"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

ACCESSION NR: AP4041377 S/0048/64/028/006/1057/1064

AUTHOR: Ivanov-Omskiy, V.I.; Kolomiyets, B.T.; Mal'kova, A.A.; Ogorodnikov, V.K.; Smekalova, K.P.

TITLE: Electric properties of single crystals of p-type HgTe and its alloys with CdTe /Report, Third Conference on Semiconductor Compounds held in Kishinev 16 to 21 Sep 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.6, 1964, 1057-1064

TOPIC TAGS: semiconductor property, electric property, Hall constant, mercury telluride, cadmium telluride

ABSTRACT: Single crystals of HgTe and HgTe-CdTe solid solutions were prepared by Bridgman's method and annealed in mercury vapor. Electric conductivities, Hall constants, and magnetoresistances were measured, in some cases at temperatures as low as 2°K. The relation between the Hall constant of HgTe and the magnetic field was determined at 4.2°K. The relation between the Hall constant and the magnetoresistance was determined for HgTe at several temperatures and was found to be linear. The behavior of the Hall constant of HgTe at low temperatures varied from sample to

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ACCESSION NR: AP4041377

sample, and in some cases it changed sign at about 50°K. Infrared absorption coefficients and photosensitivity spectral distributions were also measured. Many of the data obtained are presented graphically. The concentration of current carriers in HgTe at low temperatures, as determined from the Hall and magnetoresistive effects, was found to be large (about $2 \times 10^{16}$ $cm^{-3}$ at 4.2°K) and to increase only slowly with increasing temperature. It is concluded that there can be no energy gap between the valence and conduction bands, and therefore, in agreement with Strauss et al. (A.J.Strauss, T.C.Harman, J.G.Mavroides, D.H.Dickey and M.S.Dresselhaus; Proc. Intern.Conf.Semicond.Phys.Exeter,1962), that HgTe is a semimetal rather than a semiconductor. The data are analyzed in terms of the band structure found by Strauss et al.(Loc.cit.) for solid solutions containing 14 to 17% CdTe, and it is concluded that the $V_2$ valence band overlaps the conduction band by approximately 0.13 eV at 300°K. The properties of the solid solutions were found to vary continuously with composition from those of a semimetal for large HgTe concentrations to those of a semiconductor for large CdTe concentrations. The critical CdTe concentration above which the material behaved as a semiconductor was approximately 30%. The behavior of the infrared absorption, as well as that of the photosensitivity, was in agreement with this conclusion. Orig.art.has: 10 formulas, 9 figures and 1 table.

Card 2/3

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

ACCESSION NR: AP4041377

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: SS,IC NR REF SOV: 001 OTHER: 007

Card 3/3

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

[illegible] EWT(m)/EWP(b)/EWP(e) Pq-4 WH

[illegible] NR: AP4044636 S/0048/64/028/008/1285/1287

AUTHOR: [illegible]ilo, V. P.; Kolomiy[illegible]ts, B. T.

[illegible] Oxychalcogenide glasses

[illegible] SSSR. Izv. Seriya fizicheskaya, v. 28, no. 8, 1964, [illegible]

TOPIC TAGS: chalcogenide glass, oxychalcogenide glass, mixed [illegible]genide glass, substitution solid solution, oxychalco[illegible] [illegible]ss properties, semiconducting glass

[illegible] study of the feasibility of preparing mixed oxide and [illegible] "oxychalcogenide" glasses [illegible] in com[illegible] with a recommendation of the Third All-Union Conference on [illegible] State. The experiments were first conducted by preparing [illegible] solutions of components [illegible] such as [illegible] $As_2Se_3$ and $Sb_2O_3$. It was shown that large glassy-state [illegible] in both $As_2S_3$-$Sb_2$[illegible] and [illegible] systems [illegible] -$As_2Se_3$-$Sb_2O_3$ ternary system. [illegible] experiments con-

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APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 10396-65

ACCESSION NR: AP4044636

[illegible] components differing in structure showed that glasses are formed also in the $As_2S_3$-$As_2Se_3$-PbO, [illegible] HgO, $BeSe_2$-$As_2Se_3$-HgO, and $Sb_2O_3$-PbO-$Sb_2S_3$ systems. The $Sb_2O_3$-PbO-$Sb_2S_3$ sys- [illegible] small amounts of glasses and has two glass formation re- [illegible] with respect to color and properties. Some proper- [illegible] "oxychalcogenide" glasses are given in Table 1 of [illegible] since the conductivity of these glasses is in the [illegible] -10 ohm cm [illegible] effect, they can be classified as semiconductors. The [illegible] of the new glasses in acids and alkalis is higher than that of chalcogenide glasses. Their density is lower but their soft- [illegible] higher than those of chalgonite glasses. Orig. art. has: 6 figures and 1 table.

[illegible]: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR (Technical Institute AN SSSR)

SUBMITTED: 00 ATD PRESS: 3110 ENCL: 01

SUB CODE: MT REF SOV: 005 OTHER: 002

Card 2/3

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

ACCESSION NR: AP4044636 ENCLOSURE: 01

Table 1. Some parameters of oxychalcogenide glasses

| System | Conductivity (σ), ohm⁻¹·cm⁻¹ | Softening point | Density (d), g/cm³ | Micro-hardness (HV), kg/mm² |
|---|---|---|---|---|
| [illegible] – $Sb_2O_3$ | $10^{-13}$ – $10^{-12}$ | [illegible] | [illegible] – [illegible] | 103 – 135 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] – Ag | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] – Ag | [illegible] | [illegible] | [illegible] – [illegible] | 116 – 169 |
| [illegible] – PbO – $Sb_2S_3$ Region No. 1 | $10^{-13}$ – $10^{-12}$ | 261 – 265 | [illegible] – 4.393 | 179 – 189 |
| [illegible] Region No. 2 | [illegible] | [illegible] – [illegible] | [illegible] – 5.390 | 258 – 306 |

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APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 6805-65 EWT(1)/EWG(k)/EWT(m)/T/EWP(q)/EWP(b) Pz-6/Pq-4 IJP(c)/AS(mp)-2/
[illegible] RAEM(t) RDW/JD/AT/WH

ACCESSION NR: AP4044637 S/0048/64/028/008/1288/1290

AUTHOR: Ivkin, Ye.B ; Kolomiyets, B.T.; Lobedev, E.A.

TITLE: Measurement of carrier mobility in vitreous semiconductors of the $Tl_2SeAs_2$-$(Se\ Te)_3$ system /Report, Third All-Union Conference on Semiconductor Compounds held [illegible] 21 Sept 1963/

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.8, 1964, 1288-1290

TOPIC TAGS: semiconductor conductivity, Hall constant, Hall mobility, drift mobility, selenium compound, arsenic compound, tellurium compound, thallium compound

ABSTRACT: The conductivities and Hall constants of vitreous materials having the composition $Tl_2SeAs_2Se_{3-x}Te_x$ were measured at room temperature for values of x from [illegible] the Hall constant was measured at temperatures from -30 to 70°C for x = 3; [illegible] carrier drift mobilities were measured by the method of W.E. Spear (Proc. Phys.Soc.B-70,669,1957) for values of x from 0 to 1.2. The Hall effect measurements were performed with alternating current in an alternating field to facilitate measurement of the weak Hall emf's ($10^{-7}$ to $10^{-6}$ V). The Hall mobility was found to be independent of temperature and to increase from 0.02 $cm^2/V$ sec for x = 1.2 to 0.08

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 6805-65

ACCESSION NR: AP4044637

$cm^2/V$ sec for x = 3. The drift mobility measurements were performed with samples from 20 to 40 microns thick. Carriers were produced at the surface by a flash of [illegible] not exceeding 0.1 microsec, and the drift of both electrons and holes was observed. The ratio of electron mobility to hole mobility was found to be 0.5 and in- [illegible] Conduction [illegible] not possible to obtain accurate values for the [illegible] themselves [illegible] both the electrons and the holes were short lived (approximately $3 \times 10^{-5}$ [illegible] art. has: 6 figures.

ASSOCIATION: none

ENCL: 00

[illegible] NR REF SOV: 001 OTHER: 003

2/2

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

IVANOV-OMSKIY, V.I.; KOLOMIYETS, B.T.; MAL'KOVA, A.A.

Optical and photoelectric properties of HgTe and its alloys with CdTe. Fiz. tver. tela 6 no.5:1457-1461 My '64.

(MIRA 17:9)

1. Fiziko-tekhnicheskiy institut imeni A.F. Ioffe AN SSSR, Leningrad.

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

ACCESSION NR: AP4044638 S/0048/64/028/008/1291/1292

81

79

AUTHOR: Andriyesh, A.M.; Kolomiyets, B.T.

Thermostimulated current in vitreous $Tl_2SeAs_2Te_3$ /Report, Third All-Union [illegible] Compounds [illegible]

[illegible] SSR, Izv. Seriya fizicheskaya, v.28, no 8, 1964, 1291-1292

[illegible] semiconductor, semiconductor conductivity, photoconductor, activated [illegible]

The exposure effect, discovered many years ago in crystalline selenium [illegible] (Zh.eksp.i teor.fiz.4,146 1934) [illegible] described briefly as it ap- [illegible]

[illegible] conductivity persists for [illegible] is not per- [illegible]

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APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 6806-65

ACCESSION NR: AP4044038

...nal to $L^n$, where L is the exposure and n = 0.5 to 0.65. These phenomena ...ssumably due to the existence in the vitreous material of local centers which ... carriers produced by the illumination and thus give rise to impurity type ... The increase in the enhanced conductivity with exposure indicates that ...concentration of trapped carriers is proportional to the concentration of free ... authors conclude that the number of trapping centers ... that saturation was not reached in their experiments ... in $Tl_2SeAs_2Te_3$ was measured at two rates ... wed a maximum near ... ...lared that the trapped carriers ... magnitude of ... This is in good agreement ... activation energy ob- ... temperature dependence of the enhanced conductivity. Orig.art.has:

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR (Physico-technical ... AN SSSR); Institut fiziki i matematiki Akademii ... Institute of Physics and Mathematics, Academy of Sciences, Moldavian SSR

NR REF SOV: ... ENCL: 00

OTHER: 000

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 11076-65 EWT(m)/EWP(t)/EWP(b) AFETR/ASD(a)-5/ESD(gs) RIW/JD

ACCESSION NR: AP4046657 S/0181/64/006/010/3196/3197

AUTHORS: Kolomiyets, B. T.; Khodosevich, P. K.

TITLE: Local levels in polycrystalline hexagonal selenium 27

SOURCE: Fizika tverdogo tela, v. 6, no. 10, 1964, 3196-3197

TOPIC TAGS: selenium, polycrystal, energy level, electric conductivity, temperature dependence

ABSTRACT: To determine the depth of adhesion levels, responsible for the increased conductivity in selenium layers following application of illumination, the authors measured the thermally stimulated current in layers of hexagonal polycrystalline selenium heat-treated at 483 ± 1K for 12 hours. The distance between the electrodes (colloidal graphite) was 1 mm, and the area of the light-sensitive surface was 1 x 10 mm. The thermally-stimulated current was measured at initial experimental temperatures 223, 173, 123, and 83K.

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 11076-65
ACCESSION NR: AP4046657

2

The test procedure is described briefly. The selenium samples were 99.996 and 99.9999% pure. The measurements have shown that the temperature dependence of the current [illegible] temperature and [illegible] large absolute value to ensure sufficiently accurate measurement. The depth of the adhesion levels was measured by a standard procedure under the assumption that [illegible] mass of [illegible] equal to the mass of the free [illegible] the mobility [illegible] and is independent of the temperature. A plot of the current maxima obtained for one sample is shown in Fig. 1 of [illegible]. The values calculated from this figure for the depth of adhesion levels are 0.12, 0.16, and 0.23 eV, and differ somewhat from the data for single-crystal selenium. If the hole mobility [illegible] selenium depends on the temperature, then the depth may turn [illegible] be smaller. "The authors thank M. [illegible] work." Orig. art. has: 1 figure.

Card 2/4

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

ACCESSION NR: AP4046657

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR (Physicotechnical Institute AN SSSR)

SUBMITTED: 17Jun64

ENCL: 01

SUB CODE: SS, TD

NR REF SOV: 003

OTHER: 001

Card 3/4

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

ACCESSION NR: AP4046657

ENCLOSURE: 01

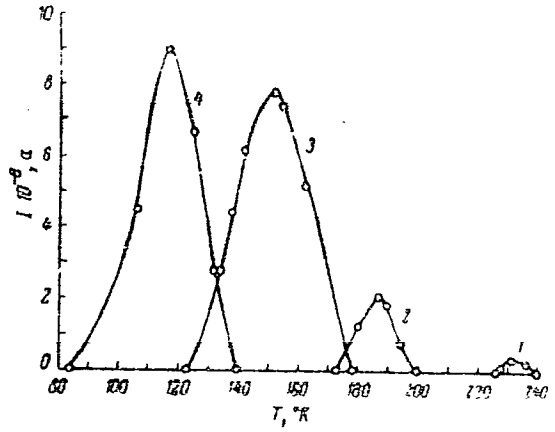


Fig. 1. Thermally induced current (I) in layers of hexagonal selenium at various temperatures (°K): 1 - 233, 2 - 173, 3 - 123, 4 - 83.

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APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 12888-66 EWP(e)/EWT(m)/EWP(b) WH

ACC NR: AT6000487 SOURCE CODE: UR/0000/65/000/000/0171/0174

AUTHOR: Kolomiyets, B. T.; Shilo, V. P.

ORG: None

45
44
B+1

TITLE: On the possibility of obtaining oxychalcogenide glasses 15,44

SOURCE: Vsesoyuznoye soveshchaniye po stekloobraznomu sostoyaniyu. 4th, Leningrad, 1964. Stekloobraznoye sostoyaniye (Vitreous state); trudy soveshchaniya. Leningrad, Izd-vo Nauka, 1965, 171-174

TOPIC TAGS: glass, glass property, arsenic compound, sulfur compound, selenium compound, germanium compound, mercury compound, copper compound, lead compound

ABSTRACT: In an attempt to obtain mixed oxychalcogenide glasses, the regions of glass formation were investigated in the following systems: $As_2S_3$-$As_2Se_3$-$Sb_2O_3$, $As_2S_3$-$As_2Se_3$-PbO, $As_2S_3$-$As_2Se_3$-HgO, $GeSe_2$-$As_2Se_3$-HgO, $Sb_2S_3$-$Sb_2O_3$-PbO, and $As_2S_3$-$As_2Se_3$-CuO. The corresponding triangular phase diagrams are given. The data indicate that oxychalcogenide glasses are indeed formed in these systems, and that they constitute a large new group of glasses whose properties should be studied. In a preliminary study, certain parameters of these glasses ($\sigma$, $T_g$, $\Delta H$) were determined and found to be similar to those known for chalcogenide glasses. Particular attention is drawn to the $As_2S_3$-$As_2Se_3$-CuO system, which

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 12888-66

ACC NR: AT6000487

has both a broad region of glass formation and a high electrical conductivity. Orig. art. has: 6 figures and 1 table.

SUB CODE: 07, 11/ SUBM DATE: 22May65/ ORIG REF: 007

Card 2/2

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

EWT(m)/T/EWP(t)/EWP(b)/EWA(c)

ACCESSION NR: AP5016588 UR/0363/65/001/005/0721/0724

546.193 221 + 546.817'221

[illegible], B. T.; Polyakov, Yu. A.

[illegible] reaction between arsenic trisulfide [illegible]

AN SSSR. Izvestiya. Neorganicheskiye materialy v. 1 no. 5 1965.

TOPIC TAGS: arsenic sulfide, lead sulfide, arsenic containing alloy, lead containing alloy, alloy structure, phase diagram, Tammann triangle

ABSTRACT: Alloys of $As_2S_3$ and PbS were prepared both from the elements and from [illegible] ($As_2S_3$ and PbS), and were [illegible] and x-ray [illegible] and by microstructural examination. An equilibrium phase diagram [illegible] system was constructed [illegible] triangle. [illegible] showed the presence of [illegible] and corresponding to the mineral sartorite or scleroclasite. When complete crystallization of the alloys of the system was carried out, vitreous $As_2S_3$ was [illegible]ed, it was thus possible to determine the [illegible] line, refine the [illegible] $As_2S_3$ (310 ± 5C), and [illegible] The

Card 1/2

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 56703-65

ACCESSION NR: AP5016588

[illegible]ancy of $T_g$ (softening range of the glass) in the glass - crystal system, the identity of the value of the solidus line temperature with the melting point of pure crystalline $As_2S_3$, Tammann's triangle, and the data of x-ray phase [illegible] the presence, in the [illegible] [illegible]ity of pure $As_2S_3$. [illegible] [illegible] [illegible] art. has 6 figures.

[illegible] Institut obshchey i neorganicheskoy [illegible] Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 23Jan65 ENCL: 00 SUB CODE: IC

[illegible] OTHER [illegible]

Card 2/2

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 11977-65 EWT(m)/EWP(e)/EWP(b) Pq-4 ASD(a)-5/AFWL/AFETR/SSD RDW/JD/WH

ACCESSION NR: AP4048406 S/0181/64/006/011/3317/3320

AUTHORS: Andriyesh, A. M.; Kolomiyets, B. T.

TITLE: Electrical conductivity and thermal emf of glassy semiconductor of the $Tl_2Se.As_2(Se, Te)_3$ system

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3317-3320

TOPIC TAGS: electric conductivity, thermal emf, glassy semiconductor, carrier mobility

ABSTRACT: The temperatures dependences of the electrical conductivity and thermal emf of materials of the system $Tl_2Se.As_2(Se, Te)_3$ [illegible] earlier by the present authors ("Issledovaniya po poluprovodnikam" [Research on Semiconductors], Izd. Akademii Moldovenyaske, Kishinev, 1964]; the present paper gives the results for five other compositions of the $Tl_2Se.As_2(Se, Te)_3$ system between 400 and 100K. On increase of the tellurium content the room-temperature electrical

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 11997-65

ACCESSION NR: AP4048406

conductivity rose exponentially from $10^{-7}$ to $3 \times 10^{-3}$ $ohm^{-1}.cm^{-1}$. When the selenium content was increased the activation energy of carriers increased linearly from 0.67 eV for $Tl_2Se.As_2Te_3$ to 1.2 eV for $Tl_2Se.As_2Se_3$. The semiconducting glasses exhibited considerable thermal emf. For example the room-temperature thermal emf of the [illegible] $Se.As_2Se_3$ reached [illegible] the tellurium [illegible] was increased, the emf decreased smoothly and amounted to [illegible] 250 μV/deg for $Tl_2Se.As_2Te_3$. An investigation of the temperature dependence of the thermal emf showed that over the whole range of temperatures all the glassy alloys had p-type conduction. When [illegible] increased, the thermal [illegible] The nature of the dependence indicated intrinsic conduction. The data on the temperature dependence of the electrical conductivity and thermal emf [illegible] to determine the ratio of the carrier mobilities by the [illegible] as for crystalline semiconductors [illegible] the intrinsic conduction. The ratio for $Tl_2Se.As_2Te_3$ was of the order of 0.1, the hole mobility was approximately an order of magnitude [illegible] the electron mobility. [illegible] the selenium con-

Card 2/3

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 11297-65

ACCESSION NR: AP4048406

3

tent, the mobility ratio tended to decrease. The hole mobility was found to vary weakly with the composition. The nature of the dependence of the forbidden bandwidth and the associated parameters on selenium and tellurium content in the investigated glassy ma- [illegible] good agreement with the [illegible] of N. A. Goryunova and one of the present authors [illegible] reference given] that the covalent bonds in glasses became metallic when light components were replaced with heavy ones. "The authors thank G. S. [illegible] for help in these measurements." Orig. art. has: 5 figures [illegible] formula.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. M. Ioffe, AN [illegible] Leningrad (Physicotechnical Institute, AN SSSR)

SUBMITTED: 26May64 ENCL: 00

SUB CODE: SS, EM NR REF SOV: 002 OTHER: 002

Card 3/3

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, B.T.; PAYASOVA, L.; SHTOURACH, L.

Heat conductivity of semiconducting chalcogenide glasses. Fiz. tver. tela 7 no.5:1588-1590 My '65. (MIRA 18:5)

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR, Leningrad.

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

ACCESSION NR: AP5010755 UR/0181/65/007/004/1261/1263

AUTHOR: Baukin, I. S.; Ivanov-Omskiy, V. I.; Kolomiyets, B. T.

[illegible] dependence of the width [illegible] concentration [illegible] of InSb with GaSb

SOURCE: Fizika tverdogo tela, v. 7, no. 4, 1965, 1261-1263

TOPIC TAGS: forbidden zone width, InSb GaSb alloy, optical transition energy

ABSTRACT: The optical properties of monocrystalline alloys of InSb with small additions of GaSb were [illegible] width of the [illegible] of the width of the zone [illegible] dependence [illegible] coefficient on the [illegible] measured on five [illegible] approximately [illegible] additions of acceptors [illegible] the [illegible] to 18 μ. The [illegible] the alloys [illegible] from x-ray surveys. [illegible] band [illegible] with different composition were compared at the same

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

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[illegible] AP5010[illegible]

[illegible] coefficient. From the dependences of the energy of ab-[illegible] on the lattice parameters of the alloy (for four dif-[illegible] absorption level) it was shown that the basic absorption coef-[illegible] dependence was practically linear [illegible] investigated [illegible] However, with an increase in the absorption coefficient, the [illegible] linear. [illegible] cannot be explained on the basis of experimental data, although [illegible] an increased GaSb content in the alloy. This is attrib-[illegible] fact that the change of the zone edge with respect to [illegible] of the alloy is slower [illegible] of the energy [illegible] in the zone depth. Orig. art. has: 1 figure. [JA]

[illegible] Fiziko-tekhnicheskiy institut im. A. F. Ioffe [illegible] (Physicotechnical Institute [illegible])

SUBMITTED: 21Nov64 ENCL: 00 SUB CODE: SE,OP

NO REF SOV: 002 OTHER: 003 ATD PRESS: 3244

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 65282-65 EWT(1)/EWP(e)/EWT(m)/EWP(i)/T/EWT(b)/EWA

ACCESSION NR: AP5014590

Impurity photoconductivity, induced [illegible] property, [illegible] time, relaxation time

ABSTRACT: This is a continuation of earlier work on the electric properties of glass semiconductors (FTT, Collection 2, 22, 1959, and elsewhere). The glass chosen had a relatively high conductivity at room temperature ($10^{-3}$ $ohm^{-1}$ $cm^{-1}$), making it possible to carry out the measurements at low temperatures. In addition, this composition shows a clearly pronounced thermostimulated current. The samples were investigated under various conditions at low temperature in darkness and illuminated. The photocurrent was measured in the temperature interval 100--200K after the sample reached an equilibrium dark resistance. The test procedures and preparation are briefly described. The results [illegible] samples exposed in [illegible] illuminated with light of wavelength [illegible] photoconductive. [illegible]mination with integral light always increased the photoconductivity some-

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L 65252-65
ACCESSION NR: AP5014554

3

[illegible] and this photoconductivity was preserved for a long time in darkness. Removal of the long-wave radiation caused the dark conductivity to decrease slowly to its [illegible]. The existence of induced photoconductivity without a pronounced [illegible] substances contains fluctuation levels. The depth [illegible] dependence of the impurity and induced photoconductivity were also investi- [illegible] show that [illegible] photoconductivity to [illegible] decrease [illegible] effective minutes, depending on the sample and on the experimental [illegible] lifetime of the carriers ranged from 15 to 25 seconds for the rising current and [illegible] seconds for the relaxation of the current. Orig. art. has: 3 figures.

[illegible] Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute, AN SSSR)

SUBMITTED: 24Oct64 ENCL: 00 SUB CODE: MT, OP

NR REF SOV: 010 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 6339-66 EWT(m)/ETC/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD

ACCESSION NR: AP5019880 UR/0181/65/007/008/2534/2535

49
21 B

AUTHOR: Kolomiyets, B. T.; Romanov, V. G.; Khodosevich, P. K.

TITLE: Spectral distribution of internal photoeffect in hexagonal selenium at low temperature

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2534-2535

TOPIC TAGS: spectral distribution, selenium, internal photoeffect, radiation sensitivity, forbidden band, electric conductivity, electron trapping

ABSTRACT: The authors point out that earlier data on the spectral distribution of the internal photoeffect in selenium at 83 and 95K are not normalized to unit incident energy, and therefore did not make it possible to determine the true spectral distribution. They have therefore carried out suitable measurements on B-5 selenium 45--80 μ thick, crystallized at 483 ± 1K for 12 hours, using electrodes of colloidal graphite, spaced 1 mm apart, with 20 v applied, in a special vacuum instrument at 83, 123, 173, and 293K. Comparison of the results, which are shown in Figs. 1 and 2 of the Enclosure, discloses that when the data are reduced to unit incident energy, a decrease in temperature causes the sensitivity to shift to the short-wave region of the spectrum. From the spectral distribution it is then possible to obtain the width of the forbidden band for different temperatures. The

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 6339-66

ACCESSION NR: AP5019880

ENCLOSURE: 01

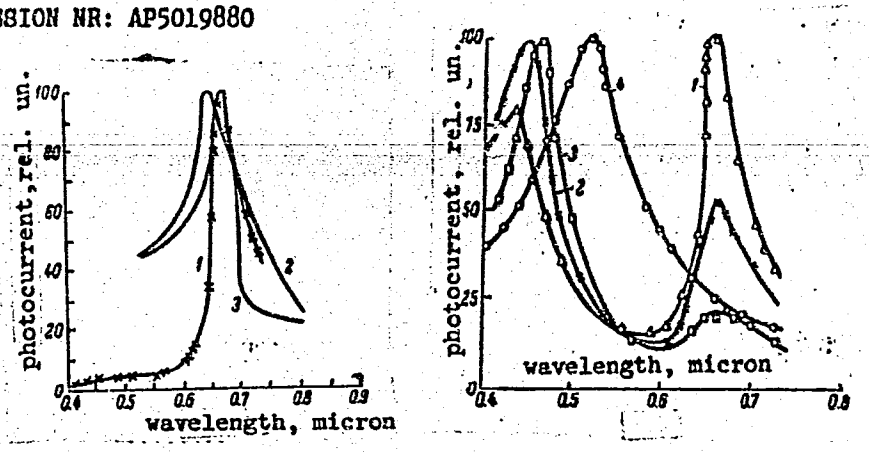


Fig. 1. Spectral sensitivity of selenium plotted without (left) and with normalization to unit incident energy.

Left: 1 - present data at 83K; 2,3 - data by others.
Right: 1, 2, 3, 4 - taken at 83, 123, 173, and 293K, respectively.

nw

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 2118-66 EWT(1)/EWT(m)/ETC/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD/AT

ACCESSION NR: AP5022707 UR/0181/65/007/009/2698/2700

44,55 54

AUTHOR: Kolomiyets, B. T.; Stepanov, G. I. 44,55

TITLE: Impurity photoconductivity in single-crystalline and vitreous arsenic selenide 21,44,55 27

SOURCE: Fizika tverdogo tela, v. 7, no. 9, 1965, 2698-2700

TOPIC TAGS: photoconductivity, impurity photoconductivity, arsenic selenide, single crystal, vitreous state

ABSTRACT: By the use of advanced methods of investigation, an additional maximum of photoconductivity at $\lambda = 1.1\ \mu$, and an independent maximum at $\lambda = 2.7\ \mu$ were detected at room temperature in single-crystalline arsenic selenide. The value of the first-mentioned maximum varies from sample to sample, which indicates the presence of an impurity effect. The same appears to be true in the case of the second maximum. Under the assumption of an impurity character of the photoconductivity, the depth of impurity levels was established at 0.95 ev and 0.45 ev for the first and second maxima, respectively. A study of the spectral distribution of photoconductivity at a sufficient preliminary illumination led to the conclusion that, in the interval between the two maxima, optical quenching occurs. This effect depends on

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L 2118-66

ACCESSION NR: AP5022707

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the wavelength of the infrared light, and has a maximum at 1.3 μ. Impurity conductivity has also been observed in vitreous arsenic selenide with a maximum at 1.9 μ which corresponds to a 0.74-ev depth of impurity levels. No quenching of light occurs in vitreous materials. Orig. art. has: 4 figures. [ZL]

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute, AN SSSR)

44,55

SUBMITTED: 26Mar65 ENCL: 00 SUB CODE: SS, EM

NO REF SOV: 001 OTHER: 005 ATD PRESS: 4117

Card 2/2

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, B.T.

L 43601-65 EPA(s)-2/EWA(c)/EWT(m)/EWG(m)/EWP(b)/T/EWP(t) Pt-7 IJP(c) BDM/ JD/JG

ACCESSION NR: AP5005381 G/0030/65/008/002/0613/0618

AUTHOR: Ivanov-Omskiy, V.I.; Kolomiyets, B.T.; Mal'kova, A.A.; Ogorodnikov, V.K.; Smekalova, K. P.

TITLE: Galvanomagnetic properties of mercury telluride

SOURCE: Physica status solidi, v. 8, no. 2, 1965, 613-618

TOPIC TAGS: galvanomagnetic property, mercury telluride, semiconductor, donor concentration, Hall coefficient, semimetal, single crystal, conductivity, Hall mobility

ABSTRACT: This paper reports the results of an investigation of the galvanomagnetic properties of HgTe carried out on purer p-type samples, and also the results of measurements made on an n-type single crystal with an excess concentration of donors $n = 4.5 \times 10^{16}$ $cm^{-3}$. This is a continuation of an earlier study in which the Hall coefficient and conductivity of p-type single crystals of HgTe at low temperatures were measured. It was on the basis of this study that the conclusion was made that HgTe is a semimetal. In the present investigation the conductivity, Hall coefficient, and change of resistance in a magnetic field were

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 43601-65

ACCESSION NR: AP5005381

measured in the temperature interval 2 to 300°K. No rigorous agreement between experiment and the two-zone conductivity model was observed. The HgTe single crystals were prepared by horizontal zone melting. An estimate is given of the temperature dependence of the natural concentration of charge carriers. The Hall mobility of the n-type sample at low temperatures exceeds 200,000 $cm^2$/sec. Orig. art. has: 7 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut, Leningrad (Physicotechnical Institute)

SUBMITTED: 10Nov64 ENCL: 00 SUB CODE: EC, SS

NO REF SOV: 002 OTHER: 006

Card 2/2nb

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

[illegible] 1306/1309

[illegible] V. I.; Kolomiyets, B. [illegible]

21

[illegible] radiation in InSb due to [illegible] concentration effect [illegible]

[illegible]

[illegible] The samples were [illegible] 6 mm. One face was polished with thin emery powder to in- [illegible] surface recombination, [illegible] polished to de- crease the rate of surface recombination. The measurements were made in constant magnetic fields of 1,000—18,000 oe intensity, produced by a square-wave generator, [illegible] with a gold-doped germanium phot resistance. The [illegible] on the [illegible] described [illegible]

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 52232-65

ACCESSION NR: AP5012761

[illegible] magnetic and electric field applied to the sample and its ampli- [illegible]

[illegible] investigated [illegible] theories of [illegible] against the magnetic field intensity is quite similar to the plot of the photomagnetic effect, [illegible] of the magnetic concentration [illegible] The pulsed radiation [illegible]

This report was presented by [illegible]

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR [illegible] Institute, Academy of Sciences SSSR)

[illegible] ENCL: 00 SUB CODE: SS

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APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 3459-66 EWT(1)/EPA(s)-2/EWT(m)/ETC/EWG(m)/EPA(w)-2/T/EWP(t)/EWP(b)/EWA(m)-2/EWA(c)
ACCESSION NR: AP5017205 IJP(c) RWW/JD/JG UR/0020/65/162/006/1269/1270

AUTHORS: Ivanov-Omskiy, V. I.; Kolomiyets, B. T.; Ogorodnikov, V. K.; Smekalova, K. P.; Konstantinov, B. P.

TITLE: Electron mobility in HgTe

SOURCE: AN SSSR. Doklady, v. 162, no. 6, 1965, 1269-1270

TOPIC TAGS: mercury compound, telluride, Hall coefficient, semiconductor carrier, electron mobility, magnetoresistance

ABSTRACT: In view of the difficulty of determining the type of conductivity of HgTe from measurements of the Hall effect, owing to the larger ratio of the electron mobility to the hole mobility (~100), the authors investigated single-crystal samples of HgTe, prepared by zone melting with subsequent annealing in mercury vapor, over a large range of temperatures. From the temperature dependence of the Hall coefficient it is concluded that HgTe is a semiconductor of the n-type, whose carrier mobility has a temperature dependence typical of the degenerate electron gas in semiconductors and in metals. The electron

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L 3459-66

ACCESSION NR: AP5017205

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mobility is quite high at all temperatures, reaching 200,000 $cm^2$/V-sec. The Hall coefficient exhibits a strong dependence on the magnetic field intensity. This is attributed either to inhomogeneity to the crystal or to the complicated energy spectrum of the electrons in the HgTe. The magnetoresistance of HgTe is characterized by curves having a continuously varying slope and exhibiting no saturation. This report was presented by B. P. Konstantinov. Orig. art. has: 2 figures

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute AN SSSR)

44,55

SUBMITTED: 16Dec64 ENCL: 00 SUB CODE: NP

NR REF SOV: 003 OTHER: 005

BNK

Card 2/2

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

EWT(1)/EWT(m)/EWP(i)/T/EWP(b)/EWA(h) ... AT/WH

ACCESSION NR: AP5012593 UR/0181/65/001/005/1588/1590

AUTHOR: Kolomiyets, B. T.; Payasova, L.; Shtourach, L.

TITLE: On the thermal conductivity of semiconductor chalcogenide glasses

SOURCE: Fizika tverdogo tela, v. 7, no. 5, 1965, 1588-1590

TOPIC: glass property, thermal conductivity, semiconductor material

[illegible] This is claimed to be the first investigation of this subject. The [illegible] first made on $As_2S_3$ and $As_2Se_3$ binary glasses and their solid solutions, synthesized by the method described earlier by one of the authors (Kolomiyets, with [illegible] collection "Stekloobrazn[illegible] [illegible] state), AN [illegible] thermal conductivity [illegible] method pro[illegible] [illegible] Devyatkova and L. S. Stil'bans (Zh.F v. 22, 900, 1952). The mea[illegible] were made in a vacuum better than [illegible] the temperature interval [illegible] results show that the thermal [illegible] $As_2Se_3$ varies like [illegible] state, [illegible] [illegible] with tempera[illegible] the same manner as established by Kittel for oxide glasses (Phys. Rev. v. [illegible] a factor worthy of attention [illegible] state does not [illegible] same decrease in thermal conductivity as is characteristic of solid so[illegible] [illegible] in the crystalline [illegible] shows that the ob-

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ACCESSION NR: AP5012593

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served value of the thermal conductivity of the $As_2S_3$ and $As_2Se_3$ glasses is a lower [illegible] by the mean free path of the [illegible] the experiment- [illegible] "The authors thank [illegible] for help [illegible] Orig. art. has: [illegible] table.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad [illegible] Institute, AN SSSR)

[illegible] ENCL: [illegible] SUB. CD

[illegible] 007 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 21428-66 EWT(m)/EWP(t) IJP(c) JD

ACC NR: AP6011494 SOURCE CODE: UR/0386/66/003/007/0287/0291

AUTHOR: Ivanov-Omskiy, V. I.; Kolomiyets, B. T.; Smirnov, V. A.

ORG: Physicotechnical Institute im. A. F. Ioffe, Academy of Sciences SSSR (Fiziko-tekhnicheskiy institut Akademii nauk SSSR)

TITLE: Spectrum of electromagnetoluminescence in InSb

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 7, 1966, 287-291

TOPIC TAGS: indium antimonide, radiative recombination, luminescence, spectral distribution

ABSTRACT: The authors calculate the spectral distribution of recombination radiation caused by the magnetoconcentration effect (electromagnetoluminescence--EML) in InSb at room temperature, which they observed earlier (Dokl. AN SSSR v. 161, 1307, 1965). Recombination radiation was excited by applying a pulsed electric field to a sample of almost intrinsic p-InSb placed in a magnetic field perpendicular to the electric one. The radiation was gathered in a third mutually-perpendicular direction, guided to a monochromator, and recorded with a photoreceiver of gold-doped germanium. The pulse duration was 2—3 μsec at a repetition frequency 2—3 cps. A pulsed synchronous detector was used to increase the

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L 21428-66

ACC NR: AP6011494

signal/noise ratio at the output of the broadband amplifier. The spectral width of the monochromator slit was 0.3 μ at a wavelength of 6 μ. The oscillograms of the sample-current and photoreceiver signal pulses show that the observed signal has a very low rise time (of the order of 0.2—0.3 μsec), so that the observed signal can be ascribed to electromagnetoluminescence. EML spectra of p-InSb with acceptor density $5 \times 10^{16}$ $cm^{-3}$ for different intensities of the electric and magnetic fields E and H show that with increasing product $\vec{E} \times \vec{H}$, which determines the concentration of the excess carriers on the crystal face from which the radiation is observed, the maximum of the emission intensity shifts markedly toward the short-wave part of the spectrum, and the spectral-band shape and width are simultaneously changed. This shift can be connected with the appreciable increase of the concentration of the excess carriers, which fill noticeably the bottom of the conduction band. The shift of the maximum and the broadening of the spectral band may be due, in addition, to heating of the electron gas under the influence of the electric field, but this heating of the electron gas cannot influence noticeably the spectral distribution of the radiation. It is also noted that in the analysis of EML spectra it is necessary to take into account the principal inhomogeneity in the distribution of the carriers. The difficulties entailed in simultaneous account of all the foregoing circumstances does not permit at present an exact estimate

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L 21428-66
ACC NR: AP6011494

of the density of the excess carriers near the surface from which the radiation is observed. A rough order-of-magnitude estimate without account of heating of the electron gas shows that at maximum electric and magnetic field there are $\sim 10^{-8}$ carriers per $cm^3$ in the immediate vicinity of the crystal face. The authors thank A. Yu. Ushakov for constructing and furnishing the pulsed synchronous detector. Orig. art. has: 2 figures and 1 formula. [02]

SUB CODE: 20/ SUBM DATE: 10Feb66/ ORIG REF: 002/ ATD PRESS: 4221

Card 3/3

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 25445-66 EWT(1)/EWT(m) JD/JG

ACC NR: AP6009698 SOURCE CODE: UR/0181/66/008/003/0967/0969

AUTHORS: Kiseleva, N. K.; Kolomiyets, B. T.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Recombination radiation of gallium antimonide

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 967-969

TOPIC TAGS: gallium alloy, antimonide, recombination radiation, twinning, pn junction, spectral distribution, radiation intensity, crystal growth

ABSTRACT: Whereas earlier investigations of recombination radiation were made in gallium antimonide p-n junctions obtained by diffusion of Zn in Te-doped GaSb of n-type, in the present investigation the p-n junctions were obtained by growing crystals having one or several twinning planes from a melt doped with Te. Such p-n junctions are parallel to the twinning planes and require no special acceptor impurity. The authors investigated the dependence of the radiation intensity on the current at 377K, the influence of the state of the

Card 1/2

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L 25445-66
ACC NR: AP6009698

surface of the sample on this dependence at low current densities, and the spectral distribution of the radiation at 77 and 300K. The current dependence of the radiation intensity has an initial nonlinear section ($\sim I^{\alpha}$) ($\alpha$ = 1.25 -- 4.3), a linear section, and a sublinear section resulting from the heating of the sample during the current pulse. The coefficient $\alpha$ depends on the surface state. At 77K the intensity of the recombination radiation is 10 -- 15 times larger than at 300K, and the nonlinearity is weaker. A change in temperature shifts the peak of the spectral distribution to shorter wavelengths, and an increase to the current density increases the energy in the short wave region of the spectrum. Comparison of the results with those by others indicates that the observed radiation bands at 77 and 300K can be related to transitions through shallow impurity levels, but unique identification of these levels is as yet difficult. The authors thank B. V. Tsarenkov for advice during the performance of the work and for a discussion of the results. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 04Oct65/ OTH REF: 006

Card 2/2

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 29988-66 EWT(m)/ETC(f)/EWP(t)/ETI IJP(c) RDW/JD

ACC NR: AP6012474 SOURCE CODE: UR/0181/66/008/004/1136/1139

AUTHOR: Kolomiyets, B. T.; Lebedev, E. A.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

50
B

TITLE: Effect of impurities on the mobility of carriers in amorphous selenium

27

SOURCE: Fizika tverdogo tela, v. 8, no. 4, 1966, 1136-1139

TOPIC TAGS: selenium, semiconductor carrier, impurity conductivity, electron mobility, hole mobility, carrier lifetime, temperature dependence, impurity level

ABSTRACT: This is a continuation of earlier work by one of the authors (Kolomiyets, with T. F. Nazarova, FTT v. 2, 174, 1960) where it was established that glass-like semiconductors, unlike crystalline ones, retain their intrinsci conductivity character independently of the impurity content. The present investigation is devoted to a more detailed study of the role of impurities in the conductivity of glass-like materials. To this end, a pulsed procedure, essentially similar to that used by W. E. Spear (Proc. Phys. Soc. v. B76, 826, 1960) and J. L. Hartke (Phys. Rev. v. 125, 1177, 1962), was used to measure the dependence of the carrier mobility in glass-like selenium on the type and content of the impurities. The measurements were made on thin samples, using semitransparent electrodes. An excess carrier density was produced on one of the surfaces by illumination or by electron bombardment. The mobility was determined from the change in charge on the content of the sample. The results

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L 29988-66

ACC NR: AP6012474

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

show that an increase in the impurity content greatly reduces the mobility, and that impurities like As and Te exert a greater effect than S. The impurities also affect the effective lifetimes of both the electrons and the holes. When Te and As are introduced, the electron lifetime increases, whereas P and Tl will decrease greatly the electron lifetime. The hole lifetime decreased slightly when P was used, but did not change noticeably when S and Te were introduced. Both electron and hole mobility increased exponentially with the temperature in the range 250 - 300K. The experimental results are explained as being due to an increase in the number of shallow and deep traps resulting from introduction of the impurities. Orig. art. has: 3 figures, 3 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 31Aug65/ ORIG REF: 003/ OTH REF: 003

Card 2/2 Jo

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 10088-67

ACC NR: AP6023368

absorption spectra of the $As_2Se_3$ were measured together with the absorption spectra of the individual components subjected to different purification techniques. The tests have identified the 12.6-μ absorption band, which appears in $As_2Se_3$, as due to the formation of $As_2O_3$ by the oxygen contained in the selenium. The amount of oxygen contamination necessary to produce this band is estimated at 0.01 -- 0.03%. The results have also shown that introduction of the arsenic in the selenium helps rid the latter of oxygen, a factor of importance for the possibility of obtaining oxygen-free selenium. In addition, the method points to the possibility of monitoring the content of oxygen in selenium by measuring the intensity of the absorption bands in the spectrum in $As_2Se_3$, and the possibility of eliminating oxygen from selenium by using elements actively interacting with the oxygen. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 15Oct65/ ORIG REF: 004/ OTH REF: 009

Card 2/2

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

ACC NR: AP6030974 SOURCE CODE: UR/0181/66/008/009/2762/2764

AUTHOR: Kolomiyets, B. T.; Rukhlyadev, Yu. V.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut, AN SSSR)

TITLE: Effect of germanium and tin on the photoelectric properties of arsenic selenide

SOURCE: Fizika tverdogo tela, v. 8, no. 9, 1966, 2762-2764

TOPIC TAGS: selenide, arsenic compound, semiconductor conductivity, photoconductivity

ABSTRACT: The conductivity and photoconductivity of vitreous arsenic selenide containing germanium and tin impurities in various concentrations were studied in the 60-180°C range. The activation energies were calculated from the temperature dependence of the conductivity and the conductivity values at 20°C were found by extrapolation. An increase in germanium content up to certain values decreases the conductivity and increases the activation energy; a further increase of Ge content above 10 at. % and Sn content above 4 at. % causes the conductivity to rise and the activation energy to diminish. For any Ge or Sn content, the activation energy calculated from the spectral distribution of the photoconductivity (allowing for the temperature dependence of the change of the forbidden band width) is greater than the activation energy calculated from the temperature dependence of the conductivity, and there is no

Card 1/2

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

ACC NR: AR6032309 SOURCE CODE: UR/0081/66/000/010/B061/B061

AUTHOR: Baukin, I. S.; Kolomiyets, B. T.

TITLE: The effect of planes of orientation of the seeding on the growth of single crystals of alloys indium antimonide with gallium antimonide

SOURCE: Ref. zh. Khimiya, Part I, Abs. 10B426

REF SOURCE: Uch. zap. Azerb. un-t. Ser. fiz.-matem. n., no. 4, 1964, 97-99

TOPIC TAGS: single crystal, growth, crystal growth, indium antimonide

ABSTRACT: A study has been made of the effect of flatness of orientation of the seeding on the growth of single crystals of InSb with small additions of GaSb grown by the zone growing method. The planes of (111) and ($\bar{1}\bar{1}\bar{1}$) of the seeding agent were first polished and etched in a dilute etching agent CR-4. It was found that single crystals grown with an iniator, oriented towards the melt with the plane (111), contained twin crystals, while those with the plane ($\bar{1}\bar{1}\bar{1}$) had no twin crystals. The obtained single crystals exhibited electron conductivity; the concentration of the carrier is $3 \cdot 10^{15}$ $cm^{-3}$, the mobility of the carrier is 100,000

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ACC NR: AR6032309

$cm^2/v \cdot sec$ and the electron conductivity is 138 $ohm^{-1}cm^{-1}$ (at ~ 20C).
V. Grishin. [Translation of abstract]

SUB CODE: 07/

Card 2/2

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

ACC NR: AR7000871 SOURCE CODE: UR/0058/66/000/009/E072/E073

AUTHOR: Kolomiyets, B. T.; Lyubin, V. M.; Mostovskiy, A. A.; Fedorova, Ye. I.

TITLE: Electric and photoelectric properties of some high-impedance semiconductor layers

SOURCE: Ref. zh. Fizika, Abs. 9E596

REF SOURCE: Sb. Elektrofotogr. i magnitografiya, Vil'nyus, 1965, 36-47

TOPIC TAGS: semiconducting material, photoelectric effect, photoconductivity vaporization, high impedance semiconductor layer, semiconductor, amorphous semiconductor

ABSTRACT: The results are presented of investigations of conductivity and photoconductivity of a large group of high-impedance photoconductors obtained in the form of thin layers by vaporization in vacuum. Layers of $As_2S_3$, $As_2Se_3$, GeS, $As_2Se_3$ and $Sb_2Se_3$, and an amorphous layer of Se, and Se with S and As additions, PbO, phtalocyanine without metal, and a number of ternary semiconductor materials ($AsSbS_3$, $AsSbSe_3$, $mAs_2S_3 \cdot nAs_2Se_3$, $Sb_2S_3 \cdot Sb_2Se_3$,

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ACC NR: AR7000871 APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

$mSb_2S_3 \cdot nBi_2S_3$, $GeS \cdot Sb_2S_3$, and $GeSe \cdot As_2Se_3$) were investigated. Most of the layers have an amorphous structure. The sign of current carriers, the volt-ampere, lux-ampere, and spectral characteristics, photoelectric effect kinetics, dependence of dark current and photocurrent on temperature, the spectral dependence of the light-absorption coefficient, and the characteristics of discharge processes in layers charged by an electron beam or ions from a corona discharge, were investigated. Also, the main characteristics of the "porous" layers of numerous materials prepared by vaporization in an $N_2$ atmosphere were studied. The discussion of the experimental results is based on the concept of strengthening the phenomenon of trapping of current carriers in amorphous semiconductors. [DW]
V. Lyubin. [Translation of abstract]

SUB CODE: 20/

Card 2/2

Kolomiyets, D. P. -- "Certain Properties of the Active Principles of Three

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, D. P.

COUNTRY : USSR
CATEGORY : Microbiology. General Microbiology. Antibiosis and Symbiosis. Antibiotics.
ABS. JOUR. : RZhBiol., No. 3 1959, No. 10052

AUTHOR : Kolomiyets, D. P.
INST. : Zaporozh'ye Institute for the Advancement of Physicians
TITLE : Certain Properties of Fungi of the Genus Penicillium

ORIG. PUB. : Tr. Zaporozhsk. in-ta usoversh. vrachey, 1957, 1, 108-114

ABSTRACT : A culture of Penicillium (No 81) was isolated from the soil which possessed an antagonistic effect on gram-positive and gram-negative bacteria. The titer of the culture fluid of a 15-day depth culture on Chapek's medium containing sucrose (6%) and ammonium phosphate (0.3%) was equal to 1:200. A description and the arrangement of the laboratory fermenter are presented. The active substance with a titer of 1:3000 with respect to the colon bacillus was obtained by

Card: 1/2

19

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

KOLOMIYETS, F.S.

Means of increasing the period of continuous operation of sugar plants in the Kuban. Sakh. prom. 32 no. 6:13-16 Je '58. (MIRA 11:7)

(Kuban--Sugar industry)

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, G.

Spain - Economic Conditions

"Spain, a yankee colony." Felipe M. Arconada. Reviewed by G. Kolomiyets. Bolshevik 29, no. 16, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1952, Uncl.

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 02969-67 EWT(d)/FSS-2/EWT(1)/EWT(m)/EEC(k)-2 GW/WS-2

ACC NR: AT6032437 SOURCE CODE: UR/3133/66/000/009/0157/0161

AUTHOR: Fialko, Ye. I.; Moysya, R. I.; Kolomiyets, G. I.; Mel'nik, V. I.; Chumak, Yu. V.

ORG: Kiev State University (Kiyevskiy gosudarstvennyy universitet) 38 B+ 1

TITLE: Statistical characteristics of radio echoes from sporadic meteors

SOURCE: AN UkrSSR. Mezhduvedomstvennyy geofizicheskiy komitet. Informatsionnyy byulleten', no. 9, 1966. Geofizika i astronomiya, 157-161

TOPIC TAGS: radio echo, meteor trail

ABSTRACT: The results of radar observations conducted on 29 October 1964 during a period in which intensive meteor streams were absent were used to construct statistical characteristics of the distribution of meteor radio echoes with respect to amplitude and duration. The radar system used had the following basic parameters: $\lambda = 8.7$ m; pulse power, 10 kw; pulse period, 10 μsec; pulse repetition rate, 500 pulse/sec; sensitivity, $\approx 5$ μv. The four-element receiving and transmitting Yagi antennas were located at height $h = \lambda/2$ above the ground. The 492 radio echoes selected for constructing the statistical character-

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 02969-67
ACC NR: AT6032437

istics included 56 for unsaturated, 76 for intermediate, and 360 for saturated meteor trails. The integral distribution of meteor radio echoes with respect to amplitude and duration is illustrated in Figs. 1 and 2, respectively. The value of parameter s was determined by several approximate methods for a wide range of masses of meteoric bodies by using radio reflections from the trails. Parameter s had a sporadic

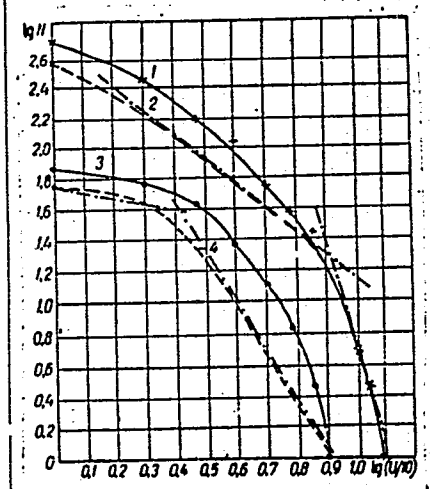


Fig. 1. Integral amplitude distribution of meteor radio echoes

1 - General integral amplitude distribution;
2 - reflection from saturated trails;
3 - reflection from intermediate trails;
4 - reflection from unsaturated trails

Card 2/3

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 02969-67
ACC NR: AT6032437

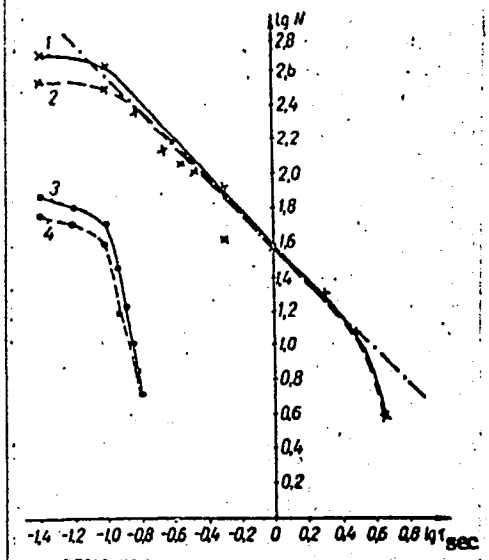


Fig. 2. Integral distribution of the duration of meteor radio echoes

1 - General integral distribution;
2 - reflection from saturated trails;
3 - reflection from intermediate trails;
4 - reflection from unsaturated trails.

noise value of 2.0—2.25, which was in agreement with previous determinations. Orig. art. has: 5 figures.

SUB CODE: 03 / SUBM DATE: none/ ORIG REF: 007/ OTH REF: 003
ATD PRESS: 5099

Card 3/3 JC

ACC NR: AR6035292 SOURCE CODE: UR/0269/66/000/007/[illegible]

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

AUTHOR: Fialko, Ye. Y.; Moysya, R. I., Mel'nyk, V. I.; Kolomiyets', H. I. -- Kolomiyets', A. R.; Yemel'yanov, I. M.; Shul'ha, A. I.; Yavlins'kyy, A. Ya.

TITLE: Radar set for observing the drift of meteor trails

SOURCE: Ref. zh. Astronomiya, Abs. 9.51.411

REF SOURCE: Visnyk Kyyivs'k. un-tu. Ser. astron., no. 7, 1966, 69-74

TOPIC TAGS: meteor trail, radar antenna, radar meteor observation, train drift

ABSTRACT: A description is given of a radar set designed at the Department of General Radio Engineering of Kiev University and which is intended for measuring the velocity and direction of the drift of ionized trains. The basic parameters of the equipment are as follows: frequency 34.47 mc; transmitter pulse power 100 kw; pulse duration 10 μsec; sending frequency 500 cps; each fifth pulse is doubled; receiver sensitivity ~ 3 μv; receiver passband 600 kc. Identical type wave-duct five-element antennas are used for reception and transmission measurements of the drift velocity radial component is carried out by the pulse-coherent method. The

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UDC: 523.164.85

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

ACC NR: AR6035292

unit is equipped with a system of noise protection which makes it possible to select reflected signals on the basis of duration, amplitude and code. The equipment was tested in March—May 1964. Article includes a bibliography of 6 titles. [DW]
V. Lebedinets. [Translation of abstract]

SUB CODE: 03, 09/

Card 2/2

ACC NR: AR6035293 SOURCE CODE: UR/0269/66/000/009/0048/0048

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

AUTHOR: Moysya, R. I.; Kolomiyets', H. I.; Mel'nyk, V. I.

TITLE: Recording the velocity and direction of meteor trail drifts

SOURCE: Ref. zh. Astronomiya, Abs. 9.51.412

REF SOURCE: Visnyk Kiyivs'k. un-tu. Ser. astron., no. 7, 1966, 75-78

TOPIC TAGS: meteor, meteor trail, meteor trail drift, coherent pulse method

ABSTRACT: At present, the coherent pulse method used in radar measurement of meteor trail drifts usually employs the recording reflected signal method, in which two beams of a cathode-ray indicator tube are used. One of the pulse sequences is obtained with the aid of reference voltage, whose phase is further shifted by 90°. A method is proposed in which both pulse sequences are recorded with one beam. The phase shift of the reference signal by 90° is effected at the time of the reception of a reflected code pulse or one of the pulses of the basic sequence (e.g., each fifth pulse). Block diagrams of the equipment and a sample of the recording of a reflected signal are given. V. Lebedinets. [Translation of abstract] [SP]

SUB CODE: 03/

Card 1/1 UDC: 523.164.85

L 08643-67 EWT(1)/FSS-2 GW/WR

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, G.K.

Brightness distribution over the daytime cloudless sky in the ultraviolet spectral region. Trudy Astrofiz. inst. AN Kazakh.SSR 4:80-84 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, G.K.

Device for determining the concentration and size of natural aerosols in the troposphere. Izv.Astrofiz.inst.AN Kazakh. SSR 11:111-115 '61. (MIRA 14:3)

(Aerosols--Measurement)
(Atmosphere)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, G.T.

Artificial insemination is the best way to eliminate sterility in cows. Veterinariia 35 no.2:72-58 F '58. (MIRA 11:2)

1. Starshiy vetvrach Ozhidovskoy mashinno-traktornoy stantsii, L'vovskoy oblasti.
(Odessa District--Artificial insemination)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 04097-67 EWT(1)/FSS-2 GW/WR

ACC NR: AR6023288 SOURCE CODE: UR/0058/66/000/003/H057/H057

37

AUTHOR: Moysya, R. I.; Kolomiyets', H. I.; Mel'nyk, V. I.

B

TITLE: Some results of radar observation of meteors at wavelength $\lambda = 8.7$ m

SOURCE: Ref zh. Fizika, Abs. 3Zh398

REF SOURCE: Deyaki rezul'taty radiolokatsiynykh sposterezhen' meteoriv na dovzhyni khvyli $\lambda = 8,7$ m. Visnyk Kyyivs'k. un-tu. Ser. astron. no. 6, 1964, 111-114

TOPIC TAGS: radar meteor observation, meteor trail, radio echo

ABSTRACT: Results are presented of trial observations of meteors, carried out with the aid of apparatus constructed in the Gneral Radio Engineering Department of the Kiev University. The apparatus makes it possible to measure the velocity and drift direction of the meteor trails, the velocity of the meteoric particles, the slant range to the trail, the time of appearance of the meteor, and the amplitude and duration of the meteoric radio echo. The main parameters of the apparatus are: pulse power 100 kw, wavelength $\lambda = 8.7$ m, receiver sensitivity 3 - 5 μv. A brief description is presented of the block diagram of the apparatus. Results of observations made on 27 - 28 May 1964 are used to construct the statistical characteristics of radio meteors. An estimate of the directivity pattern of the antenna in the vertical plane is obtained from the slant-range distribution of the radio meteors. The maximum antenna radiation is at an angle $\theta = 24°$. The distribution of the radio meteors by velocities and the distribution of the amplitudes of the radio meteors are presented. Data are

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L 04097-67
ACC NR: AR6023288

obtained on the drift velocity of the meteor trails. [Translation of abstract]

SUB CODE: 03

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Card 2/2

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I. [Kolomiiets', I.], inzh.

It mows and binds. Znan.ta pratsia no.6:10 Je '59.
(MIRA 12:11)

(Harvesting machinery)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I.A.

Formation of reproductive organs in apple trees. Nauk.zap. Kiev.un. 8 no.5:71-90 '49. (MLRA 9:10)

(Apple) (Plants, Sex in)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

1. KOLOMIYETS, I. A.

2. USSR (600)

4. Fruit Culture

7. Stage of readiness for fruitbearing and the period preceding it in fruit tree seedlings. Izv. AN SSSR. Ser. biol. no. 3, 1952.

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

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMYETS, I. A.

Fertilizers and Manures

Effect of mineral fertilizers on the formation of reproductive organs in young apple trees. Bot. zhur. 37 no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1952, Uncl.

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMYTTS, I. A.

Apple

Biological analysis of development of buds in apple trees. Dokl. AN SSSR, 84, No. 4, 1952.

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

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I.A.

Conditions for floral and propagative bud development in the apple tree. Trudy Inst.fiziol.rast. 8 no.2:361-397 '54.
(MLRA 8:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut plodovodstva, g. Kiev.
(Apple)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I.A.

KOLOMIYETS, I.A. "The Biology of Development of the Generative Organs, and the Periodicity of Fruit-bearing of Apple Trees." Acad Sci USSR. Inst of Plant Physiology imeni K.A. Timiryazev Moscow, 1956. (Dissertation for the Degree of Doctor in Biological Science)

So: Knizhnaya Letopis', No. 18, 1956,

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I. A

BULGARIA/Cultivated Plants - Fruits. Berries. II.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44275

Author : Kolomiyets, I.A.

Inst : Ukrainian Scientific Research Institute for Fruit Raising

Title : Periodicity of Fruit Bearing and a Method of Overcoming It

Orig Pub : Oroshcharstvo i gradinarstvo, 1956, No 5, 31-34.

Abstract : The work was conducted in the physiology laboratory of the Ukraine Scientific Research Institute of Fruit Raising the basic cause of periodicity is dissimilar formation of flower buds during the different ages of the trees. On young trees only a part of the growth points forms the flowers buds. Therefore young trees bloom moderately but bear fruit every year. The aging trees form the flower buds at a greater number of growth points. They blossom

Card 1/3



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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

USSR/Cultivated Plants. Fruit Trees. Small Fruit Plants. M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77825.

Author : Kolomiyets, I.A.
Inst :
Title : Physiological Effect of Pruning.

Orig Pub: Sad i ogorod, 1957, No 12, 34-36.

Abstract: In the Ukrainian Scientific-Research Institute of Horticulture in the spring of 1952, pruning was conducted of fertilized and non-fertilized Borovinki young trees and Kal'vilya snow adults with cutting of the branches and shortening of the one- and two year growths by ½ and 2/3 of their length. Determination of the content of water in the leaves and sprouts and the bioche-

Card : 1/3

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

USSR / Cultivated Plants. Fruit Trees. Small Fruit Trees. M 7

Abs Jour: Ref Zhur-Biol., 1958, No 16, 73117.

Author : Kolomiyets, I. A.
Inst : Not given.
Title : Significance of Shortening Branches by Pruning Trees.

Orig Pub: Sad i ogorod, 1958, No 2, 46-50.

Abstract: No abstract.

Card 1/1

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, Ivan Afanas'yevich

[Overcoming the periodicity of fruiting in the apple tree] Preodolenie periodichnosti plodonosheniia iabloni. Kiev, Gos. izd-vo sel'khoz. lit-ry USSR, 1961. 299 p. (MIRA 15:5)

(Apple)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I.A., doktor biolog. nauk

Phasic development of peach seedlings. Agrobiologiia no.6:896-903 N-D '64. (MIRA 18:2)

1. TSentral'nyy respublikanskiy botanicheskiy sad AN UkrSSR, Kiyev.

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I.D., inzh.

Some considerations concerning the evaluation of the track condition. Put' i put.khoz. 7 no.9:14 '63. (MIRA 16:10)

1. Nachal'nik Poltavskoy distantsii puti Yuzhnoy dorogi.

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I. D., inzh.

Need for a more accurate evaluation of track conditions. Put' i put. khoz. 6 no.8:16 '62. (MIRA 15:10)

1. Nachal'nik Poltavskoy distantsii Yuzhnoy dorogi.

(Railroads—Track)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I.D. [Kolomiiets', I.D.]; SMIRNOV, A.A.

Theory of the residual resistivity of a binary disordered alloy of periodically varying composition. Ukr.fiz.zhur. 7 no.11:1195-1204 N '62. (MIRA 15:12)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Alloys) (Electric resistance)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I.D.; SMIRNOV, A.A.

Theory of residual electric resistivity in disordered binary alloys with periodically changing composition. Part 1. Fiz. met. i metalloved. 14 no.1:3-9 Jl '62. (MIRA 15:7)

1. Kiyevskiy gosudarstvennyy universitet.
(Alloys—Electric properties)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I.D.; SPODENEYKO, I.N.; STEBLYUK, A.P., inzh.

Laying of switches by the push-on method. Put' i put. khoz. 9 no.2: 12-13 '65. (MIRA 18:7)

1. Nachal'nik Poltavskoy distantsii Yuzhnoy dorogi (for Kolomiyets). 2. Zamestitel' nachal'nika Poltavskoy distanstsii Yuzhnoy dorogi (for Spodeneyko). 3. Poltavskaya distantsiya, Yuzhnoy dorogi (for Steblyuk).

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

24,7700

S/126/62/014/002/001/018
E032/E514

AUTHORS: Kolomiyets, I.D. and Smirnov, A.A.

TITLE: Theory of residual resistivity of a binary unordered alloy with a periodically varying composition. II

PERIODICAL: Fizika metallov i metallovedeniye, v.14, no.2, 1962, 161-164

TEXT: Part I of this paper was given in v.14, no.1 of this journal (pp 3-9). Part I* was concerned with the residual resistivity of a binary unordered alloy whose composition varies sinusoidally in one of the coordinates. In the present paper this is generalised to the case where the concentrations of the components are arbitrary periodic functions of one of the coordinates. The calculations are based on the same assumptions as in part I. It is shown that the expression for $\rho_o$ is

$$\rho_o = A\left[c_A^o(1 - c_A^o) - \overline{(\delta c_A)^2}\right] \qquad (8)$$

where A is a coefficient which is independent of the composition,

Card 1/2 * NOT SELECTED FOR ABSTRACTION

Card 2/2

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I.D.; SMIRNOV, A.A.

Theory of the electric resistance of alloys with periodically changing constitution and degree of long-range order. Fiz.met.i metalloved. 15 no.3:321-326 Mr '63. (MIRA 16:4)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G.Shevchenko.
(Alloys—Electric properties) (Crystal lattices)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I.D.

Results of the experimental trips of the track-measuring car. Put' i put. khoz. 8 no.11:34-37 '64 (MIRA 18:2)

1. Nachal'nik Poltavskoy distantsii puti, Yuzhnoy dorogi.

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, I.D.

Using a ballaster for track alignment. Put' i put.khoz. 9 no.6:8-9 '65. (MIRA 18:6)

1. Nachal'nik distantsii puti, stantsiya Poltava, Yuzhnoy dorogi.

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

MARTYNENKO, Ivan Ivanovich; DOROSH, I.Y.; KISTEN', G.Ya. [Kysten', H.IA.]; KOLOMIYETS', I.F. [Kolomiiets', I.F.]; LEVITSKAYA, G.P. [Levyts'ka, H.P.], red.; GULENKO, O.I. [Hulenko, O.I.], tekhn. red.

[Use of electric power on the "Shliakh do komunizmu" Collective Farm] Vykorystannia elektroenergii v kolhospi "Shliakh do komunizmu." Kyiv, Derzhsil'hospvydav URSR, 1962. 58 p. (MIRA 16:5)

(Electricity in agriculture)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, Ivan Gavrilovich; YAROSHEVSKIY, K.P., red.; OSOVSKIY, A.T., tekhn. red.

[Socioeconomic relations and social movements in Transcarpathia in the second half of the 19th century]Sotsial'no-ekonomicheskie otnosheniia i obshchestvennoe dvizhenie v Zakarpat'e vo vtoroi polovine XIX stoletiia. Tomsk, Izd-vo Tomskogo univ. Vol.1. [Agriculture and agrarian relations]Sel'skoe khoziaistvo i agrarnye otnosheniia. 1961. 493 p. (MIRA 15:9)

(Transcarpathia--Economic conditions)
(Transcarpathia--Land tenure)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KONDRATYUK, Ye.M.[Kondratiuk, IE.M.], otv. red.; BILOKIN, I.P., zam. otv. red.; BURACHINSKIY, O.M. [Burachyns'kyi, O.M.], red.; ZHARENKO, N.Z., red.; KOLOMIYETS', I.O. [Kolomiiets', I.O.], red.; KOKHNO, M.A., red.; KHARKEVICH, S.S.[Kharkevych, S.S.], red.; CHOPIK, V.I.[Chopyk, V.I.], red.; KAS'YAN, S.M., red.

[Acclimatization and introduction of new plants] Aklimatizatsiia i introduktsiia novykh roslyn. Kyiv, Naukova dumka, 1965. 221 p. (MIRA 18:5)

1. Akademiya nauk URSR, Kiev. Botanichnyi sad.

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS', I. P.

USSR / Cultivated Plants. Fruit Trees. Small Fruit Plants. Nut Trees. Tea. M

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 25041

Author : Kolomiyets', I. P.
Inst : Not given
Title : Concerning the Change-Over of Apple Trees from Periodic to Annual Fruit-Bearing

Orig Pub : Byul. nauk.-tekhn. inform. po sadivnytstvu, 1957, No 4, 19-24

Abstract : It was established by the Laboratory of Plant Physiology of the Ukrainian Scientific-Research Institute of Fruit-Bearing that for the liquidation of the periodic fruit-bearing in the orchards of the Ukrainian SSR's forest-and-steppe zones, it is necessary completely to satisfy the plants in an

Card 1/2



APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

USSR / Cultivated Plants. Fruit Trees. Small Fruit Plants. Nut Trees. Tea. M

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 25043

Author : Kolomiyets', I. P.
Inst : Not given
Title : Acceleration of Fruit-Bearing by Apple Seedlings

Orig Pub : Byul. nauk.-tekhn. inform. po sadivnytsvu, 1957, No 4, 54-56

Abstract : Hybrid apple seedlings bear fruit in the 8-12th year, and some only on the 20th year after planting, although its generative maturity sets in on the 3-4th year. They are not bearing fruit as a result of the absence of necessary nutritive conditions. To accelerate fruit-bearing, an

Card 1/2

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, K.V.

5.2-276

Kolomiyets, K. V. and Shpilberg, G. L. O novom metode gigienicheskoi otsenki klimata. (Kriticheskie zametki v sviazi so stat'ei prof. KH. A. Nikogosiana.) [The new method of hygienic climate evaluation.] (Critical notes on the article of Prof. KH. A. Nikogosian.) *Gigiena i Sanitariia*, Moscow, 3:17-19, March 1953. Reply by KH. A. Nikogosian, p. 19-21. 551.586:612

DEC—The objection raised to NIKOGOSIAN's article are as follows: a denial of the fact that weather by itself can be pathogenetic; failure to utilize the method of complex climatology even though the author recommends its use; confusion of weather types with air mass characteristics; neglect of the methods of classical climatology of Voeikov; overstress on non-periodic variation of weather variables, etc. The authors stress microclimate studies parallel to physiological analysis of the effect of meteorological variables upon the entire organism, especially nervous system. *Subject Heading:* 1. Physiological climatology. I. Nikogosian, KH. A.—*I.L.D.*

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Ukr. Sci Res Inst Health Resort Therapy

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIETS, K. V.

Reply to K. V. Kolomiets' and G. I. Shpil'berg's article "On the new method of hygienic evaluation of climate." Kh. A. Nikogosian. Gig. i san. no. 3: 19 - 21 Mr '53

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, K.V.

Operational characteristics of the bioclimatological service in health resorts of the Ukrainian S.S.R. Trudy Ukr.NIGMI no.3:92-97 '55. (MLRA 9:10)

1. Ukrainskiy nauchno-issledovatel'skiy institut kurortologii. (Ukraine--Health resorts, watering places, etc.) (Ukraine--Climatology, Medical)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, K. V. Doc Biol Sci -- (diss) "On the effect of temperature, humidity, and circulation of air (taking into account solar radiation) upon the integument and heat perception of healthy [redacted] persons ~~adults~~ (Magnitude ~~Degrees~~ of stimulation)." Odessa, 1958. 24 pp with graphs (Acad Med Sci USSR), 500 copies. On title page author: V. K. (!) Kolomiyets. (KL, 14-58, 111)



APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, K.V. (Odessa)

Once more on weather classes in their introduction into health resort practice. Vop. kur., fizioter. i lech. fiz. kul't. 26 no. 2:173-174 Mr-Ap '61. (MIRA 14:4)
(CLIMATOLOGY, MEDICAL)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, K.V.; SHPIL'BERG, G.I.

Possibility of the use of cybernetics in climatic therapy. Vop. kur. fizioter. i lech. fiz. kul't. 28 no.5:403-404 S-O '63. (MIRA 17:9)

1. Iz Ukrainskogo instituta kurortologii i fizioterapii (dir.-dotsent F.Ye. Kurkudym).

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, L.

(16)

AUTHOR: Panovko, V. M., Engineer

TITLE: All-Union Conference on the hardfacing of dies for hot and cold press-forming

PERIODICAL: Svarochnoye proizvodstvo, no. 3, 1963, 44 - 45

TEXT: The First All-Union Scientific-Technical Conference on hardfacing of dies was held at Volgograd from November 27 - 29, 1962. The Conference heard the following reports: N. T. Prosvirov (VNIIPTMASh) on "Operational conditions and the type of forging dies"; L. A. Pozdnyakova (ENIKMASh) on "Problems of the durability of dies and press-forming steels"; V. A. Popov, ENIKMASh, on some structural peculiarities of carbide tools for cold extrusion and upsetting; I. I. Frumin, B. V. Danil'chenko (Institute of Electric Welding imeni Ye. O. Paton) on "Electric-slag hardfacing of some dies"; L. Kolomiets (IES imeni Ye. O. Paton) on "Reconditioning of dies by electric-slag hardfacing"; V. A. Timchenko (IES imeni Ye. O. Paton) on "A machine with program control for automatic hardfacing of forging dies"; Reports on manual arc-hardfacing of dies were delivered by N. V. Popov (Volgograd Tractor Plant), V. M. Panovko and Ye. G. Bloshkin (Moscow Experimental Welding Plant); O. D. Superko (Chelyabinsk Tractor Plant), N. I. Nikolko (Ural Heavy Machinebuilding Plant), P. M. Sapov ("Rostsel-mash"), N. I. Kuzovkova (GAZ), Yu. P. Zaytsev (ENIKMASh), V. I. Il'yin (ZIL), Gopovin (Khar'kov "Svet shakhtera" Plant), and others. In a decision the Conference mentioned deficiencies connected with the subject, i.e. lack of unified electrodes; of centralized production; of unified technological instructions on the hardfacing of dies; of methods for evaluating the quality of hardfaced metal, and lack of high-quality electrodes for hardfacing cast-iron dies. The Conference decided to take steps in order to eliminate the aforementioned deficiencies.

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, L.D.

3

IVANOV, V.YE., ZELENSKIY, V.F., KOLENDOVSKIY, M.G., KOLOMIYETS, L.D.

Impregnation of Graphite with Liquid Silicon in a vacuu,.

Report submitted for the Conference on New Nuclear Materials Technology including Non-Metallic Fuel Elements (IAEA), Prague, 1-5 July 63

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

L 15179-66 EWP(e)/EWT(m)/T/EWP(t)/EWP(b) IJP(c) JD/WW/JG

ACC NR: AP6002665 SOURCE CODE: UR/0126/65/020/006/0860/0863

AUTHOR: Kolomiyets, L. D.; Khorenko, V. K.

ORG: none

TITLE: Oriented growth of oxide film on beryllium

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 6, 1965, 860-863

TOPIC TAGS: metal oxide, beryllium, oxide formation, crystal growth, metal diffusion, electron diffraction analysis

ABSTRACT: The structure of the oxide film growing on the surface of nontextured polycrystalline Be was investigated. 99.98% pure Be was vacuum-evaporated onto a glass substrate dusted with rock salt. Film thickness was measured by the optical interference method and found to be 400-600 Å. The films were removed in distilled water, trapped on electrolytic Ni meshes and placed in an electric furnace. Oxidation was performed in air at 400, 500, 600, 750 and 800°C. Prior to the oxidation an electron-diffraction examination of the films revealed no texture (preferred orientation). Following the oxidation, electron diffraction patterns of the oxidized Be films were taken at various angles from 0 to 60° with respect to the electron beam in order to detect the texture maxima. For comparison, the structure of oxide films was also examined on massive vacuum-melted or hot-pressed specimens of Be. Findings: the oxide

Card 1/3 UDC: 539.23:541.45+546.45

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film on condensates and bulk specimens of Be displays preferred orientation throughout the temperature range from 400 to 800°C. At lower temperatures, when the diffusion rate of Be ions in the oxide film is low, the process of formation of the oxide film on Be may largely be determined by the chemosorption of oxygen on the oxide surface and the interaction between Be ions and adsorbed oxygen. It may be assumed that in such cases the orientation of the oxide film coating Be is associated with the preferential alignment of the BeO planes with the greatest packing density of oxygen ions parallel to the surface of the specimen. The oxidation rate of Be in dry gases at elevated temperatures is in all likelihood determined by the diffusion rate of metal ions in the BeO film. This is implied primarily by the ratio between the sizes of the ions of oxygen $r_O = 1.32$ and beryllium $r_{Be} = 0.36$ as well as by the fact that BeO is a semiconductor with cation conduction. As the oxidation temperature increases, the diffusion rate of Be ions in the oxide films increases. Considering that noncubic crystals are characterized by anisotropy of diffusion rate, the growth of BeO crystal particles in different directions may occur at different rates. Under these conditions, as the oxidation temperature increases, the type of texture of the oxide film may vary, as had indeed been observed in this study which showed that oxidation at 400°C produces a mixed texture of two types, (0002) and (10$\bar{1}$3), whereas oxidation at 500-800°C produced a texture of the (10$\bar{1}$3) orientation alone. Contrary to the findings of J. S. Kerr and H. J. Wilman (Inst. Metals, 1956, 84, 379) the presence of these textures cannot be attributed to epitaxial growth, since both

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L 15184-66

ACC NR: AP6002671

2

duces $H_c$ by eliminating the domain-boundary-consolidating effect of LOS but it leads to the rise of a magnetic texture where the preferred orientation of the magnetization of domains is parallel to the $H_A$ field. The fact that $H_c$ after quenching is greater in every direction of the specimen than after TMTR indicates that the disordered state in itself is not a cause of the enhancement of magnetic properties in alloys with order-disorder transitions, contrary to what had been thought previously, and that the effect of "permalloy" treatment is conditioned entirely (or chiefly) by the suppression of LOS during this treatment. The attendant investigation of the effect of TMT on monocrystalline E330 ferrosilicon steel did not produce unambiguous results, possibly because of the dissipation of magnetostrictive stresses. It is worth noting that practical applications may be found for the isotropic decrease in $H_c$ following TMTR. Orig. art. has: 2 figures.

SUB CODE: 11, 20/ SUBM DATE: 26Dec64/ ORIG REF: 006/ OTH REF: 005

magnetic alloy 18

Card 3/3

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

ACC NR: AP7010681 SOURCE CODE: UR/0089/66/021/003/0192/0197

AUTHOR: Zelenskiy, V. F.; Kunchenko, V. V.; Royenko, N. M.; Kolomiyets, L. D. (Deceased); Stukalov, A. I.

ORG: none

TITLE: Texture distribution along cross section of alpha-and gamma-deformed and quenched uranium rods

SOURCE: Atomnaya energiya, v. 21, no. 3, 1966, 192-197

TOPIC TAGS: x ray analysis, uranium, uranium property, particle cross section, nuclear section

SUB CODE: 11,07,18

ABSTRACT: Roentgenographic analysis of texture distribution along the cross section of $\alpha$ - and $\gamma$ -deformed and $\beta$ - and $\gamma$ -phase quenched uranium rods showed that the distribution density of P poles (hkl) and $G_x$ growth index were functions of mechanical and thermal treatments. Orig. art. has: 6 figures. [NA]

Card 1/1 UDC: 548.735:621.039.543.4

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, L.M.

Myohemoglobinuria of the type found in the residents of Lake Yuksovskoye region. Vrach.delo no.2:143-144 F '63.
(MIRA 16:5)

1. Zolochevskaya rayonnaya bol'nitsa Khar'kovskoy oblasti i kafedra propedevticheskoy terapii (zav. - doktor med.nauk Yu.D. Shul'ga) pediatricheskogo fakul'teta Khar'kovskogo meditsinskogo instituta.
(URINARY ORGANS--DISEASES)
(ZOLOCHEV DISTRICT (KHARKOV PROVINE)--FOOD POISONING)

APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"

"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, L.N.

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Akademiya nauk URSR, Kiyev. Instytut elektrozvaryuvannya

Vnedreniye novykh sposobov svarki v promyshlennost'; sbornik statey. vyp. 3. (Introduction of New Welding Methods in Industry; Collection of Articles. v. 3) Kiyev, Gos. izd-vo tekhn. lit-ry UkrSSR, 1960. 207 p. 5,000 copies printed.

Sponsoring Agency: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni akademika Ye. O. Patona Akademii nauk Ukrainskoy SSR.

Ed.: M. Pisarenko; Tech. Ed.: S. Matusevich.

PURPOSE: This collection of articles is intended for personnel in the welding industry.

COVERAGE: The articles deal with the combined experiences of the Institut elektrosvarki imeni Ye. O. Patona (Electric Welding Institute imeni Ye. O. Paton) and several industrial enterprises in solving scientific and engineering problems in welding technology. Problems in the application of new methods of mechanized welding and electroslag welding in industry are discussed. This is the third collection of articles published under the same title. The Foreword was written by B. Ye. Paton, Academician of the Academy of Sciences Ukrainian SSR and Lenin prize winner. There are no references.

TABLE OF CONTENTS:

Lashkevich, R. I. [Candidate of Technical Sciences], S. L. Mandel'berg [Candidate of Technical Sciences, Electric Welding Institute imeni Ye. O. Paton], Z. O. Knyazhinskiy [Candidate of Technical Sciences, Ukrainskiy nauchno-issledovatel'skiy trubnyy institut (Ukrainian Scientific Research Institute for the Pipe Industry)], and S. A. Frikke [Chief Engineer, Chelyabinskiy truboprokatnyy zavod (Chelyabinsk Pipe Mill)]. New Process for Producing Large-Diameter Straight-Weld Pipes for Oil and Gas Lines 140

Zvonkov, M. L. [Engineer], D. M. Rabkin [Candidate of Technical Sciences], I. M. Savich [Engineer, Electric Welding Institute imeni Ye. O. Paton], V. A. Verchenko [Engineer of the Trust "Prodmontazh" (Trust for Installation of Food Industry Establishments)], and I. M. Mirgorodskiy [Formerly Chief Engineer of the "Bol'shevik" Plant]. Experience in the Successful Welding of Aluminum and Its Alloys 154

Rozenberg, O. O. [Engineer], L. N. Kolomiyets [Engineer], Ye. I. Sushchuk-Slyusarenko [Engineer, Electric Welding Institute imeni Ye. O. Paton], I. G. Batrakov [Chief Mechanic, Belgorodskiy tsementnyy zavod (Belgorod Cement Plant)], M. P. Isayev [Chief of the Welding Engineering Department, Krasnoyarskiy zavod "Sibtyazhmash" (Krasnoyarsk Siberian Heavy Machinery Plant)], and V. G. Kotlyarov [Deputy Chief Process Engineer, Syzranskiy zavod "Tyazhmash" (Syzran' Heavy Machinery Plant)]. Electroslag Welding of Large Type 35L Steel Tie-Rings for Cement Kilns 176

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(16)

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, M.

Increasing the capacity of plants. Mias.ind.SSSR 31 no.5:23-25 '60. (MIRA 13:9)

1. Gur'yevskiy sovnarkhoz.
(Gur'ev Province--Packing houses--Equipment and supplies)

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"APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0

KOLOMIYETS, M.F. Cand Geog Sci -- (diss) ~~"The Poltava Region"~~.

? "Poltavskaya Oblast." (Economic- geog ~~characteristics~~ description).

Khar'kov,1958. 15 pp. (Min of Higher Education UkSSR. Khar'kov

Order of Labor Red Banner State Univ im A. M. Gor'kiy.) 150 copies.

(KL, 8-58, 104)



APPROVED FOR RELEASE: 09/18/2001 CIA-RDP86-00513R000823920007-0"