

PLOTNIKOV, A.F.; VAVILOV, V.S.; KOPYLOVSKIY, B.D.

Apparatus for studying the spectra and kinetics of photoconductivity
in semiconductor crystals. Prib. i tekhn. eksp. 7 no.3:183-187
My-Je '62. (MIRA 16:7)

1. Fizicheskiy institut AN SSSR.
(Photoconductivity) (Semiconductors)

VAVILOV, V.S.; GALKIN, G.N.; MALOVETSKAYA, V.M.; PLOTNIKOV, A.F.

Photoionization and thermal ionization energies of deep levels
of radiation defects in silicon. Fiz.tver.tela 4 no.7:1969-
1970 J1 '62. (MIRA 16:6)

1. Fizicheskiy institut imeni P.N.Lebedeva AN SSSR, Moskva.
(Silicon crystals--Defects) (Ionization)

L 15556-63 EWT(1)/EWG(k)/EWT(m)/BDS/EEG(b)-2 AFFTC/ASD/ESD-3
Pz-4 AT/IJP(G) S/0161/63/005/007/1826/1829
ACCESSION NR: AP3003876
AUTHORS: Tkachev, V. D.; Plotnikov, A. F.; Vavilov, V. S. 72
TITLE: Spectra of photoconductivity in n-type silica bombarded with high-speed 67
electrons 27
SOURCE: Fizika tverdogo tela, v. 5, no. 7, 1963, 1826-1829
TOPIC TAGS: photoconductivity, silica, n-type, electron, high-speed electron,
conduction band, valence band, forbidden band, center, defect
ABSTRACT: The photoconductivity of n-type silica was studied by means of the
setup described by A. F. Plotnikov, V. S. Vavilov, and B. D. Kopylovskiy (PTE,
No. 3, 183, 1962). The spectra were investigated with oscillating (modulation
frequency of 9 cycles) and steady excitation. The samples were plates cut from
single crystals and had contacts attached at the ends. The contacts were Pd and
Zn, deposited electrolytically. The bombardment was effected with electrons of
1 Mev. The temperature of the samples during bombardment did not exceed 25-30C,
and measurements were made at a temperature near 100K. From the measurements
of photoconductivity the authors diagrammed the positions of energy levels in the
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ACCESSION NR: AP3003876

forbidden band. This diagram is shown in Fig. 1 (see Enclosure 1). The results, like data on bombardment of p-type silica with electrons and neutrons, attest to a "set" of several centers, the nature of most being as yet unexplained. The "radiation" origin of centers with levels at $E_c - 0.16$, $E_c - 0.40$, $E_v + 0.54$, and $E_v + 0.45$ eV is not questioned. These levels are starred in Fig. 1. It is possible that some of the levels are initially present in the material, not developing anew but merely appearing because of the capture of equilibrium carriers by defects and because of favorable conditions for measuring photoconductivity in bombarded silica at low temperatures. "The authors express their sincere thanks to G. N. Galkin, V. M. Malovetskaya, and V. I. Brovkinaya for valuable advice and critical remarks and to Ye. M. Divil'kovskaya (deceased) for aid in the work." Orig. art. has: 6 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR, Moscow (Physical Institute, Academy of Sciences, SSSR)

SUBMITTED: 30Jan63

DATE ACQ: 15Aug63

ENCL: 01

SUB CODE: PH

NO REF SOV: 005

OTHER: 002

Card 2/7

TKACHEV, V.D.; PLOTNIKOV, A.F.; VAVILOV, V.S.

Photoconductivity spectra of n-type silicon irradiated by fast electrons. Fiz.tver. tela 5 no.7:1826-1829 JI '63. (MIRA 16:9)

1. Fizicheskiy institut imeni P.N.Lebedeva AN SSSR, Moskva.
(Photoconductivity) (Silicon--Spectra)

AKIMCHENKO, I.P.; VAVILOV, V.S.; PLOTNIKOV, A.F.

Spectra and the kinetics of photoconductivity related to simple structural defects in germanium monocrystals. Fiz.tver.tela 5 no.5:1417-1422 My '63. (MIRA 16:6)

1. Fizicheskiy institut imeni P.N.Lebedeva AN SSSR, Moskva.
(Germanium-Spectra) (Crystals-Defects) (Photoconductivity)

TKACHEV, V.D.; PLOTNIKOV, A.F.; VAVILOV, V.S.

Nature of local centers with deep-seated levels in silicon
irradiated by fast electrons. Fiz. tver. tela 5 no.11:3188-3194
N '63. (MIRA 16:12)

1. Fizicheskij institut imeni Lebedeva AN SSSR, Moskva.

L 13030-63 EWT(1)/EWG(k)/EWP(q)/EWT(m)/BDS/EEC(b)-2 AFFTC/

ASD/ESD-3 Pz-4 JD/AT

ACCESSION NR: AP3000524

S/0181/63/005/005/1417/1422

AUTHOR: Akimchenko, I. P.; Vavilov, V. S.; Plotnikov, A. F.

TITLE: Spectra and kinetics of photoconductivity⁷³ associated with simple structural defects⁷² in single crystals of germanium

SOURCE: Fizika tverdogo tela, v. 5¹⁴, no. 5, 1963, 1417-1422

TOPIC TAGS: photoconductivity, capture cross section, vacancy, interstitial, Ge, Au

ABSTRACT: The authors have investigated the photoconductivity associated with deep levels of radiation effects arising during bombardment by electrons (1 mev) of very pure single crystals of Ge and of single crystals alloyed with Au. They conclude that a detected level of E sub V + 0.42 ev, belongs to an interstitial atom. The capture cross section corresponding to relaxation at the latter level was computed to be 3 times 10 sup -17 Sq/cm. From this value the effectiveness of inserting centers and the results fell within the limits of experimental error.

"In conclusion the authors consider it their pleasant duty to express thanks to M. I. Iglitsy*n for discussing the results, and to M. I. Ginzburg and G. P.

Proshko for supplying the single crystals of germanium." Orig. art. has: 10 figures. Association: Inst. of Physics, Academy of Sciences, SSSR

Card 1/2

AKIMCHENKO, I.P.; VAVILOV, V.S.; PLOTNIKOV, A.F.

Some data on radiation defects derived from photoconductivity
spectra of germanium irradiated with fast electrons. Fiz. tver.
tela 6 no.6:1718-1723 Je '64. (MIRA 17:9)

1. Fizicheskiy institut imeni Lebedeva AN SSSR, Moskva.

ACCESSION NR: AP4039659

S/0181/64/006/006/1718/1723

AUTHOR: Akimchenko, I. P.; Vavilov, V. S.; Plotnikov, A. F.

TITLE: Some data on radiation defects obtained through investigations of photoconductivity spectra of germanium irradiated with fast electrons

SOURCE: Fizika tverdogo tela, v. 6, no. 6, 1964, 1718-1723

TOPIC TAGS: radiation defects, fast electron irradiation, p type germanium, n type germanium, germanium, fast electron irradiated germanium, germanium photoconductivity spectrum, irradiated germanium photoconductivity spectrum, forbidden zone

ABSTRACT: The following types of Ge single crystals have been irradiated by fast electrons with energies ~ 1 Mev at room temperature: (a) n-type with initial resistivities ρ of 3 and 56 ohm·cm; (b) dislocationless n-type, $\rho \sim 3$ ohm·cm; (c) p-type with a residual impurity concentration of 10^{11} to 10^{13} at/cm³. The ohmic contacts were realized by the deposition of colloidal graphite. Photoconductivity spectra were measured at ~ 100 K in the 1.7 to 10 μ wavelength range.

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ACCESSION NR: AP4039659

In the irradiated specimens the Fermi level was located 0.10 to 0.17 eV below the bottom of the conduction band. Some of the conclusions drawn from the results of the investigation are: 1) following irradiation with a flux of 6×10^{15} e⁻/cm², the photoconductivity spectra of n-type specimens showed the occurrence of a structure which can be connected with electron transitions from local levels $E_c - 0.33$, $E_c - 0.37$ and $E_c - 0.43$ eV to the conduction band. When the total electron flux is increased to 3×10^{16} e⁻/cm² the specimen acquires characteristics of p-type Ge; 2) spectra of type (b) specimens show that vacancy concentration increases almost proportionally with increased flux and that at a certain value of the electron flux there is an increase (by almost one order of magnitude) in the concentration of centers which yield a constant distribution of photoconductivity signals in the 2.5—1.9 μ wavelength range; 3) a new maximum was detected in the spectra of type (c) specimens which occurred in the presence and disappeared in the absence of bias lighting from the region of natural absorption; 4) at wavelengths up to 5 μ , the spectra of type (c) specimens showed a build-up of signals connected with electron transition to level $E_v + 0.33$ eV in the presence of a Ge filter; when no filter was used a maximum appeared at a wavelength of 3.15 μ ;

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5) in nonirradiated type (c) specimens the disturbance which introduces level $E_v + 0.33$ ev is due to copper atoms, while in the irradiated type (c) specimens it is due to the joint action of copper atoms and vacancies; 6) for the irradiated (c) specimens the hole-capture cross-section of level $E_v + 0.33$ ev is at 100°K 5×10^{-19} cm².

Orig. art. has: 9 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR, Moscow (Physics Institute, AN SSSR)

SUBMITTED: 28Dec63

DATE ACQ: 19Jun64

ENCL: 00

SUB CODE: NP

NO REF SOV: 007

OTHER: 000

Card 3/3

L 29974-65 EWT(l)/EWT(m)/EPF(c)/EPF(n)-2/EEG(t)/T/ENP(t)/ENP(b) Pz-6/Pr-A/Po-4
ACCESSION NR: AP5005291 IJP(c) JD/GG/AT 8/0181/65/007/002/0502/0505

AUTHOR: Vavilov, V. S.; Vintovkin, S. I.; Lyutovich, A. S.; Plotnikov, A. F.; Sokolova, A. A. 57
55
B

TITLE: Radiation structure defects in very pure monocrystals of silicon 14 14 7

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 502-505

TOPIC TAGS: silicon, photoconductivity, defect, radiation effect, electron bombardment

ABSTRACT: The photoconductivity spectrum of very pure monocrystals of p-type silicon was investigated prior to and after irradiation with 1-Mev electrons. The samples were prepared by crucible-free zone melting of very pure silicon. The resistivity of the samples was 20 ohm·cm, the lifetime of the minority carriers ~ 5·10¹¹ msec, and the hole mobility 200-350 cm²/v·sec. The crystals had ~ 5·10¹¹ donors/cm³ and 5·10¹² acceptors/cm³. The 12 x 2.5 x 0.4 mm samples were irradiated at room temperature and at the temperature of liquid nitrogen with a flux of 5·10¹⁵ electrons/cm². The photoconductivity of samples with a resistivity of 1030 ohm·cm containing ~ 3·10¹⁶ atoms of oxygen per cm³ was also investigated. The experiments showed that the main impurity present in the crystal samples was

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ACCESSION NR: AP5005291

boron, the concentration of which was $5-10 \cdot 10^{12}$ atoms/cm³. Electron bombardment at 80K resulted in the appearance of a continuous distribution of allowed states in the forbidden gap probably associated with point radiation defects. After heating of the samples to room temperature, only one discrete level, the $E_v + 0.45$ eV level, was found in the forbidden gap when the concentration of oxygen atoms was small; however, three levels ($E_c - 0.16$, $E_v + 0.30$, and $E_v + 0.45$ eV) were found in samples with a large concentration of oxygen atoms. The density of other electrically active impurities was lower by 1.5-2 orders of magnitude. Electron irradiation at room temperature did not change the resistivity of the samples. Bombardment at 80K increased the resistivity of samples quite sharply, although it then leveled off to a constant value. Resistivity decreased and returned practically to its initial value after irradiation was ceased. Considerable fluctuation of photoconductivity (noise) was observed in extremely pure crystals irradiated at 80K. Bombardment of the not very pure samples gradually decreased the lifetime of charge carriers; however, room-temperature irradiation of very pure crystals with fluxes up to $5 \cdot 10^{16}$ electrons/cm² hardly affected the lifetimes. Bombardment of very pure crystals at 80K decreased the lifetimes by 3-4 orders of magnitude. Initial lifetimes were restored almost completely after irradiation was stopped. Orig. art. has: 2 figures. [CS]

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L 29974-65

ACCESSION NR: AP5005291

ASSOCIATION: Fizicheskiy institut imeni Lebedev AN SSSR, Moscow (Physics Institute,
AN SSSR); Fiziko-tekhnicheskiy institut AN UzSSR, Tashkent (Physicotechnical In-
stitute, AN UzSSR)

SUBMITTED: 29Jul64

ENCL: 00

SUB CODE: SS, NP

NO REF SOV: 007

OTHER: 000

ATD PRESS: 3196

Card 3/3

KRIMAN, I.; PLOTNIKOV, A., inzh.

Textbook on steam boilers. Mor. flot 25 no.5:46 My '65. (MIRA 18:5)

1. Glavnyy inzh. Kaspiyskogo parokhodstva (for Kriman).

VAVILOV, V.S.; VINTOVKIN, S.I.; LYUTOVICH, A.S.; PLOVINIKOV, A.F.; D. KOJAWA, A.A.

Radiation defects in the structure of highly pure silicon single crystals. Fiz. tver. tela 7 no.2:502-505 F '65.

(MTRA 18:6)

1. Fizicheskiy institut imeni Lebedeva AN SSSR, Moskva i Fiziko-
tekhnicheskiy institut AN Uzbekskoy SSR, Tashkent.

L 01051-67 EWT(l)/EWT(m)/EWP(t)/ETI IJP(c) JD/GG

ACC NR: AP6030957 SOURCE CODE: UR/0181/66/008/009/2598/2604

90
23
B

AUTHOR: Vavilov, V. S. ; Plotnikov, A. F. ; Sokolova, A. A.

ORG: Physics Institute im. P. N. Lebedev, AN SSSR, Moscow (Fizicheskiy institut AN SSSR)

TITLE: Oscillating photoconductivity of ²¹cadmium telluride and its connection with exciton absorption _{27 27}

SOURCE: Fizika tverdogo tela, v. 8, no. 9, 1966, 2598-2604

TOPIC TAGS: photoconductivity, cadmium telluride, exciton, exciton absorption, absorption spectrum, absorption coefficient, heat of dissociation, impurity center

ABSTRACT: The spectra of photoconductivity, optical absorption, and reflection of CdTe crystals near the basic absorption band have been obtained at 80 and 15K. A thin structure of photoconductivity spectra is detected. It is established that the dependence of the absorption coefficient on photon energy is nonmonotonic. The peak reflection in the photon energy region close to 1.58 ev is noted at 80K. The absorption and reflection observed are interpreted to be of the exciton type. The structure of photoconductivity spectra is related to the development of excitons and

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L 01051-67

ACC NR: AP6030957

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their heat of dissociation with the participation of impurity centers. The authors thank B. M. Vul, L. V. Keldysh, N. A. Penin, and E. L. Nolle for their valuable remarks and criticism of the work, S. A. Medvedev and S. N. Maksimovskiy for furnishing the samples, and N. N. Borzunov for his considerable assistance in preparing them for the experiments. Orig. art. has: 4 figures. [Based on authors' abstract] [NT]

SUB CODE: 20/ SUBM DATE: 14Jan66/ ORIG REF: 003/ OTH REF: 014/

awm

Card 2/2

L 23310-66 EWT(m)/EWP(t) IJP(c) JD
ACC NR: AP6012480 SOURCE CODE: UR/0181/66/008/004/1168/1175
AUTHOR: Akimchenko, I. P.; Ginzburg, M. I.; Plotnikov, A. F.
ORG: Physics Institute im. P. N. Lebedev AN SSSR, Moscow (Fizicheskiy institut AN SSSR)
TITLE: Spectra and kinetics of photoconductivity of p- and n-type germanium crystals irradiated with fast electrons at 100 and 5.2K
SOURCE: Fizika tverdogo tela, v. 8, no. 4, 1966, 1168-1175
TOPIC TAGS: photoconductivity, irradiation effect, irradiation damage
ABSTRACT: An investigation was made of the photoconductivity spectra of p- and n-type Ge crystals with a concentration of residual impurities not higher than $8 \times 10^{12} \text{ cm}^{-3}$, irradiated with fast electrons at 100K and 5.2K. The thickness of the specimens, 0.4 mm, permitted homogeneous distribution of defects at electron energies of 1 Mev. The investigations at 5.2K were carried out in a helium cryostat. The irradiation of crystals and the investigation of photoconductivity spectra were accomplished without exposing the crystals to air after irradiation. Photoconductivity spectra were taken in the wave range from 1.5 to 15 μ on d-c and a-c current. N-type Ge with intrinsic conductivity was transformed into p-type following irradiation with an electron flux of $\sim 10^{15} \text{ el/cm}^2$ and higher at 100K. Defects of the same nature were introduced into transformed n- as well as p-type material, causing
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L 23310-66

ACC NR: AP6012480

$E_v + 0.36$, $E_v + 0.42$, and $E_v + 0.62$ ev levels to appear. Irradiation at 5.2K introduced defects into n- and p-type crystals, leading to the appearance of $E_v + 0.22$, $E_v + 0.36$, $E_v + 0.42$, and $E_v + 0.62$ ev levels. The cross sections of hole capture for $E_v + 0.22$, $E_v + 0.36$, and $E_v + 0.42$ levels were 3×10^{-14} , 2.5×10^{-15} , and 8×10^{-16} cm², respectively. The comparison of δ_p for the $E_v + 0.36$ and $E_v + 0.42$ ev levels obtained at 100 and 5.2K shows that when temperature decreases δ_p increases. The author thanks V. S. Vavilov for the attention given the work and for discussing the results. Orig. art. has: 7 figures. [JA]

SUB CODE: 20/ SUBM DATE: 09Sep65/ ORIG REF: 005/ OTH REF: 004/ ATD PRESS: 4236

Card 2/2 DR

ACC NR: AP6036995 (A,N) SOURCE CODE: UR/0181/66/008/011/3390/3391

AUTHOR: Vavilov, V. S.; Plotnikov, A. F.; Selezneva, M. A. Sokolova, A. A.

ORG: Physics Institute im. P. N. Lebedev, AN SSSR, Moscow
(Fizicheskiy institut AN SSSR)

TITLE: Dependence of charge carrier mobility on temperature in GaAs crystals irradiated with fast electrons

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3390-3391

TOPIC TAGS: carrier scattering, current carrier, irradiation, ionizing irradiation, irradiation effect

ABSTRACT: An investigation was made of the effect of radiation defects in the crystal structure of GaAs on the scattering character of the charge carriers at different temperatures. Four pure specimens, in which the mobility of charge carriers at temperatures from 100 to 300K was due mainly to the scattering on optical lattice vibrations, were irradiated with a gradually increasing flux of electrons with an energy of about 1 Mev at room temperature. In pure GaAs crystals at temperatures higher than 300K, the mobility is due primarily to the scattering on polar optical lattice vibrations. At temperatures lower than 100K, scattering on ionized impurities prevails. In the temperature range from 100 to

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ACC NR: AP6036995

300K, both types of scattering take place, although with an increase in impurity concentration the scattering on ionized impurities becomes more substantial. In irradiated crystals the mobility was due to scattering of charge carriers on simple point defects. The calculated number of displaced atoms due to irradiation coincided with the number of scattering centers determined experimentally. This proves that structure defects affecting the scattering character in GaAs crystals irradiated with electrons are really Frenkel defects. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 20May66/ OTH REF: 007/ ATD: PRESS: 5107

Card 2/2

ACC NR: AP6036996 (A,N) SOURCE CODE: UR/0181/66/008/011/3392/3393

AUTHOR: Plotnikov, A. F.; Selezneva, M. A.

ORG: Physics Institute im. P. N. Lebedev, AN SSSR, Moscow (Fizicheskiy institut AN SSSR)

TITLE: Influence of fast-electron bombardment on the spectra of photoconductivity of GaAs crystals grown in an oxygen atmosphere

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3392-3393

TOPIC TAGS: electron bombardment, photoconductivity, gallium arsenide, crystal growing, impurity center

ABSTRACT: The authors investigated the influence of bombardment with 1-Mev electrons on the photoconductivity of n-type GaAs crystals with carrier density $n = 10^{18} \text{ cm}^{-3}$ and mobility $3000 \text{ cm}^2/\text{v-sec}$. The photoconductivity of an n-type sample grown under the same conditions but not specially doped with oxygen was also investigated. The photoconductivity was investigated by the method described by the authors earlier (PTE no. 3, 183, 1962). The samples were irradiated at room temperature and the measurements were made in a cryostat at liquid-nitrogen temperature. Bombardment with a flux of 10^{17} e/cm^2 produced in the undoped crystals impurity centers with levels $E_v + 0.59$ and $E_v + 0.34$ ev. In the case of samples grown in an oxygen atmosphere, additional centers with level $E_c - 0.65$ ev were observed. These centers were also observed in some samples before irradiation. In both cases, the concentration of the various centers increased with electron bombardment. It is proposed that this

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ACC NR: AP6036996

is due to the fact that the GaAs produced in an oxygen atmosphere has more oxygen in the crystal lattice in an electrically inactive state, and that electron bombardment transfers these oxygen atoms into a state connected with the level $E_c - 0.65$ ev. This is confirmed by other published results. The authors thank G. M. Voronkova for supplying the GaAs single crystals. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 20May66/ ORIG REF: 001/ OTH REF: 001

Card- 2/2

PLOTNIKOV, A.I.

Increasing the precision of the check of automobile wheel alignment.
Trudy NPI 131:41-47 '62. (MIRA 16:3)
(Automobiles—Wheels)

ASTAF'YEV, N.V.; PLOTNIEV, A.A.

Gas manifestations on the bottom of Lake Issyk. Izv. AN Kazakh.
SSR. Ser.geol. 22 no.2:50-56. Mar-Apr '65. (MIRA 18:5)

1. Yuzhno-Kazakhstanskaya geologicheskoye upravleniye, Alma-Ata.

LADYZHENSKIY, N.R. [Ladyzhens'kiy, M.R.]; PLOTNIKOV, A.M.; GORDIYEVICH, V.A.
[Hordiyevich, V.A.]

Sulfur in the Dzhan-Tepe mud volcano (Kerch Peninsula). Dop. AN
URSR no.5:640-643 '65. (MIRA 18:5)

PLOTNIKOV, Aleksandr Mikhaylovich; YAKOVLEV, Igor' Vasil'yevich

[The SGS-3 hydraulic jack] Gidravlicheskaia stoika SGS-3.
Moskva, Nedra, 1965. 74 p. (MIRA 18:4)

PLOTNIKOV, Aleksey Mikhaylovich; SLAVOROSOV, A.Kh., red.izd-va;
PROZOROVSKAYA, V.L., tekhn. red.

[Development miner] Prokhodchik podgotovitel'nykh vyrabotok.
3., perer. i dop. izd. Moskva, Gosgortekhzdat, 1963. 254 p.
(MIRA 16:9)

(Mining engineering)

DUBETS, Stepan Grigor'yevich; PLOTNIKOV, Aleksey Mikhaylovich;
NAUMKIN, I.F., nauchn. red.; BYKOVA, I.V., red.

[Industrial training of miners of horizontal and inclined
workings; the coal industry] Proizvodstvennoe obuchenie pro-
khodchikov gorizonta'nykh i naklonykh vyrabotok; ugol'naia
promyshlennost'. Moskva, Proftekhizdat, 1963. 102 p.

(MIRA 17:4)

PLOTNIKOV, Aleksay Mikhailovich; SAVITSKIY, V.T., otv.red.;
SLOVOROSOV, A.Kh., red.izd-va; ALADOVA, Ye.I., tekhn.red.

[Driftman] Prokhodchik podgotovitel'nykh vyrabotok. Moskva,
Ugletekhizdat, 1958. 248 p. (MIRA 11:12)
(Coal mines and mining)

IVANOV, K.M.; PLOTNIKOV, A.M.

Device for bonding standard specimens. Plast.massy no.6:73-74
'60. (MIRA 13:11)

(Plastics)

(Adhesion)

PIOTNIKOV, A.M., otvetstvennyy za vypusk

[Curriculum and program of building and trade schools for training oil field workers] Uchebnyi plan i programmy dlia podgotovki v remeslennykh uchilishchakh operatorov po dobyche nefi. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1957. 43 p.

(MIRA 11:4)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye trudovykh rezervov. Uchebno-metodicheskoye upravleniye.

(Petroleum engineering--Study and teaching)

LOTYSHEV, Ivan Pavlovich; PLOTNIKOV, A.M., red.; KHLOBORDOV, V.I.,
tekhn.red.

[The azure shore of the Caucasus] Lazurnyi bereg Kavkaza.
Krasnodar, Krasnodarskoe knizhnoe izd-vo, 1959. 243 p.

(MIRA 14:1)

(Black Sea region--Guidebooks)

SHEVYAKOV, Lev Dmitriyevich, 1889- , akademik; BUCHNEV, V.K., redaktor;
PLOTNIKOV, A.M., redaktor.

[Mining mineral deposits] Razrabotka mestorozhdenii poleznykh
iskopaemykh. Izd. 2., ispr.i dop. Moskva, Ugletekhizdat, 1953.
756 p. (MLRA 7:3)

(Mining engineering)

PLOTNIKOV, A. M.

7609

PLOTNIKOV, A. M. Oborudvaniye uchebnogo kabineta gornogo dela v gornopromyshlennykh shkolakh. (Rukovodstvo) Sost. A. M. Plotnikov, M., Trudrezervizdat, 1955, 43 s. s ill. 22 sm. (Glav. upr. trud. rezervov pri Sovete Ministrov SSSR. Ucheb - metod upr.) 1.000 ekz. Bespl - Na. obl. sost. ne ukazan,
(55-3595) 371.65:622 + 331.86: 371.6

SO: Knizhnaya LeTopis, Vol. 7, 1955

PLOTNIKOV, A. M.

PLOTNIKOV, A.M.; POKROVSKIY, N.M., redakter; SLOVOROSOV, A.Kh., redakter;
~~ALADOVA, Ye.I.,~~ tekhnicheskii redakter.

[Maker of preparatory excavations] Prukhedchik podgetovitel'nykh
vyrabotek. Moskva, Ugletekhisdat, 1954. 306 p. (MLRA 7:8)
(Tunneling)

L 42123-66 EWT(1)/EJT(m)/T/EWP(t)/ETI IJP(c) JD/GG/AT

ACC NR: AP6024453

SOURCE CODE: UR/0181/66/008/007/1981/1984

AUTHOR: Akimchenko, I.P.; Vavilov, V.S.; Plotnikov, A.P.

ORG: Physics Institute im. P. N. Lebedev, AN SSSR, Moscow (Fizicheskiy institut AN SSSR)

TITLE: Photoconductivity spectra of oxygen-alloyed germanium crystals irradiated with fast electrons

SOURCE: Fizika tverdogo tela, v. 8, no. 7, 1966, 1981-1984

TOPIC TAGS: photoconductivity, spectrum, germanium single crystal, ~~fast~~ electron, ~~electron~~ irradiation, crystal impurity, oxygen ~~impurity~~

ABSTRACT: In addition to electrically active impurities, germanium crystals also contain neutral impurities, specifically oxygen, the concentration of which in normal crystals may reach 10^{16}cm^{-3} . It is not excluded that associations of point-contact defects with oxygen atoms may appear in Ge crystals upon irradiation. The authors were unable to determine the oxygen concentration in normal crystals in an absorption band at a wavelength of 11.6μ . At their request, the Semiconductor Department of MGU (Kafedra poluprovodnikov MGU) grew an oxygen-alloyed germanium crystal. The crystal was subjected to dilation in an oxygen atmosphere with noncontrolled pressure. The single crystal obtained has n-type electroconductivity and a resistivity from 2 to 10 $\text{ohm}\cdot\text{cm}$. On the basis of the investigations performed, the authors conclude that the

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ACC NR: AP6024453

level $E_c - 0.09$ ev belongs to the association of the oxygen atom with a point-contact defect, the association appears only as a result of irradiation at room temperature, and it is analogous to the A-center in silicon. Germanium of the n-type, alloyed with oxygen to a concentration of $5 \cdot 10^{17} \text{ cm}^{-3}$, proved to be more radiation stable than n-type material with the same resistivity, but with a considerably lower oxygen concentration. Specimens of n-type Ge with an oxygen concentration of $\sim 5 \cdot 10^{17} \text{ cm}^{-3}$ do not change their type of conductivity upon irradiation by a flux up to $6 \cdot 10^{18} \text{ cm}^{-2}$, and the lifetime starts to decrease only after irradiation with a flux on the order of 10^{18} cm^{-2} . The authors express their deep gratitude to M. D. Tyapkina for providing the oxygen-alloyed crystal. Orig. art. has: 4 figures. [26]

SUB CODE: 20/ SUBM DATE: 02Aug65/ ORIG REF: 002/ OTH REF: 003/ ATD PRESS: 5063

Card 2/2

PLOTNIKOV, A.S.

Model of the motion of an artificial satellite. Fiz. v
shkole 23 no.5:69-70 S-0 '63. (MIRA 17:1)

1. Pedagogicheskiy institut, g. Shuya Ivanovskoy oblasti.

ПЛОТНИКОВ, А. В.

АБСАТЫН, Г. М.; ПЛОТНИКОВ, А. В.; УБРАЙ, А. М.

Economic regions of northern Kazakhstan. Vest. AN Kazakh. SSR 13
no. 3:68-78 Mr '57. (MIRA 1957)

(Kazakhstan--Geography, Economic)

PLOTNIKOV, A. V.

Construction industry of Kazakhstan in the seven-year plan,
1959-1965. Izv. AN Kazakh. SSR. Ser. ekon., filos. i prava no. 2:
14-21 '59. (MIRA 13:4)
(Kazakhstan--Construction industry)

11207243377
ALEKSEYEV, G.M.; PLOTNIKOV, A.V.; CHUGAY, A.M.

Economic regions of southern Kazakhstan, Vest. AN Kazakh. SSR 13
no.4:64-72 Ap '57. (MIRA 10:6)
(Kazakhstan--Geography, Economic)

PLOETNIKOV, A.Ya.; GNEZDOV, V.I.; LABUSOVA, A.I.; BOGAYEVSKAYA, R.P.

Isolation of tall oil by the separation method. *Gidroliz. i lesokhim.*
prom. 16 no.1:21-23 '63. (MIRA 16:2)

1. Tsentral'nyy nauchno-issledovatel'skiy i proyektnyy institut lesokhimicheskoy promyshlennosti (for Plotnikov, Gnezdov, Labusova).
2. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut Khimicheskogo mashinostroyeniya (for Bogayevskaya).
(Tall oil)

PLOTNIKOV, A. YA.

M. B. WEINMAN, DAN 64, 365-8, 1949

PLOTNIKOV, A.Ya.; GNEZDOV, V.I.; ZINOV'YEVA, R.V.

Using the flotation method for the recovery of tall oil. *Gidroliz.*
i *lesokhim.prom.* 15 no.1:7-9 '62. (MIRA 18:3)

1. Tsentral'nyy nauchno-issledovatel'skiy lesokhimicheskiy institut.

PLOTNIKOV, A.Ya.; BOGDANOVA, Ye.V.

Production and use of hydroxyethylated products of tall oil for
the flotation of apatite-nepheline ores. *Gidroliz. i lesokhim. prom.*
17 no.5:12-13 '64. (MIRA 17:10)

1. Tsentral'nyy nauchno-issledovatel'skiy lesokhimicheskiy institut.

KUZOVATOVA, M.A.; PLOTNIKOV, A.Ya.

Production of phytosterol from willow pitch. *Gidroliz.i*
lesokhim.prom. 15 no.6:10-11 '62. (MIRA 15:9)

1. Tsentral'nyy nauchno-issledovatel'skiy i proyektnyy institut
lesokhimicheskoy promyshlennosti.
(Sterol)

GURICH, N.A.; LISOV, V.I.; ~~PLOTNIKOV, A.Ya.~~; KOMSHILOV, N.F.;
VOROB'YEVA, Ye.Ya.; BALETOV, A.N.; PETRONIO, V.K.

Butts of pine logs is a valuable raw material. Bum. prom.
36 no.10:16 0 '61. (MIRA 15:1)

1. Tsentral'nyy nauchno-issledovatel'skiy lesokhimicheskiy
institut (for Gurich, Lisov, Plotnikov). 2. Karel'skiy filial
AN SSSR (for Komshilov). 3. Segezhskiy kombinat (for Vorob'yeva,
Baletov, Petronio).

(Pine)
(Gums and resins)

PLOTNIKOV, A. Ye., Engineer

"Analysis of the Processes in Altitude Installations for Testing
Aviation Engines." Sub 19 Jun 47, Central Sci Res Inst of Aircraft Engine
Building imeni P. I. Baranov

Dissertations presented for degrees in science and engineering in
Moscow in 1947.

SO: Sum.No. 457, 18 Apr 55

PIOTNEKOV, A. Ye., Eng. Cand. Tech. Sci.

Dissertation: "Analysis of the Processes in Altitude Installations for Testing Aviation Engines." Central Sci Res Inst of Aircraft Engine Building inst P. I. Baranov, 19 Jun 47.

SO: Vechernyaya Moskva, Jun, 1947 (Project #17836)

PLOTNIKOV, A.Ye., kand.tekhn.nauk; SAZONKIN, V.V., inzh.

Operational efficiency of the turbine of an air refrigerating plant.
Khol. tekhn. 38 no.4:14-18 J1-Ag '61. (MIRA 15:1)
(Turbines) (Refrigeration and refrigerating machinery)

PLOTNIKOV, A.Ye., aspirant

Plastics in the manufacture of sewing machines. Nauch. trudy
MTILP no.24:194-197 '62. (MIRA 16:7)

1. Kafedra mashin i apparatov legkoy promyshlennosti Moskovskogo
tehnologicheskogo instituta legkoy promyshlennosti.
(Plastics) (Sewing machines)

DAMASKIN, B.I. (Moskva); PLOTNIKOV, A.Ye. (Moskva); LEVIN, V.I. (Moskva)

Torsional vibrations of the main shaft of the 22-A Class PMZ sewing machine with simplified needle and thread-pulling mechanisms. Shvein. prom. no.4:16-18 J1-Ag '62. (MIRA 16:6)

(Sewing machines—Vibration)

PLOTNIKOV, A.Ye., kand.tekhn.nauk

Design layout of air refrigerating machines. Khol.tekh. 39 no.4:27-
33 J1-Ag '62. (MIRA 17:2)

PLOTNIKOV, A.Ye. (Podol'sk)

Use of plastics in the manufacture of sewing machine parts. Shvein.
prom. no.5:24-26 S-0 '63. (MIRA 16:12)

PLOTNIKOV, A.Ye.

Using plastics in the manufacture of sewing machines. Biul.tekh.-
ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform 17 no.11:64-
66 N '64. (MIRA 18:3)

PLOTNIKOV, A. Ye.

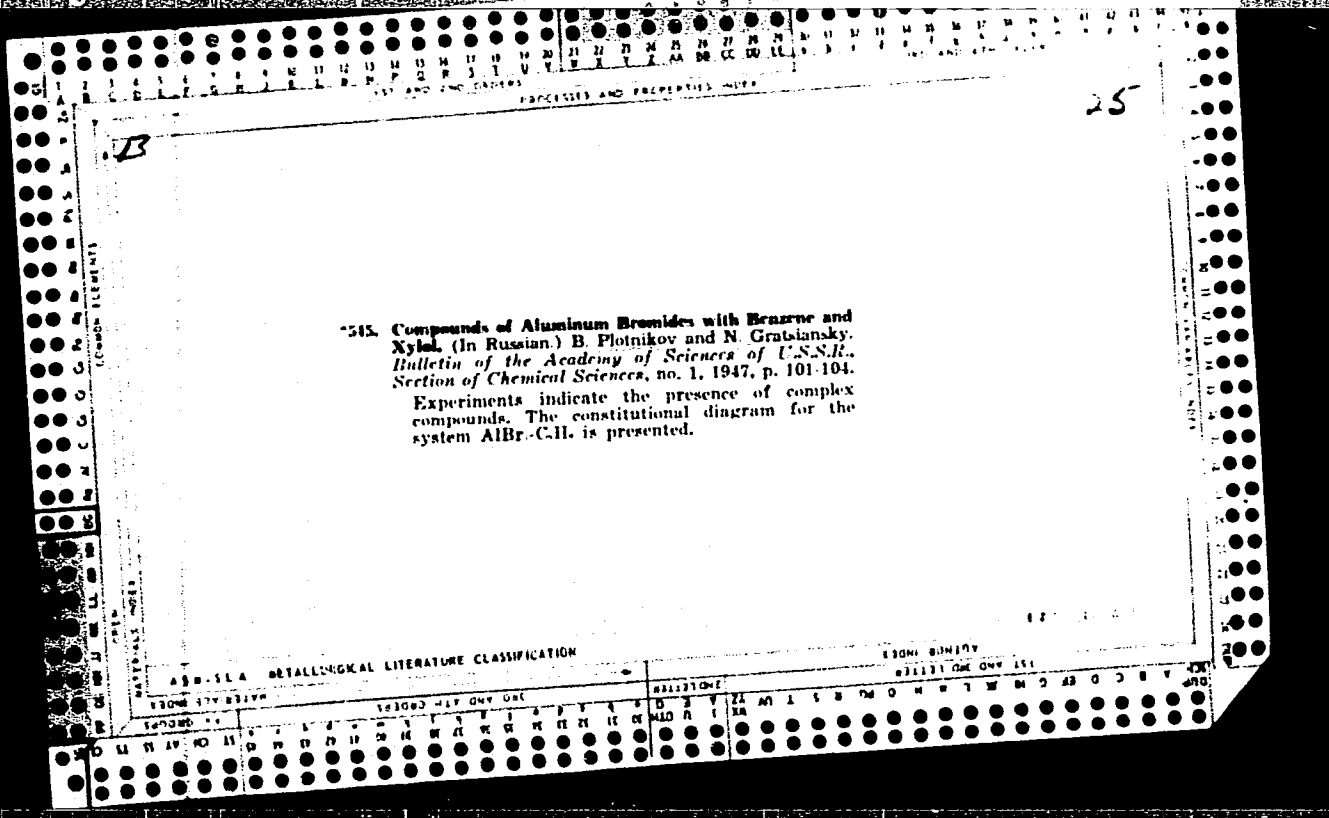
Molds for plastic articles. Biul. tekhn.-ekon. inform. Gos.
nauch.-issl. inst. nauch. i tekhn. inform. 18 no. 12:16-18
D '65. (MIRA 19:1)

PLOTNIKOV, A.Ye.

Plastics production in Japan. Plast. massy no.1:65 '65.
(MIRA 18:4)

1. PLOTNIKOV, A. Z.
2. USSR (600)
4. Oak
7. Some observations of planting acorns in clumps. Les 1 step' 5 No. 3, 1953.

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



BOROVKOV, L.; PLOTNIKOV, B.

Use keyless couplings for the propeller shafts of rivercraft.
Rech. transp. 24 no. 10:36-37 '65. (MIRA 18:12)

1. Glavnyy konstruktor Gor'kovskogo tsentral'nogo konstruktorskogo byuro Ministerstva rechnogo flota SSSR (for Borovkov).
2. Starshiy inzhener Gor'kovskogo tsentral'nogo konstruktorskogo byuro Ministerstva rechnogo flota SSSR (for Plotnikov).

PLOTNIKOV B. B.

LEYBMAN, M.D., inzh.; PLOTNIKOV, B.B., inzh. (Yaroslavl')

Repairing bridges and culverts. Put' i put. khoz. no. 4:20-21 Ap '58.
(MIRA 11:4)

(Railroad bridges--Maintenance and repair)
(Culverts--Maintenance and repair)

PLOTNIKOV, B.B.

LEYBMAN, M.D., inzhener; PLOTNIKOV, B.B., inzhener; USPENSKIY, V.N., inzhener.

Bridge beams of composite cross section. Put' 1 put.khoz.
no.6:35 Je '57. (MLRA 10:7)

(Girders)

VASIL'YEV, B.D., PLOINIKOV, B.V.

Seminar for studying gold-ore deposits. Geol. i geofiz. no. 7:720
165. (MIRA 18:9)

RAMKOV, F.; PLOTNIKOV, D.; LOGUNOV, N.; BYRDINA, A., red.; FEDOTOVA, A.,
tekhn.red.

[Hunting, fur farming, and dog breeding] Okhota, zverovodstvo i
sobakovodstvo. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1958. 91 p.
(Fur farming) (Dogs) (Hunting)

PLOTNIKOV, D.

There where taiga forests once rustled. Sov.sbakht. 10 no.8:16
Ag '61. (MIRA 14:8)
(Kuznetsk Basin--Coal mines and mining)

RAMKOV, F.; PLOTNIKOV, D., starshiy ekskursovod.

"Hunting and fur farming" pavilion. Nauka i pered. op. v sel'khoz.
8 no.8:30-33. Ag '58. (MIRA 11:10)

1. Direktor pavil'ona "Okhota i zverovodstvo," Vsesoyuznaya sel'sko-
khozyaystvennaya vystavka (for Plotnikov). 2. Pavil'on "Okhota i
zverovodstvo," Vsesoyuznaya sel'skokhozyaystvennaya vystavka (for
Plotnikov).

(Moscow--Fur farming--Exhibitions)

PLOTNIKOV, D., biolog-okhotoved

Hunting with a camera. Sov. foto 18 no. 7:50 J1 '58. (MIRA 11:8)

1. Starshiy ekskursovod pavil'ona "Okhota i sverovedstvo" Vsesoyuznoy sel'skokhozyaystvennoy vystavki.
(Mature photography)

RODOV, G.S., kand.tekhn.nauk; PILIPENKO, V.K., inzh.; SHIL'NIKOVSKIY, N.A.,
inzh.; PLOTNIKOV, F.A., inzh.

Improving the technology of manufacturing prestressed reinforced
beams on the TsKB extended stand. Trudy Zap.-Sib.fil.ASiA
no.3:120-131 '60. (MIRA 15:2)

(Girders)

PLOTNIKOV, G., svinar'-mekhanizator, delegat XII s"yezda professional'nykh
soyuzov

School on a farm. Sov. profsoiuzy 19 no.13:14-15 J1 '63.
(MIRA 16:9)

1. Sovkhoz "Proletarskaya diktatura", Rostovskaya obl.
(Rostov Province--Agricultural workers--Education and training)
(Swine--Feeding and feeds)

PLOTNIKOV, G., mekhanizator-svinar'

I cultivate corn and fatten pigs. Sel'.mekh. no.3:12-14 '62.
(MIRA 15:3)

1. Myasnikovskiy rayon, Rostovskaya oblast'.
(Swine) (Corn (Maize))

VERKHOVSKIY, A.V., prof.; GLYAVIN, Yu.V., dots.; LUPANOVA, O.K., dots.; MOKEYEV, I.I., dots.; USPENSKAYA, A.N., dots.; PONOMAREV, M.G., dots.; CHARYSHNIKOV, K.A., st. prepod.; ARANOVICH, V.M., assistant; PLOTNIKOV, G.I., assistant; PELEVINA, T.I., red.

[Handbook for the solution of problems on the strength of materials] Posobie k resheniiu zadach po soprotivleniiu materialov. Volgo-Viatskoe knizhnoe izd-vo, 1965. 319 p.
(MIRA 19:1)

1. Gorki. Politekhnicheskiy institut. 2. Kafedra "Soprotivleniye materialov" Gor'kovskogo politekhnicheskogo instituta (for all except Pelevina).

TANANYKIN, N.I.; PLOTNIKOV, G.S.

Problem of urethrovenous reflux. Urologia 25 no.2:34-39 Mr-Ap
'60. (MIRA 13:12)
(CONTRAST MEDIA) (GENITOURINARY SYSTEM--RADIOGRAPHY)

REZNIKOV, V.M.; PLOTNIKOV, G.S.; KHOL'KIN, Yu.I.

Balance sheet of turpentine in furfurole production. Trudy
Sib.tekh.inst. no.23:74-75 '59. (MIRA 14:4)
(Furaldehyde) (Turpentine)

RESNIKOV, V.M.; KHOL'KIN, Yu.I.; PLOTNIKOV, G.S.

Analysis of the products and by-products of the furfurole
manufacture at hydrolysis alcohol plants. Trudy Sib.tekh.
inst. no.23:33-37 '59. (MIRA 14:4)
(Furaldehyde) (Hydrolysis)(Wood--Chemistry)

POPOVICH, A. (st.Kizner, Udmurtskaya ASSR); PLOTNIKOV, I.

Resolutions of the November Plenum of the Central Committee of the CPSU inspire new labor victories; communist labor at grain receiving enterprises. Muk.-elev.prom. 29 no.1:3-7 Ja '63.

(MIRA 16:4)

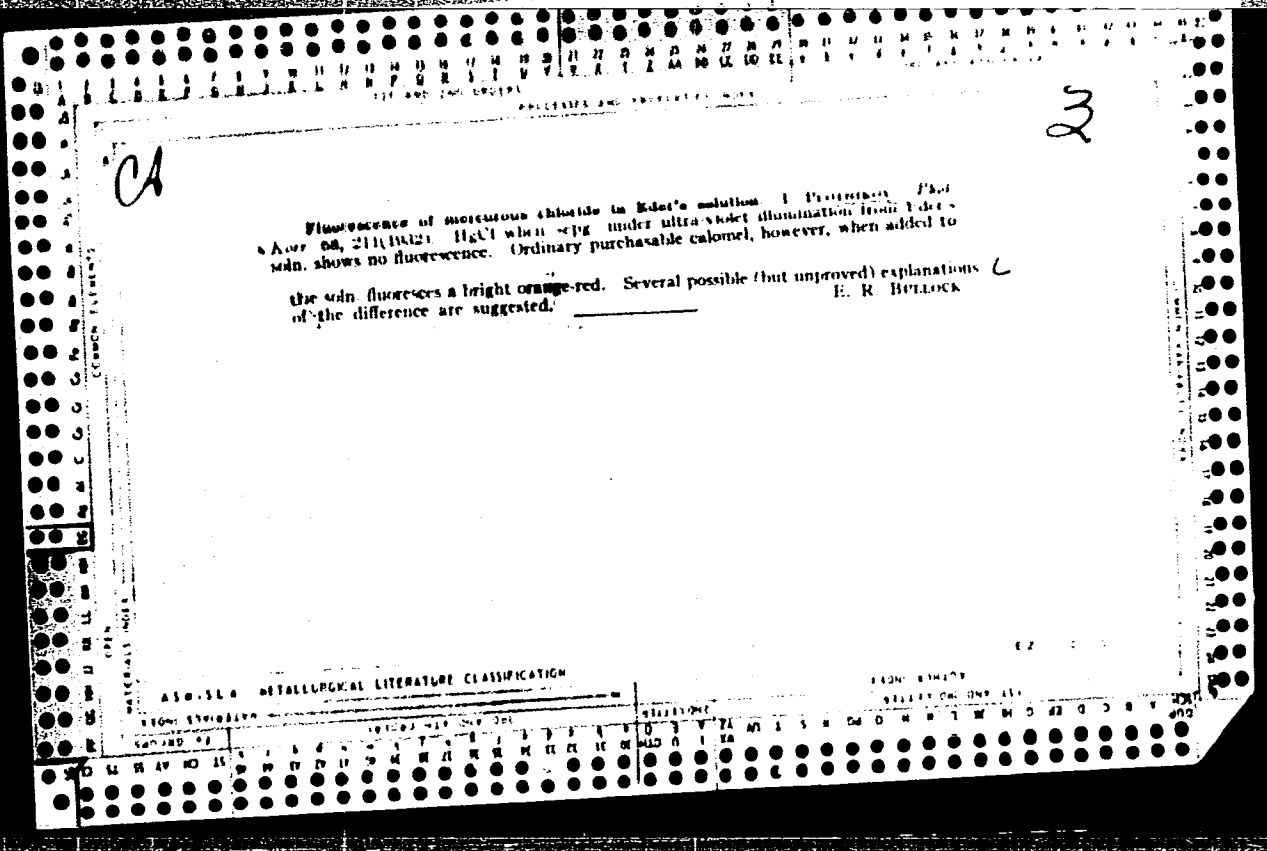
1. Vostochno-Kazakhstanskoye upravleniye khleboproduktov (for Plotnikov).

(Grain elevators)

PLOTNIKOV, I.

Planning the Rusa agricultural region in Moscow Province.
Sel'.stroj. 15 no.6:22 Je '60. (MIRA 13:8)

1. Glavnyy inshener masterskoy proyektirovaniya sel'skogo
stroitel'stva instituta "Mosoblproyekt."
(Rusa District--Regional planning)



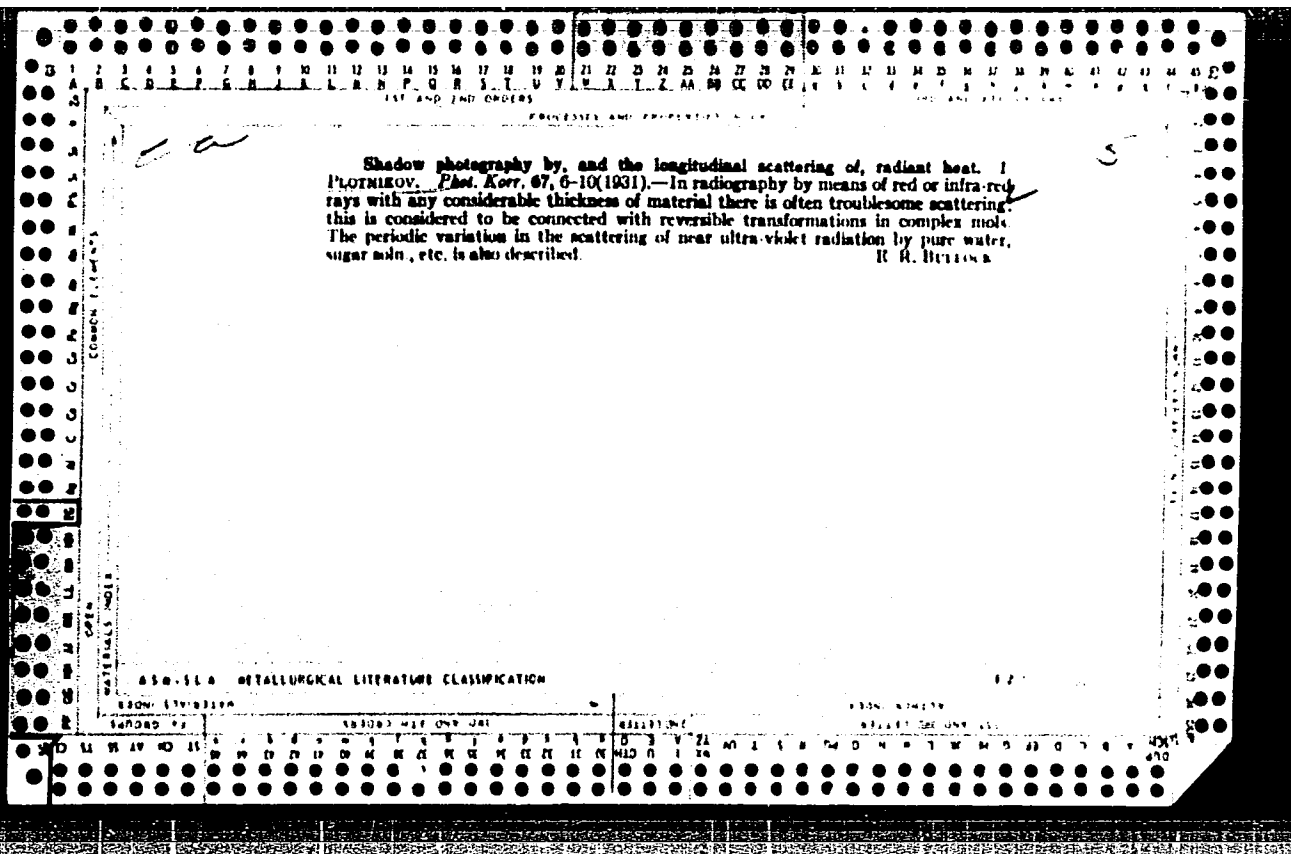
29

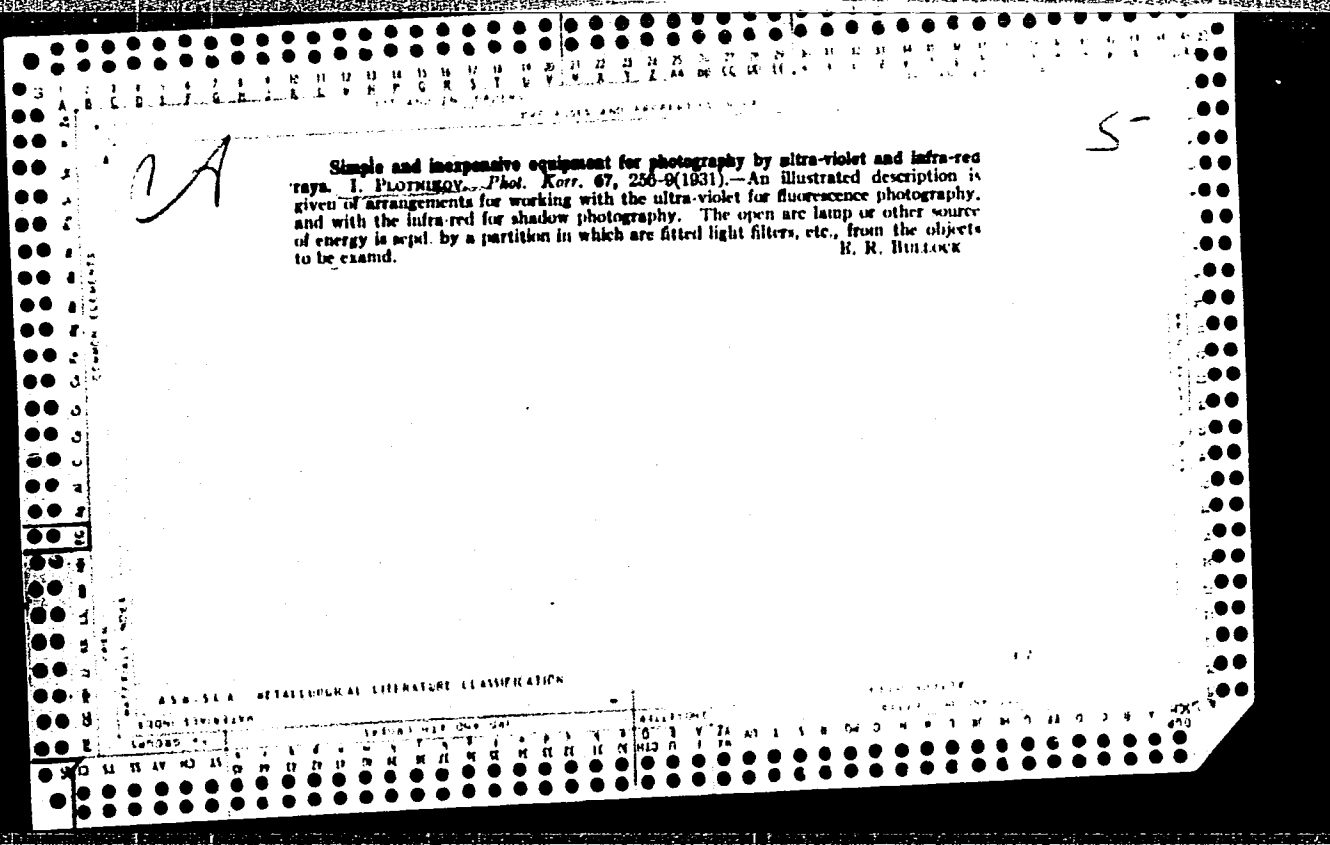
CA

Substituting glued fabrics for saddle leather. I. Plotnikov and A. Khomutov. *Kozhevno-Obuvnaya Prom. S. S. R.* 13, 217-21(1934).—Among a great variety of compds. such as metal naphthates, mixed animal and vegetable glues, nitro solns., etc., tested for the purpose of substituting fabrics for saddle leather, nitro-animal and animal glues give the best results. The strength and the elasticity of the substitute can be regulated by the amt. of the gluing substance and the no. of layers of the fabric. This substitute is characterized by an unchanging elasticity at elevated and low temps. and a greater fire resistance than substitutes prepd. with cellulose nitrate solns. Surfaces with varying elasticity and hardness can be obtained by using cellulose nitrate and rubber top layers.

A. A. Hochlingk

ASM-51A METALLURGICAL LITERATURE CLASSIFICATION





BAKUNIN, A.V., dotsent, kand. istoricheskikh nauk; DOLGINTSEV, G.M., dotsent, kand. istoricheskikh nauk; PANFILOV, A.P., dotsent, kand. iskusstv. nauk; PLOTNIKOV, I.F., dotsent, kand. istoricheskikh nauk

The party organization of Sverdlovsk Province in the struggle for strengthening the cooperation between science and industry. Sbor. nauch. trud. Ural. politekh. inst. no.122:5-28 '61. (MIRA 17:12)

PLCTNIKOV, I.F., inzh. (st.Krasnyy Liman)

New methods of highly efficient utilization of electric locomotives.
Zhel. dor. transp. 46 no.5:68-71 My '64. (MIRA 18:2)

25(1)

PHASE I BOOK EXPLOITATION SOV/1752

Plotnikov, Ivan Mikhaylovich, Valer'yan Nikitich Razumov,
Valentina Ivanovna Oborina, Murshida Salimovna Razumova, Nikolay
Vladimirovich Kuznetsov, and Aleksey Nikiforovich Koryakov

Potochnoye izgotovleniye obolochkovykh form (Assembly Line Manu-
facture of Shell Molds) Moscow, Mashgiz, 1957. 42 p. (Series:
Obmen tekhnicheskim opytom) 4,000 copies printed.

Reviewer: L.M. Volpyanskiy, Engineer; Tech. Ed.: G.A. Sarafannikova;
Executive Ed. (Ural-Siberian Division, Mashgiz): M.A. Bezukladnikov,
Engineer.

PURPOSE: This book is intended for engineering workers in foundry
shops and design establishments concerned with the development
of industrial molding methods.

COVERAGE: This book reports on experience gained by the mixed
crews of the Uralkhimmashzavod (Ural Chemical Machinery Plant)
and the Sverdlovsk branch of the NIIKhIMMASH (Scientific

Card 1/3

Assembly Line Manufacture of Shell Molds

SOV/1752

Research Institute of Chemical Machinery) in organizing mechanized mass production of large shell molds from blends containing water glass. It deals specifically with production of molds for casting large filter press frames and plates (62 to 215 kg. and 1350 x 900 mm. and 1720 x 1080 mm.). The author also describes construction of equipment used in the above process. No personalities are mentioned. There are 14 Soviet references.

TABLE OF CONTENTS:

Preface	3
Mold Mixtures With Water Glass	5
Determining Basic Factors of the Method of Making Shell-Molds For Casting Filter Press Frames and Plates	10
Industrial Experimentation and Application of Mass Production of Filter Press Casting	20
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Assembly Line Manufacture of Shell Molds

SOV/1752

Conclusion

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Appendix

38

Bibliography

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GO/jmr
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Card 3/3

PLOTNIKOV, I. M., Eng.

"The Role of the Plant Laboratory in Modernizing Machines and Equipment"
p. 284-289 in book
Increasing the Quality and Efficiency of Machinery, Moscow, Mashgiz, 1957,
626pp.

YESIN, O.A.; POPEL', S.I.; BRATCHIKOV, S.G.; RAZUMOV, V.N.; PLOTNIKOV, I.M.

Desulfurization of steel in induction furnaces with the aid of
direct current. Zhur.prikl.khim. 31 no.12:1837-1842 D '58.

(MIRA 12:2)

(Steel--Metallurgy)

(Desulfuration)

I. M. Plotnikov.

Distr: 4E2c

Effect of temperature of electrolyte on the thickness of the oxide film and the duration of anodization of aluminum and aluminum alloys. I. M. Plotnikov. *Zhur. Priklad. Khim.* 30, 1321-2 (1957). Al plates, 120 X 50 X 1 mm., were anodized in H₂SO₄, 192 g/l., at 15-30° with c.d. 1-3 amp./sq. dm. The wt. of the plate increased with the duration *t* of anodization and passed through a rounded max. at *t*_m and then decreased. The best films were obtained up to *t*_m which also corresponded with the max. thickness of the film. *t*_m decreased as the emp. increased. The max. thickness at *t*_m increased with the temp. To obtain the best films of the same thickness *t* should be decreased and the c.d. increased.

I. Brancowitz

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1

ПЛОТНИКОВ, Л. М.

PLOTNIKOV, L.M., inzh.; RAZUMOV, V.N., kand.tekhn.nauk; OBORINA, V.I., inzh.;
RAZUMOVA, M.S., inzh.; KORYAKOV, A.N., inzh.; KUZNETSOV, N.V., inzh.

Making shell molds for frames and plates of filter presses.
Mashinostroitel' no.10:17-19 0 '57. (MIRA 10:11)
(Shell molding (Founding)) (Filter presses)

PLOTHNIKOV, I.M., YESIN, O.A., POPEL, S.I., BRATCHIKOV, S.G., RAZUMOV, V.M.

"Electrochemical Desulphurization of Steel in Induction Furnace,"
lecture given at the Fourth Conference on Steelmaking, A.A. Baikov Institute of
Metallurgy, Moscow, July 1-6, 1957

PILOTNIKOV, Ivan Mikhaylovich; RAZUMOV, Valer'yan Nikitich; OBORINA,
Valentina Ivanovna; RAZUMOVA, Murshida Salimovna; KUZNETSOV,
Nikolay Vladimirovich; KORYAKOV, Aleksey Nikiforovich;
VOLFYANSKIY, L.M., inzh., retsenzent; SARAFANNIKOVA, G.A.,
tekh.nred.

[Assembly line manufacture of shell forms] Potochnoe izgotovlenie
obolochkovykh form. Moskva, Gos. nauchno-tekhn. izd-vo mashino-
stroit. lit-ry, 1957. 42 p. (MIRA 11:5)
(Shell molding (Founding))

L 12950-65, EWG(j)/EWG(r)/EWT(1)/FS(v)-3/EWG(v)/EWG(a)/EWG(c) Pe-5 DD

ACCESSION NR: AT4045946

S/3111/63/062/000/0034/0036

AUTHOR: Plotnikov, I. P.

TITLE: Ballistocardiographic studies during the adaptation period under ^Dalpine conditions

SOURCE: Dushanbe. Gosudarstvennyy meditsinskiy institut. Trudy*, v. 62, 1963. Voprosy* fiziologii i patologii vy*sokogor'ya; trudy* nauchnoy konferentsii, 1962. (Problems of the physiology and pathology of Alpine regions; transactions of the 1962 scientific conference), 34-36

TOPIC TAGS: ²high altitude, hypoxia, ballistocardiography, adaptation, cardiac function, ventricular contraction

ABSTRACT: Repeated ballistocardiographic studies in 28 normal subjects (before their ascent into the Pamirs, during a 97-day stay at an altitude of 4200 m, and 6 and 23 weeks after their return to the valley) showed a gradual increase in heart rate and in the strength of cardiac contraction during the period of adaptation to high altitude. During the first week at 4200 m, the R-H, H-I and H-K intervals all decreased sharply, with a maximal decrease appearing between the 6th and 9th week; the HI/IJ ratio increased from 49% to 56.2% during the first

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ACCESSION NR: AT4045946

week and reached 58.9% in the third week. After return to the valley, there were no immediate changes in the ballistocardiogram; after 23 weeks, however, the R-H interval was increased towards normal and the HI/IJ ratio had decreased to 51.5%. The author concludes that the cardiovascular system responds more rapidly than other systems of the body to high altitude conditions, the increased load on the right heart and consequent increase in diastolic amplitude being the result of an increased pressure in the cardiac circulation.

ASSOCIATION: Tadzhikskiy meditsinskiy Institut Im. Abuali ibni Sino, Dushanbe (Tadjik Medical Institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: LS, PH

NDI REF SOV: 002

OTHER: 003

Card 2/2

PLOTNIKOV, I.P.

Electrocardiographic observations at an altitude of 4200
m among the participants of a high-mountain expedition.
Zdrav. Tadzh. 10 no.3:3-6 '63. (MIRA 17:4)

1. Iz Instituta krayevoy meditsiny AN Tadzhikskoy SSR.

PLOTNIKOV, I.P. (Dushanbe)

"increase in the force of ejection of blood by the heart".

Report presented at the Scientific Conference devoted to the problems of physiology and pathology in High Altitudes, Ministry of Health Tadzhik SSR and Medical Institute im. Abdul' Ibn-Sino, held in Dushanbe, October 1962.

(Zdravookhraneniye Tadzhikstana, Dushanbe, No. 3, 1963, p. 37-39)

PLOTNIKOV, I.P.

Ballistocardiographic observations under high-mountain conditions
during the adaptation period. Trudy Tadzh. med. inst. 62:31-36 '63.
(MIRA 17:12)

1. Tadjhikskiy meditsinskiy institut imeni Abuali ibni Sino, Dushanbe.

PLOTNIKOV, I.P.

Comparative indices from ballistocardiograms of inhabitants of high mountain and valley regions of Tajikistan. Zdrav. Tadzh. 8 no.5:36-38 S-0 '61. (MIRA 15:1)

1. Iz klinicheskogo otdeleniya (zaveduyushchiy -- doktor med.nauk prof. Kh.Kh.Mansurov) Instituta meditsiny AN Tadzhikskoy SSR.
(TAJIKISTAN__BALLISTOCARDIOGRAPHY)
(ALTITUDE, INFLUENCE OF)