of Ag contaminated with Te. Anodic yield of Ag, on the basis of current, depends on the Te content of the alloy. Anode corresponding on composition to silver telluride dissolved on passage of current only in part. Ag telluride which is a phase component of Ag-Te alloys, was the less soluble portion of the anode and was found in anodic sludge, and in part in the electrolyte, in the form of tetravalent Te. In addition the anodic sludge

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

USSR/Physical Chemistry - Thermodynamics, Thermochemistry, Equilibrium, Physico-Chemical Analysis. Phase Transitions B-8

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3729

contained elemental Te. The Te that passed into solution, when its content in the electrolyte reached a certain limit, was deposited at the cathode together with the Ag. Cathodic Ag precipitate changed its structure on inclusion of Te: on precipitation of Ag together with Te spongy deposits were formed at the cathode.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

SOV/137-57-1-523

Translation from: Referativnyy zhurnal. Metallurgiya, 1957, Nr 1, p 69 (USSR)

AUTHORS: Medvedeva, Z. S., Khlapova, A. N.

TITLE: X-ray-diffraction Investigation of Anode Sediment and Cathode Deposits Obtained in the Electrolysis of Silver-tellurium Alloys (Rentgenograficheskoye issledovaniye anodnykh shlamov i katodnykh osadkov, poluchennykh pri elektrolize splavov serebra s tellurom)

PERIODICAL: Izv. Sektora fiz.-khim. analiza IONKh AN SSSR, 1956, Vol 27, pp 141-149

ABSTRACT: The authors carried out an X-ray-diffraction investigation in order to determine the phase composition of the anode sediments and cathode deposits which form in the process of electrolysis of $AgNO_3$ solution with anodes made of Ag-Te alloys. Powder patterns $Fe-K^{\alpha}$ on radiation) were obtained on the β-modification of Ag_2Te contaminated with the α form, the anodic sediments, and electrolytic Ag. It was established that anodic sediments consist of a mechanical mixture of Ag with silver telluride, while cathodic deposits comprise a mechanical mixture of a solid solution of Ag with Te of the maximum concentration (up to 0.5 atom·% Te) and of

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SOV/137-57-1-523

X-ray-diffraction Investigation of Anode Sediment and Cathode Deposits (cont.)

elemental Te in the amorphous state. On the basis of the heating curves of the Te powders, mechanical mixtures of Ag, Te, and cathode-deposit powders the authors discovered the presence of elemental Te in the latter and established a partial solubility of Te in the Ag which is deposited on the cathode during electrolysis.

G. G.

Card 2/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDEVA, Z.S.

Decomposition voltage of silver and tellurium nitrate solutions. Izv.Sekt.fiz.-khim.anal.27:150-156 '56. (MIRA 9:9)

1.Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova AN SSSR.
(Silver plating) (Tellurium)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDEVA, Z.S.; KLOCHKO, M.A.; KUZNETSOV, V.G.; ANDREYEVA, S.N.

Phase diagram of the system palladium-tellurium. Zhur. neorg. khim. 6 no.7:1737-1739 Jl '61. (MIRA 14:7)
(Palladium) (Tellurium)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

S/078/63/008/001/016/026
B189/B101

AUTHORS: Slavnova, G. K., Luzhnaya, N. P., Medvedeva, Z. S.

TITLE: Phase diagram of the system indium - selenium

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 8, no. 1, 1963, 153 - 159

TEXT: To study the system indium - selenium a series of melts was prepared in quartz ampoules with argon atmosphere, with compositions varying between 98 at% Se + 2 at% In and 2 at% Se + 98 at%. In. The reaction temperatures varied between 600° and 900°C according to the composition of the mixture. The heating time was 6 - 10 hours. The annealing temperatures were 190 ± 10°C or 400 ± 10°C. The phase diagram (Fig. 2) of the system In-Se was plotted on the basis of the thermal analysis of the samples; in some cases also on that of X-ray analysis, which gave corresponding results. The regions where the known compounds InSe, In_2Se_3, and In_2Se exist were determined. The following melting points were obtained for these substances: InSe 660 ± 10°C, In_2Se_3 900 ± 10°C, In_2Se 540 ± 10°C (melting under decomposition). The following temperatures of polymorphous conversions were found: $\alpha \rightleftharpoons \beta$: 200 ± 10°C; $\beta \rightleftharpoons \gamma$: 650 ± 10°C; $\gamma \rightleftharpoons \delta$: 750 ± 10°C. There are 3 figures and 3 tables.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

Phase diagram of the...

S/078/63/008/001/016/026
B189/B101

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

SUBMITTED: June 26, 1962

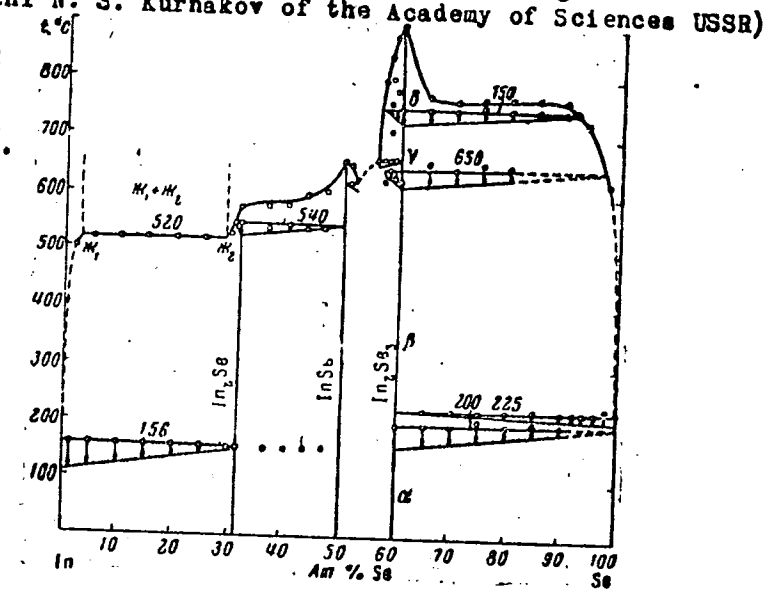

Fig. 2. Phase diagram of the system indium-selenium.

Legend: Ж - liquid phase, abscissa: atom%.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDEVA, Z.S.

AID Nr. 994-6 20 June

DIAGRAM OF THE In — Se SYSTEM (USSR)

Slavnova, G. K., N. P. Luzhnaya, and Z. S. Medvedeva. Zhurnal neorganicheskoy khimii, v. 8, no. 5, May 1963, 1199-1203.
S/078/63/008/005/011/021

On the basis of a thermal analysis of the InSe — In_2Se_3 system containing 50 to 60 at.% Se, data on the microstructure and microhardness of individual alloys, and earlier studies by the authors, the phase diagram of the In — Se system for the entire concentration range of components has been plotted. In addition to In_2Se, InSe, and In_2Se_3, the existence of a new compound -- In_5Se_6 -- has been established. It was found that 1) In_2Se is formed at 540 ± 10°C by the peritectic reaction between InSe and a melt containing 30 at.% Se; 2) InSe melts at 660 ± 10°C; 3) In_5Se_6 melts with decomposition at 660 ± 10°C and undergoes the polymorphic $\alpha \rightleftarrows \beta$ transformation at 550 ± 10°C; and 4) In_2Se_3 undergoes the polymorphic transformation

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

AID Nr. 994-6 20 June

DIAGRAM OF THE In — Se SYSTEM [Cont'd] S/078/63/008/005/011/021

$\alpha \rightleftarrows \beta$ at 200°C, $\beta \rightleftarrows \gamma$ at 650 ± 10°C, and $\gamma \rightleftarrows \delta$ at 750°C. The compounds have the following Brinnell microhardness: In_2Se, 287 kg/mm² (load, 30 g); InSe, 60 kg/mm² (30 g); α-In_5Se_6, 303 kg/mm² (30 g); and α-In_2Se_3, 50.8 to 59.4 kg/mm² (20 g). Micrographs of individual compounds are given.

[BAO]

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

ACCESSION NR: AP4012453 S/0078/64/009/002/0491/0491

AUTHOR: Madvedeva, Z. S.; Grinberg, Ya. Kh.

TITLE: Thermodynamics of boron phosphide BP

SOURCE: Zhurnal neorg. khim. v. 9, no. 2, 1964, 491

TOPIC TAGS: boron phosphide, boron phosphide preparation, thermodynamics

ABSTRACT: This study has been conducted to complete and verify thermodynamic data from literature. The formation of boron phosphide, a potential semiconductor, by reacting a boron halide with a phosphorus halide in an atmosphere of helium and hydrogen at temperatures of 1200C or above was found to proceed according to the global equation:

$$2H_2 + 4BBr + P_4 = 4BP + 4HBr$$

The heat and free energy of formation of BP at 1200C were determined. Orig. art. has: 1 formula.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

ACCESSION NR: AP4012453

ASSOCIATION: none

SUBMITTED: 10Jul63 DATE ACQ: 26Feb64 ENCL: 00

SUB CODE: TD NO REF SOV: 001 OTHER: 004

ATD PRESS: 3042

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

ACCESSION NR: AP4036966 S/0078/64/009/005/1158/1162

AUTHOR: Yeliseyev, A. A.; Babitsy*na, A. A.; Medvedeva, Z. S.

TITLE: X-ray diffraction analysis of the boron-arsenic system

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 5, 1964, 1158-1162

TOPIC TAGS: boron arsenic system, boron arsenide synthesis, boron arsenic phase diagram, boron arsenide property, boron, arsenic, boron arsenide

ABSTRACT: Boron arsenide powders, containing 2.5, 5, 10, 20, 38, 45, 50, 53.5, 55, 60, 75, 90, and 97.5 at% As, were synthetized from powdered amorphous 99.7083% pure boron and crystalline 99.9986% pure arsenic. The obtained boron arsenide powders were annealed at 600C for 950 hr and slowly cooled to room temperature, or annealed at 800 or 1000C for 250 hr and quenched in ice-cold water. The x-ray diffraction patterns showed the existence of only

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ACCESSION NR: AP4036966

two chemical compounds in the system: boron arsenide of the BAs composition and a lower boron arsenide whose composition, 85.9 atZ B and 14.1 atZ As, and density, $\rho = 3.53 \pm 0.03$ g/cm^3, are very close to those of B_6As compound ($\rho = 3.58$ g/cm^3). The lines of B_6As fit equally well into an orthorhombic lattice with parameters $a_0 = 9.6896$ kX, $b_0 = 4.3342$ kX, and $c_0 = 3.0628$ kX, or a rhombohedral lattice with parameters $a_0 = 6.125$ kX and $c_0 = 11.8679$ kX. The solubility of B and As was found to be negligible in both compounds. The coefficient of linear expansion of BAs in the 20—500C range was found to be $7 \cdot 10^{-6}$/deg C. Orig. art. has: 1 figure and 6 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences SSSR)

SUBMITTED: 18Jul63 DATE ACQ: 05Jun64 ENCL: 01

SUB CODE: MM NO REF SOV: 006 OTHER: 005

Card 2/3

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

ACCESSION NR: AP4036966 ENCLOSURE: 01

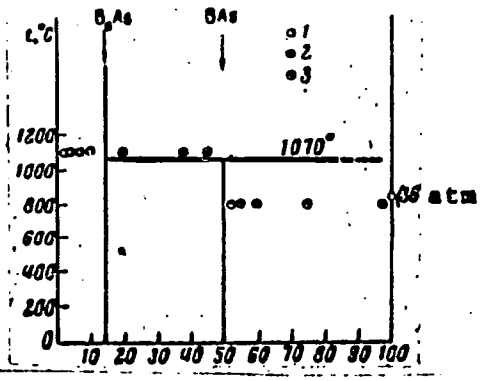

Fig. 1. Phase diagram of the B-As system

1 — B_6As; 2 — B_6As + As; 3 — BAs + As.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

ACCESSION NR: AP4036969 S/0078/64/009/005/1174/1181

AUTHOR: Luzhnaya, N. P.; Slavnova, G. K.; Medvedeva, Z. S.; Yeliseyev, A. A.

TITLE: The In-As-Se system

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 5, 1964, 1174-1181

TOPIC TAGS: indium arsenic selenium system, InAs As sub 2 Se sub 3 system, thermal analysis, x ray analysis, microstructural analysis, InAs sub 3 Se sub 3, thermogram, solid solution, InAs, phase diagram, liquidus surface diagram

ABSTRACT: The nature of the reactions of the components of the ternary system In-As-Se along the $InAs-As_2Se_3$ section was studied by thermal, x-ray and microstructural analyses. The previously unknown ternary compound $InAs_3Se$, melting congruently at 800C (fig. 1) was found. Thermograms for InAs, InAs 10, 50, and 70 mol% As_2Se_3 and As_2Se_3 are given. Microstructural photographs and x-ray data for these compositions are shown. There was indicated the existence of a relatively small area of solid solutions based on InAs which contained up to about 10 mol% As_2Se_3. An orienting diagram of the liquidus surface of the ternary system In-As-Se was constructed from the authors' and literature data (fig. 2).

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

ACCESSION NR: AP4036969

Orig. art. has: 10 figures and 3 tables.

ASSOCIATION: None

SUBMITTED: 03May63 DATE ACQ: 05Jun64 ENCL: 02

SUB CODE: MM NO REF SOV: 009 OTHER: 004

Card 2/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

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ACCESSION NR: AP4036969

ENCLOSURE: 01

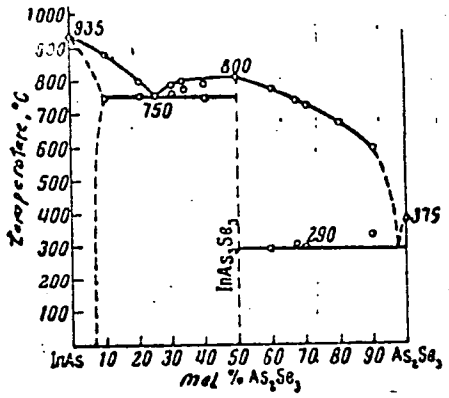

Fig. 1. Phase diagram of the InAs-As_2Se_3 section (according to heating curves, annealed alloys)

Card 3/4

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

ACCESSION NR: AP4036969

ENCLOSURE: 02

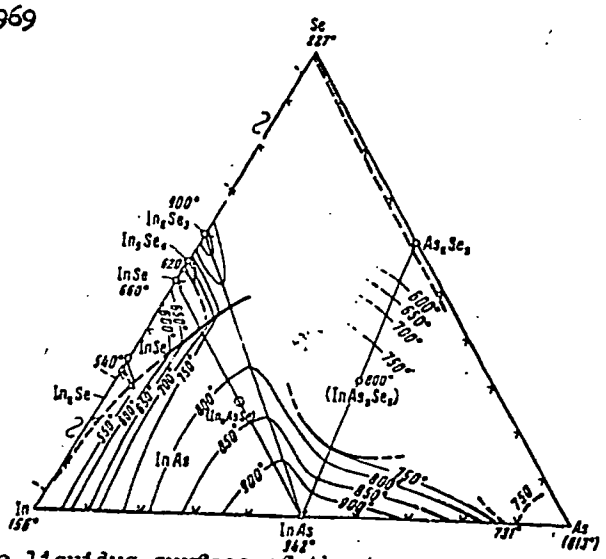

Fig. 2. Diagram of the liquidus surface of the ternary system In-As-Se.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 24465-65 EWT(m)/T/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5004594 S/0020/65/160/002/0337/0338

AUTHOR: Grinberg, Ya. Kh.; Medvedeva, Z. S.; Yeliseyev, A. A.; Zhukov, E. G.

TITLE: Preparation of boron-phosphide single crystals from the vapor phase

SOURCE: AN SSSR. Doklady, v. 160, no. 2, 1965, 337-338

TOPIC TAGS: single crystal growth, boron phosphide, vapor phase growth, chemical transport reaction, semiconductor boron phosphide

ABSTRACT: Single crystals of pure (99.998%) boron phosphide have been prepared by a chemical transport reaction in the vapor phase to avoid the difficulties encountered in preparing perfect single crystals by sublimation. The reaction was conducted in vacuum with an element [unspecified] of the sixth group of the periodic system, which forms a volatile compound with boron. The effects of the temperature gradient (ΔT) in the reaction volume, and of the temperature in the crystallization zone in the 900—1200C range, were studied; the most perfect single crystals were formed at ΔT = 20—40C. At

Card 1/2

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L 24465-65

ACCESSION NR: AP5004594

higher ΔT, the number of nucleation sites increased sharply. Preferentially tabular or dendritic growth at higher temperatures (at constant ΔT) and well-developed, bulk single crystals of varied and complex habit at lower temperatures were observed. X-ray diffraction patterns showed the crystals had ZnS-type cubic symmetry. All the crystals had an n-type electric conductivity. The thermal emf in the 20--150C range and the microhardness of the crystals were determined. Orig. art. has: 3 figures. [JK]

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova, Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 23Jun64 ENCL: 00 SUB CODE: SS

NO REF SOV: 001 OTHER: 003 ATD PRESS: 3179

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

YELISEYEV, A.A.; BABITSYNA, A.A.; MEDVEDEVA, Z.S.

X-ray diffraction study of the system boron - arsenic. Zhur. neorg. khim. 9 no.5:1158-1162 My '64. (MIRA 17:9)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova AN SSSR.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

LUZHNAYA, N.P.; SLAVNOVA, G.K.; MEDVEDEVA, Z.S.; YELISEYEV, A.A.

System In - As - Se. Zhur. neorg. khim. 9 no.5:1174-1181 My '64. (MIRA 17:9)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 38813-66 EWT(m)/T/EWP(t)/ETI IJP(c) RDW/JD

ACC NR: AR6021030 SOURCE CODE: UR/0058/66/000/002/A088/A088

AUTHOR: Medvedeva, Z. S.; Guliyev, T. N.

TITLE: Use of the method of chemical transport reactions to obtain single crystals of indium selenides

SOURCE: Ref zh.Fiz, Abs. 2A661

REF SOURCE: Sb. Materialy dokl. 1-y Nauchno-tekhn. konferentsii Kishinevsk. politekhn. in-ta. Kishinev, 1965, 70-71

TOPIC TAGS: indium compound, selenide, iodine, crystal growth, fiber crystal, crystal lattice structure, lattice parameter

ABSTRACT: The method of chemical transport reactions, using I_2 as the carrier, was used to obtain single crystals of indium selenide and of modifications of In_2Se_3 under different conditions. Variation of the crystallization conditions made it possible to realize the following: 1) Crystal growth without a temperature gradient during the process of mineralization, in which the iodine is a medium for recrystallization of powders; 2) crystal growth with transport of matter from the "cold" into the hot zone and vice-versa; 3) growth without the carrier participating; 4) different crystal shapes - plate-like or three-dimensional, dendritic, whiskers, etc. Most of them are single crystals. The lattice periods of In_5Se_6 and of γ- and δ-In_2Se_3 are determined. The structures of In_5Se_6 and γ- and δ-In_2Se_3 are calculated. [Translation of abstract]

SUB CODE: 20

Card 1/1

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

A L 9403-66 EWP(e)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP6000941 SOURCE CODE: UR/0286/65/000/022/0023/0023

INVENTOR: Medvedeva, Z. S.; Mitkina, G. D.

20
B

ORG: none

TITLE: Preparative method for boron arsenide. Class 12, No. 176265

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 23

TOPIC TAGS: boron arsenide, inorganic synthesis

ABSTRACT: An Author Certificate has been issued for a preparative method for boron arsenide involving saturation of amorphous boron with excess of vapors of crystalline arsenic at 700—900C. To accelerate the reaction and to increase the BAs yield, low-frequency vibrational agitation of the reaction mixture is used. B and As can be used in a 1/20 ratio. [BO]

SUB CODE: 07/ SUBM DATE: 03Apr63/ ATD PRESS: 4158

Card 1/1 UDC: 661.8.:546.27'19

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 35601-65 EWP(e)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD

ACCESSION NR: AP5007612 S/0363/65/001/001/0088/0090

AUTHOR: Grinberg, Ya. Kh.; Medvedeva, Z. S.; Zhukov, E. G.

TITLE: Research on the transfer of boron phosphide during a transport reaction

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 1, 1965, 88-90

TOPIC TAGS: boron phosphide, boron transfer, transport reaction, single crystal, diffusion

ABSTRACT: Considering the problem of reactions in which the product must not mix with the reactants, and where even temperature differences must be maintained, the authors extended their research on the method developed by H. Schafer. The reaction was produced in a quartz ampoule 150-200 mm in length, 20 mm max. width, evacuated to 10^{-5} mm Hg, loaded with powdered boron phosphide of 99.998% purity (prepared from boron and phosphorus vapor at 4-5 atm. pressure) and a carrier element from Group VI of the periodic table. The temperature in the ampoule was controlled to an accuracy of $\pm 5C$, and the partial pressure of the carrier was held at 5-200 mm Hg. The temperatures used were T_1 between 1203 and 1300K and T_2 between 1355 and 1393K. It was established that at these temperatures and pressures the basic mass transfer mechanism was diffusion. Over the range of the experiment, there was

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L 35601-65
ACCESSION NR: AP5007612

almost no variation of the coefficient of diffusion and the speed of the transport reaction with temperature. "The authors thank Prof. N. P. Luzhnaya for her constant interest in the work." Orig. art. has: 6 figures.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (General and inorganic chemistry institute, Academy of sciences, SSSR)

SUBMITTED: 06Jul64 ENCL: 00 SUB CODE: IC, SS

NO REF SOV: 001 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 52621-65 EWT(1)/EWP(e)/EWT(m)/EWP(i)/T/EWP(t)/EEC(b)-2/EWP(b)/EWA(h)/EWA(c)
Pz-6/Peb/Pi-4 LJP(c) JD/GG/AT

ACCESSSION NR: AP5014075 UR/0363/65/001/004/0478/0479

AUTHOR: Grinberg, Ya. Kh.; Medvedeva, Z. S.; Klinkova, L. A.

53
52
B

TITLE: Preparation of boron phosphide single crystals

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 4, 1965, 478-479

TOPIC TAGS: compound semiconductor, boron phosphide, high purity boron phosphide, synthesis, single crystal growth, chemical transport reaction, physical property

ABSTRACT: Synthesis of high-purity (99.998%) microcrystalline boron phosphide powder and a technique of growing boron phosphide single crystals have been developed to produce crystals of the purity and size suitable for measurement of physical characteristics. Difficulties encountered in preparation of this refractory compound semiconductor were emphasized. The purity achieved by the process described was almost an order of magnitude higher than in previous preparations. A chemical transport reaction with iodine vapors was used for growing the single crystals. The reaction involving a diffusion mechanism produced 1—1.5-mm large crystals. Morphology of the crystals was described and x-ray crystallographic data were given. Microhardness of the crystals was measured and found to be somewhat different than

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L 52621-65

ACCESSION NR: AP5014075

previously reported. The average thermoelectric power in the 20—150C range was about 150 μv/degree. All crystals displayed n-type conductivity. Orig. art. has: 1 figure. [JK]

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences SSSR)

SUBMITTED: 18Jan65 ENCL: 00 SUB CODE: SS, GC

NO REF SOV: 007 OTHER: 009 ATD PRESS: 4010

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 60962-65 EEC(b)-2/EWA(h)/EWA(c)/EWT(1)/EWT(m)/EWG(m)/EWP(b)/T/EWP(t)
Pi-4/Pz-6/Peb IJP(c) RDW/GG/AT/JD

ACCESSION NR: AP5018914 UR/0363/65/001/006/0845/0847
546.682'23

45
44
B

AUTHOR: Guliyev, T. N.; Medvedeva, Z. S.

TITLE: Preparation of In sub 2 Se single crystals 16

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 6, 1965, 845-847

TOPIC TAGS: indium selenide, semiconductor crystal 21

ABSTRACT: Indium selenide (In_2Se), synthesized from the elements and containing some free indium, was crystallized by a chemical transport reaction with iodine and also by Bridgman's crystallization method. In the first method, fine particles of polycrystalline In_2Se, obtained in a horizontal furnace by saturating indium with selenium, were placed with a weighed amount of iodine in a quartz ampoule which was evacuated to 10^{-3} mm Hg, then placed in a double-zone furnace at 480 and 380C and kept there for 50 hr. As a result, very brittle whiskers of single-crystal In_2Se, 2.5 mm long, grew on the surface

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

result, very brittle whiskers of single-crystal In_2Se, 2.5 mm long, grew on the surface of the charge in the "hot" zone. In the second method, the process was carried out in a double-zone vertical furnace (upper zone at 600C, lower zone at 480C) through which a quartz ampoule containing the charge was moved at the rate of 0.3 to 3 mm/hr. In

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L 60962-65

ACCESSION NR: AP5018914

accordance with the phase diagram of the In - Se system, the peritectic reaction of formation of In_2Se proceeds in such manner that InSe crystals separate and, by reacting with the liquid, yield In_2Se:

$$InSe + L \rightarrow In_2Se.$$

Crystallization of In_2Se from a melt with 95 at. % indium at a displacement rate of the ampoule of 3 mm/hr and zone temperatures of 600 and 480C, whiskers of single-crystal In_2Se 3-4 mm long were obtained. Orig. art. has: 2 figures.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 18Feb65 ENCL: 00 SUB CODE: SS, GC

NO REF SOV: 004 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 59477-65 EEC(b)-2/EPF(n)-2/EPA(s)-2/EWA(c)/EWT(1)/EWT(m)/EWG(m)/T/EWP(b)/EWP(t)
ACCESSION NR: AP5018915 Pi-4/Pt-7/Pu-4 IJP(c) UR/0363/65/001/006/0848/0852
RDW/GG/WW/JG/JD 546.682'231:548.55

AUTHOR: Medvedeva, Z. S.; Guliyev, T. N.

TITLE: Growing single crystals of indium selenides from the vapor phase

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 6, 1965, 848-852

TOPIC TAGS: indium selenide, single crystal growth, compound semiconductor, vapor phase growth, chemical transport reaction

ABSTRACT: Semiconductor single crystals of In_2Se, In_5Se_6, InSe, α-In_2Se_3, β-In_2Se_3, γ-In_2Se_3, and δ-In_2Se_3 have been grown from the vapor phase by using chemical transport reactions with iodine. This method was preferred over the previously used Bridgman and zone-melting techniques because of the inherent shortcomings of the previous methods and the impossibility of obtaining In_2Se_3 crystalline forms other than α-In_2Se_3. Polycrystalline In_2Se and In_5Se_6 and monocrystalline InSe prepared by oriented crystallization (from melt) were used as starting materials for growing single crystals of In_2Se, In_5Se_6, and InSe, respectively. Polycrystalline In_2Se_3 in any crystalline form could be used as the starting material for obtaining single-crystal In_2Se_3 in a given crystalline form. Operating procedures were described

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L 59477-65

ACCESSION NR: AP5018915

for growing single crystals of each In-Se compound and each crystalline form of In_2Se_3. Great care was taken to make high-purity products. The essential condition for single-crystal growth was to maintain a very narrow but constant temperature gradient between the "hot" and "cold" zones in the quartz ampul. The crystalline form of In_2Se_3 was also determined by the temperature of crystallization which had to be maintained within the range of crystallization of a given form. Dimensions, habit, and system of the crystal were given for each In-Se compound. Formation of dendrites or whiskers was observed in some cases. X-ray analysis confirmed the composition and crystalline form of the compounds. Formation of intermediate crystalline products, such as InSeI, InI, and, possibly, other iodides was observed under certain conditions and was believed to take place in all diffusion processes involved in the transport reactions of indium selenides with iodine. Orig. art. has: 3 figures and 1 table. [JK]

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 19Feb65 ENCL: 00 SUB CODE: SS

NO REF SOV: 006 OTHER: 003 ATD PRESS: 4054

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 3976-66 EWA(k)/EBD/EWT(1)/EWT(m)/EEC(k)-2/T/EWP(t)/EWP(k)/EWP(b)/EWA(m)-2/EWA(h)

ACC NR: AP5025781 SCIB/IJP(c) WG/JD/JG UR/0363/65/001/009/1484/1492

546.27'181.1

AUTHOR: Grinberg, Ya. Kh.; Zhukov, E. G.; Medvedeva, Z. S.; Luzhnaya, N. P.

TITLE: Kinetics of the reaction of amorphous boron with phosphorus

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9, 1965, 1484-1492

TOPIC TAGS: rectifier, maser, semiconductor, boron phosphide, boron compound, kinetics, reaction mechanism

ABSTRACT: Boron phosphide (BP) is of considerable interest since rectifiers made from it can function in an oxidizing atmosphere at up to 1000C. Boron phosphide monocrystals may prove useful for the design of masers and similar devices. In this work, the reaction of boron with phosphorus vapor was studied at 1000, 1100, and 1150C. It was found that the reaction is initially rate controlled and follows second-order kinetics. Following a transition period, the reaction becomes diffusion controlled and obeys first-order kinetics. The latter stage of the reaction is presumably caused by the formation of a coating on the boron. The rate constants and activation energies of both reaction stages were determined. A mechanism is proposed for the reaction. The optimum quality of BP (< 10^{-3}% Si) was obtained when the reaction was conducted at 1150—1200C for 1 hr or less, using amorphous boron. Orig. art. has: 7 figures, 3 tables, and 10 formulas. [VS]

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 3976-66

ACC NR: AP5025781

SUBMITTED: 29Apr65 ENCL: 00 SUB CODE: SS, GC

NO REF SOV: 007 OTHER: 012 ATD PRESS: 4118

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Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 4080-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(h)/EWA(c) IJP(c) JD/AT

ACC NR: AP5025804 SOURCE CODE: UR/0363/65/001/009/1620/1621

44,55 38 B

AUTHOR: Yegorov, L. A.; Medvedeva, Z. S. 44,55

ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnakov, Academy of Sciences, SSSR (Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR)

TITLE: Horizontal unit for growing single crystals of semiconducting materials by the Bridgman method 21,44,55

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9, 1965, 1620-1621

TOPIC TAGS: semiconductor single crystal, single crystal growing

ABSTRACT: A simple horizontal Bridgman-type unit for growing structurally more perfect crystals of semiconducting materials melting below 1200C by oriented crystallization has been developed. The unit is diagramed and described in the source, and a description of the crystallization procedure is also given. The unit can be used for growing from the liquid phase, both elemental and compound semiconductors such as InAs, InSe or In_2Se_3 with given carrier concentration, provided that their vapor pressure at the mp is below 1 atm. Orig. art. has: 2 figures. [BO]

SUB CODE: SS SUBM DATE: 24Apr65/ ORIG REF: 000/ OTH REF: 000/ ATD PRESS: 4127

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Card 1/1 UDC: 548.55

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

(A) L 13567-66 EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD

ACC NR: AP6001229 SOURCE CODE: UR/0363/65/001/012/2128/2133

38
B

AUTHOR: Medvedeva, Z.S.; Guliyev, T.N.

ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnakov, Academy of Sciences, SSSR (Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR)

TITLE: Indium selenide In_2Se_3

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965, 2128-2133

TOPIC TAGS: indium compound, selenide, phase transition, crystal growing, single crystal growing, INORGANIC SYNTHESIS, METAL CRYSTALLIZATION

ABSTRACT: The conditions of synthesis of four In_2Se_3 modifications in the polycrystalline state were studied in the course of thermal treatment of a nonequilibrium alloy synthesized from the element. Also studied were the conditions of preparation of In_2Se_3-single crystals by oriented crystallization according to Bridgman, in a vertical furnace and during zone melting. It was shown that α-In_2Se_3 single crystals are thus formed which can be converted into β- and γ-In_2Se_3 by annealing. As a rule, δ-In_2Se_3 samples obtained by annealing α-In_2Se_3 single crystals are substantially damaged because of marked differences in the structural type of these modifications. During the crystallization, purification of In_2Se_3 takes place. The transitions of In_2Se_3 modifications involve the following density changes:

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L 13567-66

ACC NR: AP6001229

200°C 650°C 750°C

$(\alpha)5.67 \rightarrow (\beta)5.36 \rightarrow (\gamma)5.48 \rightarrow (\delta)5.78$ g/cm^3

α- and β-In_2Se_3 have a semiconductor-type temperature dependence of the electrical conductivity; γ- and δ-In_2Se_3 did not show any change in electrical conductivity with temperature when the samples were studied in air at 25 — 180C. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 11, 20 / SUBM DATE: 19Jun65 / ORIG REF: 008 / OTH REF: 003

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 62631-65

ACCESSION NR: AP5018242 UR/0078/65/010/007/1520/1523

546.682'231

6

B

AUTHOR: Guliyev, T. N.; Medvedeva, Z. S.

TITLE: The compound In sub 5 Se sub 6

27 27

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 7, 1965, 1520-1523

TOPIC TAGS: indium selenide crystal, semiconudctor synthesis, lattice constant

ABSTRACT: The object of this work was to find an efficient method for the synthesis of single-crystal and polycrystalline In_5Se_6 and to study some of its properties. The polycrystalline compound was prepared from the elements in a two-zone furnace. Thermograms of the synthesis showed that In_5Se_6 is formed at 300-320C with a large exothermic effect, and that a peritectic reaction and decomposition of the compound occur at 630C. Single crystals were prepared by directional crystallization in a vertical furnace at a displacement rate of the ampoule of 1.2 mm/hr, maximum temperature gradient of 60-70C, and maximum zone temperature of 700C. X-ray diffraction in the single crystals was used to determine the constants of the monoclinic lattice of In_5Se_5, which were found to be:

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ACCESSION NR: AP5018242

a = 17.48, b = 4.09, c = 9.37 kX, and β = 101C. The experimental and theoretical values of $\sin^2 \theta$ were determined, as was the number of particles in the unit cell (two). The composition of the crystals of the peritectic compound In_5Se_6 was confirmed by chemical analysis. The density of In_5Se_6 d_{20} = 5.66 g/cm^3. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 01Dec64 ENCL: 00 SUB CODE: IC

NO REF SOV: 002 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 16745-66 EWT(m)/EWP(t) IJP(c) JD

ACC NR: AP6003637 SOURCE CODE: UR/0078/65/010/010/2315/2319

AUTHOR: Koppel, Kh. D.; Luzhnaya, N. P.; Medvedeva, Z. S.

ORG: none

35
B

TITLE: The Cd-In-As system

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 10, 1965, 2315-2319

TOPIC TAGS: cadmium, indium, arsenic, phase diagram, indium compound, arsenic compound, cadmium compound, arsenide

ABSTRACT: Some sections of the Cd-In-As system were studied by differential thermal and microstructural methods. In the thermal analysis, use was made of InAs, Cd_3As_2, $CdAs_2$, and cadmium metal. The sections InAs-Cd, InAs-Cd_3As_2, InAs--(50 at % Cd + 50 at % As), and InAs-$CdAs_2$ were studied. Phase diagrams were used to plot the diagram of the surface of the liquidus of the Cd-In-As system. As in the case of the Zn--Ga-As system, the field of primary crystallization of the $A^{III}B^{V}$ compound, in this case indium arsenide, occupies the major portion of the diagram. The comparatively small fields of primary crystallization of In, Cd, Cd_3As_2, $CdAs_2$, and As are located next to the corresponding bin-

Card 1/2 UDC: 541.123+546.48+546.682+546.19

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ACC NR: AP6003637

ary systems. On the ternary diagram of Cd-In-As, the approximate positions of the following three eutectics are indicated: E_1--(In + Cd + InAs), E_2--(Cd + Cd_3As_2 + InAs), and E_3--(Cd_3As_2 + $CdAs_2$ + InAs). Also shown is the position of the hypothetical ternary eutectic E_4--($CdAs_2$ + InAs + As). It is concluded that the formation of extensive regions of solid solutions, with the exception of a small region based on In, is improbable in the In-Cd system. Orig. art. has: 5 figures.

SUB CODE: 07/ SUBM DATE: 11Nov64/ ORIG REF: 000/ OTH REF: 006

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 16744-66 EWT(m)/EWP(t) IJP(c) JD

ACC NR: AP6003638 SOURCE CODE: UR/0078/65/010/010/2320/2323

AUTHOR: Luzhnaya, N. P.; Medvedeva, Z. S.; Koppel, Kh. D.

28
B

ORG: none

TITLE: Reaction of indium arsenide with cadmium iodide

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 10, 1965, 2320-2323

TOPIC TAGS: cadmium compound, arsenide, iodide, indium compound

ABSTRACT: The reaction between InAs and CdI_2 was studied at 1000°C. Thermal analysis of 18 different compositions of InAs-CdI_2 mixtures was performed and the data were used to plot a phase diagram of the InAs-CdI_2 system. Microstructural analysis showed the presence of two layers, with different properties, caused by phase separation in the liquid state. It also showed the presence of two phases in each layer. X-ray and chemical analysis showed that the lower layer consisted of InAs and $CdAs_2$ and the upper layer of CdI_2 and InI. The data indicated that the reaction of InAs with CdI_2 occurs in accordance with the reaction $2InAs + CdI_2 \rightleftharpoons 2InI + CdAs_2$ whose equilibrium shifts neither left nor right. This system should not be seen as a binary system but rather as

UDC: 546.682'19 + 546.48'151

Card 1/2

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L 16744-66

ACC NR: AP6003638

a section of a more complex system, e. g., Cd-In-As-I. Since this reaction involves substances with an appreciable proportion of covalent bond character (InAs and particularly $CdAs_2$) and the interaction of the components causes a redistribution of electrons, the system is not a reciprocal ternary system. Phase separation occurs apparently because indium and cadmium arsenides differ markedly from indium and cadmium iodides in the type of chemical bonding. Orig. art. has: 5 figures.

SUB CODE: 07/ SUBM DATE: 21Nov64/ ORIG REF: 002/ OTH REF: 003

Card 2/2 vmb

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

L 34353-66 EWT(d)/EWT(1)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(1) IJP(c)

ACC NR: AP5027474 (A) SOURCE CODE: UR/0032/65/031/011/1416/1417

JD/AT

AUTHOR: Yegorov, L. A.; Medvedeva, Z. S.

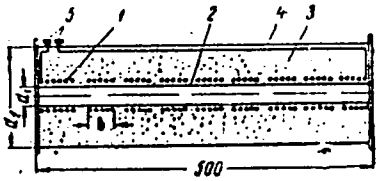
ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnakov, A SSSR (Institut obshchey i neorganicheskoy khimii AN SSSR)

TITLE: Furnace for zone melting of semiconductor material

SOURCE: Zavodskaya laboratoriya, v. 31, no. 11, 1965, 1416-1417

TOPIC TAGS: melting furnace, ~~zone melting~~, metal zone melting, semiconducting material, METAL PURIFICATION, MELTING FURNACE

ABSTRACT: The efficiency of zone melting during purification of metals and semiconductors can be increased considerably by simultaneous use of several heaters. A 9-zone tubular furnace with nichrome wire as a heater was devised for zone melting at temperatures up to 1200C. An 0.8-mm nichrome wire 1 (see figure) was wound on an alundum tube 2, 500 mm long and 24 mm in diameter. Each heater, except the extreme 2, consisted of a spiral 7 mm wide and formed by 6 loops of wire at 5 mm distance between loops and 5 cm between the zones. The coils were covered from the top by a layer of refractory clay 1 cm thick. To decrease heat loss, the 2 wider spirals made up of 9 loops of nichrome wire were set at the



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L 34353-66

ACC NR: AP5027474

ends of the alundum tube and the entire furnace was insulated by asbestos 3. The heaters and the heat insulation were inclosed into a jacket 4, having an internal diameter of 200 mm. The stabilized voltage, delivered to 2 terminals 5 of each heater, was regulated by an autotransformer RNO 250-2, amd the temperature was measured by a Pt-PtRh thermocouple, one end of which was set into the center of one of the zones. Orig. art. has: 1 fig.

SUB CODE: 13/ SUBM DATE: none

Card 2/2 ULR

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

(A) L 27859-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/JG/GG

ACC NR: AP5028625 SOURCE CODE: UR/0030/65/000/010/0049/0054

AUTHOR: Luzhnaya, N. P. (Doctor of chemical sciences); Yarembash, Ye. I. (Candidate of chemical sciences); Medvedeva, Z. S. (Candidate of chemical sciences)

ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnakov, Academy of Sciences, SSSR (Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR)

TITLE: Method of transport reactions in semiconductor chemistry

SOURCE: AN SSSR. Vestnik, no. 10, 1965, 49-54

TOPIC TAGS: single crystal growing, semiconductor single crystal, semiconducting film, boron compound, phosphide, selenide, telluride, rare earth element, semiconducting material, refractory, single crystal, chemical reaction

ABSTRACT: Since 1962, the semiconductor chemistry laboratory of the Institute of General and Inorganic Chemistry im. N. S. Kurnakov, Academy of Sciences SSSR (laboratoriya khimii poluprovodnikov Instituta obshchey i neorganicheskoy khimii Akademii nauk SSSR) has been conducting systematic research on growing single crystals of boron phosphide and rare earth selenides and tellurides by the method of transport reactions. The mechanism of these reactions is explained, and a description of the preparation of boron phosphide (BP) in the form of single crystals and polycrystalline layers is given. Also discussed is the preparation of chalcogenides of elements of the cerium group having the composition Me_2X_3 and MeX_2 and characterized by semiconducting properties. It is concluded that the method of transport reactions for growing single crystals and films of refractory semiconductors has great

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L 27859-66

ACC NR: AP5028625

promise and will soon find industrial applications. Orig. art. has: 7 figures and 3 formulas.

SUB CODE: 20, 07 / SUBM DATE: none

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

GRINGERG, Ya.Kh.; MEDVEDEVA, Z.S.; YELISEYEV, A.A.; ZHUKOV, E.G.

Preparation of single boron phosphide (BP) crystals from the gaseous phase. Dokl. AN SSSR 160 no.2:337-338 Ja '65. (MIRA 18:2)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR. Submitted July 7, 1964.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

ACC NR: AP7002399 SOURCE CODE: UR/0363/66/002/012/2130/2133

AUTHOR: Grinberg, Ya. Kh.; Luzhnaya, N. P.; Medvedeva, Z. S.

ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnakov, Academy of Sciences, SSSR (Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR)

TITLE: Study of the equilibrium in the boron phosphide - iodine system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 12, 1966, 2130-2133

TOPIC TAGS: boron compound, phosphide, iodine, chemical equilibrium

ABSTRACT: The heterogeneous equilbirium between solid boron phosphide and gaseous iodine was studied at 1075, 1120, 1160 and 1195°C. The amount of phosphorus and boron in the gas phase were determined from the weight loss of the solid phase, and the amount of iodine introduced was known. Assuming the equilibrium reaction to be $2BP_s + BI_{3g} \rightleftharpoons 3BI_g + P_{2g}$, the authors calculated the equilibrium constant K_p of this reaction, $K_p = [p_{BI}]^3 p_{P_2}/p_{BI_3}$. Within the limits of experimental error, K_p thus calculated for all four temperatures had the same value, and its temperature dependence is given by the equation $\log K_p = -19{,}210/T + 10.59$ (atm^3), i. e., in the temperature range studied $\log K_p$ varies linearly with reciprocal temperature. The enthalpy ΔH and entropy ΔS of the reaction per mole of BP were found to be 44 kcal/mole and 24 cal/

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ACC NR: AP7002399

mole deg respectively. Orig. art. has: 3 figures and 13 formulas.

SUB CODE: 07/ SUBM DATE: 29Jan66/ ORIG REF: 005/ OTH REF: 011

Card 2/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

ACC NR: AP7008524 SOURCE CODE: UR/0363/67/003/002/0300/0310

AUTHOR: Koppel, Kh. D.; Medvedova, Z. S.; Luzhnaya, N. P.

ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnakov, Academy of Sciences, SSSR (Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR)

TITLE: Reaction of indium arsenide with certain metals

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 3, no. 2, 1967, 300-310

TOPIC TAGS: indium compound, arsenide, phase diagram, solubility

ABSTRACT: The liquidus surfaces of the ternary systems Zn-In-As, In-Sn-As and In-Pb-As were plotted in order to find solvents for the crystallization of indium arsenide. The system Cd-In-As, studied earlier, is also considered. The criteria for determining the suitability of these systems for the crystallization of InAs were: 1) type of diagram, 2) adequate solubility of InAs in the liquid solvent, 3) minimum content of InAs in the eutectic composition and 4) possibility of separating InAs crystals from the solvent. It was found that InAs is substantially soluble in the liquid state at relatively low temperatures in a series of sections of the systems studied. The choice of crystallization conditions is determined both by the lower liquidus temperature on the section and by the fact that the InAs crystals can be completely separated from the solvent. The crystallization conditions are more favorable if the third component of the system melts at relatively low temperatures, and InAs deter-

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mines the triangulation of the system. The study of the ternary systems made it possible to grow InAs crystals from several solvents by spontaneous growth, Bridgman's method, and the temperature gradient method. In spontaneous crystallization, the best solvents were found to be the compositions InAs-In-M (M = Cd, Sn, Pb). Orig. art. has: 11 figures.

SUB CODE: 07/ SUBM DATE: 06Jun66/ ORIG REF: 013/ OTH REF: 019

Card 2/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDEVA - ORLOVA T.P.

PHASE I BOOK EXPLOITATION SOV/4599

Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze

Posobiye po proyektirovaniyu aviatsionnykh priborov, vyp. 2: Manometricheskiye navigatsionnyye pribory (Textbook on the Design of Aviation Instruments, No. 2: Pressure-measuring Instruments for Navigation) Moscow, Oborongiz, 1960. 129 p. Errata slip inserted. 5,500 copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR. Moskovskiy aviatsionnyy institut imeni Sergo Ordzhonikidze.

Ed.: B.A. Ryabov, Doctor of Technical Sciences, Professor; Managing Ed.: A.S. Zaymovskaya; Ed. of Publishing House: K.I. Grigorash; Tech. Ed.: V.I. Oreshkina.

PURPOSE: This book is intended as a manual on design for students and graduates of electromechanical departments of schools of higher technical education; it may also be of interest to engineers and technical workers engaged in calculating and designing pressure-measuring instruments used in aircraft.

~~Card 1/7~~

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

Textbook on the Design of Aviation Instruments (Cont.) SOV/4599

COVERAGE: The book presents design methods and bases of calculation for common pressure-measuring instruments used in aircraft (altimeter, speed indicator, Mach-number indicator). Calculation sequence and methodical directions for designing instruments are given. Problems treated in the existing literature are not considered. Problems treated insufficiently in the literature are discussed in more detail, for certain problems in engineering calculations of instruments, new solutions are presented. The recommendations given regarding the general sequence of design calculations of instruments and the details of their construction represent possible variants of solutions which may be supplemented and modified. Ch. I was written by T.P. Medvedevaya-Orlovaya and V.M. Izhevskaya; Ch. II by N. Ya. Vovchenko; Ch. III by T.P. Medvedevaya-Orlovaya; Ch. IV by V.M. Izhevskaya; and Ch. V by A.P. Turkevich and Z.T. Chistyakovaya. No personalities are mentioned. There are 18 references, all Soviet.

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Determining the structural parameters of membranes 6
Selection of standard membranes 6

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PHASE I BOOK EXPLOITATION SOV/5632

Medvedeva-Orlova, Tamara Pavlovna

Posobiye po proyektirovaniyu aviatsionnykh priborov. vyp. 3: Rychazhnyye peredatochno-mnozhitel'nyye mekhanizmy (Textbook on the Design of Aviation Instruments. no. 3: Link-Type Transmitting and Multiplying Mechanisms) Moscow, Oborongiz, 1961. 85 p. Errata slip inserted. 8,400 copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR. Moskovskiy ordena Lenina aviatsionnyy institut imeni Sergo Ordzhonikidze.

Ed. (Title page): B. A. Ryabov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: K. I. Grigorash; Tech. Ed.: V. P. Rozhin; Managing Ed.: A. S. Zaymovskaya, Engineer.

PURPOSE: This textbook is intended for students of schools of higher education and may also be useful for engineers specializing in the design of electric and mechanical instruments.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

Textbook on the Design of Aviation Instruments (Cont.) SOV/5632

COVERAGE: The book is Part III of a general textbook on the design of aviation instruments and deals with link-type transmitting-multiplying mechanisms only. Part I deals with electrical instruments for the control of power plant operation, and Part II with piloting and navigation instruments. The design of spherical and articulated four-link transmissions will be treated in a later issue. Particular attention is given to the selection of crankshaft-mechanism parameters. Included are graphs and tables of characteristics for analysis of existing instruments and comparison of their friction losses. No personalities are mentioned. There are 5 references, all Soviet.

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General Information on Link-Type Transmitting-Multiplying Mechanisms 4

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BIBIKOVA, V.A.; MEDVEDEVSKIKH, V.I.; DANKOV, S.S.

Epizootiological role of the fleas of greater gerbils. Report No.4. Xenophylla skrjabini Ioff 1928. Med. paraz. i paraz. bol. 32 no.5:622 S-O'63 (MIRA 16:12)

1. Iz Sredneaziatskogo nauchno-issledovatel'skogo protivochumnogo instituta i Gur'yevskoy protivochumnoy stantsii.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

ARNAUTOV, V.T.; BARANOV, V.M.; DONSKOY, S.A.; PASTUKHOV, A.I.; SMIRNOV, L.A.; TORSHILOV, Yu.V.; TRET'YAKOV, M.A.; UDOVENKO, V.G.; FREYDENZON, Ye.Z.; SHCHEKALEV, Yu.S.; Prinimali uchastiye: MAKAYEV, S.V.; KOMPANIYETS, G.M.; NAGOVITSYN, D.F.; NOVOLODSKIY, P.I.; VARSHAVSKIY, V.L.; KOROGODSKIY, V.G.; KLIBANOV, Ye.L.; MEDVEDEVSKIKH, Yu.; TALANTSEVA, T.I.; DUBROV, N.F.; DZEMYAN, S.K.; TOPYCHKANOV, B.I.; CHARUSHNIKOV, O.A.; KHARITONOV, Yu.A.

Developing and mastering the technology of converting vanadium cast iron in oxygen-blown converters with a 100 ton (Mg) capacity. Stal' 25 no.6:507-508 Je '65. (MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat (for Makayev, Kompaniyets, Nagovitsyn, Novolodskiy, Varshavskiy, Korogodskiy, Klibanov, Medvedevskikh, Talantseva). 2. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov (for Dubrov, Dzemyan, Topychkanov, Charushnikov, Kharitonov).

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

1. RUBINOV, M. O.; MEDVEDEVSKIY, G. D.; Engs.

2. USSR (600)

4. Reinforced Concrete Construction

7. Erecting reinforced concrete storage silos and vertical slurry bins inside a sliding form. TSement 19, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDIK, S., kand.tekhn.nauk

Rope changing on RMZ floating cranes. Rech.transp. 22 no.1:47 Ja '63. (MIRA 16:2)

(Floating cranes--Maintenance and repair)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDIK, S., kand.tekhn.nauk, dotsent

Rough estimate of the duration of a gantry crane cycle. Mor. flot 23 no.4:11-12 Ap '63. (MIRA 16:5)

1. Zaveduyushchiy kafedroy Astrakhanskogo tekhnicheskogo instituta rybnogo khozyaystva i promyshlennosti.
(Cranes, derricks, etc.)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDIK, S., aspirant.

Planning the repair of loading machines. Mor. flot 16 no.10: 8-10 O '56. (MLRA 9:11)

1. TSentral'nyy nauchno-issledovatel'skiy institut morskogo flota, Leningrad.
(Conveying machinery--Repairing)
(Hoisting machinery--Repairing)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDIK, S.I.

Effect of speed of jib crane work motions on their productivity.
Trudy TSNIIMF no.11:61-90 '57. (MIRA 11:2)
(Cranes, derricks, etc.)
(Loading and unloading)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDIK, S.

SKOMOROVSKIY, R., kand.tekhn.nauk; MEDVEDIK, S., aspirant.

Some potentialities for increasing the productivity of gantry cranes. Mor. flot 17 no.10:11-14 O '57. (MIRA 10:12)

1.TSentral'nyy nauchno-issledovatel'skiy institut Moskogo flota.
2.Nachal'nik otdela TSentral'nogo nauchno-issledovatel'skogo instituta Moskogo flota (Skomorovskiy)
(Cranes, derricks, etc.)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDIK, S.I.

Selecting the form for the acceleration angle of boom crane hoisting mechanisms. Trudy TSNIIMF no.21:13-22 '58. (MIRA 12:8)

(Cranes, derricks, etc.)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDIK, S.I.

Forces acting on portal crane cables during the hoisting of loaded clamshell buckets. Trudy TSNIIMF no.21:23-38 '58. (MIRA 12:8)

(Cranes, derricks, etc.) (Cables)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDIK, S. I. Cand Tech Sci -- (diss) " Velocity rates and means ~~methods~~ of automation ~~the introduction~~ of the ~~automatic~~ control of electric portal cranes." Len, 1959

23 pp (Min of River Fleet RSFSR. Len Inst of Water Transport), 150 copies

(KL, 52-59, 121)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDIK, S., inzh., aspirant; GARBER, T.

Methods of decreasing loads on clamshell cables of gantry cranes. Mor. flot 19 no.1:5-9 Ja '59. (MIRA 12:3)

1. TSentral'nyy nauchno-issledovatel'skiy institut morskogo flota (for Medvedik). 2. Starshiy elektromekhanik Odesskogo Porta (for Garber). (Cables) (Cranes, derricks, etc.)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

GRIGOR'YEV, N.; MEDVEDIK, S.

Load deflection during gantry crane operations. Rech. transp. 20 no.5:16-17 My '61. (MIRA 14:5)
(Cranes, derricks, etc.) (Loading and unloading)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDKIN, Ya.V.

Manufacture of chemical water purifying tanks with a capacity of 300 and 500 m^3 using a rolling method on the assembly site. Energ. stroi. no.20:125-127 '61. (MIRA 15:1)

1. Trest "Volgoenergomontazh".
(Stavropol--Tanks)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDKIN, Yu.I.

Auxiliary attachments for machining precise parts. Mashinostroitel' no.7:28 Jl '54. (MIRA 17:8)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

S[illegible]VACHEV, K.F.; [illegible]NA, [illegible].A.

Nucleic acids in the [illegible] obtained from hyperimmunized breeders. Vest. [illegible] Biol. [illegible] 18 no.3: 29-34 My-Je'63 (MIRA 17:7)

1. Laboratoriya izotopov Moskovskogo universiteta.

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1. MEDVEDKO, A. I.

2. USSR (600)

4. Nitroglycerin

7. First place of Russian scientists in the invention of nitroglycerine explosive materials. Gor. zhur. na11, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

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MEDVEDIKO, A.I., dotsent, kand.tekhn.nauk; MALIOVANOV, D.N., kand.tekhn. nauk, otv.red.; BANK, I.I., red.; SAGITULLINA, R.I., tekhn.red.

[Mechanism of rock shattering in impact boring; second lecture] Mekhanizm razrusheniia gornykh porod pri udarnom burenii; lektsiia vtoraia. Moskva, Vses.zaochnyi politekhn.in-t, 1959. 32 p. (MIRA 13:4)

(Boring)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDKO, Aleksandr Il'ich; KUCHERYAVYY, F.I., kand.tekhn.nauk, retsenzent; ASSONOV, V.A., kand.tekhn. nauk, otv. red.; SHMELEV, A.I., red.izd-va; MINSKER, L.I., tekhn. red.

[Boring and blasting operations] Burovzryvnye raboty. Moskva, Gosgortekhizdat, 1963. 334 p. (MIRA 16:9)
(Boring) (Blasting)

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MEDVEDKO, M.G.

Improving the Komarov disinfection apparatus. Veterinariia 35 no.6: 57 Je '58. (MIRA 11:6)

1. Zaveduyushchiy Ziminskoy mezhrayonnoy vetbaklaboratorii Irkutskoy oblasti.
(Disinfection and disinfectants)

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TARABAYEV, S.I.; SHCHUROV, K.A.; MEDVEDKOV, B. Ye.

Rate of dissolution of lead and zinc sulfides in hydrochloric acid solutions. Trudy Inst. met. i obogashch. AN Kazakh. SSR 3:134-147 '60. (MIRA 14:6)

(Sulfides—Metallurgy)
(Hydrometallurgy)

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GOL'DMAN, M.M.; MEDVEDKOV, B.Ye.; NI, L.P.; PONOMAREV, V.D.

Regeneration of sodium oxide from sodium calcium hydrosilicates. Izv.AN Kazakh.SSR.Ser.met., obog.i ogneup. no.2:53-63 '61. (MIRA 14:8)

(Sodium calcium silicate—Analysis)

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NI, L.P.; MEDVEDKOV, B.Ye.; PONOMAREV, V.D.

Phase equilibria in the system Na_2O - CaO - SiO_2 - H_2O at 220° C.
Izv.AN Kazakh SSR. Ser.tekh.i khim.nauk no.1:36-43 '63.
(MIRA 17:3)

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NI, L.P.; MEDVEDKOV, B.Ye.; PONOMAREV, V.D.

Interaction in the system Na_2O - CaO - SiO_2 - H_2O at 280° C.
Trudy Inst. met. i obog. AN Kazakh. SSR 9:69-76 '64.
(MIRA 17:9)

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MEDVEDKOV, K.V., dotsent

Postoperative gastric hemorrhages following stomach resection. Sbor. trud. Kursk. gos. med. inst. no.13:108-110 '58. (MIRA 14:3)

1. Iz kliniki obshchey khirurgii (zav. - prof. Z.I.Rakhman) Kurskogo gosudarstvennogo meditsinskogo instituta.
(STOMACH—SURGERY) (HEMORRHAGE)

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MEDVEDKOV, N.I., inzh.; ZHELUDKOV, V.I., inzh., nauchnyy red.; ZAKHARENKO, V.I., red.izd-va; SOLNTSEVA, L.M., tekhn.red.

[Building apartment houses using large blocks in Temir-Tau (Kazakh S.S.R.)] Opyt stroitel'stva zhilykh domov iz krupnykh blokov v Temir-Tau (Kazakhskaia SSR). Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1958. 44 p. (MIRA 11:12)
(Temir-Tau--Apartment houses)

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MEDVEDKOV, N.I.

Construction of the Karaganda Iron and Steel Plant. Prom. stroi. 38 no.11:23-26 '60. (MIRA 13:10)

1. Ispolnyayushchiy obyazannosti glavnogo inzhenera tresta Kazmetallurstroy.

(Karaganda--Steelworks)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033310015-4

MEDVEDKOV, M. I., inzh.

Large-block housing construction in Temir-tau. Zhil. stroi. no. 1:16-18 Ja '61. (MIRA 14:1)
(Temir-Tau--Apartment houses)

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MEDVEDKOV, N.I.

New techniques at construction projects in the Ministry of Construction of the Kazakhstan S.S.R. Biul. stroi. tekh. 20 no.12: 41-4[illegible]163. (MIRA 17:8)

1. Nachal'nik tekhnicheskogo upravleniya Ministerstva stroitel'-stva Kazakhskoy SSR.

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SOV-127-58-9-10/20

AUTHORS: Gerasimov, A.G., Suslikov, V.F., Tatsiyenko, F.A. and Medvedkov, V.I.

TITLE: New Data on the Concentration of Iron Ores of the Nizhnyaya Angara Deposits (Novyye dannyye po obogashcheniyu zheleznykh rud Nizhne-Angarskogo mestorozhdeniya)

PERIODICAL: Gornyy zhurnal, 1958, Nr 9, pp 56-62 (USSR)

ABSTRACT: Data on the concentration processes of the Nizhnyaya Angara iron ore deposits have been collected and studied during the last 10 years by the Instituty Mekhanobr, Uralmekhanobr i Sibirskiy metallurgicheskiy institut (The Mekhanobr, Uralmekhanobr Institutes and the Siberian Metallurgical Institute) and as a result two rational methods of concentration have been proposed: gravity-flotation and magnetic-roasting methods. Comparative results are shown in table 1. After technical and economical calculations, the Mekhanobr, represented by N.P. Titkov, I.N. Kachan, G.I. Yudenich, Z.S. Bogdanova, V.F. Savel'yev, Engineer Ruchkin and D.I. Frantsuzov, recommended the gravity-flotation method. Although these findings were confirmed by laboratory tests conducted in the Krasnoyarsk Plant Sibelektrostal' by V.D. Kosul'nikov, V.S. Tomilin, A.M. Komlev, A.I. Komleva,

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