[illegible], [illegible]. A.

K[illegible]OV, ALEKSEY AND[illegible]Y[illegible]VICH [illegible] ([illegible]) [illegible]. A. [illegible]
[illegible]. O. [illegible] [illegible]. KYYIV, [illegible], 195[illegible].

[illegible] P. ILLUS., [illegible]S., [illegible].

"LIT[illegible]: P. ([illegible])-[illegible].

57-9-37/40

AUTHOR: Kurov, P.A.

TITLE: On the Problem of the Structure and the Properties of Layers Obtained by the Evaporation of InSb in a Vacuum (K voprosu o strukture i svoystvakh sloyev poluchayushchikhsya pri isparenii InSb v vakuume)

PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol.27, Nr 9, pp 2181 - 2182 (USSR)

ABSTRACT: The present paper contains a comment on the work by I.D. Konozenko and S.D. Mikhnovskiy in Izvestiia Akad. Nauk SSSR, Ser. Fiz., 1956, Vol. 2o, Nr 12, pp. 1486, where the authors expressed the opinion that they obtained layers of the intermetallic compound in InSb. It is shown that, on the strength of experiments carried out in the laboratory for Electronography at the Institute for Crystallography AN USSR, as well as on the strength of data made in publications by the authors of the paper mentioned, not InSb, but pure antimony was obtained. This may also be seen from the electronograms attached by Konozenko and Mikhnovskiy. This explains the changes of electrical properties observed by the two authors. When producing intermetallic compounds by evaporation in a vacuum it is therefore necessary to subject the structure of samples to a particularly rigorous control. There are 5

Card 1/2

57-9-37/40

On the Problem of the Structure and the Properties of Layers Obtained by the Evaporation of InSb in a Vacuum

Slavic references.

ASSOCIATION: Institute for Crystallography, AN USSR
(Institut kristallografii AN SSSR)

SUBMITTED: April 15, 1957

AVAILABLE: Library of Congress

Card 2/2

KUROV, P.Ye.

Electromagnetic reversible drive for cutting control. Stan.i instr. 24 no.12:30-31 D '53. (MLRA 7:1)

(Electric driving)

Kurov, P.E.

USSR/Miscellaneous - Industrial devices

Card 1/1 Pub. 103 - 13/23

Authors : Kurov, P. E.

Title : Electromagnetic mechanism for automatic cut-off of traverse feed

Periodical : Stan. i instr. 2, 33-34, Feb 1954

Abstract : The difficulties involved in manual cut-off or traverse feedings during the machining of external and boring of internal surfaces of details are analyzed. The development and employment of an electromagnetic automatic cut-off devices for screw cutting lathes which works with an accuracy of 0.02 mm is announced. The electromagnetic device consists of electrical and mechanical parts and its mode of operation is described in detail.

Institution : .....

Submitted : .....

KUROV, P.Ye.

Automatic temperature regulation of electroplating baths.
Mashinostroitel' no.2:14-15 F '63. (MIRA 16:3)
(Electroplating—Equipment and supply)

KHOVI, S. A., ITG

Automobiles - Design and Construction

Improved construction of assemblies and parts of the automobile ZIS-5. Vest. mash., 32, No. 1, 1952.

MONTHLY LIST OF RUSSIAN ACCESSIONS. LIBRARY OF CONGRESS, OCTOBER, 1952. UNCLASSIFIED

KUROV,S.A.; TITKOV,A.I.; VASIL'YEV,A.M.; GLADYSHEV,G.I.; SHAPSHAL,B.G.
BLYAKHMAN,D.S.; BOGACHEVA,M.M.; FOMIN,V.M.

Critical notes on a reference book ("Tractors and Automobiles." IU.A.Domatovskii, I.I.Trepenenkov. Reviewed by S.A.Kurov). Avt. trakt. prom. no.5:32 My '55. (MLRA 8:8)
(Tractors) (Automobiles) (Dolmatovskii, IU.A.) (Trepenenkov,I.I.)

KUKOV, S.M.

"A New type of Floating Blades", Stanki I Instrument, 14, No. 11-12, 1943

BR-52059019.

KUROV, S.M.

"A Multipurpose Attachable Head for a Horizontal Milling Machine."
Stanki I Instrument Vol. 15, No. 1-2, 1944.

BR 52059019

Kurov, V

Subject : USSR/Aerodynamics AID P - 2213

Card 1/2 Pub. 135 - 14/18

Author : Not given

Title : Readers' suggestions

Periodical: Vest. vozd. flota, 6, 73-79, Je 1955

Abstract : In this column the four following articles are published, all related to the evaluation of wind in flight: 1) "Measuring the drift angle by twice taking the bearing of a fix in the rear hemisphere of the aircraft" by Lakhtin, M., Lt. Col. Examples, graphs, formulae; 2) "How to accelerate the computation of navigational data" by Kurov, V., Guards Maj. Examples, graphs, formulae; 3) "Determination of the drift angle and the true speed by two slanting ranges and the course angle" by Levshin, B., Jr. Lt. Examples, graphs, formulae; 4) "Graphs for the determination of the navigational data of a flight" by Shabalin, Yu., Lt., in which the

Vest. vozd. flota, 6, 73-79, Je 1955 AID P - 2213

Card 2/2 Pub. 135 - 14/18

author gives a short description of the use of a graph giving corresponding values of the drift angle slanting distances.

Institution: None

Submitted : No date

KOBEZSKIY, P., inzh.; KUROV, V., inzh.

New asphalt-concrete plant with automatic control. Avt.dor. 22 no.3:12-13 Mr '59. (MIRA 12:4)
(Asphalt concrete) (Automatic control)

YURCHENKO, Ye.; KUVSHINCHIKOV, Yu.; KUROV, V.

Winged ships should also sail in nighttime. Rech.transp. 22 no.1:45 Ja '63. (MIRA 16:2)

1. Kapitan teplokhoda "Raketa-12" Volgo-Donskogo parokhodstva (for Yurchenko). 2. Kapitany-dublery teplokhoda "Raketa-12" Volgo-Donskogo parokhodstva (for Kuvshinchikov, Kurov).
(Hydrofoil boats)

KUROV, V.A.

Problems given at the 11th mathematics contest of students in Kuybyshev. Mat. v shkole no. 4:95 Jl-Ag '58. (MIRA 11:7)
(Mathematics--Competitions)

SARYLOVA, K.P., dotsent; TOTOCHENKO, V.K.; LAVROV, I.V.; BOGOMOLOVA, N.I.
KUROV, V.D.

Clinical aspects of hemorrhagic capillarotoxicosis in children.
Pediatriia no.4:55-58 Jl-Ag '55. (MLRA 8:12)

1. Iz fakul'tetskoy detskoy kliniki II Moskovskogo meditsinskogo instituta (zav.-prof. P.A.Ponomareva)
(PURPURA, MONTHROMBOPENIC, in infant and child)

KUROV, V.D.

KUROV, V.D.

Case of unilateral affection by scleroderma in a 5-and-half-year-old girl. Pediatriia 40 no.1:67-69 Ja '57. (MIRA 10:10)

1. Iz gorodskoy klinicheskoy detskoy bol'nitsy No.1 (glavnyy vrach - zasluzhennyy vrach RSFSR Ye.V.Prokhorovich)
(SCLERODERMA)

KUROV, V.D.

Ovarian tumors in children. Pediatriia 36 no.11:27-32 N '58 (MIRA 12:8)

1. Iz Detskoy gorodskoy klinicheskoy bol'nitsy No.1 Moskvy (glavnyy vrach - zasluzhennyy vrach RSFSR Ye. V. Prokhorovich, zav. khirurgicheskim otdeleniyem - doktor meditsinskikh nauk I.E. Sandukovskiy).
(OVARIES--TUMORS)

PHASE I BOOK EXPLOITATION SOV/5925

Kurov, Viktor Dmitriyevich, and Yuriy Mikhaylovich Dolzhanskiy

Osnovy proyektirovaniya porokhovykh raketnykh snaryadov (Principles of Designing Solid-Fuel Rocket Missiles) Moscow, Oborongiz, 1961. 293 p. Errata slip inserted. 12,000 copies printed.

Reviewer: M. F. Dyunze, Candidate of Technical Sciences, Docent; Ed.: M. V. Malyshev, Engineer; Ed. of Publishing House: M. F. Bogomolova; Tech. Ed.: L. A. Garnukhina; Managing Ed.: S. D. Krasil'nikov, Engineer.

PURPOSE: This textbook is intended for use at tekhnikums. It may also be useful to students at schools of higher education and engineers specializing in rocket designing.

COVERAGE: The book presents basic information on the design and construction of modern solid-fuel-rocket missiles and components. Generally speaking,

Card 1/3

factual and numerical data have been based on non-Soviet literature. Topics discussed include the following: methods for selecting optimum parameters; the designing of rocket engines and warheads; the laws of powder combustion and powder-gas flow; methods for calculating maximum powder-gas pressure, unit impulse, and reaction thrust; equation systems for the motion of missiles; method for calculating missile trajectories; and flight-stabilization methods. Chs. I and VII were written by V. D. Kurov, and Ch. IV. by Yu. M. Dolzhanskiy. Kurov and Dolzhanskiy collaborated in writing Chs. II, III, V, and VI. The authors thank Professor V. I. Feodos'yev and Candidate of Technical Sciences M. F. Dyunze. There are 38 references: 18 Soviet (including 3 translations), 17 English, and 1 unidentified.

TABLE OF CONTENTS [Abridged]:

KUROV, V.F.

Using iteration methods in investigating the stability at the first approximation. Izv. SO AN SSSR no. 10. Ser. tekh. nauk no. 3:49-55 '65 (MIRA 19:1)

1. Novosibirskiy elektrotekhnicheskiy institut. Submitted January 4, 1965.

L 9894-66 EWT(d)/T IJP(c)
ACC NR: AP5026569 SOURCE CODE: UR/0281/65/000/005/0051/0063

AUTHOR: Kurov, V. F. (Novosibirsk)

ORG: none

TITLE: Matrix algorithms of static stability of a complex power-supply system

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 5, 1965, 51-63

TOPIC TAGS: electric power system, system stability

ABSTRACT: The modern theory of static stability of electric power-supply systems has been based on the Liapunov first approximation and involved analyzing the roots of a corresponding characteristic equation. In practice, this method has been extremely cumbersome and is not relieved by using digital computers. Hence, a new method of power-system static -stability analysis is suggested which is based on studying the characteristics of the individual parts

Card 1/2 UDC: 621.311.1:621.3.016.351

L 9894-66

ACC NR: AP5026569

of the power system and uses matrix algebra techniques. Initial equations for each synchronous machine describing the mechanical motion of the rotor and the electromagnetic transient phenomena in the machine are set up. These cases are analyzed: (a) aperiodic stability of a multimachine system having no field regulators, (b) static stability of same, and (c) static stability of a complex automatically controlled power system. These conclusions are offered: (1) It is expedient to analyze the synchronous electromechanical stability, electromagnetic stability, and oscillatory electromechanical stability separately; stability criteria of the entire power system are formulated on the assumption that all synchronous machines are replaced by constant emf's acting upon the impedances which allow for the regulation; (2) The developed algorithms permit easy programing of the stability calculations; standard subroutines can be used for transforming the matrices involved. Orig. art. has: 90 formulas.

SUB CODE: 12, 10 / SUBM DATE: 14Apr65 / ORIG REF: 016 / OTH REF: 003

Card 2/2

KUROV, V.G.

Electric heaters for petroleum products. Prom.energ. 16 no.9:21-22 S '61. (MIRA 14:8)
(Electric heating)

KUROV, V.G.; MONASTYRSKIY, O.V.

Experience in setting up an automatic cement concrete plant. Avt.dor. 18 no.1:14-16 Ja-F '55. (MIRA 8:4)
(Road construction) (Cement industries)

KUROV, V.G., inzhener.

Semiautomatic asphalt concrete plant. Mekh.stroi.13 no.4:
23-25 Ap '56. (Asphalt concrete) (MLRA 9:7)

KUROV, Vitaliy Georgiyevich; MARTYNOV, N.V., redaktor; GALAKTIONOVA, Ye.N. tekhnicheskiy redaktor

[Automatization of asphalt concrete plants] Avtomatizirovannyi asfal'tobetonnyi zavod. Moskva, Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1957. 69 p. (MLRA 10:5)
(Automatic control) (Asphalt concrete)

KUROV, V.O.

KUROV, V.O., inzhener.

Work of the efficiency promoters in road construction. Avt. dor. 20 no.4:27-28 Ap '57. (MIRA 10:6)
(Road construction)

KUROV, V.G., inzh.

Prospects for over-all electrification of asphalt-concrete plants. Avt.dor. 22 no.1:7-8 Ja '59. (MIRA 12:2)
(Asphalt concrete) (Electrification)

KUROV, V.G., inzh.

Electromechanical system of automatic control for asphalt concrete and concrete plants. Avt.dor. 22 no.11:11-12 N '59. (MIRA 13:2)
(Concrete plants) (Automatic)

KUROV, V.G., inzh.

Two years' norm fulfilled in one year. Avt. dor. 23 no.5:9-11 My '60.
(MIRA 13:10)

(Concrete plants)

KUROV, V.G., inzh.

Structural and technological characteristics of an automatic asphalt concrete plant. Avt.dor. 25 no.7:11-12, 24 Jl '62. (MIRA 15:8)

(Asphalt concrete) (Concrete plants)

KUROV, V.G., inzh.; OZEROV, L.K., inzh.

Organization of earthmoving operations at the State North Caucasus Road Construction Combine. Mekh. stroi. 20 no.11:12-15 N '63. (MIRA 17:1)

KUROV, V.G., inzh.

Asphalt-concrete plant "Zvezdochka." Avt.dor. 28 no.8:9-11 Ag '65. (MIRA 18:11)

KUROV, V.I., inzh.

Modernization and automation of the C-1 asphalt concrete mixers.
Stroi. i dor. mash. 7 no.3:25-28 Mr '62. (MIRA 15:4)
(Concrete mixers)

10

CA KUROV. V. I.

Alkyl carbonates of metals. I. V. I. Kurov. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 490-3(1951). Passage of CO_2 into EtONa gave *EtOCO_2Na*, a solid almost insol. in the usual org. solvents except MeOH. It is hydrolyzed by H_2O. Heating to 200° initially (final temp. 300°) gave C_2H_4, CO_2, EtOH, and H_2O, along with considerable amts. of CO (the gas mixt. contained 43.5% CO_2, 40.4% CO, and 16.1% C_2H_4). Some AcH was detected. Possibly CO arises from intermediate formation of HCO_2Na and AcH; the former then yields CO and NaOH, while the latter yields Na_2CO_3 and H_2O. Apparently at least 2 concurrent schemes of decompn. are in operation. G. M. Kosolapoff

KUROV, V. I.

USSR/Chemistry - Carbonic Acid Esters Sep 51

"Salts of Alkyl Half Esters of Carbonic Acid. II," V. I. Kurov

"Zhur Obshch Khim" Vol XXI, No 9, pp 1637-1642

Prepd MeOCOONa, PrOCOONa, and BuOCOONa; studied their phys chem, thermodynamic properties, and decompn products; proposed general scheme of decompn of Me, Et, Pr, and Bu ester-salts. Prepd, studied phys chem properties of, and established consts of MeOCOOK, EtOCOOK, PrOCOOK, BuOCOOK, and BuOCOORb (last 3 compds were prepd for 1st time).

191T42

KUROV, V. I.

2

CZECH

Complete ethyl carbonate ester of ethylene glycol. V. I. Kurov. *Sbornik Statei Obshchei Khim.* 2, 913-916(1953).—[illegible] with $(CH_2ONa)_2$ [cf. Wallach, *Ann.* 226, 82 (1884)] gave $(CH_2O)_2CO_2Et$ (I), b. 225-8°, which on standing 6-7 months changed into 2 substances: $(CH_2O)_2CO$, m. 39°, b. 240°, and Et_2CO_3. I heated with [illegible] glass to 120-40° evolved CO_2 and C_2H_4, leaving [illegible] matter and a distillate of EtOH and AcH. At 400° only some 30% of the I is decompd., indicating considerable thermal stability, in comparison with the corresponding carbonate.

G. M. Kosolapoff

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61429

Author: Kurov, V. I.

Institution: None

Title: On Interaction of CO_2 Gas with Alcoholates of Some Alcohols (On Alkyl-Carbonate Salts)

Original Periodical: Tr. Leningr. tekstil'n. in-ta, 1955, No 6, 99-102

Abstract: A series of Li-, Na- and K-salts of alkyl carbonic acids have been prepared containing normal or branched or unsaturated radicals. The synthesized compounds possess mixed salt-ester functions. $CM_3OCOOLi$ was prepared by passing CO_2 into heated solution of CH_3OLi after which the solution is filtered and treated with absolute ether. Analogously are prepared $C_3H_7OCOOLi$ and $C_4H_9OCOOLi$. All Li-salts are soluble in CH_3OH. By reaction of CO_2 with C_3H_5ONa was prepared $CH_2 = CHCH_2OCOONa$. Saturation with CO_2 of warm solutions of the corresponding alcoholates yields

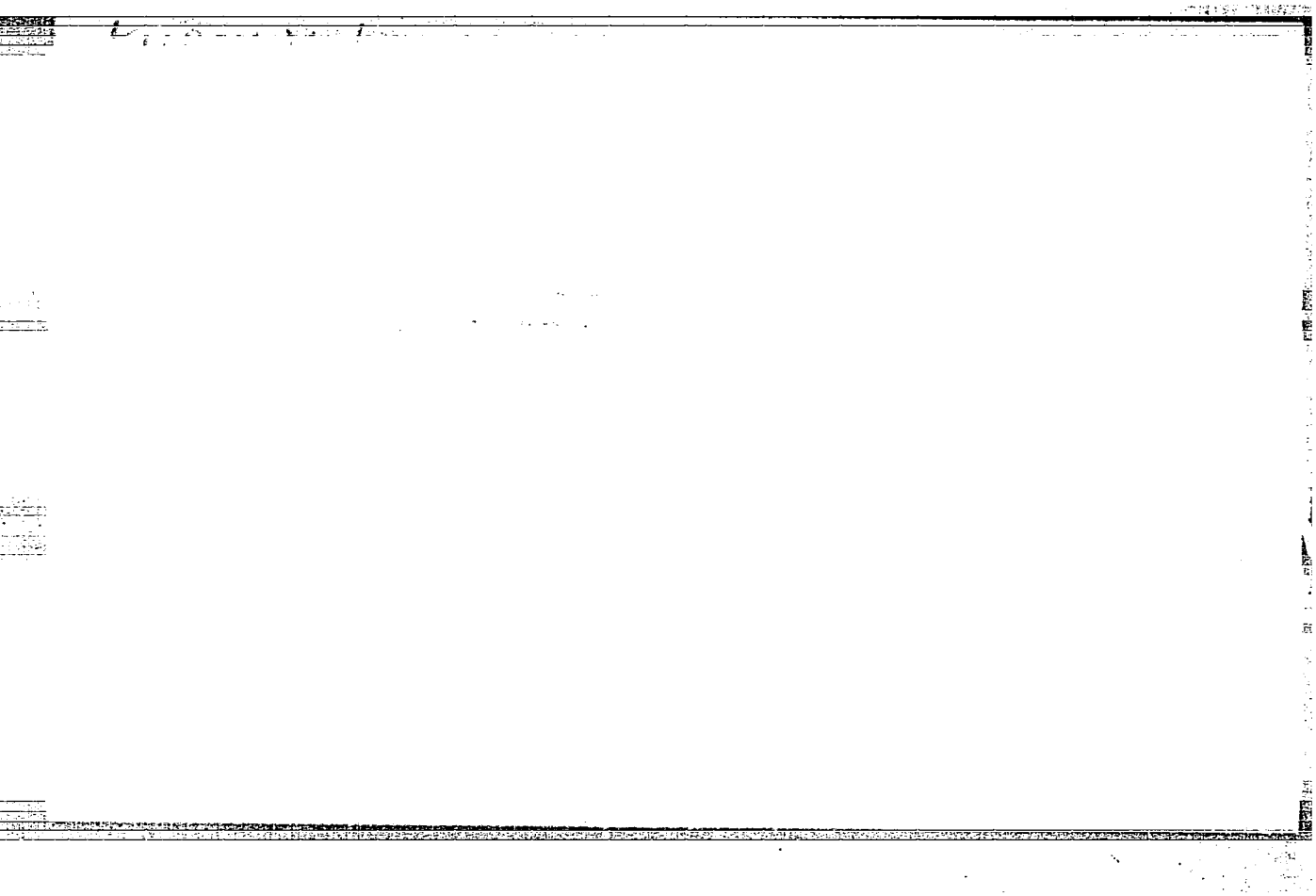
Card 1/2

USSR/Orgánic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61429

Abstract: $(CH_3)_2CHCH_2OCOONa$, $n\text{-}C_5H_{11}OCOOK$, $n\text{-}C_5H_{11}OCOOPb$ and $n\text{-}C_5H_{11}OCOONa$.

Card 2/2



APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000927730009-4"

AUTHOR: Kurov, V.I. 54-10-2-16/16

TITLE: A Method of Determining the Metal Content in Alkyl Carbonic Acid Salts (Metodika opredeleniya soderzhaniya metallov v alkiluglekislykh solyakh)

PERIODICAL: Vestnik Leningradskogo Universiteta, Seriya fiziki i khimii , 1958, Vol. 10, Nr 2 , pp. 139-142 (USSR)

ABSTRACT: In the course of several years the less known compounds of the so-called alkyl carbonic acid salts of the type $RMCO_3$ and $R_2M_1(CO_3)_2$ were studied. These compounds are of great scientific interest because they are compounds of a mixed salt-ether function. Besides the already known carbonic acid methyl salts (Refs 3-13), which, however, have not been studied, the author obtained and studied a number of new carbonic acid alkyl salts, among them salts of butyl carbon rubidium (Ref 14) and alkyl carbon lithium, salts containing radicals with isostructure, unsaturated and other (Ref 15) as well as methyl carbon strontium salt concerning which only insufficient data have been published (Ref 6). From a scientific point of view the alkyl carbon lithium salts CH_3LiCO_3, $C_3H_7LiCO_3$ $C_4H_9LiCO_3$ are the most interesting. Whereas the acid lithium salts

Card 1/2

A Method of Determining the Metal Content in Alkyl Carbonic Acid Salts

54-19-2-16/16

of carbonic acid are unknown (Ref 16), the author obtained substituted acid lithium salts of these acids (Ref 15) in a crystalline state. A common method of obtaining the above carbonic acid salts is the reaction of metal alcoholates obtained from absolute alcohols and corresponding metals with carbonic acid gas under certain conditions:

$$R-OH + M \rightarrow R\ OM + H$$

$$2R-OH + M_1 \rightarrow (R-O)_2M_1 + H_2;$$

$$R-OM + CO_2 \rightarrow ROCOOM\ (RMCO_3)$$

$$(R-O)_2M_1 + 2CO_2 \rightarrow (ROCO)_2M_1\ (R_2M_1(CO_3)_2)$$

The results of the analysis of alkyl carbonic acid salts by the volumetric method are given (in a table). For reasons of comparison also the results obtained by the sulfate method are given. There are 1 table, and 18 references, 7 of which are Soviet.

SUBMITTED: June 26, 1957

AVAILABLE: Library of Congress

1. Alkyl carbonic acid salts—Volumetric analysis—Tables
2. Metals—Determination

Card 2/2

USCOMM-DC-55, 224

KUROV, V.I.

Device for filling mortars in slab joints. Suggested by V.I. Kurov. Rats.i izobr.predl.v stroi. no.11:108-109 '59. (MIRA 13:3)

1. Proizvoditel'rabot stroitel'nogo upravleniya No.77 tresta Mosstroy No.16 Glavmosstroya.
(Vibrators)

5(3) SOV/79-29-4-46/77

AUTHOR: Kurov, V. I.

TITLE: Alkyl Carbonates. IV (Ob alkiluglekislykh solyakh. IV). Alkyl Lithium Carbonates (Alkiluglelitiyevyye soli)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 4, pp 1245-1249 (USSR)

ABSTRACT: These salts are of scientific importance. Acid lithium salts (bicarbonates) are as yet unknown, but the author succeeded in synthesizing the substituted acid salts of the composition $LiRCO_3$ in their crystalline state. It was impossible to obtain the salt $CH_3OCOOLi$ by the usual method (Ref 2). The synthesis of this salt, carried out successfully by the author as early as 1948 at increased temperature and at pressure in a bulb, was later on simplified (Ref 3), and the methyl lithium salt was obtained in its crystalline state (this is described experimentally). Thus the following alkyl lithium carbonates were synthesized for the first time: methyl lithium salt CH_3LiCO_3, propyl lithium salt $C_3H_7LiCO_3$, butyl lithium salt $C_4H_9LiCO_3$, and methyl rubidium salt CH_3RbCO_3. The analysis of propyl- and butyl lithium salts with respect to their lithium contents by the

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sulphate method met with great difficulties. In order to avoid them, these salts first passed into the nitrates, which were then transformed into the sulphates by sulphuric acid. Later on the metal content of the alkyl carbonates was determined according to a new volumetric analysis developed by the author, viz. by means of inverse titration of the hydrochloric acid excess used to dissolve the weighed alkyl carbonate with sodium hydroxide. This method proved to be faster than the sulphate method, and equally accurate. The alkyl lithium carbonates are white crystalline products which dissolve more easily in cold than in hot water. Their aqueous solutions enter alkaline reactions (hydrolysis). It was found that the thermostability of the alkyl lithium-, alkyl potassium-, and alkyl rubidium salts is a function of the metal and radical contained in the salt. A general scheme was suggested for the thermal splitting of these salts. The experimental results are illustrated by four figures and two tables. There are 4 figures, 2 tables, and 7 Soviet references.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet i Leningradskiy tekstil'nyy institut (Leningrad State University, Leningrad

Alkyl Carbonates. IV. Alkyl Lithium Carbonates SOV/79-29-4-46/77

Textiles Institute)

SUBMITTED: October 4, 1957

Card 3/3

KUROV, V.I.

Alkyl carbonates. Part 5: Methylcarbonic salts of divalent metals. Zhur. ob. khim. 31 no.1:9-11 Ja '61. (MIRA 14:1)

1. Leningradskiy gosudarstvennyy universitet i Leningradskiy tekstil'nyy institut.
(Carbonic acid)

KUROV, V.I.

Kinetics of the thermal decomposition of sodium ethyl carbonate.
Dokl. AN BSSR. 7 no.6:391-394 Je '63. (MIRA 16:10)

1. Leningradskiy tekstil'nyy institut imeni S.M.Kirova.
Predstavleno akademikom AN BSSR B.V. Yerofeyevym.

OSTASHEVSKAYA, N.S.; OLENTSEVICH, N.A.; BASHKATOVA, A.S.; LANDA, M.B.; KUNSHCHIKOVA, A.A.; LISIN, D.M.; KUROV, V.V.; YEMEL'YANOV, N.A.; FAKTOROVICH, B.A.; KUROKHTIN, A.N.

Industrial testing of Listvyanka anthracite for lining the bottom of aluminum electrolytic cells. TSvet.met. 38 no.10:62-66 O '65. (MIRA 18:12)

KUROV, Yu.

Quantitative of proportioning vitamins, antibiotics, and microelements. Muk.-elev. prom. 27 no.11:19-21 N '61. (MIRA 14:12)

1. Glavnyy konstrukto · nauchno-issledovatel'skoy chasti Ukrnigiprosel'khoza.

(Feed mills--Equipment and supplies)

ZHOGA, V.; KUROV, Yu.

Poultry plant for three million broilers. Sel'. stroi. no.10:26-27 O '62. (MIRA 15:11)

1. Rukovoditel' laboratorii ptitsevodcheskikh sooruzheniy Ukrainskogo gosudarstvennogo proyektnogo i nauchno-issledovatel'skogo instituta proyektirovaniya sel'skogo i sel'skokhozyaystvennogo stroitel'stva (for Zhoga).
2. Glavnyy konstruktor laboratorii ptitsevodcheskikh sooruzheniy Ukrainskogo gosudarstvennogo proyektnogo i nauchno-issledovatel'skogo instituta proyektirovaniya sel'skogo i sel'skokhozyaystvennogo stroitel'stva (for Kurov).
(Poultry plants)

KUROV, Yu.A.

Overall mechanization in poultry farming. Mekh. sil'. hosp. 14 no.9:23-24 S '63. (MIRA 17:1)

1. Zaveduyushchiy laboratoriyey Ukrainskogo nauchno-issledovatel'skogo i proyektnogo instituta sel'skogo khozyaystva.

KUROV, Yu.A., inzh.

New types of poultry farms. Mekh. sil'. hosp. 13 no.7:15-16 Jl '62.
(MIRA 17:3)

ANTONYUK, B.N.; DENESYUK. I.P.; KUROV, Yu.P.; VAYNSHTEYN, A.I.; BERDNIKOV. V.A.; VEYTSMAN, M.B.; IVANOV, A.A.; IVANOV, A.S.; GAYEVSKIY, B.A.; KOZEL'TSEV, L.K.; KOZEL'TSEV, L.I.; KUVALDIN, S.G.; MIROSHIN, A.I.; MIL'KOV. G.Ye.; ZUBKOVSKIY, B.P.; IZYUMOV, B.N.; EDEL'SHTEYN, V.I.; KOCHETKOV. V.P.; BUBLIKOV, A.V.; DZHANASHIYA, V.A.

Patents. Bum. i der. prom. no.1:53-54 Ja-Mr '65.

(MIRA 18:10)

BYKOV, A.P., kand. tekhn. nauk, dots.; LOMAGIN, N.A., red.; KUROVA, A.A., red.; NIKOL'SKAYA, K.G., tekhn. red.

[Development of electric power engineering and railroad electrification in the U.S.S.R.] Razvitie elektroenergetiki i elektrifikatsiia zheleznykh dorog SSSR. Izd.2., perer. i dop. Moskva, 1963. 63 p. (MIRA 17:3)

BARSHCHEVSKIY, B.U., dotsent, kand. fiziko-matem. nauk; KUROVA, A.V., red.; KLEYMAN, L.G., tekhn. red.

[Physics; dispersion of light] Fizika; dispersiia sveta. Konspekt lektsii dlia studentov II kursa vsekh spetsial'nostei. Moskva, Vses. zaochnyi institut inzhenerov zhel-dor. transp., 1960. 13 p. (MIRA 14:7)

(Refraction)

SOLOV'YEV, N.V., dots., kand. tekhn. nauk; VEDERNIKOV, A.I., red.; KUROVA, A.V., red.; KLEYMAN, L.G., tekhn. red.

[Fundamentals of safety engineering and fire prevention in railroad transportation; course of lectures for students of all branches] Osnovy tekhniki bezopasnosti i protivopozharnoi tekhniki na zheleznodorozhnom transporte; kurs lektsii dlia studentov vsekh spetsial'nostei. Moskva, M-vo putei soobshcheniia Vses.zaochnyi in-t inzhenerov zhel-dor.transp., 1961. 308 p. (MIRA 14:12)

(Railroads--Safety measures)
(Railroads--Fires and fire prevention)

ASHEKO, S.M., dots., kand. tekhn. nauk; KLAUZ, P.L., dots., kand. tekhn. nauk; KUROVA, A.V., red.; NIKOL'SKAYA, K.G., tekhn. red. KLEYMAN, L.G., tekhn. red.

[Repair of road and construction machinery] Remont putevykh i stroitel'nykh mashin; uchebnoe posobie po distsipline "Tekhnologiia mashinostroeniia i remont mashin" dlia studentov V kursa spetsial'nosti "Stroitel'nye i dorozhnye mashiny i oborudovanie." Moskva, zaochnyi in-t inzhenerov zhel-dor. transp., 1962. 108 p. (MIRA 16:2)
(Road machinery--Maintenance and repair)
(Construction equipment--Maintenance and repair)

BURCHAK, G.P., dots.; BULANOVA, N.F., assistent; ZYLEV, B.V., dots.; PRAVDIN, Zh.L., dots.; KUROVA, A.V., red.

[Methods manual on the solution of problems in theoretical mechanics; dynamics] Metodicheskoe posobie po resheniiu zadach teoreticheskoi mekhaniki; dinamika. Moskva, Mosk. in-t inzhenerov zhel-dor. transp., 1962. 163 p. (MIRA 18:8)

GLEBOV, V.A., kand. tekhn. nauk, dots.; KARINSKAYA, L.P., red.; KUROVA, A.V., red.; KLEYMAN, L.G., tekhn. red.

[Regulation of electrical machines and the traction characteristics of a diesel locomotive] Regulirovanie elektromashin i tiagovye kharakteristiki teplovoza; uchebnoe posobie po distsipline "Elektromashiny i elektrooborudovanie teplovozov" dlia studentov V i VI kursov spetsial'nosti "Teplovozy i teplovoznoe khoziaistvo." Moskva, Vses. zaochnyi in-t inzhenerov zhel-dor. transporta, 1963. 33 p. (MIRA 16:10)
(Diesel locomotives) (Electric railway motors)

LUL.EV, Boris Petrovich; KURKOVA, A.V., red.

[Descriptive geometry; mutual intersection of polyhedra and surfaces. Methodological textbook for students of the first course majoring in any subject] Nachertatel'naia geometriia; vzaimnoe peresechenie mnogogrannikov i poverkhnostei. Uchebno-metodicheskoe posobie dlia studentov I kursa vsekh spetsial'nostei. Moskva, Vses. zaochnyi in-t inzhenerov zheldor. transporta, 1963. 36 p. (MIRA 18:3)

IOFFE, Gerts Saulovich, kand. fiz.-matem. nauk, dots.; KUROVA, A.V., red.; KLEYMAN, L.G., tekhn. red.

[International system of units of measurement of physical quantities; textbook for students of courses I, II, and III for all majors] O mezhdunarodnoi sisteme edinits izmereniia fizicheskikh velichin; uchebnoe posobie dlia studentov I, II i III kursov vsekh spetsial'nostei. Moskva, Vses. zaochnyi in-t inzhenerov zhel-dor. transporta, 1963. 41 p. (MIRA 17:3)

RAPOPORT, T.B.; GINZBURG, I.G.; KRASNIKOV, M.A.; KUKOVA, A.V., red.

[Engineering and structural drawing; a manual for students in course II of "Building of Railroads", "Bridges and Tunnels", "Industrial and Civilian Construction", "Water Supply and Sewerage System", "Economics and Organization of Construction for Railroad Transportation"] Inzhenerno-stroitel'noe cherchenie; uchebnoe posobie dlia studentov II kursa spetsial'nostei: "Stroitel'stvo zheleznykh dorog"(S), "Mosty i tonneli" (MT), "Promyshlennoe i grazhdanskoe stroitel'stvo" (PGS), "Vodosnabzhenie i kanalizatsiia" (VK), "Ekonomika i organizatsiia stroitel'stva na zheleznodorozhnom transporte" (ES). Moskva, Vses. zaochnyi in-t inzhenerov zhel-dor. transp., 1963. 69 p. (MIRA 17:9)

LAPIN, A.V.; KUROVA, A.V., red.; KLEYMAN, L.G., tekhn.red.

[Fundamentals of electric drives; textbook for the forth and fifth year students specializing in the "Electrification of railroad transportation," "Thermal power systems for electric power stations," "Cars and car operation, maintenance and repair," "Construction and road machinery and equipment"] Osnovy elektroprivoda; uchebnoe posobie dlia studentov IV i V kursov spetsial'nostei: "Elektrifikatsiia zheleznodorozhnogo transporta," "Teploenergeticheskie ustanovki elektrostantsii," "Vagony i vagonnoe khoziaistvo," "Stroitel'nye i dorozhnye mashiny i oborudovanie." Moskva, VZIIT, 1963. 99 p. (MIRA 17:3)

SNITKO, Ivan Konstantinovich; KUROVA, A.V., red.

[Structural mechanics of metal elements of machinery; a manual for students in course 4 majoring in "Construction and road machinery and equipment"] Stroitel'naia mekhanika metallokonstruktsii mashin; uchebnoe posobie dlia studentov IV kursa spetsial'nosti "Stroitel'nye i dorozhnye mashiny i oborudovanie" (SM). Moskva, Vses. zaochnyi in-t inzhenerov zhel-dor. transp., 1963. 138 p. (MIRA 17:4)

AL'BREKHT, Vladimir Georgiyevich, doktor tekhn. nauk, prof.; LYASHCHENKO, Vasiliy Nikolayevich, kand. tekhn. nauk, dots.; PERSHIN, Sergey Petrovich, kand. tekhn. nauk, dots.; KUROVA, A.V., red.; KLEYMAN, L.G., tekhn. red.

[Continuous track and continuous welded rails] Besstykovoi put' i dlinnye rel'sy; uchebnoe posobie. [By] V.G.Al'brekht i dr. Moskva, Vziit, 1963. 213 p. (MIRA 17:1)
(Railroads--Track) (Railroads--Rails--Welding)

VEKSLER, V.M.; IGNATOVICH, A.M., prof.; MUKHA, T.I.; KUKOVA, A.V., red.

[Loading and unloading, hoisting and conveying machinery] Pogruzochno-razgruzochnye i pod"emno-transportnye mashiny. Moskva, VZIIT. Pt.2. 1964. 137 p. (MIRA 18:5)

GOLDSHTEYN, R.I.; ZEL'KIND, Ye.M.; TSEYTLIN, S.I.; CHEKULAYEVA, Yu.I.; KUROVA, E.A., ved. red.; SOLOV'YEVA, S.S., ved. red.

[Petroleum refining abroad; a statistical and economic collection] Neftepererabotka za rubezhom; statistiko-ekonomicheskii sbornik. Moskva, TsNIIITEIneftegaz, 1963. 112 p. (MIRA 17:12)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut informatsii i tekhniko-ekonomicheskikh issledovaniy po neftyanoy i gazovoy promyshlennosti.

BERG, P.D.; GOL'DSHTEYN, R.I.; ZEL'KIND, Ye.M.; TOMASHPOL'SKIY, L.M.; FEDOROV, I.V.: IVANOV, V.A.; CHEKULAYEVA, Yu.I.; KUKOVA, E.A., red.; NIKOLAYEVA, Ye.A., ved. red.; MASOLOV, Ya.M., tekhn. red.

[Petroleum refining in capitalist countries; statistical studies] Neftepererabatyvaiushchaia promyshlennost' kapitalisticheskikh stran; statisticheskii sbornik. Moskva, Vol.1. [Petroleum refining and petroleum products] Pererabotka nefti i proizvodstvo nefteproduktov. 1960. 219 p. Vol.2. [Consumption, transportation, and storage of petroleum and petroleum products] Potreblenie, transport i khranenie nefti i nefteproduktov. 1961. 323 p. (MIRA 15:6)

1. Moscow. Gosudarstvennyy nauchno-issledovatel'skiy institut nauchnoy i tekhnicheskoy informatsii.
(Petroleum--Refining) (Petroleum industry--Statistics)

AUTHORS: Kurova, I. A., Kalashnikov, S. G. 57-2-1o/32

TITLE: The Ionization Energy of Bismuth and Thallium in Germanium (Energiya Ionizatsii vismuta Talliya v Germanii)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 2, pp. 256-258 (USSR).

ABSTRACT: The temperature-dependence of the resistance of germanium alloyed with bismuth and thallium at a concentration of $7.1o^{14}$ to $6.1o^{15}$ cm^{-3} was investigated here. The measurements were made in a cryostat with preheater which was connected with the sample by a quartz-monocrystal. The temperature varied from 4,2 to 2o°K and was controlled by means of an argon thermometer with an accuracy up to 1%. At more than 7°K the resistance was measured with the aid of a highly resistive potentiometer according to the compensation method. Welded-on-tin-spheres (contact-diameter 0,2 - 0,3 mm) served as potential probes. At lower temperatures the resistance was determined by means of the electrometer ЭМУ - 3 by comparison with a standard resistance. From the specific resistance over temperature curves is to be seen that the measurements according to the compensation method yield the same gradient as the electrometric measurements and that a change in the length of the sample does not have any influence upon this gradient. The formula from reference 3 was used

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The Ionization Energy of Bismuth and Thallium in Germanium. 57-2-1c/32

for determining the ionozation-energy for the samples of the p-type. From the values, summarized in a table, for the ionization energy in antimony and zinc is to be seen that they agree with the data given in publications (0,0097 eV in reference 1 and 0,03 eV in reference 4). The ionization energies in bismuth and thallium lie near the ionization energies of other elements of the 3rd and 5th with a high distribution coefficient. The obtained results show that the local lattice-deformations which are caused by the penetration of foreign atoms with a different atom-radius do not markedly influence the ionization-energy (at least in the case of weakly bound electrons(holes) and do not disturb the use of a hydrogen-like model for the local levels. The present measurements were performed in the Cryoscopic-Laboratory of the State University, Moscow. The work was advised by A. I, Shal'nikov. V. G. Alekseyeva placed the samples at the authors' disposal.
There are 1 figure, 1 table, and 6 references.

ASSOCIATION: Moscow State University, Physics Department, (Moskovskiy gosudarstvennyy universitet. Fizicheskiy fakul'tet). None Soviet

SUBMITTED: July 1, 1957.

AVAILABLE: Library of Congress.

Card 2/2 1. Crystals-Ionization 2. Bismuth 3. Thallium

67405

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SOV/181-1-9-29/31

AUTHORS: Kurova, I. A., Kalashnikov, S. G.

TITLE: On the Electrical Conductivity of Germanium at Low Temperatures

PERIODICAL: Fizika tverdogo tela, 1959, Vol 1, Nr 9, pp 1476 - 1479 (USSR)

ABSTRACT: The anomalies occurring at low temperatures in germanium with impurity concentrations of $\sim 10^{15}$-$10^{18}/cm^3$, had already been investigated earlier several times, as briefly shown in the introduction. The authors investigated high-ohmic n- and p-type germanium samples with $\sim 3.10^{13}/cm^3$ and antimony-alloyed germanium samples with $\sim 1.10^{14}$ - $3.10^{15}/cm^3$; they measured the Hall constant, the resistivity and the change of resistance in the magnetic field. The preparation of the samples is described. The voltage was measured by a Compton electrometer. The field inside the samples did not exceed 0.2 v/cm and was for all samples within the range of validity of Ohm's law. Half-constant and change of resistance in the magnetic field were measured at field strengths up to 3500 oersteds. Figures 1 and 2 show typical curves for

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antimony-alloyed samples (the characteristics of the samples are given in a table). It is shown that for all samples the law of resistance growth changes at about 4°K; the activation energy drops from a value of $\sim$ 0.01 ev (impurities of the V group) to $\sim 5.10^{-4}$ ev in high-ohmic samples. The temperature dependence of the Hall constant and the change of resistance in the magnetic field of samples with an impurity concentration $< 1.5.10^{15}/cm^3$ deviates strongly from the dependence for samples with high concentrations. The Hall constant has no maximum for high-ohmic samples and changes by approximation after the same law as the resistance. In the range of 500 - 5000 oersteds it does not depend on the magnetic field. For low-ohmic samples the same ratios were found as already established in references 1-8. The Hall mobility $\mu = R/\varrho$ is of the order of $10^5 cm^2/v.sec$ for low impurity concentration samples at $T < 4°K$. The results obtained show that in high-ohmic germanium with impurity concentrations $\sim 10^{15} cm^{-3}$ and lower at low temperatures the weak conductivity is conserved in the ground band; in the samples investigated

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On the Electrical Conductivity of Germanium at Low Temperatures

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it corresponds to a carrier concentration of the order of $10^5 cm^{-3}$ and can be explained by the existence of low levels immediately at the bottom of the ground band. The author finally thanks A. I. Shal'nikov for having offered the possibility of conducting the investigations in his laboratory and for valuable advice as well as V. G. Alekseyeva for having prepared the germanium crystals. There are 2 figures and 12 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy universitet Fizicheskiy fakul'tet (Moscow University, Department of Physics)

SUBMITTED: April 10, 1959

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83018

S/181/60/002/008/037/045
B006/B063

24.7700

AUTHORS: Kalashnikov, S. G., Kurova, I. A.

TITLE: Electrical Conductivity of Germanium at Low Temperatures

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 8, pp. 1949 - 1950

TEXT: The present article follows a previous publication (Ref. 1) in which the authors gave the results of measurement of the resistivity, the Hall constants, and the change in resistivity of Ge samples with Sb impurities of 8.10^{13} - $2.9 \cdot 10^{15}$ cm^{-3} placed in a magnetic field. Samples of higher impurity concentrations ($2.7 \cdot 10^{15}$ - $2.9 \cdot 10^{15}$) showed a typical impurity conductivity at the temperature of liquid helium. This is in agreement with the results of other authors. Further studies on samples of impurity concentrations of $\sim 10^{15} cm^{-3}$ showed that these samples had a remanent conductivity owing either to long-wave rays scattered in the instrument or to thermal radiation emitted by tubes. The intensity was

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Electrical Conductivity of Germanium at Low Temperatures

was estimated to be $\sim 10^{-10}$ w/cm^2. The accompanying figure shows typical curves (Q and R as a function of 1/T) of samples exhibiting such a remanent conductivity. These curves were recorded by a modified instrument in which the effects of scattered thermal radiation were considerably reduced. The temperature dependences of the Hall constant and resistivity in the presence of this scattered radiation are shown for comparison. The curves differ considerably. After the elimination of the scattered radiation, Q and R vary according to an exponential law with an activation energy of about 0.01 ev, and show no anomalies. The change in resistivity in a magnetic field for the two cases is also to be seen. In the presence of this radiation, the Hall constant has no maximum, and the carrier mobility calculated from Q and R retains its high value in the entire temperature range. The samples to which the data and curves refer are indicated by 1-1 and 4-2. They show different behaviors which are discussed here. Their composition is not given. The author thanks A. I. Shal'nikov who made these experiments possible and gave him valuable advice. There are 1 figure and 1 Soviet reference.

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83018

Electrical Conductivity of Germanium at Low Temperatures

S/181/60/002/008/037/045
B006/B063

ASSOCIATION: Moskovskiy gosudarstvennyy universitet Fizicheskiy fakul'tet (Moscow State University, Department of Physics)

SUBMITTED: January 29, 1960

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S/181/60/002/012/016/018
B006/B063

AUTHORS: Kurova, I. A. and Tyapkina, N. D.

TITLE: Electrical Conductivity of Lithium-doped Germanium at Low Temperatures

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 12, pp. 3106-3109

TEXT: Germanium specimens containing impurities of elements of the third and fifth groups have been studied repeatedly at the temperatures of liquid helium (Refs. 1-9), but there are no data available on the variations of ionization energy of lithium in germanium and on the electrical conductivity of lithium-doped germanium at low temperatures. This work was intended to fill this gap. As Li in Ge has a diffusion coefficient of $D=1.10^{-6}$ cm^2/sec at 500°C, diffusion of Li into Ge at elevated temperature is the best method of introducing lithium. The germanium specimens were ground, etched, purified, and annealed in vacuo at 490°C for 4-8 hrs, depending on the size of the specimen. The annealing was done with an Li-Pb alloy, from which Li diffused into Ge. Starting materials were p-type and n-type germanium having a resistivity of

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B006/B063

~50 ohm.cm. The specimens were cut perpendicularly to the growth axis [111], and had a size of 3·4·15 mm. After the diffusion, the specimens were ground anew and etched with boiling H_2O_2. Li-Pb spots were left as contacts. Lithium concentration varied from $2.3 \cdot 10^{14}$ and $2.9 \cdot 10^{15}$ cm^{-3}, resistivity at 300°K from 6.5 to 0.58 ohm.cm, and ionization energy from 9.3 to 9.4 kev. The Hall constant (R) and the variation of resistivity under the action of a magnetic field were measured as well. This was done in liquid helium; the temperature of the specimens was determined from the saturation pressure. The measurements in the magnetic field were made at 1200 oe; the electric field inside the specimens did not exceed 0.2 v/cm and thus remained within the range of validity of Ohm's law. The curves $\rho = f(1/t)$ and $R = f(1/T)$ are reproduced here. They show that only specimens with 6.5 and 4.45 ohm.cm and lithium concentrations of $(2.3 \div 3.9) \cdot 10^{14} cm^{-3}$ have regular (exponential) functions, whereas specimens with higher lithium concentrations and lower resistivity exhibit an anomalous temperature dependence of ρ and R R(1/T) curves, for example have peaks. The authors thank S. G. Kalashnikov for discussions, and A. I. Shal'nikov for putting his laboratory at their disposal. The

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B006/B063

2 figures, 1 table, and 23 references: 2 Soviet, 16 US, 1 German, 1 Dutch, 1 French, 1 Canadian, and 1 Czechoslovakian

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo universiteta (Division of Physics of Moscow State University)

SUBMITTED: May 5, 1960

Card 3/3

KUROVA, I.A.; TYAPKIN, Yu.D.

Electrical conductivity of germanium containing lithium impurities at low temperatures. Fiz. tver. tela 3 no. 12:3106-3109 D '61. (MIRA 14:3)

1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta.
(Germanium--Electric properties)

26410
S/056/61/041/001/005/021
B102/B212

24,7700

AUTHORS: Il'ina, M. A., Kurova, I. A.

TITLE: Effect of unidirectional compression on the electrical properties of p-type germanium at low temperatures

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 1(7), 1961, 81 - 82

TEXT: Unilateral compression splits the valence band in germanium which is normally quadruply degenerate, into doubly degenerate bands and deforms it. This brings about a change of the electrical properties of p-type germanium. G. Ye. Pikus and G. L. Bir have already investigated this problem theoretically. The authors of this paper have measured the resistivity, Hall constant, and resistivity variation in a magnetic field 4.2 - 5.7°K for p-type Ge specimens, whose resistivity, ρ, at room temperature, was 20 ohm.cm. The resistance of the specimen was $R > 10^{12}$ ohms at $T < 5.7$°K. The measurements were made along the direction of deformation [110] and normal to it, [110], at a load of 600 kg/cm^2. For the measurements an instrument, well shielded

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against thermal radiation, was used, since radiation weakens the measured effects, which even disappear with a strong radiation. The measurements were carried out with a magnetic field of 1500 oe and an electric field that does not violate Ohm's law. The results obtained for the conductivity as a function of pressure show that the conductivity will change more along the [110] direction than in the [110] direction. If it is assumed that the scattering displays a small anisotropy, then it is possible to determine the sign of dD from the mobility ratio $\mu_\perp/\mu_\parallel = \sigma_\perp/\sigma_\parallel$, which is negative. d denotes the deformation potential coefficient, D the matrix element of the spin-orbital interaction. An analysis of the pressure dependence of μ/μ_0 and the carrier concentration ratio $n/n_0 = R_0/R$ (R - Hall constant) along the deformation direction [110] at 4.2°K showed that the change in conductivity of p-type Ge with deformation is caused by both the increased number of holes and increased hole mobility. From a measurement of the temperature dependence of the Hall constant at zero and maximum deformations, the change of the hole ionization energy was determined to be $5 \cdot 10^{-4}$ ev, which amounts to 5% of the total ionization energy. This value is close

Effect of unidirectional...

to the measurement accuracy (~3 %), and the same change is obtained from the pressure dependence of the number of carriers. The authors thank N. B. Brandt, A. I. Shal'nikov, and G. Ye. Pikus for interest in this work.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: February 22, 1961

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S/181/62/004/006/019/051
B104/B112

24.7700

AUTHORS: Kurova, I. A., Kalashnikov, S. G., and Tyapkina, N. D.

TITLE: The kinetics of impurity conduction in Au-doped n-type germanium

PERIODICAL: Fizika tverdogo tela, v. 4, no. 6, 1962, 1503 - 1509

TEXT: The trapping of electrons on the E_4 level of gold in Au-doped n-type germanium was investigated at hydrogen temperature. The photoconduction of single-crystal specimens was determined in a He cryostat evacuated to $\sim 10^{-2}$ mm Hg. The heat emission of a crucible furnace was filtered through Ge and Sb-In filters. The damping periods of the photoconduction of the specimens were measured for two different directions of current passage. If the contacts of the samples are of high quality, the damping of photoconduction can be described by $\exp(-t/\tau)$. The coefficients α_n^- of electron trapping on the E_4 level of gold were determined from measured values of τ, using the relation $\tau = (\alpha_n^- N_3)^{-1}$

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The kinetics of...

(Table), where N_3 is the dark concentration of Au^- ions. The temperature dependence of the trapping cross section is described by $s \cdot \exp(-E/kT)$, where E is the activation energy. The dependence of τ on T increases with increasing Sb content. This confirms the authors' conclusions as to the effect of electron adhesion to Sb ions. The temperature dependence of the trapping cross section shows no signs of a strong influence of the potential barrier around the centers upon the trapping processes. There are 5 figures and 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: January 25, 1962

KUROVA, I.A.; KALASHNIKOV, S.G.

Electric instability in germanium. Fiz. tver. tela 5 no.11:3224-3230 N '63. (MIRA 16:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

Fizika tverdogo tela

compensated with gallium. The spectra were measured with an IKS-21

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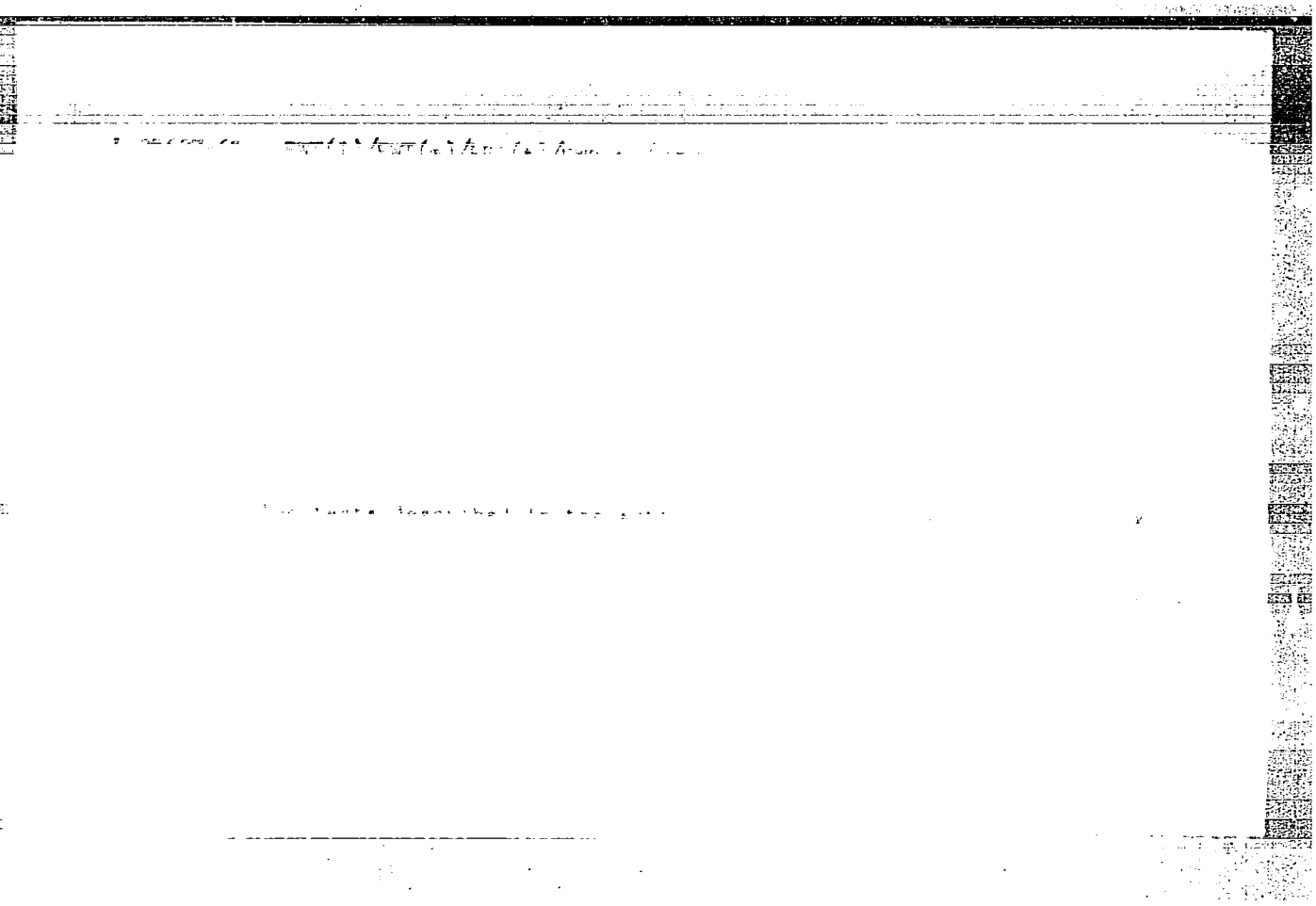

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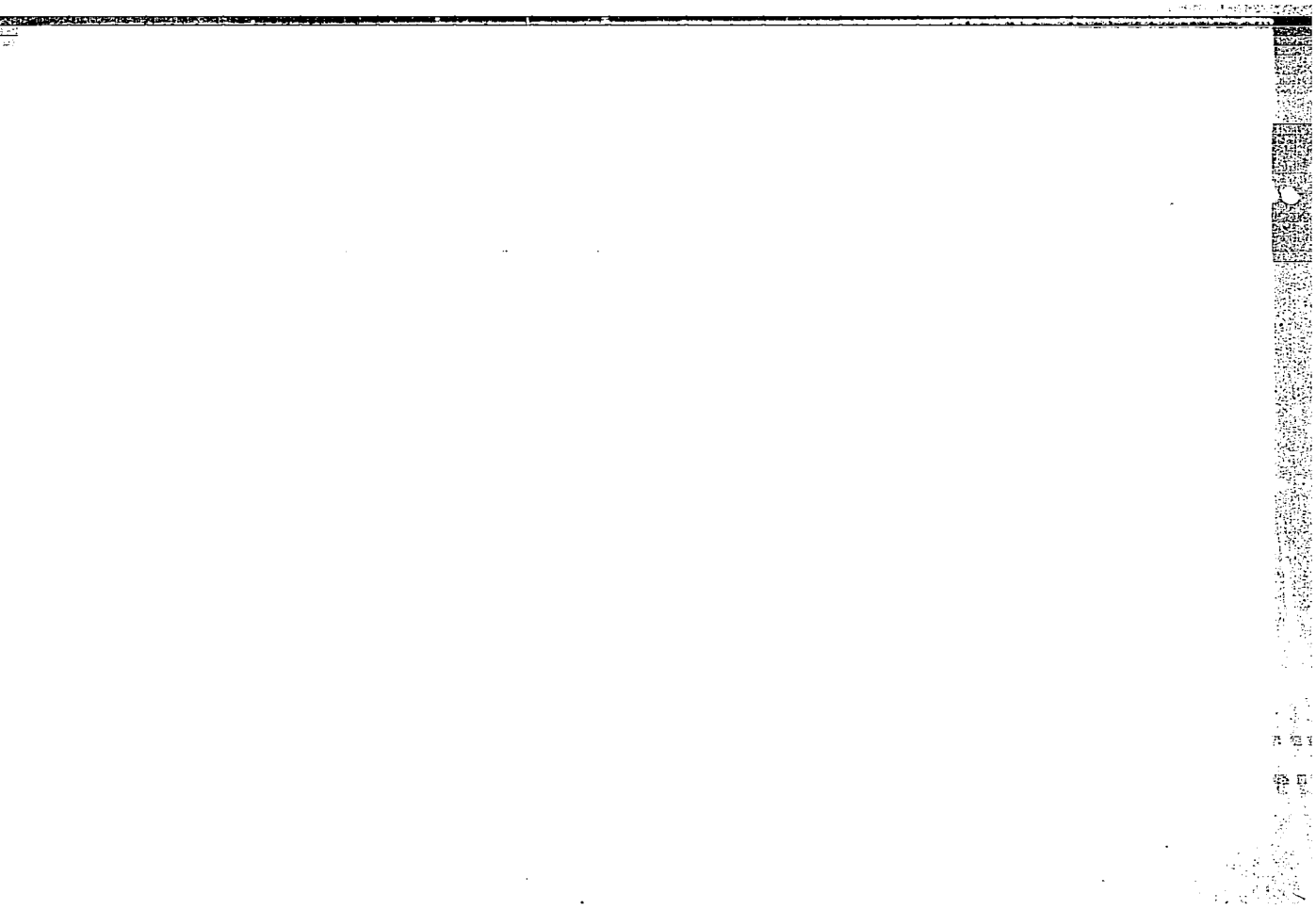

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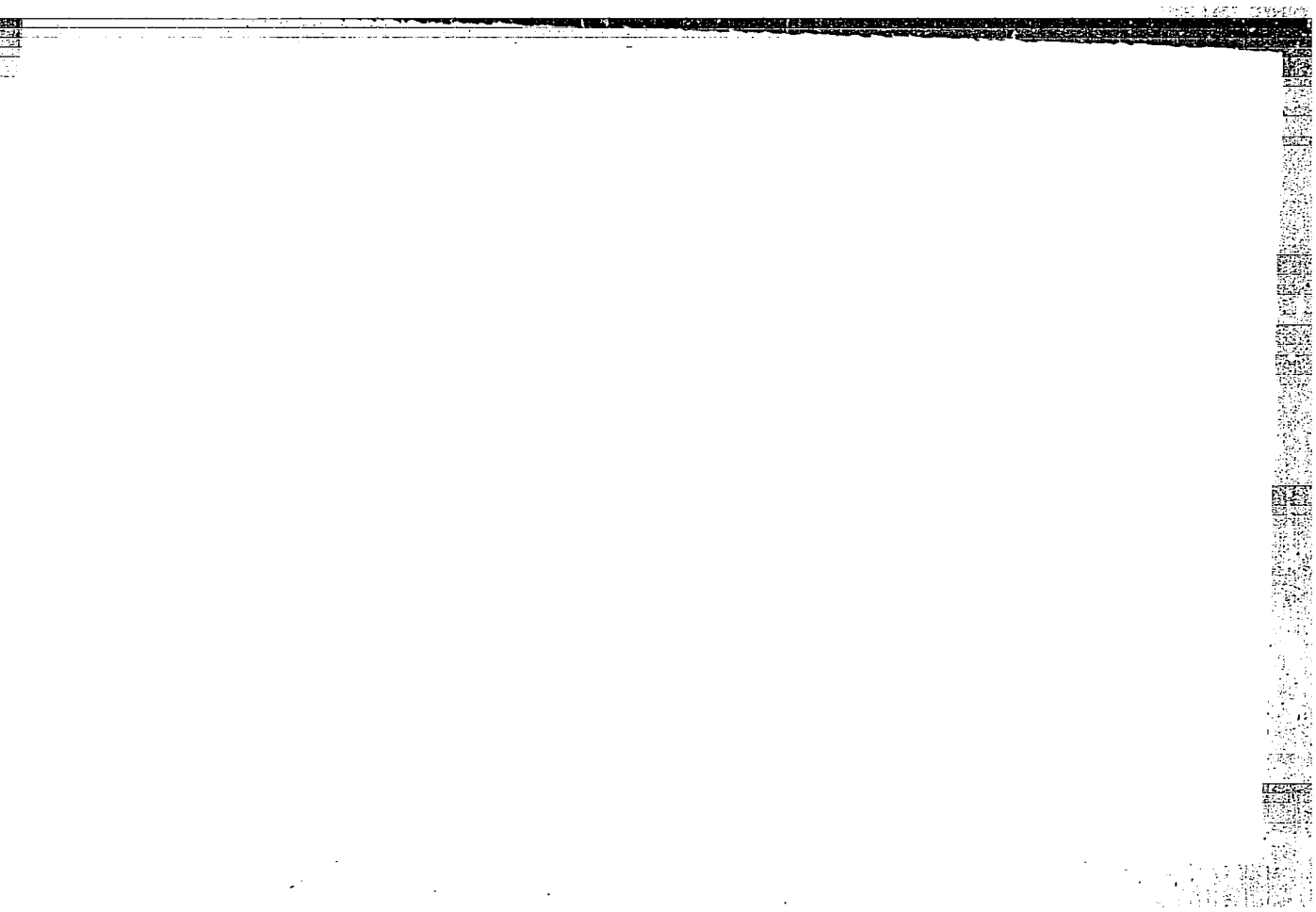
KUROVA, I.A.; OSTROBORODOVA, V.V.; OHMONT, N.N.

Volta sensitivity of Au-doped p-germanium at low temperatures. Fiz. tver. tela 7 no.3:940-941 Mr '65.

(MIRA 18:4)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.



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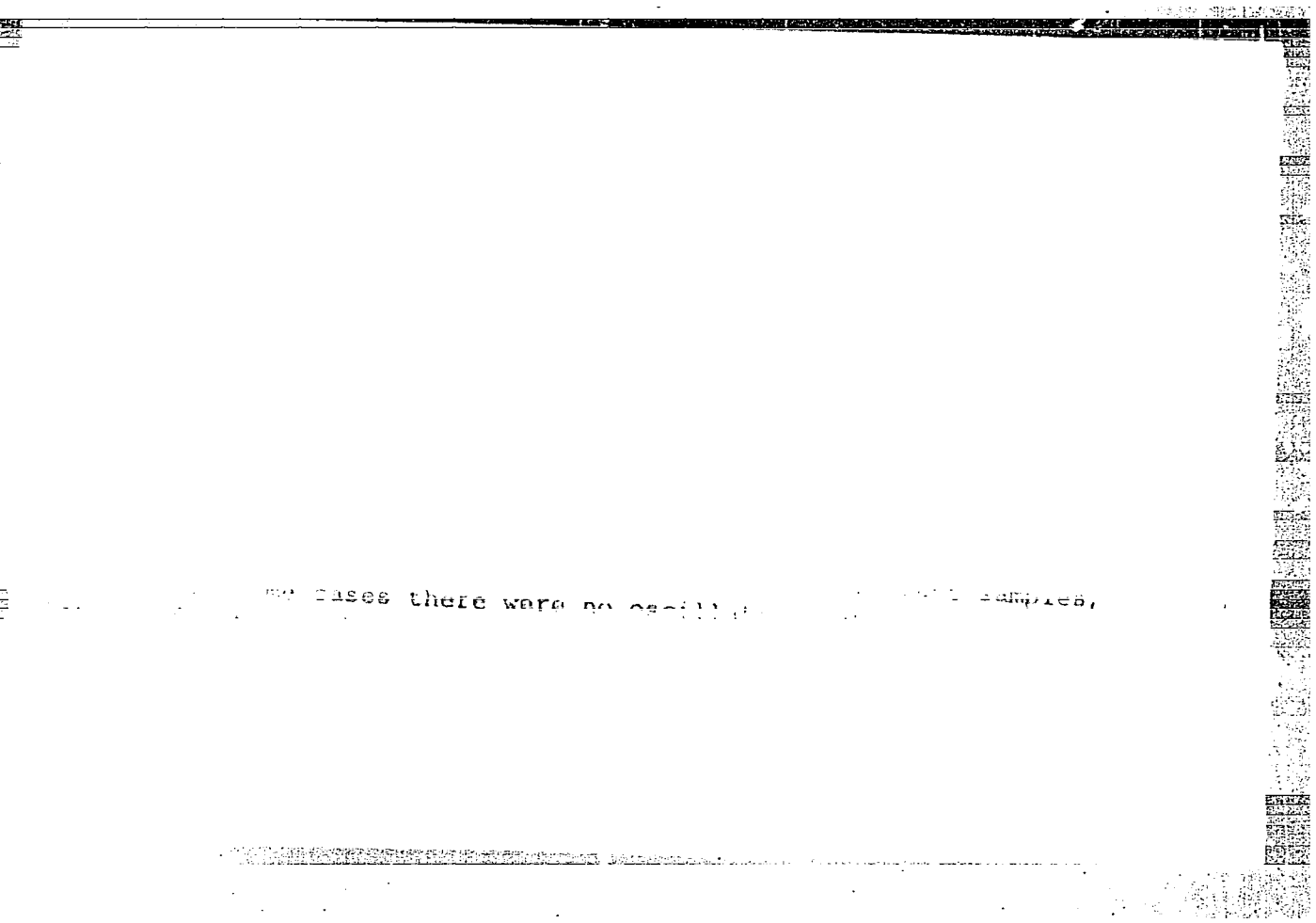

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ACCESSION NR: AP5016550

concentration. The "cold" hole lifetimes ...

... universitet (Moscow State University)

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L 2261-66 EWT(m)/EWP(t)/EWP(b) LIP(c) JD

ACCESSION NR: AP5006920 S/0181/65/007/003/0940/0941

AUTHOR: Kurova, I. A.; Ostrobcrodova, V. V.; Ormont, N. N.

TITLE: Voltage sensitivity of p-type germanium with gold at low temperatures

SOURCE: Fizika tverdogo tela, v. 7, no. 3, 1965, 940-941

TOPIC TAGS: germanium, voltage sensitivity, donor level, photoionization, low temperature research

ABSTRACT: The integral voltage sensitivity of p-type germanium samples with partially compensated donor level of gold was measured in a metallic helium cryostat. The sample was fastened on a cold finger together with a heater and its temperature could be varied between 10 and 50K. The source of radiation was a copper cylinder with heater, and radiation from which was modulated at 400 cps. The voltage from the sample was displayed on an oscilloscope and measured with a meter after amplification. The temperature dependence of the voltage sensitivity is illustrated in Fig. 1 of the Enclosure. The activation energy was ~0.04 eV, and the ionization energy of the donor level was 0.041 eV. The temperature dependence of the voltage sensitivity was thus in agreement with the theory of impurity photoconductivity in the presence of one impurity level. The voltage sensitivity was also independent

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of the degree of compensation of the level and of the impurity concentration. A value of (1.16--08) x 10^{16} cm^2 was obtained for the average effective photoionization cross section of the level, in agreement with data obtained by others. Orig. article has: 1 figure, 2 formulas, and 1 table.

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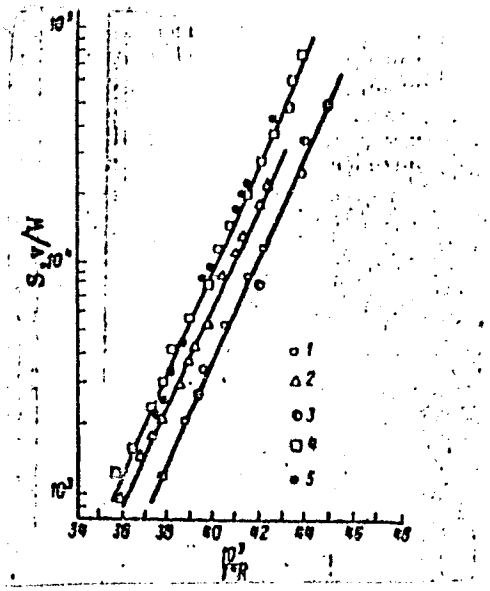

ENC. 01

Dependence of the integral voltage sensitivity on the temperature.

Symbol number:
1. 2078
2. 1641
3. 1033
4. 1431

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BESFAMIL'NAYA, V.A.; KUROVA, I.A.; ORMONT, N.N.; OSTROBOKOLOVA, V.V.

Oscillations in impurity photoconductivity spectra of germanium. Zhur. eksp. i teor. fiz. 48 no.6:1588-1593 Je '65.
(MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet.