PAVLOV, P.V.; LEONOVA, A.G.

Stabilization of dephtherial toxin for the Schick test. Zhur.
mikrobiol.epid. i immun.29 no.3:106-111 Mr '58.   (MIRA 11:4)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
        (DIPHTHERIA, immunology.
            Schick test, stabilization of toxin (Rus)

PAVLOV, P.V., AKIMOVA, V.V., PEMYANKEVICH, A.N.

Purified adsorbed scarlet fever toxin. Report No.2: Adsorption of
purified scarlet fever toxin. Zhur. mikrobiol. epid. i immun.
29 no.9:8-10 S'58   (MIRA 11:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
        (STREPTOCOCCUS,
                scarlatinae, toxin purification (Rus))

PAVLOV, P.V., MITEL'MAN, S.L., AKIMOVA, V.V.

Purified adsorbed scarlet fever toxin. Report No.3:Result of
active immunization against scarlet fever with purified adsorbed
scarlet fever toxin. Zhur.mikrobiol. epid. i immun. 29 no.9:11-15
S '58   (MIRA 11:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN
SSSR.
        (SCARLET FEVER, prev. & control,
            vacc. with purified adsorbed toxin (Rus))

PAVLOV, P. V.; MITEL'MAN, . L.; ANIMOVA, V. V.

"Problems of active immunization against scarlet."
{ava.

Report submitted at the 13th All-Union Congress of Hygenists,
Epidemiologists and Infectionists. 1959

ZHDANOV, V.M., red.; VASHKOV, V.I., red.; ZAKHAROVA, M.S., red.;
KUDLAY, D.G., red.;_PAVLOV,_P.V., red.; RUDNEV, G.P., red.
(Moskva); TIMAKOV, V.D., red. (Moskva); TROITSKIY, V.L., red.;
KHRISTOV, L.N., red. (Moskva); NECHAYEV, S.V., red.;
BEL'CHIKOVA, Yu.S., tekhn.red.

[Transactions of the All-Union Conference of Hygienists, Epidemio-
logists, Microbiologists, and Infectious Disease Specialists]
Doklady XIII Vsesoiuznogo s"ezda gigienistov, epidemiologov, mikro-
biologov i infektsionistov. Pod red. V.M.Zhdanova. Moskva, Gos.
izd-vo med.lit-ry Medgiz. Vol.2. [Section on epidemiology, micro-
biology, infectious diseases, and the organization of the public
health system] Otdelenie epidemiologii, mikrobiologii, infektsion-
nykh boleznei i organizatsii zdravookhraneniia. Pod red. V.I.
Vashkova. 1959. 866 p.   (MIRA 14:1)

1. Vsesoyuznyy s"yezd gigiyenistov, epidemiologov, mikrobiologov
i infektsionistov. 13th.
              (EPIDEMIOLOGY--CONGRESSES)

PAVLOV, P.V.; AKIMOVA, V.V.; APARASHCHENKO, N.I.; ATSEROVA, I.S.

Experimental studies on antigenic and immunogenic properties of combined vaccines against scarlet fever, diphtheria, and whooping cough. Zhur.mikrobiol.epid. i immun. 30 no.5:42-48 My '59.   (MIRA 12:9)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
                (VACCINES AND VACCINATION,
                        scarlet fever-diphtheria-whooping cough
                        vaccine, animal tests (Rus))
                (SCARLET FEVER, immunol.
                        same)
                (WHOOPING COUGH immunol.
                        same)
                (DIPHTHERIA, immunol.
                        same)

LEONOVA, A.G.; PAVLOV, P.V.

Use of the method of precipitation in agar in the selection of toxigenic variants of strain PW8; author's abstract. Zhur. mikrobiol.epid. i immun. 30 no.5:88-89 My '59. (MIRA 12:9)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

(DIPHTHERIA)

STEPANCHENOK-RUDNIK, G.I.; NEKHOTENOVA, Ye.I.; BLAGOVESHCHENSKIY, V.A.;
     PAVLOV, P.V.

     Effect of ultrasonic waves on diphteria toxin; author's abstract.
     Zhur.mikrobiol.,epid.i immun. 30 no.11:118-119 N '59.   (MIRA 13:3)
          (DIPHTHERIA)   (TOXINS AND ANTITOXINS)
          (ULTRASONIC WAVES--PHYSIOLOGICAL EFFECT)

PAVLOV, P.V.; AKIMOVA, V.V.

Precipitation in gel with scarlet fever toxin. Zhur. mikrobiol.
epid. i immun. 31 no. 10:39-44 O '60.   (MIRA 13:12)

1. Iz Otdela profilaktiki detskikh infektsiy Instituta epidemiologii
i mikrobiologii imeni Gamalei AMN SSSR.
(SCARLET FEVER)

PAVLOV, P.V.; LEONOVA, A.G.

Determination of the optimal antigen dose for active immunization.
Report No.1: Determination of the optimal dose of native diphtherial
anatoxin. Zhur. mikrobiol., epid. i immun. 32 no.9:8-12 S '61.
(MIRA 15:2)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
        (DIPHTHERIA)   (TOXINS AND ANTITOXINS)

PAVLOV, P.V.; LEONOVA, A.G.

Effect of the products of protein splitting in a culture medium
on toxin formation. Report No.2: Antigenic and immunogenic
properties of diphtheria toxins (toxoids) obtained on a medium,
digested by two enzymes, during culture of the Weisensee strain.
Zhur.mikrobiol.epid.i immun. 32 no.1:95-99 Ja '61. (MIRA 14:6)

1. Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
        (CORYNEBACTERIUM DIPHTHERIAE)   (TOXINS AND ANTITOXINS)
                        (TRYPSIN)   (PROTEINASE)

SOKOLOV, Mikhail Ignat'yevich;PAVLOV, Petr Vasil'yevich; PETERSON, O.P.,
    red.; BALDINA, N.F., tekhn. red.

[Manual on the use of vaccines and sera] Spravochnik po primene-
niiu vaktsin i syvorotok. Moskva, Medgiz, 1961. 162 p.
                                              (MIRA 15:2)

    (VACCINATION—HANDBOOKS, MANUALS, ETC.)

PAVLOV, P.V.; NEKHOTENOVA, Ye.I.; LEONOVA, A.G.; APANASHCHENKO, N.I.;
POZYANKEVICH, A.N.

Production of diphtheria toxin under conditions of submerged cul-
tures. Nauch. osn. proizv. bakt. prep. 10:71-76 '61. (MIRA 18:7)

1. Institut epidemiologii i mikrobiologii im. Gamalei AMN SSSR.

PAVLOV, P.V.; MITEL'MAN, S.L.; AKIMOVA, V.V.

Preparations for active immunization against scarlet fever. Nauch.
osn. proizv. bakt. prep. 10:129-134 '61.   (MIRA 18:7)

1. Institut epidemiologii i mikrobiologii im. Gamalei AMN SSSR.

PAVLOV, Petr Vasil'yevich; USPENSKIY, V.I., red.; PRONINA, N.D.,
        tekhn. red.

[Active immunization against scarlet fever] Aktivnaia im-
munizatsiia protiv skarlatiny. Moskva, Medgiz, 1963. 217 p.
                                        (MIRA 16:9)
    (SCARLET FEVER--PREVENTIVE INOCULATION)

PAVLOV, P.V.; LEONOVA, A.G.

Determination of optimum doses of antigens used for active
immunization. Report No.2: Determination of the optimum
dose of sorbed diphtheria anatoxin as a monoantigen and
as a component included in polyvalent preparations. Zhur.
mikrobiol., epid. i immun. 40 no.3:59-63 Mr '63.

(MIRA 17:2)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei
AMN SSSR.

MUROMTSEV, S.N., prof., otv. red. [deceased]; ANAN'IN, V.V., prof.,
red.; VYGODCHIKOV, G.V., prof., red.; ZIL'BER , L.A.,
prof., red.; MILENUSHKIN, Yu.I., kand. biol. nauk, red.;
PAVLOV, I.V., prof., red.; TROITSKIY, V.L., prof., red.
[deceased]; SHEVTSOV, D.G., red.; GRACHEVA, N.P., kand.
med. nauk, red.

[Problems of infectious pathology and the experimental ther-
apy of infections (on the 60th birthday of Professor Kh.Kh.
Planel'es, Corresponding Member of the Academy of Medical Sci-
ences of the U.S.S.R.); transactions of the Institute] Voprosy
infektsionnoi patologii i eksperimental'noi terapii infektsii
(k 60-letiiu so dnia rozhdeniia chlena-korr. AMN SSS. prof.
Kh.Kh.Planel'esa); trudy instituta. Pod obshchei red. ..N.
Muromtseva. Moskva, 1963. 495 p.   (MIRA 17:7)

1. Akademiya meditsinskikh nauk SSSR, Moscow. Institut epide-
riologii i mikrobiologii. 2. Deystvitel'nyy chlen Vse...'nov
v...... se 'skoy ozyavutvennykh nauk 'meni V.l.Lenina, direkto"
Instituta epidemiologii i mikrobiologii im. N.F.Gamalei AMN SSSR
(for Muromtsev). 3. Deystvitel'nyy chlen AMN SSSR (for Zil ber,
Vygodchikov, Troitskiy).

PAVLOV, P.V.; AKIMOVA, V.V.; LEONOVA, A.G.; KASHINTSEVA, N.S.

Experimental study of combined vaccine for active immunization
against scarlet fever, diphtheria, whooping cough and tetanus.
Zhur. mikrobiol., epid. i immun. 40 no.9:3-10 S'63.
(MIRA 17:5

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei
AMN SSSR.

S/126/63/015/001/014/029
E111/E383

AUTHORS: _Pavlov, P.V._ and Uskov, V.A.

TITLE: Possibility of using the gamma-spectrum method for
              investigating processes of the simultaneous diffusion
              of two components

PERIODICAL: Fizika metallov i metallovedeniye, v. 15, no. 1,
              1963, 105 - 108

TEXT: Simultaneous diffusion of several elements is involved
in semiconductor developments. To obtain the necessary experimental
data by the method entailing the removal of successive layers and
use of radioactive isotopes it is necessary to register separately
the various, simultaneously-diffusing elements. This was achieved
in the present work by using a single-crystal scintillation gamma-
spectrometer. The apparatus was calibrated with a series of radio-
active elements and then checked with mixtures of the radioactive
isotopes Cs^{137} and Fe^{59}. Values for the diffusion coefficients of
Fe^{59} in an Fe-1.16 at.% Mo-0.93 at.% C alloy at 950, 1050 and
1150 °C obtained by this method agreed well with those yielded by
Card 1/2

Possibility of using ....

S/126/63/015/001/014/029·
E111/E383

the Geiger-Muller counter method.   There are 3 figures and
1 table.

ASSOCIATION: Gor'kovskiy fiziko-tekhnicheskiy institut
(Gor'kiy Physicotechnical Institute)

SUBMITTED: June 8, 1962

Card 2/2

Crystal structure of herderite, datolite, and gadolinite.
... and ... (Bernh)... Natk
S.S.S.R. ... ... Mineral. Gsb.P.O.H. dato-
lite, Ca... ... ... are typical iso-
structural group. The structure of herderite was detd. by
a complete ... ... based on the abso-
lute ... ... structure transformed ... The
monoclinic unit cell has the dimensions $a_0 = ...$
$b_0 = 7.88$ Å; ... $c_0 = 4.80$ Å; $\beta = ...$ space group $C_{2h}^5 = $
$P 2_1/a$ ... ...

B) In $x = ...$, $y = 0.400$, $z = 0.050$, Be (or B) in
$x = 0.383$; $y = 0.408$; $z = 0.5597$; O_I in $z = 0.0411$;
$y = 0.307$; $z = 0.200$; O_{II} in $x = 0.433$; $y = 0.278$; $z = $
0.650; O_{III} in $x = 0.105$; $y = 0.443$; $z = 0.673$; O_{IV} in
$x = 0.141$; $y = ...$; $z = 0.330$; ...
... ...

... ...

... ...
1.57, O-O in [PO_4] ... to ..., ... $= 1.60$;
1.64; 1.07; Be-F $= 1.07$; O-O in [BeO_3F] $= 2.52$ to
2.73; Ca-O $= 2.46$ to 2.70 Å. For datolite (with $a_0 = $
9.02 Å; $b_0 = 7.60$ Å; $c_0 = 4.84$ Å; $\beta \sim 90°$, space group
$C_{2h}^5 = P 2_1/a$), the previous structure detn. by Ito and Mori
(C.A. 47, 7370i) was improved. Gadolinite, somewhat dis-
turbed by metamictization, shows $a_0 = 0.87$ Å; $b_0 = $
7.59 Å; $c_0 = 4.65$ Å; $\beta = 99°33'$; $Z = 2$. Because of
the uncertainty of the at. factor F for F, the reliability
coeff. is less satisfactory than for herderite and datolite.

W. Buel.

AUTHORS: Borisov, S.V., Pavlov, P.V. and Belov, N.V.

TITLE: A Graphical Method for Solving the Fundamental Harker-Kasper Inequalities (Graficheskiy metod resheniya osnovnykh neravenstv Kharkera-Kaspera)

ABSTRACT: The most powerful inequality relating the absolute unitary structure amplitudes is:

$$(U_H \pm U_K)^2 \leq (1 \pm U_{H+K})(1 \pm U_{H-K}) \ .$$

This leads to a relationship between the signs of $S_{H+K} = S_H \cdot S_K$ and $S_{H-K} = S_H \cdot S_K$. The examination of all quartets of reflections is a long process and can be facilitated by suitable graphs. If $(U_H \pm U_K)$ is denoted by Σ and $(1 \pm U_{H+K})$ and $(1 \pm U_{H-K})$ by x and y , respectively, then the inequality is $\Sigma^2 \leq xy$ which takes the form of hyperbolae for the case of equivalence. Lines of constant Σ are drawn out on two graphs (each with U_{H-K} as abscissae and U_{H+K} as

Card1/3   ordinates) one with values of Σ greater than 1 and

SOV/70-3-1-17/26

A Graphical Method for Solving the Fundamental Harker-Kasper
Inequalities

the other with values less than 1 . The graphs are then
divided into four regions: a) where $S_{H-K} = S_H \cdot S_K$
obtains; b) where $S_{H+K} = S_H \cdot S_K$ obtains;

c) where neither obtains and ab) where both are true.
These can be overlaid with weighted reciprocal nets. It
can be seen that the most effective inequalities will be
obtained when three of the amplitudes selected are large
and the fourth small. For values of Σ near to 1 the
inequalities will also be effective, for a pair U_{H+K}

and U_{H-K} of the order of 0.15 to 0.20. There are 3
figures and 7 references, 5 of which are Soviet and
2 English.

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SOV/70-3-1-17/26

A Graphical Method for Solving the Fundamental Harker-Kasper Inequalities

ASSOCIATION: Institut kristallografii AN SSSR
               (Institute of Crystallography of the Ac.Sc.USSR)

SUBMITTED: November 25, 1957

Card 3/3

SOV/70-4-3-8/32

AUTHORS: Pavlov, P.V. and Belov, N.V.

TITLE: The Determination of the Structures of Herderite, Datolite and Gadolinite by Direct Methods

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 3, pp 324 – 340 (USSR)

ABSTRACT: The structures of these three compounds were determined in parallel by direct methods, particularly by those elaborated in the Institute of Crystallography and in Gor'kiy University, which proved to be exceptionally powerful. A full account is given for pedagogic purposes. The cell dimensions and space group, found by Strunz, for herderite (a = 9.80, b = 7.68, c = 4.80 Å, $\beta = 90°06'$, $C_{2h}^5 = P2_1/a$) were confirmed. $d_{obs.} = 3.00$ and Z = 4 , the formula unit being $CaBePO_4F$. The use of Harker-Kasper inequalities followed by Zachariasen's statistical analysis has been successful several times before and was applied here. Weissenberg photographs with Mo radiation provided abundant data. There were 167 independent hk0 reflexions. Amplitudes were put on an absolute scale by Wilson and Vaynshteyn's methods.

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SOV/70-4-3-8/32

The Determination of the Structures of Herderite, Datolite and Gadolinite by Direct Methods

There were 15 with $\left| U_{hk0} \right| > 0.5$. In all, 45 confirmed sign relationships of the form $S_{H+K} = S_H \cdot S_K$ were found. 18 signs were found uniquely by:

$$\left| U_{hkl} \right|^2 \leqslant 1/2 + 1/2\ U_{2h,\ 2k,\ 2l}$$

and other inequalities and less directly others giving a total of 56 "banker" reflexions. Two signs were given arbitrarily. Zachariasen's method was then applied and gave another 84 signs, i.e. a total of 140 out of 167, $> 70\%$. About 20-24 pairs determined each sign. The resulting Fourier projection showed all atoms and calculated F values gave $R = 24\%$ only two having signs opposite to those assumed. A second synthesis with the remaining 27 reflexions and recalculation with the new positions gave $R = 14.9\%$ without zeros and 20.4% with zeros up to $\sin \theta / \lambda = 1.1$. Normalisation by $\sum F_o = \sum F_c$ showed that the

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SOV/70-4-3-8/32

The Determination of the Structures of Herderite, Datolite and
Gadolinite by Direct Methods

original setting of the amplitudes on an absolute scale
was accurate to within 5%. The $h0l$ projection was
treated similarly. There were 116 non-zero reflexions,
21 with $|U_{h0l}| \geq 0.5$. Without zeros $R = 14.3\%$ and
with 60 zeros up to 1.1 $R = 19.7\%$. Vaynshteyn's
method gave the probable errors in atomic positions as
follows: for Ca 0.004 Å; P_o- 0.006 Å; Be - 0.033 Å,
0 - 0.015 Å and F - 0.013 Å. Table 1 gives the
atomic co-ordinates in the structures of herderite, datolite
and gadolinite (in hundredths of a, b and c). Datolite I
represents Japanese data and datolite II Pavlov and
Belov's.
The structure consists of infinite pseudotetragonal nets
of PO_4 and BeO_3F tetrahedra. In the net the fourfold

centrosymmetrical rings of tetrahedra of two sorts
alternate with locked centrosymmetrical pulled-out
octagons of the same tetrahedra. This is characteristic
of felspars and other related aluminosilicates. The

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SOV/70-4-3-8/32

The Determination of the Structures of Herderite, Datolite and Gadolinite by Direct Methods

structure has two storeys, the lower consisting of 4 antiprisms (with 8 corners) around the Ca atoms and the upper of linked PO_4 tetrahedra in one orientation and BeO_3F tetrahedra in another. Interatomic distances are tabulated. Pauling's valency balance does not fit very accurately for some O atoms. $CaBSiO_4(OH)$, datolite (a = 9.62, b = 7.60, c = 4.84 Å β = 90°, $P2_1/a$) was solved by Ito and Mori by a semi-heavy atom technique. The analysis reported for herderite was repeated. It was also partially repeated for gadolinite, $Fe^{++}Y_2Be_2O_2Si_2O_8$ (Z = 2, a = 9.89, b = 7.52, c = 4.71, β = 90°33') with results given in the table. Fe atoms are found at the origins octahedrally co-ordinated but otherwise the structure is very similar to that of the other minerals.

Card4/5

The Determination of the Structures of Herderite, Datolite and
Gadolinite by Direct Methods   SOV/70-4-3-8/32

There are 8 figures, 7 tables and 19 references. 13 of
which are Soviet, 2 German and 4 international.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of
        Crystallography of the Ac.Sc., USSR)
            Gor'kovskiy universitet im. N.I. Lobachevskogo
        (Gor'kiy University imeni N.I. Lobachevskiy)

SUBMITTED: February 23, 1959

Card 5/5

L 13025-63   EWP(q)/EWT(m)/BDS   AFFTC/ASD   JD
ACCESSION NR: AP3000629   8/0181/63/005/005/1454/1457

AUTHOR: Pavlov, P. V.; Panteleyev, V. A.

TITLE: Diffusion of antimony on the surface of germanium

SOURCE: Fizika tverdogo tela, v. 5, no. 5, 1963, 1454-1457

TOPIC TAGS: surface diffusion, body diffusion, Ge, Sb, specific resistance, semiconductor, oxide layer, SR-4, HF, hydrogen peroxide

ABSTRACT: The investigation utilizes the method proposed by Geguzin, Kovalev, and Ratner (FMM, 10, 47, 1960). Tests were made on plates of monocrystalline germanium 5 x 5 x 0.6 mm, cut normal to [111], and having a specific resistance of 30 ohm/cm. Samples were divided into three groups: one polished mechanically, a second polished chemically in standard SR-4 etchant, and the third also polished chemically, for 30 seconds in an etchant consisting of 40 parts HF, 6 parts hydrogen peroxide, and 24 parts water. Diffusion was measured in the interval 250-350C for germanium and at 350C for surfaces coated with an oxide film. The experiments show that the more carefully the surface of the semiconductor is prepared the less mobile are the atoms in the near-surface layer. The spread of Sb in the surface layer of Ge proved to be very rapid: at 100C surface diffusion

Card 1/2

ACCESSION NR: AP4013492   S/0181/64/006/002/0382/0389

AUTHORS: Pavlov, P. V.; Panteleyev, V. A.; Mayorov, A. V.

TITLE: Diffusion of antimony along dislocations in silicon

SOURCE: Fizika tverdogo tela, v. 6, no. 2, 1964, 382-389

TOPIC TAGS: impurity diffusion, antimony, dislocation, silicon, impurity concen-
tration, boundary diffusion, body diffusion

ABSTRACT: Increase in number of dislocations in a crystal generally leads to
worsening of electrical properties, but certain data indicate that dislocations
may, under certain circumstances, improve some properties of actual crystals. In
pursuing this possibility, the authors have solved equations for diffusion along
individual tubular dislocations. The solution has been used to study the diffusion
of antimony in single crystals of silicon along dislocations. Etching removed a
layer from the samples on the order of 100 microns thick. This indicates that the
destroyed layer was not complete. For this reason, rapid diffusion as observed in
the experiments cannot be considered a surface effect. Samples were carefully
selected, with uniform dislocation distribution, and this precaution eliminated the

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ACCESSION NR: AP4013492

possibility of diffusion along low-angle faces, microfractures, or other similar
defects. It appears obvious that antimony has migrated through silicon along
individual dislocations. Such an interpretation is confirmed by data on increased
concentration of the diffusing impurities with increase in dislocation density.
The activation energy of diffusion along the dislocations is substantially less
than the activation energy of ordinary body diffusion (about one-fourth). This
indicates an easier path of diffusion and is in agreement with the view that the
dislocations are disordered zones with abundant vacancies. However, the individual
dislocations must possess a lower penetration than grain boundaries, and this
conforms with experimental data that prove the activation energy of diffusion along
a face to be less than body diffusion (about one-third). The coefficient of
diffusion along these dislocations was found to depend on temperature according to

the following equation: $D_d = 4.5 \cdot 10^2 \exp \left(- \frac{69900}{RT} \right)$ cm^2/sec. Orig. art. has: 3

figures, 3 tables, and 6 formulas.

ASSOCIATION: Gor'kovskiy gosudarstvennyﾎy universitet im. N. I. Lobachovskogo
(Gorkiy State University)

Card 2/3

ACCESSION NR: AP4028459   S/0181/64/006/004/1231/1233

AUTHORS: Pavlov, P. V.; Panteleyev, V. A.

TITLE: A method of determining the coefficient of diffusion along the surface of a crystalline body

SOURCE: Fizika tverdogo tela, v. 6, no. 4, 1964, 1231-1233

TOPIC TAGS: diffusion coefficient, crystal, surface property, laminated sample

ABSTRACT: This is chiefly a discussion of the method of a "laminated sample" as proposed by Ya. Ye. Geguzin, G. N. Kovalev, and A. M. Ratner (FMM, 10, 47, 1960) and by Ya. Ye. Geguzin and G. N. Kovalev (FTT, 10, 1687, 1963). The present authors point out some limiting factors, defining when the method is valid. They suggest that, in investigating surface diffusion in solids by a "laminated sample," the best method of determining surface diffusion and density will be by matching the experimental concentration curve with the previously computed theoretical (standard) curve for different values of diffusion and density. In this way, the two values may be determined independently of each other for any parameter values. The authors computed (by means of an electronic computer) the theoretical concentration curves from the data in the first work cited above. The curves obviously

Card 1/2

ACCESSION NR: AP4028459

differ from each other, a fact that speaks favorably for the indicated method.
Orig. art. has: 1 figure, 1 table, and 6 figures.

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet im. N. I. Lobachevskogo
(Gorky State University)

SUBMITTED: 04Nov63   DATE ACQ: 27Apr64   ENCL: 00

SUB CODE: ME, SS   NO REF SOV: 004   OTHER: 000

Card 2/2

L 15271-65   EWT(d)/EWT(m)/EEC(k)-2/EEC-4/EWP(t)/EWP(b)   Po-4/Pq-4/Pg-4/Pk-4/
Pl-4   IJP(c)/AFWL/BSD/ASD(a)-5/SSD/ASD(p)-3/AS(mp)-2/ESD(gs)   JD
ACCESSION NR: AP4048391   S/0181/64/006/011/3222/3226

AUTHOR: Pavlov, P. V.; Zorin, Ye. I.; Tetel'baum, D. I.; Popov, Q
Yu. S.

TITLE: On the depth of penetration and distribution of radiation
damage when germanium is bombarded with argon and nitrogen ions

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3222-3226

TOPIC TAGS: germanium, radiation defect, ion bombardment, surface
layer, semiconductor material

ABSTRACT: In view of the practical interest associated with the
use of ion beams in semiconductor technology, the authors measured
the thickness   of the inversion layers produced on n-type germanium
bombarded with argon and nitrogen ions of energies of 46, 67, and 82 kev.
The germanium was in the form of plates 5 x 5 x 1 mm with resistivity of
1 ohm-cm, cut perpendicular to the [111] axis. The plates were care-

Card   1/3

L 15271-65
ACCESSION NR: AP4048391   O

fully ground and chemically polished so that the surface was uni-
form within 0.2 micron. The ion bombardment was produced in an ac-
celerator with magnetic ion separation. The samples were etched
away layer by layer after irradiation and the surface resistivity
was measured after each etching by a four-probe method. The results
show that for argon the thickness of the inversion layer agrees
well with the theory of K. O. Nielsen (Electromagnetically Enriched
Isotopes and Mass Spectrometry, New York, 1956, p. 68). The thick-
ness of the inversion layer increases with increasing energy and
radiation dose, and is larger for nitrogen ions than for argon ions,
although the experimental value is smaller for nitrogen than predicted by
theory. The depth distributions of the specific conductivities in
the inversion layers were determined and it was established that
sufficiently large doses of bombarding argon ions produce on the sur-
face of the inversion layer a high-resistance region whose thickness
increases with the dose. It is suggested that this high-resistance
layer is due to   disordering of the crystal structure of the ger-

Card 2/3

L 15271-65
ACCESSION NR: AP4048391

manium; this hypothesis is confirmed by electron diffraction data.
"Students Г. Frolova and S. Shul'ts of the Physics Department of
GGU participated in the work." Orig. art. has: 4 figures, 3 formu-
las, and 1 table.

ASSOCIATION: Gor'kovskiy gosudarstvenny*y universitet im. N. I.
Lobachevskogo   (Gor'kiy State University)

SUBMITTED: 21Apr64   ENCL: 00   SUB CODE: SS, NP

NO REF SOV: 001   OTHER: 011   ATD PRESS: 3143

Card 3/3

L 3335-66   EWT(m)/T/EWP(t)/EWP(b)/EWA(c)   IJP(c)   JD

ACCESSION NR: AP5017321

UR/0181/65/007/007/2209/2211

AUTHORS: Pavlov, P. V.: Panteleyev, V. A.

TITLE: Application of the method of 'standard curves' to the investigation of the diffusion of antimony on the surface of germanium and silicon

SOURCE: Fizika tverdogo tela, v. 7, no. 7, 1965, 2209-2211

TOPIC TAGS: antimony, silicon, germanium, surface property, metal diffusion

ABSTRACT: To check whether it is possible in principle to determine separately the thickness of the surface layer in which the diffusion coefficient is larger than in the rest of the crystal, and to determine the value of the larger diffusion coefficient itself, the authors integrated the equation derived by R. T. P. Wipple (Phil. Mag. v. 45, 1225, 1954), using an electronic computer, for a wide range of the parameters encountered in practice. The result was used to investigate the diffusion of antimony over the surface of plates of p-type

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L 3335-66

ACCESSION NR: AP5017321

single-crystal silicon (resistivity 2 ohm-cm), cut parallel to the [111] direction. Three different surface finishes were used, and the experimentally measured distribution was checked against the theoretically calculated one. The results are in good agreement with data obtained by others, but recalculation of the authors' earlier data for the diffusion of antimony over the surface of germanium (FTT v. 5, 1454, 1963), using the procedure described in this paper and a different procedure, does not give identical results. Orig. art. has: 1 figure, 1 formula, and 1 table.

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet im. N. I. Lobachevskogo (Gor'kiy State University)

SUBMITTED: 29Sep64   ENCL: 00   SUB CODE: SS

NR REF SOV: 007   OTHER: 005

Card 2/2

L 26620-66   EWT(1)/EWT(m)   IJP(c)   JD/JG

ACC NR: AP5025369   SOURCE CODE: UR/0181/65/007/010/2940/2946

AUTHOR: Pavlov, P. V.; Zorin, Ye. I.; Tetel'baum, D. I.; Granitsyna, Z. K.

ORG: Gor'ky State University im. N. I. Lobachevskiy (Gor'kovskiy gosu_darst-
vennyy universitet)

TITLE: Investigation of electrical conductivity of inversion layers forming in
n-type silicon during bombardment by boron ions

SOURCE: Fizika tverdogo tela, v. 7, no. 10, 1965, 2940-2946

TOPIC TAGS: electric conductivity, silicon single crystal, boron, ion bombard-
ment

ABSTRACT: Results were presented of measuring electrical conductivity of in-
version layers formed in n-type silicon as a result of bombardment of the surface
by boron ions with energies of 25-150 kev. Dependence of electrical conductivity
of an inversion layer, formed during boron ion bombardment, on dosage and
annealing temperature has qualitatively, a similar character during all energies
in the diapazone studied. The effect was studied of radiation dose, temperature
and annealing time. With any dosage in the 1-1000 microcoulomb . cm^{-2} range,
a sufficiently high annealing temperature leads to an electrical conductivity

Card 1/2   UDC

APPROVED FOR RELEASE: Tuesday, August 01, 2000   CIA-RDP86-00513R0012396

L 26620-66

ACC NR: AP5025369

value corresponding to the quantity of boron atoms introduced. The greater the dosage, the higher the annealing temperature needed to reach this state. This possibility of developing inversion layers during bombardment without subsequent annealing was indicated. With a sufficiently large dose of boron ions the effect of injected boron atoms prevailed under the influence of radiation defects; thus the formation of p-type layer in n-silicon was possible without additional annealing. Orig. art. has: 4 figs.

SUB CODE: 20/ SUBM DATE: 03Apr65/ ORIG REF: 004/ OTH REF: 009

Card 2/2

L 15977-66   EWT(1)/EWT(m)/T/EWP(t)   IJP(c)   JD/AT

ACC NR: AP5021276   SOURCE CODE: UR/0020/65/163/005/1128/1130

AUTHOR: Pavlov, P. V.; Zorin, Ye. I.; Tetel'baum, D. I.; Popov, Yu. S.

ORG: Gorki Physicotechnical Research Institute of the Gorki State University im.
N. I. Lobacheskiy (Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut;
Gorkovskiy gosudarstvenniy universitet)

TITLE: Donor properties of nitrogen injected into silica and germanium by ion bombardment

SOURCE: AN SSSR. Doklady, v. 163, no. 5, 1965, 1128-1130

TOPIC TAGS: ionizing radiation, nitrogen, argon, ion current, ion density, silica, crystal structure

ABSTRACT: The silica plate samples, having a resistivity of 1 ohm.cm., were cut

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L 15977-66

ACC NR: AP5021276

O

perpendicular to the crystallographic direction [111] , polished mechanically
and chemically to a microscopically smooth surface, and subjected to bombard-
ment by atomic nitrogen ions in an accelerator with magnetic analyzer at an energy
of 57 kev. The density of the ion current was ≤ 4 amp./sq.cm. and the vacuum
near the target was $\sim 10^{-5}$ mm.Hg. After irradiation the samples were annealed
at various temperatures in a 10^{-5} mm. Hg. vacuum. The n-type layer was formed
on irradiated silica surfaces (at the dose range of 50 - 5000 coulomb/sq.cm.)
after short annealing (1-3 minutes) at temperatures $\ge 700C$, whereas the
inversion layer was not observed even after an annealing for 4 hours at temper-
atures $\ge 500C$. The fact that inversion layers were formed only after annealing
at sufficiently high temperatures indicated that their generation was affected
by the donor properties of the nitrogen. The bombardment of silica plates with
argon ions did not result in the formation of inversion layers after subsequent
annealing at various temperatures. The bombardment of p-type germanium $(\rho = 1$
ohm.cm.) by nitrogen ions resulted in the formation of n-layers at doses > 1000

SUB NR: VL203535P

Card 2/3

L 15977-66

ACC NR: AP5021276

ocoulomb/sq.cm. after prolonged annealing at 450C. The annealing at lower temperatures was evidently insufficient for removal of radiation defects. The thermoconversion occured at temperatures $\geq$ 500C. Orig. art. has: 1 figure.

SUB CODE: 20 , SUBM DATE: 06Jun65/ ORIG REF: 001/ OTH REF: 006

Card 3/3

L 22918-66

ACC NR: AP6009655   EWP(e)/EWT(m)/EWP(t)   IJP(c)   SOURCE CODE: JD   UR/0181/66/008/003/0750/0752

AUTHORS: Pavlov, P. V.; Zorin, Ye. I.; Tetel'baum, D. I.

ORG: Gor'kiy State University im. N. I. Lobachevskiy (Gor'kovskiy gosudarstvennyy universitet)

TITLE: Characteristics of photodiode obtained by bombarding silicon with boron ions

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 750-752

TOPIC TAGS: silicon, ion bombardment, photodiode, pn junction, boron, photosensitivity, spectral energy distribution

ABSTRACT: In view of some contradictions in the published data on the production of photoelectric p-n junctions by ion bombardment, the authors investigated the dependence of the characteristics of photo-diodes obtained by bombarding n-silicon with 60-keV boron ions on the irradiation dose and on the annealing temperature. The n-type silicon was doped with phosphorus and was externally oxidized to an oxide thickness of 0.7 μ. Windows of 500 μ diameter were etched on the

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L 22918-66
ACC NR: AP6009655

oxide surface by photolithography. A second oxidation covered the
windows with a layer of SiO_2 of 0.2 μ thickness. The bombardment with
68-kev boron ions was in an accelerator with a magnetic analyzer. The
irradiation doses were 0.1, 10, 100, 300, 500, and 700 μC/cm^2. The
annealing temperature varied from 600 to 1,000C and the annealing time
from 3 to 30 minutes. At 0.1 μC/cm^2 the diodes had very poor photo-
response at all annealing temperatures. At doses above 100 μC/cm^2 the
photosensitivity decreased. Removal of layers of different thicknesses
has shown that the dislocations penetrate to a depth of approximately
1 μ, whereas the p-n junction lies 0.5 μ thick, so that the disloca-
tions can participate in the excess carrier recombination on both
sides of the junction. The dependence of the photocharacteristics on
the annealing temperature is attributed to the fact that with in-
creasing dose a high temperature is necessary to anneal out the defects
that influence the conductivity of the inversion layer. A preliminary
investigation of the spectral characteristics of the photodiodes has
shown that their maximum sensitivity is at 0.85 -- 1.1 μ wavelength,
and that this maximum shifts towards longer wavelengths with increasing

Card   2/3

Card 3/3

ACC NR: AP6013541   SOURCE CODE: UR/0181/66/008/006/1791/1795

AUTHOR: Pavlov, P. V.; Zorin, Ye. I.; Tetel'baum, D. I.

ORG: Gor'kiy State University im. N. I. Lobachevskiy (Gor'kovskiy gosudarstvennyy universitet)

TITLE: Inversion layers produced on n-type germanium bombarded with boron and aluminum ions

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1791-1795

TOPIC TAGS: germanium semiconductor, surface property, ion bombardment, boron, aluminum, impurity conductivity

ABSTRACT: To check whether the inversion layer produced on the surface of germanium by ion bombardment depends on the type of ion used, the authors bombarded germanium with 50-kev ions of several elements (B, Al, Ne, Ar, C). The irradiation procedure was described before (FTT v. 6, 3222, 1964). The ion current was ~5 $\mu a/cm^2$ and the dose ranged from 0.01 to 1000 $Coul/cm^2$. The presence of the inversion layer was determined by a procedure described in the earlier paper, and the resistivity of the inversion layer was measured both directly after irradiation and after annealing; in the latter case the dependence on the annealing temperature was also measured. In addition, a study was made of the depth distribution of the acceptors (Al and B) introduced by ion bombardment. The results show clearly that the surface resistance depends in a complicated manner on the type of bombarding ion, the irradiation dose,

Card 1/2

ACC NR: AP6033559   SOURCE CODE: UR/0181/66/008/010/2977/2981

AUTHOR: Pavlov, P. V.; Uskov, V. A.

ORG: Gor'kiy State University im. N. I. Lobachevskiy (Gor'kovskiy gosudarstvennyy universitet)

TITLE: Investigation of the diffusion of antimony and indium in germanium with account of the internal electric field

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 2977-2981

TOPIC TAGS: antimony, indium, germanium, physical diffusion, semiconductor research,. gamma spectrum, surface property, crystal lattice defect

ABSTRACT: This is a continuation of earlier work (FTT v. 7, 3346, 1965), where a theoretical analysis was made of the influence of the internal electric field on the diffusion of impurities in intrinsic and impurity semiconductors. The present investigation was an experimental check on the results, as applied to the diffusion of antimony and indium in n-type germanium. The diffusing atoms were the isotopes Sb^{124} and In^{114} from the gas phase, under conditions corresponding to a constant source. The depth variation of the impurity concentration was determined by the method of layer removal. The residual activity of the sample was measured with a scintillation γ spectrometer. The procedure for determining the diffusion coefficients is described in a paper by V. Ye. Kosenko (Izv. AN SSSR, ser. fiz. v. 20, 1526, 1956), by comparison of the experimental curves with the standard curves derived in the authors' earlier

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ACC NR: AP6033559

paper. The diffusion coefficients and the various diffusion parameters are tabulated. The results confirm the correctness of the formula derived in the earlier paper for the distribution of the impurity with allowance for the internal electric field arising during the impurity diffusion process, provided the surface concentration does not exceed 4×10^{19} cm^{-3}. When the concentration increases, certain factors unaccounted for in the earlier paper come into play. One of them is the occurrence of the defects in the lattice during the impurity diffusion. Another may be the presence of both neutral and ionized atoms in the diffusion flow. The experimental evidence favors the assumption that the deviation from the theoretical values are due to the formation of lattice defects. Orig. art. has: 2 figures, 1 formula, and 3 tables.

SUB CODE: 20/   SUBM DATE: 14Dec65/   ORIG REF: 003/   OTH REF: 014

Card 2/2

ACC NR: AP6033567   SOURCE CODE: UR/0181/66/008/010/3043/3046

AUTHOR: Pavlov, P. V.; Sterkhov, V. A.

ORG: Gor'kiy State University im. N. I. Lobachevskiy (Gor'kovskiy gosudarstvenny universitet)

TITLE: Diffusion of indium over the surface of germanium

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 3043-3046

TOPIC TAGS: indium, germanium, metal diffusion, surface property, transport property

ABSTRACT: The authors report results of an investigation of the diffusion and electric transport of indium over the (111) surface of single-crystal p-type Ge with resistivity 1 ohm-cm and dislocation density 3×10^3 cm^{-2}. The diffusion was carried out at 600 - 910C, and the electric transport at 500 - 800C. The distribution of the diffusing atoms in depth was determined by a "layered sample" method, using In^{114} as the tracer, wherein the sample was made up of stacks of 8 - 10 plates $5 \times 5 \times 0.4$ mm, and the activities of the different surfaces were measured. The experimental data obtained on the diffusion was reduced by the "standard-curves" method described by one of the authors earlier (Pavlov, with V. A. Panteleyev, FTT v. 7, 2209, 1965). Account was taken of the fact that indium is transported by the electric field either to the anode or to the cathode, depending on the temperature, owing to different degrees of electron-hole dragging. The values obtained for the coefficient of surface diffusion, $D_1 = 2 \times 10^2 \exp(-54.5/RT)$ cm^2/sec, agree well with the results obtained by others. The

Card 1/2

ACC NR: AP6033567

authors thank V. A. Panteleyev and V. A. Uskov for a useful discussion.   Orig. art.
has: 3 figures and 10 formulas.

SUB CODE: 20/   SUBM DATE: 07Feb66/   ORIG REF: 013/   OTH REF: 004

Card   2/2

ACC NR: AP7007168   SOURCE CODE: UR/0070/67/012/001/0155/0157

AUTHOR: Pavlov, P. V.; Tetel'baum, D. I.; Zorin, Ye. I.; Kudryavtseva, R. V.

ORG: Gor'kiy Physicotechnical Research Institute (Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut)

TITLE: The amorphism in polycrystalline germanium films resulting from irradiation with argon ions

SOURCE: Kristallografiya, v. 12, no. 1, 1967, 155-157

TOPIC TAGS: amorphous polymer, semiconducting film, polycrystalline film , germanium semiconductor, thin film semiconductor, irradiation effect , argon, ion

ABSTRACT: An investigation was made of the transition of crystalline germanium into the amorphous state as the result of irradiation. The experiment was performed with thin polycrystalline germanium films. The films were obtained by the vacuum coating of an NaCl backing heated to 400°C. The film thickness varied from 200 to 500 Å, which meant that it was smaller than the mean free path of the ions. Bombardment with kev argon ions was performed in an accelerator with a magnetic analyzer. The density of the ion current was 2 to 4 µ amp/cm², The irradiation doses were 1, 10, 100, 1000, and 5000 µcurie/cm². The vacuum in the

Card 1/2   UDC: 548.74

ACC NR:AP7007168

. vicinity of the target was 2×10^{-5} mm Hg. During bombardment, the specimens were heated to 90°C in order to reduce organic vapors. At a does of 1 μcurie/cm² no changes were observed in the specimens. However, at doses of 10 μcurie/cm² and larger, the electronograms clearly indicated the transformation of the germanium into the amorphous state: the sharp lines disappeared and were replaced by two or three diffusion rings. The location of the intensity maxima did not coincide with the location of the interference rings of the crystalline germanium, except for the first maximum, which was located at the position of the (111) line. This showed that the structure obtained was not microcrystalline, but amorphous. Two basic mechanisms of amorphism are proposed. First, a gradual accumulation of Frenkel defects during irradiation can lead to the dispacement of atoms to new positions and, consequently, to the disruption of proper order. The second mechanism consists in the generation of regions of local fusion (thermal peaks) inside the germanium by means of retarded ions. These peaks harden in a short time ($10^{-11} — 10^{-12}$ sec). Crystallization cannot occur in such a short time. As a result, a liquid structure or some intermediate state (partial crystallization) appears. The first mechanism is considered more probable. Orig. art. has: 1 table.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 011 [WA-95]

Card 2/2   [JA]

PAVLOV, P.V.; LEONOVA, A.G.; SMIRNOV, M.V.

Effect of products of deep splitting of proteins in a culture
medium on C. diphtheriae toxin formation. Report No.1: Medium
digested by an enzymatic mixture of trypsin and enterokinase for
the preparation of diphtherial toxin. Zhur.mikrobiol.epid.i immun.
31 no.8:65-69 Ag '60.   (MIRA 14:6)

1. Iz Otdela profilaktiki detskikh infektsiy Instituta epidemiologii
i mikrobiologii imeni Gamalei AMN SSSR.
            (CORYNEBACTERIUM DIPHTHERIAE)   (TOXINS AND ANTITOXINS)
            (BACTERIOLOGY—CULTURES AND CULTURE MEDIA)
                (TRYPSIN)   (KINASE)

SEMENOVA, L.P.; RUBANOVICH, G.L.; PAVLOV, R.K.

Surgery in knife wounds of the heart performed under conditions
of clinical death. Vest.khir. 86 no.3:115-116 Mr '61.

(MIRA 14:3)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. S.L.
Libov) Kuybyshevskogo meditsinskogo instituta. Adres avtorov:
Kuybyshev (obl.) Semeykenskoye shosse, klinicheskaya bol'nitsa,
fakul'tetskaya khirurgicheskaya klinika.

(HEART—WOUNDS AND INJURIES)   (RESUSCITATION)

PAVLOV, P.V.

The Savala Forestry; climatic and silvicultural characteristics and
the history of the establishment of cultivated forest stands. Trudy
VIZR no.15:13-32 '60.   (MIRA 14:3)
          (Voronezh Province--Forests and forestry)

PAVLOV, P.V.   DECEASED   1962/4
                                C' 1961

                                SEE IIC

AGRIC MACHINERY

PAVLOV, P. Z.

Structure and spatial distribution of metals in the Lebnitsa
lead and zinc deposits, Kyustendil District. Spis Bulg geol
druzh 25 no.3:239-244 '64.

1. Gyueshevo Mine, Kyustendil District. Submitted April 17,
1963.

MITREVA, Nedelia; PAVLOV, Pavel K.

Influence of ammonium nitrate and superphosphates on the germination of millet. Selskostop nauka [2] no. 2: 250-251 '63.

PAVLOV, P.V., aspirant

Determing the accuracy of stream leveling for the calcultion
of the Chezy coefficient. Izv. vys. ucheb. zav.; geod. i aerof.
no.2:69-76 '61.   (MIRA 14:6)

1. Kiyevskiy inzhenerno-stroitel'nyy institut.
            (Leveling) (Hydrographic surveying)

L 22540-66   EWT(1)/EWT(m)/T/EWP(t)   IJP(c)   JD/GG

ACC NR: AP6009650   SOURCE CODE: UR/0181/66/008/003/0725/0730

AUTHOR: Pavlov, P. V.; Layner, L. V.; Sterkhov, V. A.; Panteleyev, V. A.   48

ORG: Gor'kiy State University im. N. I. Lobachevsiy (Gor'kovskiy gosudarstvennyy universitet)

TITLE: On the proof of the existence of an autonomous diffusion flux along iso-lated dislocations

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 725-730

TOPIC TAGS: crystal lattice dislocation, physical diffusion, silicon, single crystal

ABSTRACT: This is a continuation of earlier work by the authors (FTT v. 7, 922, 1965 and v. 6, 384, 1964), where it was shown that diffusion along dislocations exist in single crystals of germanium and silicon, in addition to the ordinary volume diffusion. Since these results differ from those of many others, the authors present, using the diffusion of indium in silicon as an example, new re-sults to confirm that the diffusion along the dislocations is much faster than through the volume. The investigations were made on "sitting" dislocations. p-type silicon samples were used, with specific resistivity 18 ohm-cm and average dislocation density $N_d = 10^4$ cm^{-2}. The samples were cut from a specially grown

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L 22540-66

ACC NR: AP6009650

ingot, which contained dislocations of only one kind, "sitting" dislocations parallel strictly to the growth axis [110]. The diffusing indium was tagged with In^{114}. The diffusion from the gas phase in quartz ampoules is accurate to 10^{-4} torr at temperatures 1010--1270C. The distribution of the indium was determined by removal of layers. In parallel with this method, autoradiographic study of the diffusion was also made to exclude the possibility of simultaneous existence of other diffusion mechanisms. The data yielded for the diffusion coefficient and diffusion heat along the dislocations values of 10^{4} cm^2/sec and 77 kcal/mole, respectively, as against 16.5 cm^2/sec and 90 kcal/mole for volume diffusion. A criterion is introduced, making it possible to estimate the influence of volume diffusion on the form of the concenteration curve, and it is shown that the diffusion actually observed takes place along the dislocations and cannot be attributed to the settling of indium on the dislocations when the sample is cooled. The dimension of the effective diffusion region around the dislocations is determined by an independent electron transport method, and is found to be of the order of 100 Å. Orig. art. has: 3 figures, 11 formulas, and 1 table.

SUB CODE: 20/   SUBM DATE: 16Jul65/   ORIG REF: 012/   OTH REF: 005

Card 2/2 bK

KUDREV, Todor; PAVLOV, Petur

Influence of the drying up of swollen and germinated seeds and plants in the fall on the development and yield of the wheat. Selskostop nauka 2 no.1:117-123 '63.

VOL'SKAYA, L., inzh.; PAVLOV, R., inzh.; SHCHERBAKOV, V., inzh.

Standard series of automatic equipment for refrigerating machines [with summary in English]. Khol. tekh. 35 no.4:39-44 Jl-Ag '58.

(MIRA 11:10)

1.TSentral'noye konstruktorskoye byuro kholodil'nogo mashinostroyeniya.
(Refrigeration and refrigerating machinery)

L 47340-65   EN   D/EWT(a)/T/EWP(t)/ETI   IJP(c)   JD

ACC NR: AR6025735   SOURCE CODE: UR/0058/66/000/004/A075/A075

AUTHOR: Rarenko, I. M.; Pankevich, Z. V.; Pavlov, R. A.; Semizorov, A. F.

TITLE: Development of operating conditions and apparatus for the synthesis and grow-
ing of single crystals of $A^{II}B^{V}$ compounds, using physico-chemical analysis

SOURCE: Ref. zh. Fizika, Abs. 4A627

REF SOURCE: Sb. Simpozium. Protsessy sinteza i rosta kristallov i plenok poluprovod-
nik. materialov, 1965. Tezisy dokl. Novosibirsk, 1965, 32-34

TOPIC TAGS: single crystal growing, zinc compound, cadmium compound, antimonide,
stoichiometry

ABSTRACT: The possibility of obtaining single crystals of CdSb and ZnSb was investi-
gated. Single crystal p- and n-type CdSb with a carrier density $\sim 1 \times 10^{14}$ cm^{-3} at 77K
was grown by the Czochralski method, using specially constructed apparatus, in various
inert gases at pressures 0.1 - 3 kg/cm^2. The temperature of the melt and of the space
over the melt was maintained constant by separate thermal regulators accurate to
±0.05C. A physico-chemical analysis was made of alloys of the Cd-Sb system, with
stoichiometric and near-stoichiometric composition, in the temperature interval up to
650C. Apparatus in which conditions could be created for obtaining single-phase crys-
tals of compounds that melt non-congruently was constructed and used to grow ZnSb
crystals. [Translation of abstract]

SUB CODE: 20

Card 1/1   pk

PAVLOV, R.K.

Two cases of Barre-Mason disease. Kaz.med.zhur. no.5:61-62
S-O '62.
(MIRA 16:4)

1. Fakul'tetskaya khirurgicheskaya klinika (zav. - prof.
S.L.Libov) Kuybyshevskogo meditsinskogo instituta.
(ANGIOMA)

RUBANOVICH, G.L.; PAVLOV, R.K.

Use of the muscle relaxant, decamethonium (procuran). Khirurgiia
no.12:21-26 '61.   (MIRA 15:11)

1. Iz klinki fakul'tetskoy khirurgii (zav. - prof. S.L. Libov)
Kuybyshevskogo meditsinskogo instituta.
                        (CURARELIKE SUBSTANCES)

AUTHORS: Burtsev, V.V., Yelyutin, S.P., Zarayev, I.I., Lysenko, N.Ye., Migdal, Ye.Ia., Wolchankir, Yu.T., "ysina, A.3., Myagkov, M.A., Pavlcv, 3.N., and Filippovich, V.C.   SOV/19-58-6-554/685

TITLE.   A Method of Coloring the Ends of Paper Cartridges on Bobbin-Winding Machines (Sposob okraski kontsov bumazhnykh patronov na shpulesavertochnykh mashinakh)

PERIODICAL: Byulleten' izobreteniy, 1958, Nr 6, p 122 (USSR)

ABSTRACT: Class 54o, 4. Nr 113596 (580171 of 11 Oct 57). Submitted to the Committee for Inventions and Discoveries at the Ministers Council of USSR. In order to simultaneously color both ends of the cartridge by one coloring roller, the paint is applied on one side of the paper tape in the form of rectangular sect-ions: the tape is cut down the center of the colored sections and fed to the rotating spindle with the side opposite to the colored sections facing outwards.

Card 1/1

SINYAGIN, I.I., red.; MOVSISIANTS, A.P., otv. za vypusk; NIKOLAYEVA, G.F., red.; PAVLOV, R.P., red.; POTOTSKAYA, N.M., tekhn. red.

[Farm management system in Novosibirsk Province; materials of the outsession of the Lenin All-Union Academy of Agricultural Sciences, Novosibirsk, July 29th - August 2nd, 1958] O sisteme vedeniia sel'-skogo khoziaistva v Novosibirskoi oblasti; materialy vyezdnoi ses-sii Akademii 29 iiulia - 2 avgusta 1958 goda g. Novosibirsk. Novo-sibirskoe knizhnoe izd-vo. Vol.3. 1959. 401 p.   (MIRA 14:8)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina. 2. Glavnyy uchenyy sekretar' Prezidiuma Akademii sel'sko-khozyaystvennykh nauk imeni V.I.Lenina, Chlen-korrespondent Akade-mii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Sinyagin)
(Novosibirsk Province—Agriculture)

SINYAGIN, I.I., red.; MOVSISYANTS, A.P., otv. za vypusk; NIKOLAYEVA, G.F., red.; PAVLOV, R.P., red.; POTOPSKAYA, N.M., tekhn.red.

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