

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858810008-2



APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858810008-2"

VASILEVSKAYA, N.L.; MATVEYEVA, O.F.

Reticulocytosis in peripheral blood of the mother as a symptom of oxygen deficiency in the fetus. Akush. i gign. 33 no.2:5-11 Mr-Apr. '56. (MIRA 9:7)

1. Iz kliniko-diagnosticheskoy laboratorii (zav. - kandidat meditsinskikh nauk N.L.Vasilevskaya) i rodit'nogo otdeleniya (zav. - dotsent L.A.Reshetova) Instituta akusherstva i ginekologii AMN SSSR (dir.- prof. P.A.Beloshapko)

(PREGNANCY, blood in  
reticulocytosis, as diag. of oxygen defic. of fetus)

(FETUS  
oxygen defic., determ. by means of reticulocytosis determ.  
in mother)

(OXYGEN, defic.  
in fetus, diag. by means of reticulocytosis determ.  
in mother)

VASILEVSKAYA, N.L., kandidat meditsinskikh nauk; PROROKOVA, V.K., kandidat  
~~meditsinskikh nauk~~

Some problems in hematology in gynecological and obstetrical  
practice. Vest. AMN SSSR 12 no.3:87-90 '57. (MLRA 10:8)  
(BLOOD) (GYNECOLOGY) (OBSTETRICS)

VASILEVSKAYA, N.L.; KISTING, M.G.

Significance of certain hematological indexes in the early diagnosis of erythroblastosis fetalis. Vop. okh. mat. i det. 3 no.1:37-41 Ja-F '59.  
(MIRA 12:2)

1. Iz kliniko-diagnosticheskoy laboratorii (zav. - starshiy nauchnyy sotrudnik N.L. Vasilevskaya) i otdeleniya novoroz dennikh (nauchnyy rukovoditel' - prof. A.F. Tur) Instituta akusherstva i ginekologii AMN SSSR (dir. - prof. P.A. Belshapko).  
(ERYTHROBLASTOSIS FETALIS)

VASILEVSKAYA, N.L.

Simple methods for the determination of bilirubin in the blood of newborn infants; on the problem of early prognosis of hemolytic disease. Akush.i gin. 35 no.4:56-58 J1-Ag '59. (MIRA 12:11)

1. Iz kliniko-dagnosticheskoy laboratorii Instituta akusherstva i ginekologii (dir. - chlen-korrespondent AMN SSSR prof. P.A. Beloshapko) AMN SSSR.

(ERYTHROBLASTOSIS, FETAL blood)  
(BILIRUBIN blood)

VASILEVSKAYA, N.L.

New data on the pathogenesis of jaundice in the newborn period  
(review of the literature). Vest. AMN SSSR 1963 no. 11:54-63  
1960. (MIRA 13:12)

1. Institut akusherstva i ginekologii AMN SSSR.  
(JAUNDICE)

VASILEVSKAYA, N.L.

On the "glycogenic function" of the myometrium during pregnancy.  
Biul. eksp. biol. i med. 49 no. 4:101-104 Sp '60. (MIRA 13:10)

1. Iz Instituta akusherstva i ginekologii (dir. - chlen-  
korrespondent AMN SSSR P.A. Beloshapko) AMN SSSR, Leningrad.  
(PREGNANCY) (UTERUS) (GLYCOGEN)

VASILEVSKAYA, N.L.

Some mechanisms of the regulation of glycemia in intrauterine fetuses and newborn infants. Biul. eksp. biol. i med. 54 no.9:22-26 S '62. (MIRA 17:9)

1. Iz Instituta akusherstva i ginekologii (dir.- prof. M.A. Petrov-Maslakov) AMN SSSR, Leni'grad. Predstavleno deyatvitel'ny'm chlenom AMN SSSR A.F. Turom.



VASILEVSKAYA, N.L.

Bilirubin in the blood of the newborn under normal and hypoxic conditions. Akush. i gin. no.6349-52 N-D '63. (MIRA 17:12)

1. Instituta akusherstva i ginekologii (direktor .. prof. M.A.Petrov-Maslakov) AMN SSSR.

PROCESSES AND PRESERVATIVE MEDIA

117 AND 118 ORDERS

17

CA

The use of quinazol as a preservative in placental measles antiserum. M. N. Vasil'evskaya and O. Z. Chumachenko. *Z. Mikrobiol., Epidemiol., Immunitätsforsch.* (U. S. S. R.) 1989, No. 1, 75-8 (in English, 78). --Quinazol in concns. of 0.05% is a more effective preservative than CHCl<sub>3</sub> for placental measles antiserum. S. A. Karjala

A 38-51A METALLURGICAL LITERATURE CLASSIFICATION

EFFECTIVE DATE

GROUPS	SUBGROUPS	LETTERS	LIST AND ORDER
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

ACC NR: AP6035346

SOURCE CODE: UR/0239/66/052/011/1392/1394

AUTHOR: Vasilevskiy, N. N.

ORG: Laboratory of Cybernetics, Department of Comparative Physiology, Institute of Experimental Medicine, AMN SSSR, Leningrad (Laboratoriya kibernetiki Otdela sravnitel'noy fiziologii, Instituta eksperimental'noy meditsiny AMN SSSR)

TITLE: A modification of the microelectrode holder for drawing off potentials from individual cortical neurons

SOURCE: Fiziologicheskiy zhurnal SSSR, v. 52, no. 11, 1966, 1392-1394

TOPIC TAGS: cerebral cortex, neuron, rabbit, experiment animal, animal physiology, electric potential

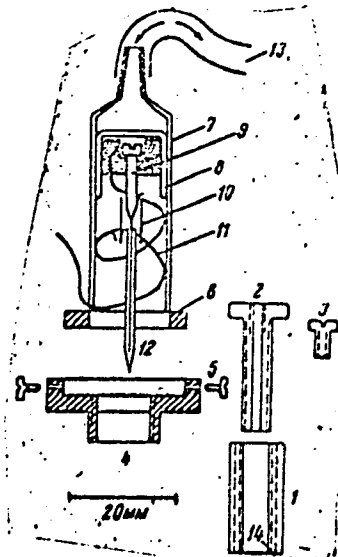
ABSTRACT: A simpler modification of the Hubel chamber, specially designed for metal microelectrodes in a glass insulating envelope, is proposed. The feed cylinder of the chamber is made from an ordinary 5-ml glass syringe. The cylinder of the syringe (see Fig. 1) is cut off to 30--40 mm and the plunger to 10--15 mm. A silver point electrode is used for taking a monopolar surface electrocorticogram. The indifferent electrode is placed on the ear of the animal. Microelectrodes made of tungsten wire with a diameter of 20  $\mu$  were used to read extracellular peak potentials. The described micromanipulator and microelectrode holder were used to record the activity of individual cortical cells of rabbits, under conditions of a chronic experiment of

UDC: 612.822.3(0.18)

Card 1/2

ACC NR: AP6035346

Fig. 1. Microelectrode holder with hydraulic feed of electrode: 1 - sleeve with outside and inside threads (outside diameter 10 mm) attached in trepanned opening of skull; 2, 3 - screws; 4 - shaped disk with set screws; 5, 6 - disks with eccentric openings; 7 - glass cylinder; 8 - plunger; 9 - Teflon insert with center screw; 10 - rubber tube; 11 - spirally bent lead to grid of cathode follower; 12 - microelectrode; 13 - plastic tube to hydraulic oil manipulator; 14 - monopolar electrode for surface electrocorticogram



10--60 min. This time was entirely sufficient for determining and analyzing the receptive field of an individual neuron. Orig. art. has: 1 diagram and 1 graph.

SUB CODE: 06/ SUBM DATE: 26May65/ ORIG REF: 003/ OTH REF: 005

Card 2/2

VASILEVSKIY, Nikolay Nikolayevich; NAUMENKO, Andrey Ivanovich

[Rate of cerebral blood flow and movement of the cerebrospinal fluid; experimental study by means of tagged atoms] Skorost' mozgovogo krovotoka i dvizhenie tserebrospinal'noi zhidkosti; eksperimental'noe issledovanie metodom mechenykh atomov. Lenin-grad, Medgiz, 1959. 179 p. (MIRA 13:8)  
(BRAIN--BLOOD SUPPLY) (CEREBROSPINAL FLUID)

ACC NR: AP6037018

(A,N)

SOURCE CODE: UR/0181/66/008/011/3434;3436

AUTHOR: Vasilevskaya, A. S.; Sonin, A. S.

ORG: none

TITLE: Electrooptical and elasto-optical properties of deuterated dihydrophosphate ammonium crystals

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3434-3436

TOPIC TAGS: electrooptic effect, elasto-optic effect, ammonium phosphate, deuterium compound

ABSTRACT: The authors report on an investigation of the electrooptical and elasto-optical effects in  $\text{ND}_4\text{D}_2\text{PO}_4$  crystals in the temperature interval from room to the Curie point. The electrooptic coefficients were determined under static conditions in mechanically free crystals, and the piezooptic coefficient, which determines the secondary electrooptic effect, was measured in isolated samples without electrodes, using a procedure described by one of the authors earlier (Vasilevskaya, Kristallografiya v. 10, 425, 1965). All the measurements were made in a thermostat at a constant wavelength  $5350 \text{ \AA}$ . The linear and quadratic electro-optical effects were determined separately by birefringence measurements. The linear coefficient was found to be  $1.8 \times 10^{-7}$  esu, and the quadratic one, which was found to depend on the polarization (owing to the fact that the nonlinear terms of higher order are still quite large), was found to be  $4 \times 10^{-10}$  esu at a polarization of  $0.02 \text{ \muCoul/cm}^2$ . The

Card 1/2

ACC NR: AP6037018

quadratic coefficient increases with temperature more rapidly than the linear one. The piezooptic coefficient was found to be practically independent of the temperature. When the piezooptic effect is taken into account, the value of the electrooptic coefficient decreases from  $\sim 1.8 \times 10^{-7}$  to  $\sim 1.4 \times 10^{-7}$  esu. The authors thank L. N. Rashkovich and V. A. Koptsik for supplying the crystals, I. A. Slepko and M. P. Kalitina for help with the experiments, and I. S. Rez and V. E. Perfilova for a discussion of the results. Orig. art. has: 2 figures and 3 formulas.

SUB CODE: 20/    SUBM DATE: 18Mar66/    ORIG REF: 002/    OTH REF: 006

Card 2/2

ACC NR: AM6035816

Monograph

UR/

Zhukov, G. P.; Vasilevskaya, E. G.; Lukin, P. I.

Outer space and the problem of universal peace (Kosmos i problema vseobshchego mira) Moscow, Izd-vo "Nauka", 1966. 193 p. biblio. (At head of title: Akademiya nauk SSSR. Institut gosudarstva i prava) 3200 copies printed.

TOPIC TAGS: space flight, space program, space warfare, space law, disarmament

PURPOSE AND COVERAGE: This book, intended for the general reader, discusses the problems of assuring the use of space for peaceful purposes. It summarizes the UN proceedings relative to this matter and stresses the validity of the Soviet position. The legal problems arising in connection with the use of outer space, including the safety of astronauts, responsibility for damage, and questions of jurisdiction are discussed.

TABLE OF CONTENTS:

Introduction -- 3

Ch. I. Soviet disarmament program. A practical way of banning the use of outer space for military purposes -- 7

Ch. II. Law and order in space - a vital necessity -- 47

Ch. III. International legal problems of assuring the safety of flights in outer space -- 63

Card 1/2

UDC: NONE



ACC NR: AM6035816

- Ch. IV. Responsibility for damage sustained as a result of space activity -- 101
- Ch. V. Use of artificial Earth satellites to create a world-wide communications system -- 129
- Ch. VI. Communication satellites and international relations -- 152
- Ch. VII. International legal status of communication satellites -- 174
- Ch. VIII. Meteorological satellites and problems of international law -- 185

SUB CODE: 05, 22/

SUBM DATE: 28Apr66/

ORIG REF: 149/

OTH REF: 079

Card 2/2

VASILEVSKAYA, N. P.

COUNTRY : USSR

CATEGORY : Pharmacology and Toxicology. Analeptics V

ABS. JOUR. : RZhBiol., No. 5 1959, No. 23064

AUTHOR : Vasilevskaya, N. P.; Kuzmenko, A. N.

INST. : -

TITLE : Changes of the Sugar Level in the Blood of Man During Peroral Administration of the Seeds of Schizandra chinensis

ORIG. PUB. : V sb.: Materialy k izuch. zhen'shenya i limonnika Vyp. 3, L., 1958, 166-169

ABSTRACT : Triturated seeds of Schizandra chinensis (S) in a dose of 2-5 g were administered on an empty stomach perorally to 40\* persons, simultaneously with 50 g of glucose (G), 2 hours prior to the administration of G and without administration of G. No regularities in the action of S upon the sugar level in the blood were detected.

\*healthy

Card: 1/1

76

TEMPER, B.A.; VASILEVSKAYA, N.P.; MOROZ, R.I.; SMYSHLYAYEVA, A.P.

Characteristics of the arterial pressure in young people in the city of Khabarovsk; report No. 1. Trudy Khab.med.inst. no.20:162-170 '60.  
(MIRA 15:10)

1. Iz kafedry gospital'noy terapii (zav. prof. B.A.Temper)  
Khabarovskogo meditsinskogo instituta.  
(Khabarovsk—BLOOD PRESSURE)



VASILEYSHAYA, N. S.

USSR/Chemistry - Mercury Compounds  
Succinimide

Aug 49

"Reaction of Bromosuccinimide With Several Mercury Organic Compounds," G. A. Razuvaev,  
N. S. Vasileyshaya, *Sov'kiy State U*, 3 $\frac{1}{4}$  pp

"Dok Ak Nauk SSSR" Vol LXVII, No 5

Gives general formulas for the reaction of bromosuccinimide with symmetrical and non-symmetrical organic mercury compounds, and lists the "new" compounds:  $n\text{-NO}_2\text{-C}_6\text{H}_4\text{HgNC}_4\text{H}_4\text{O}_2$ ,  $\text{C}_6\text{H}_5\text{CH}_2\text{HgNC}_4\text{H}_4\text{O}_2$ ,  $n\text{-Br-C}_6\text{H}_4\text{HgNC}_4\text{H}_4\text{O}_2$ ,  $\text{C}_2\text{H}_5\text{HgNC}_4\text{H}_4\text{O}_2$ ,  $m\text{-CH}_3\text{O-C}_6\text{H}_4\text{HgNC}_4\text{H}_4\text{O}_2$ ,  $n\text{-(CH}_3)_2\text{NC}_6\text{H}_4\text{HgNC}_4\text{H}_4\text{O}_2$ , and  $\text{C}_6\text{H}_5\text{HgNC}_4\text{H}_4\text{O}_2$ . Submitted 3 Jun 49.

PA 66/49T25

VASILEYSKAYA, N. S.

CH  
 Reactions of carbon tetrachloride with alcohols. C. A. Paznyany and N. S. Vasileyskaya (State Univ., Gorki, Doklady Akad. Nauk S.S.S.R. 80, 69-72 (1951)).—In studies of photoreactions of metalloorg. compds. in mixts. of 2 solvents, one of which contains halogen and the other does not, an interesting reaction was discovered which resulted in the following: each R or R<sub>2</sub>Hg radical reacted by splitting off an atom of H from the nonhalogen solvent, but the RHg radical reacted with the halogen-carryg. solvent with the formation of RHgX. Thus, HgPh<sub>2</sub> in MeOH soln. with CCl<sub>4</sub> on exposure to ultraviolet light gave C<sub>6</sub>H<sub>6</sub>, PhHgCl, HCHO, and C<sub>2</sub>Cl<sub>4</sub>. When HgPh<sub>2</sub> in MeOH was exposed to ultraviolet light, C<sub>6</sub>H<sub>6</sub> and HCHO were formed. With CCl<sub>4</sub>, HgPh<sub>2</sub> reacted similarly on exposure with formation of PhHgCl, PhCl, and C<sub>2</sub>Cl<sub>4</sub> while upon heating the reaction was not observed. It appears probable that radicals are formed in the thermal reaction of HgPh<sub>2</sub> with MeOH, which can react with CCl<sub>4</sub>. HgPh<sub>2</sub> (2.0 g.) in 15 cc. MeOH were heated in a sealed tube with 15 cc. CCl<sub>4</sub> at 200-10° for 20 hrs. The reaction mixt. after heating sepd. into 2 layers, water-sol. combustion gases which were condensed to liquid upon cooling, and 1.1 g. Hg in bottom of tube. The top H<sub>2</sub>O layer contained HCHO and the nonaq. layer contained CHCl<sub>3</sub>, C<sub>6</sub>H<sub>6</sub>, and CCl<sub>4</sub>. A soln. of 1 g. HgCl<sub>2</sub> in 10 cc.

CCl<sub>4</sub> and 17 cc. MeOH was similarly processed and the products of reaction were CH<sub>2</sub>Cl, H<sub>2</sub>O and Me<sub>2</sub>O, HgCl (0.55 g.), HCHO (2.41 g.), CH<sub>2</sub>(OMe), CH<sub>2</sub>Cl, and HCl (0.2 g.). Later tests indicated that the reaction between MeOH and CCl<sub>4</sub> proceeded without Hg compds. by merely warming the components. 2 CCl<sub>4</sub> + MeOH → 2 CHCl<sub>3</sub> + 2 HCl + HCHO, then MeOH + HCl → H<sub>2</sub>O + MeCl, and HCHO + 2 MeOH  $\xrightarrow{HCl}$  CH<sub>2</sub>(OMe) + H<sub>2</sub>O. A series of reactions also occurred in the presence of Hg compds. HgCl<sub>2</sub> reacted with CCl<sub>4</sub> to form HgCl<sub>2</sub> and C<sub>2</sub>Cl<sub>4</sub>. Alc. (Me, Et, PhCH<sub>2</sub>) were dehydrated upon heating with HgCl<sub>2</sub> with the formation of esters, and the reaction went more smoothly with large amts. of HgCl<sub>2</sub> and at increased temps. As shown in the tests, EtOH and PhCH<sub>2</sub>OH also gave esters upon heating with HgCl<sub>2</sub>. PhCH<sub>2</sub>OH with CCl<sub>4</sub> gave PhCH<sub>2</sub>Cl, heating with HgCl<sub>2</sub>. PhCH<sub>2</sub>OH with CCl<sub>4</sub> gave PhCH<sub>2</sub>Cl, considerable quantities of resinous products. It is possible that in the reactions with alcs. the CCl<sub>4</sub> radical was formed, which split off H from the alc. A mixt. of MeOH (20 cc.) with CCl<sub>4</sub> (20 cc.) on 14-day exposure to a Hg quartz lamp gave laminated mixts. The lower layer gradually enlarged and finally remained const. (14 cc.). The photoreaction

GA. RAZUVAEV

2/  
12

6

produced much HCl. The reaction mixt. was processed with H<sub>2</sub>O, the H<sub>2</sub>O soln. contained 0.32 g. HCHO and 2.19 g. HCl; the nonaq. layer consisted of a soln. of 2.4 g. C<sub>2</sub>Cl<sub>4</sub> in CCl<sub>4</sub>. The thermal reaction and photoreaction are sharply distinguished. In the photoreaction the process also includes the reaction: MeOH + 2 Cl. → HCHO + 2 HCl, MeCl is not formed, but large quantities of HCl are formed; the same difference occurs in the behavior of the CCl<sub>3</sub> radical in the thermal process, as the reaction proceeds by removal of the H from the alc., but in the photoreaction dimerization takes place. The difference in the reactions with temp. change is marked for other radicals such as Me or Et. At lower temps. the dimerization reaction prevails but at higher temps. the reaction of the radicals with other mols. and reactions of disproportionation prevail. In the thermal reaction the radical CCl<sub>3</sub> partially dimerizes to C<sub>2</sub>Cl<sub>6</sub>, which can in turn react with MeOH. CHCl<sub>3</sub> is not found in the reaction products when MeOH is warmed with C<sub>2</sub>Cl<sub>4</sub> in a sealed tube at 200-20°. HCHO, MeCl, and CCl<sub>3</sub>·CCl<sub>3</sub> are obtained; therefore the reaction is: C<sub>2</sub>Cl<sub>4</sub> + MeOH → (Cl<sub>2</sub>C)<sub>2</sub> + 2 HCl + HCHO. P. S. Boig

VASILEYSKAYA, N. S.

Chem Abs v48

1-25-54

General & Physical  
Chemistry

Chem  
② 3

Free-radical reactions of carbon tetrachloride. G. A. Razuvaev and N. S. Vasiletskaya, *Uspehi Khim.* 22, 38-61 (1953).—A review with 105 references on the properties and reactions of the CCl<sub>3</sub> radical. G. M. Kosolapoff



AUTHOR: Vasileyskaya, N. S.

SOV/79-28-7-5/64

TITLE: ~~Reactions of the Polyhalogen Compounds With Alcohols~~  
(Reaktsii polihaloidnykh soyedineniy so spirtami)PERIODICAL: Zhurnal obshchey khimii, Vol 28, Nr 7,  
pp 1738 - 1742 (USSR)ABSTRACT: In earlier papers published by the author and her collaborators the reactions  $\text{CCl}_4$  with methyl- and ethyl alcohol (Ref 2) were investigated. On their heating to  $200^\circ$  these reactions take place according to the scheme
$$\text{CCl}_4 + \text{ROH} \longrightarrow \text{CHCl}_3 + \text{HCl} + \text{R}-\text{C} \begin{array}{l} \text{O} \\ \parallel \\ \text{H} \end{array}$$
 entraining other formation processes of alkyl chloride and ethers. In the case of an irradiation with ultraviolet light, with  $\gamma$ -rays as well as on the action of an initiator (Ref 4) this reaction takes place at low temperatures under the formation of HCl. It was of interest to the author to clear the problem whether these rules are valid also in the case of other alcohols and polyhalogen compounds. Therefore the thermal reactions of carbon tetrachloride with butanol-1, butanol-2 and, on the other

Card 1/3

Reactions of the Polyhalogen Compounds With  
Alcohols

SOV/79-28-7-5/64

hand, that of ethane pentachloride and ethane tetrachloride (symmetrical and asymmetrical) with methanol were investigated. The reactions of butanol-1 with  $\text{CCl}_4$  take place at higher temperature ( $230^\circ$ ) than in the case of using  $\text{CH}_3\text{OH}$ , under the formation of chloroform,  $\text{HCl}$ , water and butyl chloride. Instead of the expected butyric acid aldehyde, however, its butyl ester was found in the reaction products, as the aldehyde further converts:  $2\text{C}_3\text{H}_7\text{COH} \longrightarrow \text{C}_3\text{H}_7\text{COO}-\text{C}_4\text{H}_9$ . Butanol-2 reacts with  $\text{CCl}_4$  at  $210-220^\circ$  with the expected products being formed: The formation of chloroform,  $\text{HCl}$ , methyl-ethyl ketone, water, secondary butyl chloride, butylene, and the unexpected formation of a compound of the empiric formula  $\text{C}_5\text{H}_8\text{Cl}_4$  and of a considerable amount of cyclohexene. Thus it was shown that also other primary and secondary alcohols enter reaction with  $\text{CCl}_4$  analogous to methyl alcohol. Ethane pentachloride reacts with methanol in a similar way as carbon tetrachloride, i.e. under the dehydration of alcohol to the formaldehyde and under the formation  $\text{HCl}$  and ethane tetrachloride. There are 8 refer-

Card 2/3

Reactions of the Polyhalogen Compounds With  
Alcohols

SOV/79-20-7-5/64

ences, 5 of which are Soviet.

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet (Gor'kiy State University)

SUBMITTED: June 6, 1957

1. Halogen compounds--Chemical reactions    2. Alcohols--Chemical reactions

Card 3/3

SOV/81-59-8-27394

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 8, p 213 (USSR)

AUTHORS: Razuvayev, G.A., Vasileyskaya, N.S.

TITLE: The Reaction of Carbon Tetrachloride With Cyclohexanol

PERIODICAL: Uch. zap. Gor'kovsk. un-ta, 1958, Nr 32, pp 175 - 178

ABSTRACT: The heating of cyclohexanol (I) with an equal amount of  $CCl_4$  in a sealed ampoule (30 - 35 hours at 200 - 210°C) is accompanied by dehydrogenation, leading to  $CHCl_3$  and cyclohexanone. Simultaneously with the dehydrogenation the dehydration of I to cyclohexene takes place. As a result of secondary processes, cyclohexyl chloride and a mixture of dicyclohexyl chloride isomers are formed. The latter is polluted apparently by a small quantity of cyclohexenyloxylohexyl chloride. ✓

L. Khayfits

Card 1/1

5.4500  
5.3600

5(3)

AUTHORS: Razuvayev, G. A., Corresponding Member AS USSR, Vasileyskaya, N. S.,  
Oleynik, E. P.

6755

SOV/20-130-1-28/69

TITLE: Ways of Hexachloroethane Formation in Photoreactions Between  
Carbon Tetrachloride and Alcohols

PERIODICAL: Doklady Akademii Nauk SSSR, 1960, Vol. 130, Nr 1, pp 102-104 (USSR)

ABSTRACT: K. Pfordte (Ref 6) indicated a scheme for the process mentioned  
in the title (3). He assumed the formation of  $C_2Cl_6$  to be a  
consequence of the dimerization of  $CCl_3$  radicals. The authors,  
however, consider another way of  $C_2Cl_6$  formation possible.

At first, the same process occurring in the thermal action may  
occur in the photoreaction (Equation 1). But then,  $CHCl_3$  reacts

with  $CCl_4$  according to the formula  $CHCl_3 + CCl_4 \xrightarrow{h\nu} C_2Cl_6 + HCl$  (4).

This happens really when irradiating the mixture of 46.5 g of  
 $CCl_4$  and 17.9 g of  $CHCl_3$  by means of the mercury-quartz lamp of  
type PRK-2. 4.0 g of  $C_2Cl_6$  are formed within 1 month.

Card 1/3

Ways of Hexachloroethane Formation in  
Photochemical Reactions Between Carbon Tetrachloride and Alcohol

1966  
1966/22-130-1-20/66

To solve this problem, the authors used the reaction of  $CCl_4$  with metals (3) during which  $C_2Cl_6$  is formed. A flask of  $CCl_4$  (5.0 ml, activity 926 imp/min) was heated with 10.2 mg of Ni for 10 h in the presence of skeleton nickel in nitrogen atmosphere up to 80°. In this case, the primary formation reaction of the  $CCl_3$  radicals can only be the interaction between  $CCl_4$  and Ni.  $CCl_4 + \frac{1}{2} Ni \rightarrow CCl_3 + \frac{1}{2} NiCl_2$  (4)

The  $C_2Cl_6$  (6 imp/min) and  $CCl_4$  (5 imp/min) isolated from the reaction mixture were not active. Therefore, the reactions (5) and (6) did not take place here. It was investigated separately whether the reaction (6) ("Fries base exchange") of the  $CCl_3$  radicals takes place. For this purpose, a mixture of 10.0 ml of  $CCl_4$  and 5.0 ml of  $CCl_3$  (activity 772 imp/min) was irradiated under nitrogen with UV rays for 100 h. The  $CCl_4$  isolated was not active (7 imp/min) whereas the resulting  $C_2Cl_6$  showed 123 imp/min.

Card 2/3

Ways of Hexachloroethane Formation  
Photochemical Reactions Between Carbon Tetrachloride and Ethanol

Therefore, reaction (4) did not take place. Thus, the reactions (5) and (6) which might disturb the use of a marked  $CCl_2$  to clarify the formation mechanism of  $C_2Cl_6$  in the acid photo-reaction were excluded here. By UV irradiation (for 110 min under nitrogen) of 15.5 ml  $CCl_4$ , 2.2 ml  $C_2H_5OH$  (90% imp/min), and 15.0 ml  $CH_3OH$ , the authors found that the  $CCl_2$  radical does not tear away the H from the alcohol in the reaction (5). In fact,  $CCl_2$  is formed in the reaction (3).  $C_2Cl_6$  is only formed by dimerization of  $CCl_2$  radical which develop in the photolysis of  $CCl_4$ . According to the authors' opinion, no hydrogen abstraction takes place in the photochemical reactions by the  $CCl_2$  radical, and no reaction (6) occurs due to the rather considerable ionization energy (Ref 8). This is in agreement with the data of other authors.

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

SUBMITTED: September 15, 1955  
Card 3/3

RAZUVAYEV, G.A.; VASILEYSKAYA, N.S.; BYCHKOV, V.T.; MAKAR'YEVA, A.Ye.

Photoreaction of carbon tetrachloride with dioxane. Zhur.ob.khim.  
31 no.12:4057-4058 D '61. (MIRA 15:2)

(Carbon tetrachloride)  
(Dioxane)



RAZUVAYEV, G.A.; VASILEYSKAYA, N.S.

Photoreaction of mercuric chloride with chloroform in the presence of pyridine. Izv. AN SSSR. Ser. khim. no.7:1285-1286 '65. (MIRA 18:7)

1. Laboratoriya stabilizatsii polimerov AN SSSR, Gor'kiy.

RAZUVAYEV, G.A.; VASILEYSKAYA, N.S., kand.khim.nauk

Synthesis, study and use of organic peroxides; conference in  
Lvov. Vest. AN SSSR 35 no.12:108-109 D '65.

(MIRA 19:1)

1. Chlen-korrespondent AN SSSR (for Razuvayev).

L 36991-66 EWP(j)/EWT(m) RM

ACC NR: AP6008513

SOURCE CODE: UR/0062/66/000/001/0181/0182

AUTHOR: Muslin, D. V.; Vasileyskaya, N. S.; Khidekel', M. L.; 29  
Razuvayev, G. A.ORG: Laboratory of Stabilization of Polymers, Academy of Sciences, SSSR  
(Laboratoriya stabilizatsii polimerov Akademii nauk SSSR); Institute of Chemical  
Physics, Academy of Sciences, SSSR (Institut khimicheskoy fiziki Akademii nauk  
SSSR)TITLE: 2,4-di-tert-butyl-6-trimethylsilylphenol<sup>1</sup> and the corresponding phenoxyl

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 1, 1966, 181-182

TOPIC TAGS: phenol, chemical synthesis, silane

ABSTRACT: This article describes the synthesis of a steric-hindered phenol (and corresponding phenoxyl) containing a trimethylsilyl group in the ortho-position. 2,4-di-tert.-butyl-6-trimethylsilylphenol is obtained by hydrolysis of 2,4-di-tert.-butyl-6-trimethylsilyl phenoxytrimethylsilane synthesized by the Wurtz-Fittig reaction from 2,4-di-tert.-butyl-6-bromophenoxytrimethylsilane. Upon oxidation of the new steric-hindered compound with an alkalide solution  $K_3[Fe(CN)_6]$  or  $PbO_2$ , stable 2,4-di-tert.-butyl-6-trimethylsilylphenoxyl is obtained. The electron paramagnetic resonance spectrum of this compound represents a triplet caused by splitting at the meta-protons of the benzene ring.

SUB CODE: 07/ SUBM DATE: 28May65/ ORIG REF: 001/ OTH REF: 002

Card 1/1 *ll*

UDC: 541+541.51+538.113+546.287

VASILEVSKAYA, N.V.

Glycogen content in uterine muscles during disorders of its contractive function. *Akush. i gin.* 32 no.1:5-9 Ja-F '56(MIRA 9:6)

1. Iz laboratorii biokhimii (zav. doktor biologicheskikh nauk. A. D. Braun) i rodil'nogo otdeleniya (zav. dotsent L.A. Reshetova) Instituta akusherstva i ginekologii AMN SSSR (dir. prof. P.A. Beloshapko)

(UTERUS, metab.

glycogen in musc. during disord. of contractive funct.)

(GLYCOGEN, metab.

uterine musc., during disord. of contractive funct.)

PA 8/49T89

VASILEVSKAYA, N. YE.

---

USSR/Medicine - Reflex, Conditioned  
Medicine - Dogs

Jul 48

"Interceptive Conditional Reflex of the Second  
Order," N. Ye. Vasilevskaya, Lab of Higher  
Nervous Activity, Leningrad State U, 3 3/4 pp

"Dok Ak Nauk SSSR" Vol LXI, No 1

Describes experiments conducted on two dogs, one in  
1940-1941, the other in 1945-1946. Includes and  
discusses reflex diagrams obtained. Submitted  
25 Mar 1948.

R/hotRo

VASILEVSKAYA, N.Ye.; AYRAPET'YANTS, E.Sh., zaveduyushchiy.

Characteristics of the role of the time factor in the development of the  
effect resulting from stimulation of interoceptors. Vop.fiziol.int. no.1:  
129-136 '52. (MLRA 6:8)

1. Laboratoriya vysshey nervnoy deyatel'nosti Fiziologicheskogo instituta  
Leningradskogo Gosudarstvennogo ordena Lenina universiteta im. A.A.Zhdanova.  
(Reflexes)

VASILEVSKAYA, N.Ye.; AYRAPET'YANTS, E.Sh., zaveduyushchiy.

Role of interoceptive impulses in temporary chain associations. Vop.fiziol.  
int. no.1:137-144 '52. (MLBA 6:8)

1. Laboratoriya vysshey nervnoy deyatel'nosti Fiziologicheskogo instituta  
Leningradskogo Gosudarstvennogo ordena Lenina universiteta im. A.A.Zhdanova.  
(Nervous system) (Conditioned response)

VASILEVSKAYA, N. Ye.

Uchenyye zapiski Leningradskogo gosudarstvennogo universiteta. No. 164, Fiziologiya i Biokhimiya (Scientific Notes of the Leningrad State University, No. 164, Physiology and Biochemistry), Leningrad University Press. A. I. Zhdanov Press.

Contents: The Physiology of Higher Nervous Activity-- B. A. Ayrapent'yants, "O vnutrenney signalizatsii" (On Internal Signalling); N. Ye. Vasilevskaya, "K voprosu o tsopnykh usloynykh refleksakh" (Toward the Question of Conditioned Reflex Chains), etc; General Laws of Nervous Processes -- L. I. Vasil'yev and N. A. Shoshina, "Vosstanovlenniye serdetsnoy deyatel'nosti razdrazheniyem ekstrakardial'nykh nervov" (Restoration of Heart Activity by Stimulation of Extracardial Nerves); S. Ye. Rudachovskiy, "O tsentral'nykh vliyaniyakh v sechenovskom tormozhenii" (On the Central Influence of Sechenov Inhibitions") etc; Biochemistry-- G. Ye. Vladimirov, "Nekotoryye novyye daniyye po energeticheskoy kharakteristike reaktsii glikoliza" (Several New Facts on the Energy Characteristic of the Glycolysis Reaction); T. N. Ivanova, "Vozrastnyye izmeniya kolichestv nukleinovykh kislot v skeletnoy i serdetsnoy mytse krolika" (Age Modifications of the Number of Nucleic Acids in Skeletal and Cardiac Muscles of the Rabbit); N. I. Prokhorova, "K voprosu ob uglowodnom obmene mozga pri normal'nom ego sostoyanii" (On the Problem of the Carbohydrate Metabolism of the Brain in Its Normal State"), etc.

SO: Sovetskiye knigi (Soviet Books), No. 186, 1953, Moscow, (U-6472)



VASILEVSKAYA, N.Ye.

~~Conditioned chain reflexes.~~ Uch.zap.Len.un. no.164:26-35 '54.  
(MIRA 10:3)

1. Laboratoriya fiziologii vysshey nervnoy deyatel'nosti (zaveduyushchiy  
E.Sh. Ayrapet'yants)  
(CONDITIONED RESPONSE)

FD-2455

USSR/Medicine - Physiology

Card 1/1 Feb 33-6/24

Author : Vasilevskaya, N. Ye.

Title : On the relationship between conditioned reflexes to acid ingestion and the state of the internal analyzer.

Periodical : Fiziol. zhur. 2, 204-209, Mar-Apr 1955

Abstract : The interoceptive conditioned digestive reflexes, produced by a visual or acoustic signal associated with irrigation of an isolated intestinal loop of dogs with a 0.25% solution of HCl, are decreased by rectal application of 200 cc of 0.25% HCl prior to the conditioned stimulus. This effect can also be developed into a conditioned reaction. Rectal application of 0.2% NaOH increases the conditioned response to acid applied to the isolated intestinal loop, and this effect can also be developed into a conditioned reflex. Tables. Seven references, all USSR (5 since 1940).

Institution: Laboratory of Physiology of Higher Nervous Activity of the Physiologic Institute imeni A. A. Ukhtomskiy of the Leningrad University

Submitted : July 18, 1953

USSR/Human and Animal Physiology (Normal and Pathological)  
Nervous System. Higher Nervous Activity. Behavior. T

Abs Jour : Ref Zhur Biol., No 6, 1959, 27061

Author : Vasilevskaya, N.Ye.

Inst : -

Title : On Interaction of Conditioned and Unconditioned Reflexes,  
Connected with Introduction Into the Organism of Acid  
and Alkali.

Orig Pub : Zh. vyssh. nervn. deyat-sti, 1957, 7, No 4, 560-568

Abstract : On dogs, in utilization of acid-defensive reinforcement  
after introduction of acid into the organism, fall of  
interoceptive conditioned reflexes (CR, produced to ir-  
rigation of isolated intestinal loop with 0.25% solution  
of HCl) and increase of exteroceptive CR was observed;  
in alkaline load, reciprocal ratios were noted. Condi-  
tioned signals, which accompanied the introduction into  
organism of acid and alkali, reproduced the changes of

Card 1/2

- 134 -

USSR/Human and Animal Physiology (Normal and Pathological)  
Nervous System. Higher Nervous Activity, Behavior. T

Abs Jour : Ref Zhur Biol., No 6, 1959, 27061

CR which corresponded to real acid and alkali loads. The possibility of production of differentiation to irrigation of intestinal loop with 1% solution of HCl points to considerable finesse of cortical analysis of chemical stimuli which act on internal organs. The action of conditioned exteoreceptove signal of alkali introduction on the back ground of preliminary acid loading (or signal of introduction of acid on the background of alkali load) was prevalent over the action of real acid or alkali.

Card 2/2

USSR/Human and Animal Physiology. Nervous System.  
Higher Nervous System. Behavior.

T

Abs Jour: Ref Zhur-Biol., No 20, 1958, 93641.

Author : Vasilevskaya, N.Ye.

Inst :

Title : Peculiarities in the Course of Chain Conditioned Reflexes  
During Supplemental Administration of Acids and Alkalis  
to the Organism.

Orig Pub: Fiziol. zh. SSSR, 1957, 43, No 6, 511-516.

Abstract: In dogs with isolated ansa of the small intestine  
an application of acid reduced the amount of the  
primary interoceptive acid conditioned reflex (CR)  
and there was also a sharp drop in the magnitude  
of the second degree exteroceptive CR developed upon

Card : 1/2

USSR/Human and Animal Physiology. Nervous System.  
Higher Nervous System. Behavior.

T

Abs Jour: Ref Zhur-Biol., No 20, 1958, 93641.

its foundation. An amount of alkali produced opposite changes. Specially developed exteroceptive CR associated with the entrance of acids and alkalis into the organism also produced changes in second degree CR, just as in a real administration of these substances. The changes described were accompanied by an increase or reduction of acidity in the urine.

Card : 2/2

111

VASILEVSKAYA, N.Ye.

Selective effects of acid and sugar loads on interoceptive conditioned reflexes [with summary in English]. *Fiziol.zhur.* 43 no.9:864-870 S '57. (MIRA 10:11)

1. Laboratoriya fiziologii vysshey nervnoy deyatel'nosti Fiziologicheskogo instituta im. A.A.Ukhtomskogo Leningradskogo gosudarstvennogo universiteta.

(ACIDS, effects,

on conditioned interoceptive reflexes in animals (Rus))

(GLUCOSE, effects,

same)

(REFLEX, CONDITIONED,

eff. of acids & glucose on interoceptive reflexes in animals (Rus))

VASILEVSKAYA, N.Ye.

Electrophysiological data contributing to the study of conditioned  
interoceptive reflexes. Fiziol. zhur. 44 no.3:181-186 Mr '53.

(MIRA 11:4)

1. Laboratoriya fiziologii vysshey nervnoy deyatel'nosti Fiziologicheskogo  
instituta im. akad. A.A. Ukhtomskogo pri Leningradskom gosudarstvennom  
ordena Lenina universitet im. A.A. Zhdanova.

(REFLEX, CONDITIONED, physiology  
electrophysiol. studies (Rus)



VASILEVSKAYA, N.Ye.

Feculiarities of the dynamics of cortical processes in conditioned responses to chemical irritation of the interoceptors. Zhur.vys.nerv. deiat. 8 no.2:201-207 '58.  
(MIRA 13:1)

1. Laboratory of Physiology of Higher Nervous Activity, Ukhtomsky Physiological Institute, Leningrad University.

(INTESTINES, physiology,

chem. stimulation inducing conditioned reflexes in dogs, cortical dynamics (Rus))

(REFLEX, CONDITIONED,

by intestinal chem. stimulation, cortical dynamics in dogs (Rus))

VASILEVSKAYA, N.Ye.

Influence of extirpation of the motor region of the cerebral cortex  
on the chemical interoceptive conditioned reflexes. Nerv. sist.  
no. 2:122-131 '60. (MIRA 14:4)  
(CONDITIONED RESPONSE) (CEREBRAL CORTEX)

AYRAPET'YANTS, E.Sh.; VASILEVSKAYA, N.Ye.; SOTNICHENKO, T.S.

Limbic cortex and visceral reflexes. Report No.1: Condition of the interoceptive and exteroceptive alimentary and acid conditioned reflexes following extirpation of the cortex of the anterior section of gyrus cinguli. Trudy Inst. fiziol. 9:261-267 '60. (MIRA 14-3)

1. Laboratoriya interdtsektivnykh usloynykh reflektsov i Laboratoriya vysshey nervnoy deyatel'nosti Leningradskogo gosudarstvennogo universiteta (zaveduyushchiy - E.Sh.Ayrapet'yants).  
(CONDITIONED RESPONSE) (BRAIN)

VASILEVSKAYA, N.Ye.

Influence of extirpation of the sigmoid gyrus of the cerebral cortex on acid-defensive reflexes from the oral cavity. Trudy Inst. fiziol. 9:285-294 '60. (MIRA 14:3)

1. Laboratoriya interoseptivnykh uslovnnykh reflektsov i Laboratoriya fiziologii vysshey nervnoy deyatel'nosti Leningradskogo gosudarstvennogo universiteta (zaveduyushchiy - E.Sh.Ayrapet'yants).  
(CEREBRAL CORTEX) (CONDITIONED RESPONSE)

BEREZINA, Mariya Pavlovna; VASILEVSKAYA, Natal'ya Yefimovna; AVERBAKH, Mikhail Solomonovich; VETYUKOV, Ivan Alekseyevich, dots.; GOLIKOV, Nikolay Vasil'yevich; GULYAYEV, Pavel Ivanovich; ZHUKOV, Yevgraf Konstantinovich; LATMANIZOVA, Lyudmila Vladimirovna; MAKAROV, Petr Osipovich; NIKITINA, Iya Pavlovna; SPERANSKAYA, Yekaterina Nikolayevna; VASIL'YEV, L.L., prof., red.; PEREDEL'SKAYA, N.M., red.; PARSADANOVA, K.G., red. izd-va; GRIGOR-CHUK, L.A., tekhn. red.

[Comprehensive laboratory manual of human and animal physiology] Bol'shoi praktikum po fiziologii cheloveka i zivotnykh. Izd.2., ispr. i dop. Moskva, Gos. izd-vo "Vysnaya shkola," 1961. 674 p. (MIRA 14:8)  
(PHYSIOLOGY---LABORATORY MANUALS)

VASILEVSKAYA, N.Ye.

Electrocoriteographic representation of chemical changes in the internal environment of the organism. Fiziol.zhur. 47 no.3:310-315  
Mr '61. (MIRA 14:5)

1. From the Laboratory of the Nervous Activity Physiology, State University, Leningrad.

(ELECTROENCEPHALOGRAPHY)  
(BLOOD—ANALYSIS AND CHEMISTRY)

VASILEVSKAYA, N.Ye.; NABOKINA, T.K.

Data on the interaction of nutritional and acid-defensive conditioned reflexes. Nerv. sist, (Leningrad) 2 no.3:101-109 '62.  
(MIRA 17:7)

1. Laboratoriya fiziologii vysshey nervnoy deyatel'nosti Fiziologicheskogo instituta imeni Ukhtomskogo Leningradskogo gosudarstvennogo universiteta.

VASILEVSKAYA, N.Ye.

Electrophysiological study of the relation between the limbic and the motor cortex in rabbits reflecting chemical shifts in the organism. Nerv. sist. no.5:73-82 '64.

(MIRA 18:3)

1. Laboratoriya fiziologii vysshey nervnoy deyatel'nosti Leningradskogo gosudarstvennogo universiteta.



VASILEVSKIY, N.N.; KLIMOVA-CHFRKASOVA, V.I.; VARTANYAN, G.A.

Structural and functional correlations between excitation and inhibition in the central nervous system. Fiziol.zhur. 51 no.4:424-430 Ap '65. (MIRA 13:6)

1. Institut eksperimental'noy meditsiny AMN SSSR, Leningrad.

VASILEVSKIY, N.N.

Relation of the background activity of neurons of the somato-sensory cortex and the characteristics of their functional organization. Fiziol. zhur. 51 no.6:711-716 Je '65.

(MIRA 18:6)

1. Laboratoriya kibernetiki otдела sravnitel'noy fiziologii  
Instituta eksperimental'noy meditsiny AMN SSSR, Leningrad.

VASILEVSKAYA, N.Ye.; UDALOVA, G.P.

Electric activity of the cerebral cortex of a rabbit in the case of salt overload following destruction of the motor and posterior limbic areas of the cortex. Dokl. AN SSSR 161 no.5:1238-1241 Ap '65. (MIRA 18:5)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.  
Submitted June 22, 1964.

VASILEVSKAYA, S.D., uchitel'nitsa

Using farming as a medium for the study of zoology. Biol.v  
no.4:18-21 J1-Ag '60. (MIRA 13:7)

1. Krasnogorodenskaya srednyaya shkola, Kaluzhskogo rayona,  
Kaluzhskoy oblasti.  
(Stock and stockbreeding--Study and teaching)

VASILEVSKAYA, S.D., uchitel'nitsa

Acquainting the eighth grade students with some aspects of industrial hygiene. Biol.v shkole no.4:48-50 J1-Ag '62. (MIRA 15:12)

1. Odinnadtsatiletnyaya shkola No.17, Kaluga.  
(Health education)

AUTHORS: Ol'dekop, Yu. A., Vasilevskaya, T. V. SOV/79-28-11-23/55

TITLE: Reactions of Mercury Pivalate With Peroxides and Light  
(Reaktsii pivalata rtuti s perekisyami i svetom)

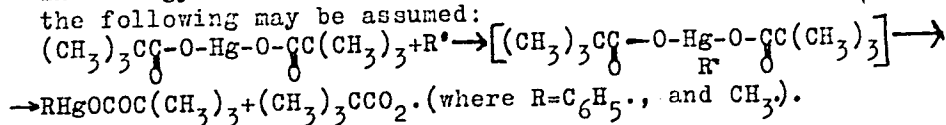
PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11,  
pp 3008 - 3010 (USSR)

ABSTRACT: Continuing earlier papers by G.A.Razuvayov and his  
collaborators (Refs 1-3) the authors investigated  
the reactions of the mercury pivalate (mercury  
trimethyl acetate) with benzoyl peroxide and the  
ditert.butyl dialkyl peroxide, as well as under  
the action of ultraviolet light. The reaction of  
mercury trimethyl acetate with benzoyl peroxide  
took place in benzene solution at 80°, and lead  
to the phenyl mercury compounds (94.8%). In the  
reaction products metallic mercury (99.7%), pivalic  
acid (30%), and resinous products in small amounts  
were found. The reaction of the ditert. butyl per-  
oxide with mercury pivalate was carried out in  
chloro benzene solution at boiling temperatures of  
this not completely inert solvent. The final product

Card 1/3

Reactions of Mercury Pivalate With Peroxides and Light SOV/79-28-11-23/55

consisted of 35.7% methyl mercury compounds, 50.6% metallic mercury, 68.7% pivalic acid and a gas containing CO<sub>2</sub>. The fixation of the methyl radical in the cleavage of the ditert.butyl peroxide was observed for the first time. In the irradiation of mercury pivalate in the ultraviolet light in benzene at 80° the authors obtained 86.5% mercury, pivalic acid, resin and CO<sub>2</sub>. Basing on the results obtained it may be assumed that the radical R<sup>•</sup> formed in the decomposition of the peroxide, breaks the O-Hg bond under the formation of the corresponding RHgOCOC(CH<sub>3</sub>)<sub>3</sub>. In analogy to the earlier found scheme (Ref 1) the following may be assumed:



In the thermal and photoreactions of mercury pivalate no (CH<sub>3</sub>)<sub>3</sub>CHgX compounds were found. There are 10 references, 3 of which are Soviet.

Card 2/3

Reactions of Mercury Pivalate With Peroxides and Light SOV/79-28-11-23/55

ASSOCIATION: Belorusskiy gosudarstvennyy universitet imeni V.I. Lenina  
(Belorussian State University imeni V.I.Lenin)

SUBMITTED: September 26, 1957

Card 3/3



VASILEVSKAYA, V. A. and L. A. SLUTSKIY.

Stakhanovtsy liteinogo tsekha (ZIS). Moskva, Mashgiz, 1950. 84 p.

Refers to the foundry shop of the Moscow Stalin automobile plant.

(Stakhanovites of the foundry shop.)

SO: Manufacturing and Mechanical Engineering in the Soviet Union,  
Library of Congress, 1953.

VOINOV, M.S.; KIRILLOV, G.H.; KOZLOVA, M.M.; CHZHAO, A.Ye. [Chao, A.E.];  
ABRIKOSOVA, F.S., red.; AMBARTSUMYAN, Z.N., red.; YASILNYSKAYA,  
V.A., red.; DROZDGYA, N.H., red.; ZHAK, D.K., red.; KRSEKHICH, V.N.,  
red.; KOPNELOVA, G.I., red.; LEVASHEVA, Z.P., red.; SMIRNOVA, B.A.,  
red.; TIMOSHENKO, G.G., red.; KHRENKOVA, A.A., red.; KHELEMSKAYA,  
L.M., tekhn. red.

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

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

ERLAVENTSEVA, G.N., BOGATOVA, G.P., LEVINA, S.S., NASEDKINA, B.A., FOMINA, Ye.N.,  
red.; ABRIKOSOVA, F.S., red.; AMBARTSUMYAN, red.; VASILEVSKAYA, V.A.  
red.; DROZDOVA, N.N., red.; ZHAK, D.K., red.; KOPELOVA, G.T., red.;  
LEVASHOVA, Z.P., red.; SMIRNOVA, B.A., red.; TIMOSHENKO, G.G., red.;  
KHRENKOVA, A.A., red.; KHELEMSKAYA, L.M., tekhn.red.

[Catalog for district libraries. Classes: Natural sciences - 5;  
Medicine- 61; Geography - 91] Katalog raionnoi biblioteki.  
Otdely: 5 estestvoznaniye, 61 meditsina, 91 geografiya. Izd. 3.,  
dop. 1 perer. Moskva, 1958. 215 p. (MIRA 11:8)

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

ABRIKOVA, F.S.; AMBARTSUMYAN, Z.N.; VASILEVSKAYA, Y.A.; DROZDOVA, N.N.;  
ZHAK, D.K.; KESSENIKH, V.N.; KOPELOVA, G.I.; LEVASHOVA, Z.P.;  
SMIRNOVA, B.A.; TIMOSHENKO, G.G.; KHRENKOVA, A.A.; KHOVANSKIY,  
I.P., tekhn.red.

[Catalog of a district library] Katalog raionnoy biblioteki.  
Section 6:[Technology] Tekhnika. Iss. 3., dop. 1 perer. (MIRA 12:2)  
Moskva, 1958. 263 p.

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

VASILEVSKAYA, V.K.

VASILEVSKAYA, V.K.

Study of ontogenesis as one of the methods used in ecological  
anatomy. Probl.bot. no.1:264-281 '50. (MIRA 8:11)  
(Ontogeny (Botany))

SHISHKIN, B.K., professor; ROMANKOVA, A.G., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; MARKOV, G.S., doktor biologicheskikh nauk, dotsent; DANILEVSKIY, A.S., kandidat biologicheskikh nauk, dotsent; SHTEYNBERG, D.M., doktor biologicheskikh nauk; LOMAGIN, A.G. aspirant; SELL'-BEKMAN, I.Y., mladshiy nauchnyy sotrudnik; ZHINKIN, L.N., doktor biologicheskikh nauk, professor; IPATOV, V.S., student V kursa; KOZLOV, V.Ye., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; KARTASHEV, A.I., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; NITSENKO, A.A., starshiy nauchnyy sotrudnik; VASILEVSKAYA, V.K., doktor biologicheskikh nauk, dotsent; RYUMIN, A.V., kandidat biologicheskikh nauk; NAUMOV, D.V., kandidat biologicheskikh nauk, mladshiy nauchnyy sotrudnik; KHOZATSKIY, L.I., kandidat biologicheskikh nauk, dotsent; GOROBETS, A.M., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; GODLEVSKIY, V.S. assistant; GERBIL'SKIY, N.L., doktor biologicheskikh nauk, professor; ALEKSANDROV, A.D., professor; KOLODYAZHENYY, V.I.; TURBIN, N.V.; ZAVADSKIY, K.M.

[Theory of species and the formation of species]. Vest.Len.un. 9  
no.10:43-92 0 '54. (MLRA 8:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Shishkin, Aleksandrov)

(Continued on next card)

SHISHKIN, B.K., professor; ROMANKOVA, A.G., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik, and others.

[Theory of species and the formation of species]. Vest.Len.un. 9  
no.10:43-92 0 '54. (MLBA 8:7)

2. Leningradskiy gosudarstvennyy universitet (for Shishkin, Romankova, Markov, Ipatov, Kozlov, Kartashev, Godlevskiy, Gerbil'skiy, Aleksandrov)
3. Zoologicheskiy institut Akademii nauk SSSR (for Shteynberg, Naumov)
4. Kafedra entomologii Leningradskogo gosudarstvennogo universiteta (for Danilevskiy).
5. Kafedra darvinizma Leningradskogo gosudarstvennogo universitete (for Lomagin, Gorobets).
6. Kafedra geobotaniki Leningradskogo gosudarstvennogo universiteta (for Nitsenko).
7. Kafedra botaniki Leningradskogo gosudarstvennogo universiteta (for Vasilevskaya).
8. Kafedra zoologii pozvonochnykh Leningradskogo gosudarstvennogo universiteta (for Khozatskiy).
9. Leningradskoye otdeleniye Vsesoyuznogo instituta udobreniy, agropochvovedeniya i agrotekhniki (for Sell'-Bekman)
10. Institut eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR (for Zhinkin)

(Origin of species)

VASILEVSKAYA, V.K.

Characteristics of the structure of aphyllous xerophytes (Haloxylon  
aphyllum (Minkw.) Ikjin). Izv.AN Turk.SSR no.3:53-60 '55.  
(MLBA 9:5)

1. Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova.  
(Xerophytes) (Haloxylon)



VASILEVSKAYA, V. K.

USSR/Agriculture - Plant physiology

Card 1/1      Pub. 22 - 45/51

Authors      : Vasilevskaya, V. K., and Kondratyeva, Ye. A.

Title        : ~~Formation of buds on roots of ligneous undergrowth plants~~  
Formation of buds on roots of ligneous undergrowth plants

Periodical   : Dok. AN SSSR 101/5, 951-954, Apr 11, 1955

Abstract    : Scientific data are presented regarding the formation of buds on the roots of certain ligneous undergrowth plants. Ten references: 1 USA and 9 Russian and USSR (1868-1951). Drawings.

Institution   : .....

Presented by : Academician V. N. Sukachev, February 5, 1955

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing. M-5

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29868

Author : Vasilevskaya, V.K.

Inst : The Agricultural Institute of the Academy of Sciences,  
Turkmen SSR.

Title : The Peculiarities of Branching in Cotton of Limited and  
Non-Limited Types.

Orig Pub : Tr. In-ta zemledeliya, AN TurkmSSR, 1957, 1, 35-49

Abstract : The results of a study of branching in cotton variety  
5904I which has zero type branching in comparison with  
the standard variety 5476I with an unlimited type of bran-  
ching. The tests were made in 1955 at the Bagirskaya  
Experimental Station of the Academy of Sciences Turkmen  
SSR. It was established that both varieties yield an  
earlier formation of secondary buds in the axillary buds.

Card 1/2

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing. M-5

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29868

The lower leaf of the maternal bud dies undeveloped, causing, in the presence of branch growth, a lack of development in its lower internode. As a consequence of the internodes reduction a branch of the first and one of the second series will be placed side by side. All the buds of the node in the 590<sup>4</sup> I variety were transformed into flowers. The top bud first blossomed and afterwards the axillary buds of the second series became rapidly differentiated into flowers. Only the topmost bud is transformed into a flower. The axillary bud of the secondary series before turning to a flower separates itself from a bud of the third order, which forms a single leaf and then gives off a bud of the fourth order, and then turns to a flower, etc. It is by this process that the unlimited type of branching is brought about.

Card 2/2

- 1 -

VASILEVSKAYA, V.K.

Anatomy of bud formation on the roots of certain woody plants [with  
summary in English]. Vest. IGU 12 no.3:5-21 '57. (MIRA 11:5)  
(Buds) (Roots (Botany)) (Trees)

VASILEVSKAYA, V.K.; KONDRAT'YEVA-MEL'VIL, Ye.A.

Structure of the vegetative shoot apex [with summary in English].  
Probl. bot. no.3:288-298 '58. (MIRA 11:7)  
(Botany--Anatomy)

VASILEVSKAYA, V.K.

Anatomic structure of the embryo and seedling of some her-  
baceous plants. Vest.LGU 14 no.3:5-19 '59. (MIRA 12:5)  
(SEEDLINGS) (BOTANY--ANATOMY)

BARSKIY, I.Ya.; BRUMBERG, Ye.M.; BUKHMAN, Ye.M.; VASILEVSKAYA, V.K.;  
PLUZHNIKOVA, G.P.

Use of ultraviolet fluorescence microscopy in the study of botanical  
objects. Bot.zhur. 44 no.5:639-642 My '59. (MIRA 12:11)

1. Botanicheskiy institut im. V.L. Komarova AN SSSR i Leningradskiy  
gosuniversitet.  
(Botanical research) (Fluorescence microscopy) (Photomicrography)

VASILEVSKAYA, V.K.; SHILOVA, N.V.

Structural characteristics of foliar organs in Pyrolaceae Lindl.  
and their role in shoot formation. Vest. LGU 15 no.3:5-13 '60.  
(MIRA 13:1)

(Scales (Botany)) (Wintergreen)



VASILEVSKAYA, V.I.

Relationship between root structure and the venation of cotyledons;  
anatomical structure of seedlings of *Aithaca rosea* L. Vest  
IGU 16 no.21:14-22 '61. (IITA 14:11)  
(Seedlings)

VASILEVSKAYA, V.K.

Primitive signs in the anatomical structure of sunflower seedlings.  
Bot.zhur. 46 no.6:780-789 Je '61. (MIRA 14:6)

1. Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova.  
(Sunflowers) (Botany—Anatomy)

VASILEVSKAYA, V. K.

Some correlations in the structure of plants. Trudy FBI no.19:  
3-16 '62. (MIRA 16:1)

1. Laboratoriya anatomii rasteniy kafedry vysshikh rasteniy  
Petergofskogo biologicheskogo instituta.

(Botany—Anatomy)

VASILEVSKAYA, V.K.

"Rhythmicity of development in plants," by V. M. Voroshilov. Reviewed  
by V. K. Vasilevskaya. Bot. zhur. 47 no. 1: 139-141 Ja '62.  
(MIRA 15:2)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova.  
(Ontogeny (Botany))

VASILEVSKAYA, V.K.

Change in the anatomical structure of the shoot apex in the  
ontogenesis of *Cosmos bipinnatus* Cav. Bot.zhur. 47 no.11:  
1553-1566 N '62. (MIRA 16:1)

1. Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova.  
(Cosmos (Botany)) (Botany--Anatomy)

VASILEVSKAYA, V.K.; ZALENSKIY, O.V.; PETROV, M.P.; SVESHNIKOVA, V.M.

In memory of Susanna Il'inichna Kokina (1894-1960). Bot. zhurn.  
48 no.4:599-600 Ap '63. (MIRA 16:5)

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR, Leningrad.  
(Kokina, Susanna Il'inichna, 1894-1960)

VASILEVSKAYA, V.K.; NECHAYEVA, N.T.

Materials on the biology of *Eminium lehmannii* (Bge.) Ktze.  
Izv. AN Turk. SSR. Ser. biol. nauk : 2:35-40 '64.

(MIRA 17:6)

1. Kafedra vysshikh rasteniy Leningradskogo gosudarstvennogo  
universiteta i Institut pustyn' AN Turkmenskoy SSR.

VASILEVSKAYA, V.K.

"Physiology of plant development" by D.A.Sabinin. Reviewed by V.K. Vasilevskaia. Bot. zhur. 49 no.1:134-137 Ja '64. (MIRA 17:2)

1. Leningradskiy gosudarstvennyy universitet.



VASILEVSKAYA, V.K.; PETROV, M.P.

*Tetraena mongolica* Maxim., an endemic plant of Central Asia. Bot. zhurn.  
49 no.10:1506-1513 0 '64. (MIRA 18'1)

1. Leningradskiy gosudarstvennyy universitet.

VASILEVSKAYA, V.K.; SAVCHENKO, M.I.; YAKOVLEV, N.S.

Ekaterina Aleksandrovna Mokeeva, 1885- ; on her 80th birthday.  
Bot. zhur. 50 no.12:1769-1771 D '65. (MIRA 19:2)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova i  
Botanicheskiy institut imeni Komarova AN SSSR, Leningrad.

SMEYANOV, A.N.; TOPCHIYEV, A.V.; KURCHATOV, I.V.; SKOBEL'TSYN, D. .;  
KAPITSA, P.B.; IOFFE, A.F.; VINOGRADOV, A.P.; ERENBURG, I.G.; TIKHONOV,  
N.S.; FADEYEV, A.A.; FRANK, I.M.; VEKSLER, V.I.; KORNEYCHUK, A.Ye.;  
POPOVA, N.V.; LEBEDEVA, Z.A.; YASILEVSKAYA, V.L.; PETROVSKIY, I.G.;  
ALEKSANDROV, A.D.; ARTSIMOVICH, L.A.; MESHCHERYAKOV, M.G.

Irene Joliet-Curie; obituary. Vest.AN SSSR 26 no.4:73-72 Ap '56.  
(Joliet-Curie, Irane, 1897-1956) (MIRA 9:7)

VASIEVSKAYA, V.N.

VASIEVSKAYA, V.N. [Vasylevs'ka, V.M.]; MISELYUK, Ye.G. [Miseliuk, O.H.]

Segregation and solubility of iron and tin impurities in germanium on crystallization [In Ukrainian with summary in English]. Ukr.fiz. zhur. 3 no.1:71-78 Ja-F '58. (MIRA 11:4)

1. Institut fiziki AN URSR.  
(Germanium--Metallography)

VASILIA VASNOVA, V. V.

PLATE 1 BOOK EXCERPTION SCI/1966

Sovetskii metallurgii po poluprovodnikovym materialam. Moscow, 1967  
Teplovy metallurgii i fiziki poluprovodnikov; lindy 3-40 sovetskii metallurgii, (Physical Metallurgy and Physics of Semiconductors; Transactions of the Third Conference) Moscow, Izdato AN SSSR, 1959. 129 p. Serials 2119 inserted. 1,200 copies printed.

Sponsoring Agency: Academy nauk SSSR, Institut metallurgii izdati  
A. A. Baginov, Zap. 22.1 5. E. Shirkov, Doctor of Chemical Sciences  
M. of Publishing House: P. P. Zolotov.

PROLOG: This collection is intended for technical and scientific personnel concerned with the investigation and production of semiconductor materials. It may also be used by students in schools of metallurgy.

CONTENTS: The collection contains reports submitted at the Third Conference on Semiconductor Materials, held at the Institute of Metallurgy Izdati A. A. Baginov, AS SSSR, Moscow, in May 1967. The reports deal with problems of obtaining and investigating germanium, silicon, and semiconductor compounds. The collection was first edited by D. A. Petrov, Doctor of Technical Sciences. References accompany most of the reports.

Colophon: I. I. On the Problem of the Role of Some Factors in the Growth Process of Single Crystals from a Melt

23  
Nalyp, I. B. Investigation of Hole Zones of Diamond-Type Crystals  
on the Basis of the Multispectrum Theory  
Sibirskii Akademicheskii Institut Nauk, Sibirskii Akademicheskii Institut Nauk, Siberian People's Republic).  
Concerning the Problem of Semiconductor Point-Contacts

29  
Majevskii, Z. (Institute of Basic Technical Problems, Polish Academy of Sciences). Properties of P-n Junctions in Germanium Single Crystals  
Withdrawn from the Melt by Pulling

43  
Semenov, I. (Institute of Physics, Polish Academy of Sciences).  
Effect of the Introduction of Minority Current Carriers on Light Emission from Germanium

49  
Ragov, A. A., Yu. Ye. Iosadko, and Ye. G. Mihalynk. Diffusion and Solubility of Iron and Silver in Germanium

92  
Pyshin, A. D., and V. A. Prizner. Investigation of Holotending of Semiconductor with Sulfur

97  
Vasil'yevskiy, V. M., and Ye. G. Mihalynk. Investigation of Segregation and Solubility of Some Impurities in Germanium During Crystallization  
Tsentral'nyi Institut of Technical Physics, Gosoboluchenskaya Akademiya of Sciences). Problem of Crystallizing Pure Silicon

62  
Petrov, D. A., Yu. M. Sankharov, V. V. Koshcheyevskiy,  
I. I. Shirkov, and V. D. Evtushenko. Etching of Silicon Single Crystals

68  
Balov, T. G. (Institute of Applied Physics, Chinese People's Republic). Importance of Using Pure Water for Washing Materials Used in Semiconductor Engineering

78  
Abolayev, G. B., M. I. Aliev, A. A. Babayevskiy, and G. N. Aliev. Series of Intrinsic Impurities on the Physical Properties of Germanium

80  
Abolayev, G. B., G. A. Abdujay, A. A. Kalyev, and Z. A. Alievskaya. On the Diffraction of Gamma Rays in Polycrystalline Silicon

89  
Dedkin, I. D., and E. D. Ahrbator. Problems of Alloying Semiconductors

94  
Mestekova, I. B., B. I. Vityazovskiy, and V. D. Puzanov. Effect of Growth Conditions of Single Crystals of CdS and CdTe on Their Physical Properties

107  
Professors A. P. and G. A. Pedornu. Effect of Temperature and Certain Impurities on the Dark Resistance and Photoconductivity of CdS Single Crystals

112  
Kilman, L. (Institute of Technical Physics, Czechoslovak Academy of Sciences). Semiconductor Compounds with an Excess of One of the Components

117  
Dobson, J. P. Effect of Surface Conditions on the Electrical Properties of Type II-VI Compounds

120  
Petrov, V. A., N. A. Kozlov, V. E. Verzhobovskiy, A. G. Gaidar'nik, and Ye. V. Mikhaylov. Production and Investigation of New Semiconducting Material

127  
AVAILABLE: Library of Congress

81770

S/181/60/002/02/07/033  
B006/B067

24.7500

AUTHORS: Belyayev, A. D., Vasilevskaya, V. N., Miselyuk, Ye. G.

TITLE: Investigation of the Influence Exercised by Some Factors on the Occurrence of Dislocations in the Crystallization and Its States in Germanium Single Crystals

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 2, pp. 227-234

TEXT: The authors investigated the influence exercised by the seed, the impurities, and the pulling rate on the occurrence of dislocations in germanium single crystals bred from melts. Furthermore, the effect of thermal processing on the state and distribution of dislocations in single crystals as well as the effect of the latter on the lifetime  $\tau$  of the non-equilibrium carriers was investigated. The influence exercised by the dislocation density in the seed crystals on the dislocation density in the bred single crystals was investigated for dislocation densities in the seeds between  $10^2$  and  $10^7$   $\text{cm}^{-2}$ , where the seed crystals with dislocation densities of  $10^4$   $\text{cm}^{-2}$  and more were cut out of specially

Card 1/4

Investigation of the Influence Exercised by  
Some Factors on the Occurrence of Dislocations  
in the Crystallization and Its States in  
Germanium Single Crystals

S/181/60/002/02/07/033  
B006/B067

bred single crystals. The seeds had uniform dimensions and shape: cubes with a cross section of  $\sim 0.2 \text{ cm}^2$ . The influence exercised by the pulling rate on the occurrence of dislocations was investigated at rates between 0.8 and 6 mm/min, the effect of impurities by means of the active isotopes  $\text{Sb}^{124}$ ,  $\text{Fe}^{59}$ ,  $\text{Ag}^{110}$ , and  $\text{Cd}^{115}$ . For the purpose of influencing the state of the dislocations occurring in the single crystals, the single crystals were heated at  $750\text{-}900^\circ\text{C}$  for 1-3 hours in vacuo (this causes displacements of the dislocations which partly show approach and "recombination", partly repulsion, according to the angles formed by the Burgers vectors of the interacting dislocations). The dependence of the lifetime of the non-equilibrium carriers on the dislocation density was measured by a photoelectric and an impulse method. Density, distribution, and displacement of the dislocations were investigated by etching, measuring the etching rate, and by taking etch patterns. The pictures were evaluated by means of a metallographic microscope of the type MIM-8 (MIM-8). The samples were subjected to the following surface processing:

Card 2/4

81770

Investigation of the Influence Exercised by  
Some Factors on the Occurrence of Dislocations  
in the Crystallization and Its States in  
Germanium Single Crystals

S/181/60/002/02/07/033  
B006/B067

grinding with  $7\mu$  abrasive, chemical polishing with HF + HNO<sub>3</sub> (3:5);  
45 sec at 70°C; slow etching with 2 parts of HF + 2.5 parts of HNO<sub>3</sub> +  
+ 1 part of CH<sub>3</sub>COOH + 4 parts of H<sub>2</sub>O; 8 mg of iodine per 50 cm<sup>3</sup> were  
added to this solution (this etching agent proved to be most favorable).  
The results of the investigations are discussed in detail, and a number  
of microphotographs of the etch patterns are shown. The dislocation  
concentration in the seed influences the dislocation concentration in  
the single crystal in such a way that the higher the former, the higher  
is also the latter. The impurities had no essential influence on the  
occurrence of dislocations with concentrations below the solubility  
limit in Ge, at higher concentrations, however, an influence was noticed.  
Pulling rates < 4 mm/min influenced the dislocation concentration not  
essentially, whilst pulling rates above this value caused a considerable  
increase. Heating led to a reduction of the dislocation density (e.g.,  
reduction by 50-60% at 750°C during three hours, by almost 90% at 900°C

X

Card 3/4



81770

Investigation of the Influence Exercised by  
Some Factors on the Occurrence of Dislocations  
in the Crystallization and Its States in  
Germanium Single Crystals

S/181/60/002/02/07/033  
B006/B067

during one hour). An increase in the dislocation density led to a reduction of  $\tau$ , and vice versa. The authors thank A. N. Kvasnitskaya for preparing the germanium specimens. There are 4 figures, 1 table, and 15 references: 3 Soviet, 1 Czech, 7 American, 1 Japanese, 1 German, and 1 British.

ASSOCIATION: Institut fiziki AN USSR Kiyev (Institute of Physics of  
the AS UkrSSR Kiyev)

SUBMITTED: May 4, 1959

Card 4/4

X

20119

S/181/61/003/002/017/050  
B102/B204

9.4300 (and 1035, 1143)

AUTHORS: Vasilevskaya, V. N. and Miselyuk, Ye. G.

TITLE: The problem of making visible (developing) dislocations in germanium by etching

PERIODICAL: Fizika tverdogo tela, v. 3, no. 2, 1961, 429-435

TEXT: It was the purpose of the investigations described in the present paper to determine the dependence of the density of the dislocations made visible by etching upon the various crystallographic faces of germanium single crystals, of the composition of the etching material, and of the duration of its effect. The single crystals, on which the investigations were carried out, had a resistivity of 30 ohms.cm, and had been grown according to the method developed by Chokhral'skiy. Specimens of various form were cut from them, most of them were in the shape of little disks and had a diameter of 10 to 25 mm. The planes (100), (110), and (111) were ground and chemically polished for 45 seconds by means of HF + HNO<sub>3</sub> (1:1) at 70°C. Etching was carried out by means of the following mixtures:

Card 1/4

20119

The problem of making visible ...

S/181/61/003/002/017/050

B102/B204

no.	Composition	Temperature	Duration of Etching
1	3 parts HF + 5 parts HNO <sub>3</sub>	70°C	20 sec
2	8 g K <sub>3</sub> Fe(CN) <sub>6</sub> + 12 g KOH in 100 cm <sup>3</sup> H <sub>2</sub> O	100	3-4 min
3	10 cm <sup>3</sup> HF, 15 cm <sup>3</sup> HNO <sub>3</sub> , 5 cm <sup>3</sup> CH <sub>3</sub> COOH, 20 cm <sup>3</sup> H <sub>2</sub> O, 8 mg I and 2mg KI	20	12 min

The etching media nos. 1 and 2 are frequently used and it is generally assumed that by their means only linear dislocations may be made visible; no. 3 was developed by the authors. It is suitable for making visible spiral, edged, and mixed dislocations. The effect produced by the duration of etching manifested itself above all by the fact that with increasing duration of etching, certain etch patterns grew and covered those around them. In the case of a special experiment, the etch patterns had grown up to 20  $\mu$  already after 20 minutes; this, naturally, leads to an error in determining dislocation density. Dislocation density first increases with growing

Card 2/4

20119

S/181/61/003/052/017/050  
B102/B204

The problem of making visible ...

duration of etching, attains a maximum at 10-15 minutes, after which it again decreases quickly. The duration of etching of 10-14 minutes was found to be optimal for the etching medium no. 3. In the individual planes the following densities were measured:

no.	(111)	(100)	(110)
1	$3.2 \cdot 10^3$	$2.1 \cdot 10^3$	none
2	$4.8 \cdot 10^3$	none	none
3	$6.4 \cdot 10^3$	$5.3 \cdot 10^5$	$3 \cdot 10^6$

The etching medium no. 2 is the most selective, which developed only edged dislocations on the (111) plane. No. 1 was less selective, no. 3 was the least selective. The etching media no. 1 and no. 2 both developed the same sort of edged dislocations (tetrahedron-shaped), with a linear density of  $2.5 \cdot 10^2 \text{ cm}^{-1}$ . No. 3 developed not only such dislocations but also more fine edged dislocations as well as spiral and mixed ones (which fact is repeatedly pointed out in the present paper). The authors thank L. I. Dotsenko and S. P. Nuzhnaya for their

Card 3/4