"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUD', V.V.

Generalization on the Manley-Rowe theorem for a case when two or more pumping generators act on a nonlinear reactive element. Radiotekhnika 20 no. 12:8-13 D '65 (MIRA 19:1)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni Popova.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 33600-66 EWT(m)/EWP(e)/T/EWP(t)/ETI IJP(c) JD/WH

ACC NR: AR6016220 SOURCE CODE: UR/0058/65/000/011/E011/E011

AUTHORS: Goryunova, N. A.; Kesamanly, F. P.; Osmanov, E. O.; Rud', Yu. V.

TITLE: Crystalline and glass-like $CdGeAs_2$

SOURCE: Ref. zh. Fizika, Abs. 11E80

REF SOURCE: Sb. Fizika, Dokl. k XXIII Nauchn. konferentsii Leningr. inzh.-stroit. in-ta. L., 1965, 49-51

TOPIC TAGS: cadmium compound, crystal, glass property, germanium compound, arsenide

ABSTRACT: It is shown that when the melt is rapidly cooled, the compound $CdGeAs_2$ can be obtained in a glass-like state. The temperature dependence of the electron transport effects of this compound was investigated in the interval 100 - 750K. Relative characteristics of glass-like and crystalline $CdGeAs_2$ are presented. T.Volkov [Translation of abstract]

SUB CODE: 20

Card 1/1

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

VOLTSEKHOVSKIY, A.V. [Voltsekhovs'kyi, O.V.]; KESAMANLY, F.P.; MITYURIN, V.K. [Mitiur'ov, V.K.]; RUD', Yu.V.

Transfer effects in the alloys InAs-GdTe and InAs-ZnTe.
Ukr.fiz.zhur.10 no.12:1349-1353 D '65. (MIRA 19:1)

1. Kiyevskiy pedagogicheskiy institut im. Gor'kogo.
Submitted December 15, 1964.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

15

Physico-chemical properties and structure of monocrystalline samples of $ZnSiAs_2$. A. A. Vaypolin, N. A. Goryunova, E. O. Osmanov.

Investigation of macrocrystalline $ZnSiP_2$. N. A. Goryunova, A. A. Vaypolin, Yu. V. Rud'.

Some properties and zone structure of the ternary compound $CdGeAs_2$. F. M. Gashimzade, N. A. Goryunova, E. O. Osmanov.

Electrical properties of monocrystalline samples of $ZnSnAs_2$. N. A. Goryunova, F. P. Kesamanly, D. N. Nasledov, Yu. V. Rud'.

Investigation of properties of $ZnGeP_2$ and $CdGeP_2$. N. A. Goryunova, N. K. Takhtareva, I. I. Tychina.

On the question of the existence of homogeneous many-component tetrahedral phases. G. K. Aberkiyeva, A. A. Vaynolin, N. A. Goryunova.

X-Ray investigation of certain compounds of the type $A^{II}B^{IV}C_2^{VI}$. A. A. Vaynolin, E. O. Osmanov, Yu. V. Rud', I. I. Tychina, A. F. Lindin, N. A. Goryunova, A. F. Ryevin'sh.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

ACCESSION NR: AP4011746 S/0181/64/006/001/0113/0115

AUTHORS: Goryunova, N. A.; Kesamanly*, F. P.; Nasledov, D. N.; Rud', Yu. V.

TITLE: Electrical properties of p-ZnSnAs sub 2 crystals

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 113-115

TOPIC TAGS: p-ZnSnAs sub 2 crystal, electrical property, chalcopyrite structure, Hall constant, specific conductivity, vacancy

ABSTRACT: The present work is a continuation of two other works (N. A. Goryunova, S. Mamayev and V. D. Prochukhan. DAN SSSR, 142, 623, 1962) and (F. M. Gashimzade. Izv. AN Azerb. SSR, ser. fiz. mat., 3, 67, 1963). It represents a study of electrical properties exhibited by $ZnSnAs_2$ single crystals. To resolve the contradictions pertaining to this substance, the authors carried out an x-ray analysis of crystals and proved their structure to be of chalcopyrite type with parameters: a = 5.8515 ± 0.0005 Å, c = 11.703 ± 0.001 Å. Samples used in this work were parallelepipeds 1.5 x 3.5 x 12 $mm^3$ cut from single crystals. They were tested for specific conductivity $\delta$ and for Hall constant R. Measurements were taken in direct current in a constant magnetic field. The study brought out the fact that this material exhibits

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ACCESSION NR: AP4011746

inclusion conductivity throughout the whole range of temperatures tested. Between 150-200K there appears a pronounced maximum on the R - Temperature curve. The authors believe that this maximum can be explained with the help of a two-zone model. It is believed that quantitative determination of the valence zone structure in crystals of $ZnSnAs_2$ will require a complex investigation of the kinetic effects in crystals with various concentrations of vacancies. This will call for a study of R and $\delta$ at low temperatures (2-78K). The authors thank A. A. Vaypolin and T. S. Lagunova for their help in obtaining quantitative data, and F. M. Gashimzade and O. V. Yemel'yanenko for their evaluation of the work. Orig. art. has: 2 graphs.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physical and Technical Institute, AN SSSR); Institut fiziki AN AzerbSSR, Baku (Institute of Physics, AN AzerbSSR)

SUBMITTED: 12Jul63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 006 OTHER: 006

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

ACCESSION NR: AP4033143 S/0120/64/000/002/0179/0180

AUTHOR: Mekhtiyev, R. F.; Osmanov, E. O.; Rud', Yu. V.

TITLE: Outfit for growing single crystals of semiconducting compounds

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 179-180

TOPIC TAGS: crystal, single crystal, semiconductor, single crystal semiconductor, crystal growing, semiconductor crystal growing

ABSTRACT: A special electric furnace for growing single crystals from substances with volatile components is briefly described. The substance, in a a quartz ampul 10 cm long and 14 mm in diameter, is placed in an electric furnace 40 cm long which has two resistance-wire windings. At 2 amp in the main winding the "hot end" of the ampul is heated to 1150C; temperature gradients of 5-15C/cm are obtained by automatically adjusting the current (1-5 amp) in the auxiliary winding. A differential thermocouple is used as a

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ACCESSION NR: AP4033143

sensor for the electronic temperature controller which regulates the auxiliary-winding current. Crystals of GaSe and other complex semiconductors, 8 x 10 x 60 mm in size were grown in the above furnace. "The authors wish to thank G. B. Abdullayev and N. A. Goryunova for their attention to the project." Orig. art. has: 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Physicotechnical Institute, AN SSSR); Institut fiziki AN AzerbSSR (Institute of Physics, AN AzerbSSR)

SUBMITTED: 02Apr63 ATD PRESS: 3082 ENCL: 00

SUB CODE: SS NO REF SOV: 002 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

ACCESSION NR: AP4041731 S/0181/64/006/007/2187/2190

AUTHORS: Kesamanly*, F. P.; Nasledov, D. N.; Rud', Yu. V.

TITLE: Thermal emf and transverse Nernst-Ettingshausen effect in p-$ZnSnAs_2$ crystals

SOURCE: Fizika tverdogo tela, v. 6, no. 7, 1964, 2187-2190

TOPIC TAGS: thermal emf, Nernst Ettingshausen effect, Hall constant, p band, transport property, conductivity

ABSTRACT: In order to investigate transport effects in crystals with different carrier densities, the authors doped crystals with different impurities and, by using heat treatment in some cases, obtained $AnSnAs_2$ crystals with hole density from $10^{18}$ to $10^{20}$ $cm^{-3}$. No n-type crystals were obtained as yet. Single-crystal specimens are transparent for wavelengths 1.5--3 μ, but no waves could be trans-



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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

ACCESSION NR: AP4041731

mitted through polycrystalline specimens. The temperature dependences of the specific conductivity $\sigma(T)$, the Hall constants $R(T)$, and the transverse Nernst-Ettingshausen effect $Q^{\perp}(T)$, and also the differential thermal emf $\alpha(T)$, were measured simultaneously in the interval 90--750K using an instrument described elsewhere (FTT, v. 6, 113, 1964). Tests have shown that the larger the density of the holes in the sample, the lower the $Q^{\perp}(T)$ curve and the later the mixed conductivity sets in. The maximum on the $R(T)$ curve decreases in absolute magnitude with increasing concentration, and the point at which R reaches a maximum, together with the point of reversal of the sign of R, shifts towards higher temperatures. The width of the forbidden band was found to be 0.89 eV, in qualitatively good agreement with the data obtained from the edge of the intrinsic absorption. The data measured in this experiment make it possible, in the case of a semiconductor with simple structure of allowed bands, to determine such parameters as the density and effective mass of the carriers, and also the scattering parameter. The effective mass

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ACCESSION NR: AP4041731

of the holes determined in this experiment was on the average 0.13 $m_0$, where $m_0$ -- mass of the free electron. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute, AN SSSR); Institut fiziki AN Azerb. SSR, Baku (Institute of Physics, AN Azerb. SSR)

SUBMITTED: 04Feb64 ENCL: 02

SUB CODE: SS, EC NR REF SOV: 004 OTHER: 002

Card 3/5

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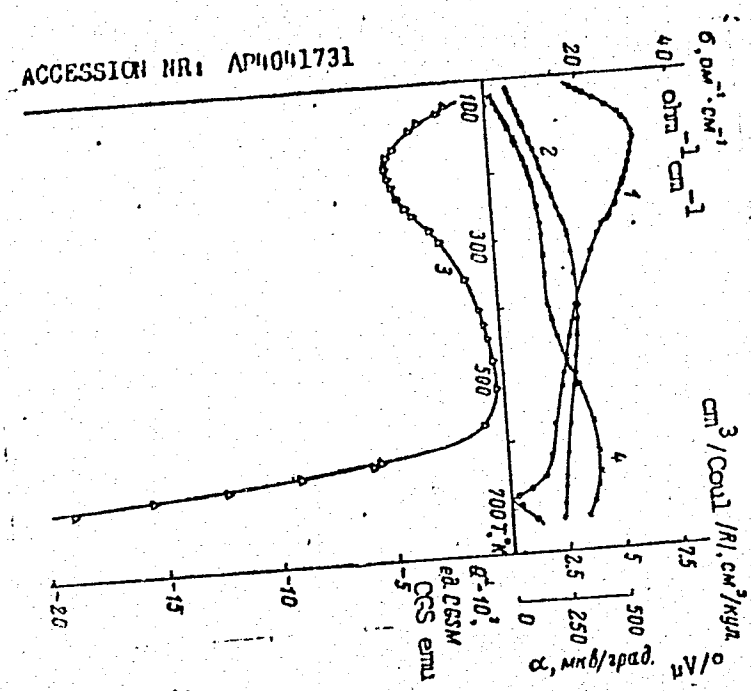
"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

ACCESSION NR: AP4041731

ENCLOSURE: 01




Temperature dependences of the Hall constant (1), specific electric conductivity (2), the transverse Nernst-Ettingsausen constant (3), and the differential thermal emf (4) in a sample of $ZbSnAs_2$.

Card 4/5

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

VAYPOLIN, A.A.; GASHIMZADE, F.M.; GORYUNOVA, N.A.; KESAMANLY, F.P.; NASLEDOV, D.N.; OSMANOV, E.O.; RUD', Yu.V.

Physicochemical and electric properties of certain ternary semiconducting compounds of the type $A^{II}B^{IV}C_2^{V}$. Izv. AN SSSR. Ser. fiz. 28 no.6:1085-1089 Je '64. (MIRA 17:7)

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

ACCESSION NR: AP4016508 S/0020/64/154/005/1116/1119

AUTHORS: Vaypolin, A.A.; Goryunova, N.A.; Osmanov, E.O.; Rud' Yu. V.; Tret'yakov, D.N.

TITLE: Investigating $ZnSiP_2$, $CdSiP_2$, and $ZnSiAs_2$ crystals

SOURCE: AN SSSR. Doklady*, v. 154, no. 5, 1964, 1116-1119

TOPIC TAGS: high melting compound, forbidden zone, chalcopyrite, Debye crystallogram, right prism, phosphide crystal, xray diffraction, lattice spacing, electronic mobility, anisotropy

ABSTRACT: The lack of information on the $ZnSiP_2$, $CdSiP_2$ and $ZnSiAs_2$ crystals prompted an investigation into their structure by the use of x-ray and electric measurements. The phosphide crystals are transparent and vary in color ranging from ruby color for the $ZnSiP_2$ to light red for the $CdSiP_2$. The anistropy of the internal

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

ACCESSION NR: AP4016508

structure of these crystals is projected to their external appearance; the phosphide crystals are divided into hexahedral, pentahedral and trihedral, according to their lateral faces. They are resistant to a variety of acids and alkalis. Optical measurements have made it possible to determine the width of the forbidden zone of the crystals under consideration. These $ZnSiP_2$ and $CdSiP_2$ parameters have thus been defined for the first time. The width of the $ZnSiAs_2$ forbidden zone was found to be less than 2.1 ev. The microhardness of the phosphidesis somewhat greater than that of their binary analogues, and their width is larger than that of the forbidden zone of the same order. As for the arsenides, their microhardness is of the same order as that of their binary analogues, and their forbidden zone is narrower. "The authors are grateful to B.P. Zakharchene and G.A. Sikharulidze for their assistance in determining the width of the forbidden zone. In conclusion, the authors express their gratitude to F.M. Gashimzade for a discussion of the results." Orig. art. has: 3 figures and 2 tables.

Card 2/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

ACCESSION NR: AP4016508

ASSOCIATION: Institut fiziki Akademii nauk AzSSR (Institute of Physics AzSSR); Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physico-technical Institute, Academy of Sciences SSSR)

SUBMITTED: 12Jul63 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE PH NO REF SOV: 004 OTHER: 005

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

KEJAMANOV, F.I.; NASIEDOV, D.N.; RUD', Yu.V.

Thermo-e.m.f. and the transverse Nernst - Ettingshausen effect in p-ZnSnAs2 crystals. Fiz. tver. tela 6 no.7:2187-2190 Jl '64. (MIRA 17:10)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad, i institut fiziki AN Azerbaydzhanskoy SSR, Baku.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

MEKHTIYEV, R.F.; OSMANOV, E.O.; RUD', Yu.V.

Apparatus for producing single crystals of semiconducting compounds. Prib. i tekh. eksp. 9 no.2:179-180 Mr-Ap'64. (MIRA 17:5)

1. Fiziko-tekhnicheskiy institut AN SSSR i Institut fiziki N AzerbSSR.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 27847-65 EWP(e)/EWT(m)/EWP(t)/EWP(b) Pq-4 IJP(c) JD/WH

ACCESSION NR: AP5005896 S/0020/65/160/003/0633/0634

AUTHOR: Vaypolin, A. A.; Goryunova, N. A.; Osmanov, E. O.; Rud', Yu. V. 30 29 B

TITLE: New glassy compounds

SOURCE: AN SSSR. Doklady, v. 160, no. 3, 1965, 633-634

TOPIC TAGS: glass, compound, vitreous compound, compound semiconductor, ternary compound, cadmium germanium arsenic compound, cadmium germanium phosphorus compound, phase transition

ABSTRACT: Quite unexpectedly, a glassy state has been discovered during a study of high-temperature phase transitions in $A^{II}B^{IV}C_2^{V}$ semiconductor compounds, especially in $CdGeAs_2$. A single-phase glass ingot of $CdGeAs_2$ and a thin glassy layer of $CdGeP_2$ were obtained from melts at a high cooling rate (over 200C/sec). The physical and electric properties of the glassy $CdGeAs_2$ were compared with those of the crystalline $CdGeAs_2$. A relatively small change in density on transition into the glassy state and a correspondence between the diffusion peaks of the x-ray diffraction patterns of both states would indicate a similar short-range order, i.e., no change in the diamond-type structure of the $CdGeAs_2$ crystals. Orig. art. has: 2 figures and 1 table. [JK]

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APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 27847-65

ACCESSION NR: AP5005896

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

SUBMITTED: 14Jul64 ENCL: 00 SUB CODE: MT, SS

NO REF SOV: 000 OTHER: 001 ATD PRESS: 3193

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 58928-65 EWT(1)/EWT(m)/EPA(w)-2/T/EWP(t)/EWP(b)/EWA(c) Pi-4 IJP(c)
JD/JW

ACCESSION NR: AP5011527 UR/0020/65/161/005/1065/1066 53 49 B

AUTHORS: Kesamanly, F. P.; Rud', Yu. V.; Slobodchikov, S. V.

TITLE: Photoelectric properties of the crystals p-$ZnSiAs_2$ and p-$CdGeAs_2$

SOURCE: AN SSSR. Doklady, v. 161, no. 5, 1965, 1065-1066

TOPIC TAGS: photoconductivity, spectral distribution, forbidden band, activation energy

ABSTRACT: The authors have previously observed photoconductivity in n-$ZnSiP_2$ crystals (FTT v. 7, 1324, 1965). The present article reports the result of an investigation of the spectral distribution of the photoconductivity and its temperature dependence for crystals of the same class ($A^{II}B^{IV}C_2^{V}$), namely single crystal $ZnSiAs_2$ and $CdGeAs_2$ of the p-type. The spectral characteristics were obtained with a 3MR-2 monochromator with various prisms and a tungsten lamp as a radiation source. The apparatus used to measure the photoresponse

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ACCESSION NR: AP5011527

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was described elsewhere (FTT v. 4, 1227, 1962). The results are shown in Fig. 1 of the Enclosure. They indicate that only the intrinsic photoconductivity, connected with the direct transition of the carriers from the valence band to the conduction band, exists in the investigated temperature interval. The maximum of the photosensitivity corresponds to 2.29 eV at room temperature and 2.33 at 200K. The width of the forbidden band is 2.10 and 2.14 eV, respectively. The activation energy is found to be 0.15 eV. The variation with temperature is due to rise in the Fermi level which decreases the effective number of recombination centers and increases the photoconductivity. In the case of $CdGeAs_2$, the second maximum corresponds to 0.51 eV, whereas the intrinsic photoconductivity maximum occurs at 0.53 and 0.61 eV at room temperature and 80K, respectively. The corresponding gap widths are 0.54 and 0.50 eV. The presence of shallow levels at 0.06 and 0.13 eV, transitions to which give rise to the impurity photoconductivity peak, is deduced from the temperature dependence of the short-circuit current. 'The authors thank N. A. Goryunova and D. N. Nasledov for interest in the work.' This report was presented by V. P. Konstantinov. Original article has: 2 figures

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APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 58928-65

ACCESSION NR: AP5011527 2

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute, Academy of Sciences, SSSR); Institut fiziki Akademii nauk AzerbSSR (Institute of Physics, Academy of Sciences, AzerbSSR)

SUBMITTED: 03Sep64 ENCL: 01 SUB CODE: SS, EM

NR REF SOV: 005 OTHER: 003

Card 3/4

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

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ACCESSION NR: AP5011527

ENCLOSURE: 01

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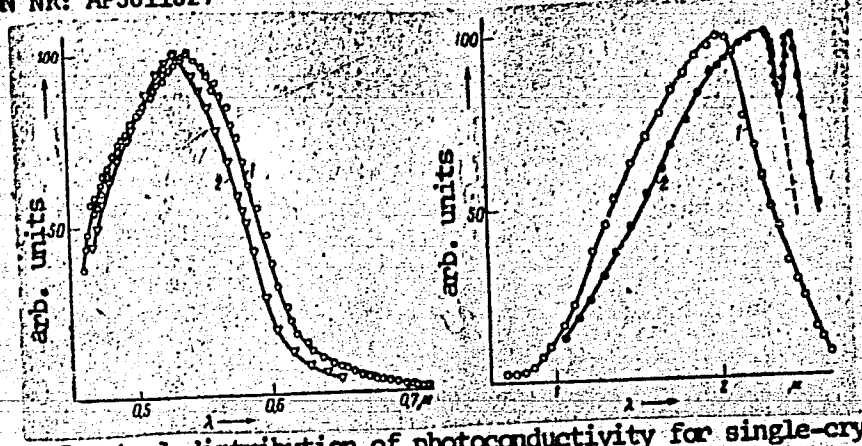


Fig. 1. Spectral distribution of photoconductivity for single-crystal p-$ZnSiAs_2$ (left) and p-$CdGeAs_2$ (right) at two values of the temperature.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 2373-66 EWT(1)/T IJP(c) GG

ACCESSION NR: AP5020827 UR/0020/65/163/004/0868/0869

AUTHORS: Kesamanly, F. P.; Kroitoru, S. G.; Rud', Yu. V.; Sobolev, V. V.; Syrbu, N. N.

TITLE: The energy band structure in crystals of the group $A^{ii}B^{iv}C_2^{v}$

SOURCE: AN SSSR, Doklady, v. 163, no. 4, 1965, 868-869

TOPIC TAGS: semiconductor, zinc compound, conduction band, Brillouin zone

ABSTRACT: Investigations were made of the energy structure in minerals having the structure of chalcopyrite. The lowest conduction band is simple, and the highest valence band is triple. This paper examines the reflection spectra of $ZnSnAs_2$, $ZnSiP_2$, and $ZnSiAs_2$ in the region of 1-6 ev and at 293K. The spectral distribution of reflectivity showed two intense maximums for each crystal: at 265 and 600 mμ for the first, 280 and 330 mμ for the second, and 275-295 and 370 mμ for the third. The peak at 600 mμ for $ZnSnAs_2$ has a doublet structure with two maximums at 550 and 650 mμ. Spin orbit splitting for $ZnSnAs_2$ proved to be 5-10 times that for the other two. Because of the width of the peaks, doublet structure of a long-wave maximum was not observed in the reflectivity curves of the last two crystals. In

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ACCESSION NR: AP5020827 9

general characteristics, the three minerals are very similar. It is concluded that the reflectivity spectra are due to allowed cross-over interzonal transitions at points in the Brillouin zone analogous to points L and X in crystals of group $A^{iv}$ and $A^{iii}B^{v}$. The great general and detailed similarity in reflectivity spectra of the tested crystals to the groups $A^{iv}$ and $A^{iii}B^{v}$ strongly suggests a great similarity in structure of the energy bands and the nature of the chemical bonds of both groups. "The authors express their thanks to Professor D. N. Nasledov for his support of the present work." Orig. art. has: 2 figures and 1 table. 44,55

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe, Akademii nauk SSSR (Physical and Technical Institute, Academy of Sciences SSSR); 44,55 Institut prikladnoy fiziki, Akademii nauk MSSR (Institute of Applied Physics, Academy of Sciences MSSR) 44,55

SUBMITTED: 15Jan65 ENCL: 00 SUB CODE: SS

NO REF SOV: 005 OTHER: 003

BVK

Card 2/2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 50527-65 EWT(1) IJP(c) GG

ACCESSION NR: AP5012534 UR/0181/65/007/005/1312/1314

AUTHORS: Goryunova, N. A.; Kesamanly, F. P.; Nasledov, D. N.; Negreskul, V. V.; Rud', Yu. V.; Slobodchikov, S. V.

TITLE: Electric and photoelectric properties of $ZnSiP_2$

SOURCE: Fizika tverdogo tela, v. 7, no. 5, 1965, 1312-1314

TOPIC TAGS: zinc compound, electric conductivity, temperature dependence, photoconductivity, spectral distribution, electric field dependence

ABSTRACT: Most published data on $ZnSiP_2$ pertain to its physicochemical properties only. The authors measured the temperature dependence of the electric conductivity and of the Hall constant of n-$ZnSiP_2$ in the temperature interval 80—670K, and the spectral distribution of the photoconductivity and its dependence on the electric field, the intensity of illumination, and temperature (80—290K).

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 50527-65

ACCESSION NR: AP5012534

The crystals were grown by a method devised by one of the authors (Rud', with E. O. Osmanov, Registration Certificate No. 38432 of 25 June 1963). The samples had a surface of natural brilliance, and their regular form was attained by grinding. The crystals had an electron density ~(1—2) x $10^{17}$ $cm^{-3}$ at room temperature and a Hall mobility ~70—100 $cm^2$/V-sec. The results are shown in Fig. 1 of the Enclosure. They are briefly analyzed from the point of view of the possible impurity level scheme and possible main transitions. The temperature dependence of the width of the forbidden band is found to have a constant $\alpha = -(7—8) \times 10^{-4}$ eV/°K. It is noted that carrier capture is especially effective at low temperatures, when the relaxation time of the photoconductivity is of the order of several minutes and decreases with rising temperature. Orig. art. has: 2 figures. [02]

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

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

BYCHKOV, A.G. [Bychkov, O.H]; GORYUNOVA, N.A. [Horiunova, N.O.]; KEBAMANLY, F.P.; MITYUREV, V.K. [Mitiur'ov, V.K.]; RUD', Yu.V.; SLOBODCHIKOV, S.V.

Electric and photoelectric properties of $ZnSiP_2$. Ukr. fiz. zhur. 10 no.8:867-872 Ag '65. (MIRA 18:8)

1. Kiyevskiy pedagogicheskiy institut im. Gor'kogo.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 44442-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD/AT

ACC NR: AP5020691 UR/0185/65/010/008/0867/0872

AUTHOR: Bychkov, O. H. (Bychkov, A. G.); Horyunova, N. O.; (Goryunova, N. A.); Kesamanly, F. P.; Mityu'ov, V. K. (Mityurev, V. K.); Rud', Yu. V.; Slobodchykov, S. V. (Slobodchikov, S. V.)

TITLE: Electrical and photoelectric properties of $ZnSiP_2$

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 8, 1965, 867-872

TOPIC TAGS: electric conductivity, Hall constant, photoconductivity, zinc compound, temperature dependence, forbidden band

ABSTRACT: The temperature dependence of the electric conductivity, the Hall constant in the temperature range 80--670K, and the photoconductivity (its spectral distribution, dependence on the electric field, intensity of illumination, and temperature in the range 80--295K) were studied in n-type $ZnSiP_2$ crystals. The average size of the crystals was 8 x 1.5 x 0.3 mm. The investigated samples had an electron concentration of 1--2 x $10^{17}$ $cm^{-3}$ and a Hall mobility of 70--100 $cm^2$/v-sec. The Hall and conductivity measurements were carried out with dc current with the aid of an ordinary potentiometer in a constant magnetic field. The photoconductivity was investigated by a compensation method utilizing unmodulated constant radiation. A type M 195/3 galvanometer was used to register the signal. The electric conductivity decreased sharply and the Hall constant increased sharply with decreasing temperature. This, together with the small electron mobility, indicates the presence of impurity com-

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L 44442-66

ACC NR: AP5020691

pensation. The Hall electron mobility changes between 350 and 670K like $T^{-1}$. On lowering the temperature the mobility increases sharply. The ionization energy of the donor impurities was found to be 0.08 ev. Intrinsic photoconductivity was found to predominate at all investigated temperatures. Its maximum is shifted to the short-wavelength side with decreasing temperature. The width of the forbidden band, its variation with temperature, and the coefficient dependence of the photoconductivity on the electric field is linear up to fields of 20 v/cm when heating apparently becomes appreciable. At room temperature an acceptor level has been noted at 0.32 ev above the valence band. The activation energies of the donor and acceptor levels were also determined from the temperature dependence of the photoconductivity. Large relaxation times of the photoconductivity have been observed. An energy level diagram of the impurity transitions is proposed. "In conclusion the authors express their gratitude to Professor D. M. Naslyedov for support and discussion of the work." Orig. art. has: 5 figures.

ASSOCIATION: Kyyivs'kyy pedinstytut im. O. M. Hor'koho [Kiyevskiy pedagogicheskiy institut im. A. M. Gor'kogo] (Kiev Pedagogical Institute)

SUBMITTED: 19Sep64 ENCL: 00 SUB CODE: SS, OP

NR REF SOV: 007 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

GORYUNOVA, N.A.; KERAMANLY, F.P.; OSMANOV, E.O.; RUD', Yu.V.

Certain properties of $CdGeAs_2$. Izv. AN SSSR. Neorg. mat. 1 no.6:885-889 Je '65. (MIRA 18:8)

1. Fiziko-tekhnicheskiy institut imeni A.F. Ioffe i Institut fiziki AN AzerbSSR, Baku.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 60924-65 EWT(1)/T/EEC(b)-2/EWA(h) IJP(c) GG/AT

ACCESSION NR: AP5018922 UR/0363/65/001/006/0885/0889 27
546.289'48'19 21

AUTHOR: Goryunova, N. A.; Kesamanly, F. P.; Osmanov, E. O.; Rud', Yu. V. B

TITLE: Study of certain properties of CdGeAs sub 2

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 6, 1965, 885-889

TOPIC TAGS: cadmium compound, germanium compound, arsenic compound, semiconductor 27 27 27

ABSTRACT: The article examines the crystal structure, 21 phase transformations in the compound, and certain physical properties of $CdGeAs_2$ single-crystal samples. The compound was obtained from the elements by ordinary fusion. X-ray diffraction showed that its structure was that of chalcopyrite with constants a = 5.9427 ± 0.0005 A, c = 11.2172 ± 0.0005 A, and c/a = 1.8875. The region of homogeneity in the compound is very small, and thermal analysis showed the melting point to be at 665C. Quenching of molten $CdGeAs_2$ produced a glass (as in the case of $CdGeP_2$). Single-crystal n- and p-type samples of the compound were obtained. The electrical conductivity, Hall constant, the constant of the Nernst-Ettings-

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L 60924-65

ACCESSION NR: AP5018922

6

hausen transverse effect, and the thermoemf were studied between 100 and 750K. The Hall mobilities of the electrons and holes at 300K are respectively equal to 800-1000 and ~150 $cm^2/V$ sec. The effective electron mass, $m^* = 0.027\ m_0$, was determined from the thermoemf and Hall effect. "The authors express their appreciation to A. A. Vaypolin, F. M. Gashimzade, and N. O. Lipovskaya." Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe (Physicotechnical Institute); Institut fiziki AN AzerbSSR, Baku (Institute of Physics, AN AzerbSSR)

SUBMITTED: 27Feb65 ENCL: 00 SUB CODE: IC, SS

NO REF SOV: 009 OTHER: 005

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

KESAMANLY, F.[illegible]; KR[illegible], [illegible].G.; RUD', Yu.V.; S[illegible], V.V.; SYRBU, N.N.

Energy band structure in certain crystals of the $A^{II}B^{IV}C^{V}_{2}$ group. Dokl. AN SSSR 163 no.4:868-869 Ag '65.

(MIRA 18:8)

1. Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR i Institut prikladnoy fiziki AN Moldavskoy SSR. Submitted January 21, 1965.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 15157-66 EWT(1)/EWP(e)/EWT(m)/EWP(b) WH

ACC NR: AP6002028 SOURCE CODE: UR/0185/65/010/012/1349/1353

AUTHORS: Voytsekhivs'kyy, O. V. (Voytsekhovskiy, A. V.); Kesamanly, F. P.; Rud', Yu. V.; Mityur'ov, V. K. (Mityurev, V. K.)

ORG: Kiev Pedagogical Institute im. O. M. Gor'kiy (Kyyivs'kyy pedinstytut)

TITLE: Transport effects in InAs-CdTe and InAs-ZnTe alloys

SOURCE: Ukrayins'kyy fizichnyy zhurnal, v. 10, no. 12, 1965, 1349-1353

TOPIC TAGS: indium alloy, electric conductivity, Hall constant, thermoelectric power, heat conduction, electron mobility, electric measurement

ABSTRACT: Samples of various compositions of the InAs-CdTe and InAs-ZnTe alloys were prepared by melting the constituent materials of purity no worse than 99.999% in quartz ampoules, using vibrational mixing. After zone recrystallization, the samples were coarse-grained. The electrical measurements were carried out on right parallelepipeds cut from ingots with mean dimensions of 1.0 x 3.0 x 12.0 mm with ohmic electrodes of pure indium. Measurements were made of the electrical conductivity, the Hall constants, the Nernst-Ettingshausen effect over a temperature range of 800--600K, the differential thermal emf, the coefficient of thermal conductivity, and the transmission spectrum at

Card 1/2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 15157-66

ACC NR: AP6002028 3

300K. It is proposed that the band structures of alloys of the InAs-CdTe system and of the initial compounds are analogous. The mechanism of carrier scattering is discussed. The effective electron mass for alloys of the system InAs-CdTe is found to be 0.05 $m_0$. The small value of the effective electron mass at a concentration of about $10^{19}$ $cm^{-3}$ and the regular variation of $E_{opt}$ as a function of the alloy composition indicate that by purification of the investigated substances one can obtain material with high electron mobility for a given width of the forbidden band. Authors thank Professor D. M. Naslyedov and N. O. Horyunova (Goryunova) for interest in the work. Orig. art. has: 3 formulas, 1 table, and 4 figures.

SUB CODE: 20/ SUBM DATE: 15Dec64/ ORIG REF: 009/ OTH REF: 005

Card 2/2 vmb

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 20972-66 EWP(e)/EWT(m)/EWP(t) IJP(c) JD/WH

ACCESSION NR: AP5017348 UR/0181/65/007/007/2266/2268

18
15
B

AUTHOR: Vyapolin, A. A.; Osmanov, E. O.; Rud', Yu. V.

TITLE: Diamond-like semiconductors in the vitreous state

SOURCE: Fizika tverdogo tela, v. 7, no. 7, 1965, 2266-2268

TOPIC TAGS: electric conductivity, temperature dependence, activation energy, forbidden zone width, glass product, semiconductor

ABSTRACT: In view of the fact that an early investigation (DAN SSSR v. 160, 633, 1965) has shown unexpectedly that some ternary semiconductors components of the $A^{II}B^{IV}C^{2V}$ type ($CdGeAs_2$ and $CdGeP_2$) are produced in the vitreous state, the authors investigated further the glassy structure of $CdGeAs_2$. In the crystalline state this compound is highly homogeneous and has the structure of chalcopyrite. The radial distribution of the electron density was calculated from x-ray structure measurements and compared with that for the atoms in the crystal within the first and second coordination spheres. The results show that the short-range order in the glass is similar to that in the crystal structure. The vitreous $CdGeAs_2$ has p-type conductivity with an electric resistivity $10^{-6}$ $ohm^{-1}cm^{-1}$ at room temperature. Unlike previously investigated semiconductor glasses, this substance does not have a region of intrinsic conductivity in the 80--670K interval. In the

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L 20972-66

ACCESSION NR: AP5017348

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80--200K range the conductivity remains practically constant, but above 200K it increases exponentially. The width of the forbidden band is approximately the same as for the crystalline sample, ~0.6 ev at 295K. It is concluded that only impurity conductivity obtains in the samples up to 670K, and that the activation energy of the impurity level is ~0.55 ev. "The authors thank T. N. Mamontova and G. I. Stepanov for determining the width of the forbidden band." Orig. art. has: 2 figures and 1 formula.

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

SUBMITTED: 03Feb65 ENCL: 00 SUB CODE: SS

NR REF SOV: 006 OTHER: 001

Card 2/2 mgs

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 29621-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6018748

SOURCE CODE: UR/0057/66/036/006/1146/1148

AUTHOR: Arkad'yeva, Ye. N.; Matveyev, O. A.; Rud', Yu. V.; Ryvkin, S. M.

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

40
B

TITLE: The possibility of using cadmium telluride for making n-p gamma-quanta detectors

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 6, 1966, 1146-1148

TOPIC TAGS: gamma detector, beta detector, radiation counter, particle counter

ABSTRACT: Tests were made to investigate the possibility of recording gamma-quanta with the aid of n-p transitions based on cadmium telluride. To construct a highly efficient semiconductor n-p counter for operation in a suitable temperature range, a material with a high atomic number and a sufficiently wide forbidden band should be used. The specimens were therefore prepared from CdTe crystals with n-type conductivity by means of lithium diffusion. A sensitive layer approximately 200 μ thick was obtained as a result of the drift of $Li^-$ ions in the n-p transition field. The mobility of the $Li^-$ ions in CdTe was determined to be approximately $5 \times 10^{-10}$ $cm^2/v \cdot sec$, i.e., it was sufficiently high. The reverse current of such a structure was approximately $10^{-8}$ amp. The relatively weak dependence of capacity on voltage at high voltages shows that the transition is structurally similar to the

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L 29621-66

ACC NR: AP6018748

0

n-i-p system. The working surface of the specimens was 5 to 7 $mm^2$. With such specimens a positive count of $Cs^{137}$ gamma-quanta and beta-particles at room temperature with a signal-to-noise ratio of approximately 15 to 20 was obtained. Orig. art. has: 2 figures. [JA]

SUB CODE: 18 SUBM DATE: 29Nov65/ ORIG REF: 001/ ATD PRESS: 5014

Card 2/2 CC

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 02229-67 EWT(1)/EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AR6013672

SOURCE CODE: UR/0058/65/000/010/E070/E070

AUTHOR: Kesemanly, F. P.; Nasledov, D. N.; Rud', Yu. V.

TITLE: Transport effects on p-type $ZnGeAs_2$ crystals

SOURCE: Ref. zh. Fizika, Abs. 10E569

REF SOURCE: Sb. Fizika. Dokl. k XXIII Nauchn. konferentsii Leningr. inzh.-stroit. in-ta. L., 1965, 51-52

TOPIC TAGS: electric conductivity, Hall coefficient, thermal emf, temperature dependence, transport property, carrier scattering, transport effect, crystal lattice vibration

ABSTRACT: The authors measured the temperature dependence of the electric conductivity ($\sigma$), the Hall constant, the differential thermal emf ($\alpha$), and the transverse Nernst-Ettingshausen effect ($\chi$) of $ZnGeAs_2$ in the temperature interval 100-550K. The character of the temperature dependence of all the transport effects is the same as for p-$ZnSnAs_2$. It was found that $\sigma$ and $\alpha$ increase with the temperature, $\chi < 0$ in the entire temperature interval, and that the Hall mobility increases like $\sim T^{0.5}$ up to 400K, after which it decreases. At low temperatures the scattering is by the impurity ions, and with increasing temperature, also by the lattice vibrations. [Translation of abstract]

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Card 1/1

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

CHAZOV, Ye.I.; BOGOLYUBOV, V.M.; DENISOV, Ye.I.; RUDA, M.Ya.

Experimental basis for the diagnosis of thrombosis by means of labeled $I^{131}$ fibrinolysin. Biul. eksp. biol. i med. 60 no.7:28-31 Jl '65. (MIRA 18:8)

1. Institut terapii (direktor - deystvitel'nyy chlen AMN SSSR prof. A.L. Myasnikov) AMN SSSR i Institut meditsinskoy radiologii (direktor - deystvitel'nyy chlen AMN SSSR prof. G.A. Zadgenidze) AMN SSSR, Moskva.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

GOLOVNINA, M.V. [Holovnina, M.V.], prepodavatel'; CHERNITSKAYA, M.V. [Chernyts'ka, M.V.], prepodavatel'; RUDA, O.Ya., prepodavatel'; PANCHENKO, Z.P., prepodavatel'; OLEYNIKOVA, G.F. [Olieinykova, H.F.], prepodavatel'; VIRTEL', L.M., prepodavatel'; YAMPOL'SKAYA, A.M. [Lampol's'ka, A.M.], prepodavatel'; ALEKHNO, S.T., prepodavatel'; OKREPILOVA, E.P. [Okrepylova, IE.P.], prepodavatel'; SIMONENKO, Ye.M. [Symonenko, E.M.], prepodavatel'; TSIGEL'MAN, F.M., prepodavatel'; SHCHEPELYAYEVA, O.P. [Shchepeliaieva, O.P.], prepodavatel'; ZAIKA, N.P., prepodavatel'; BARSUKOVA, M.M., prepodavatel'; IZAROVA, N.O., prepodavatel'; IVCHENKO, T.P., prepodavatel'; NEKRASOVA, K.S., prepodavatel'; ALEKSEYEVA, P.O. [Aleksieieva, P.O.], prepodavatel'; GAVRILOVA, G. [Havrylova, H.], red.; GORKAVENKO, L. [Horkavenko, L.], tekhn.red.

[Dressmaking] Krii ta shyttia. Vyd.6, perer. i dop. Kyiv, Derzh.vyd-vo tekhn.lit-ry URSR, 1960. 692 p. (MIRA 14:2)

(Dressmaking--Pattern design) (Sewing)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDA, S.P.; KOSTYUCHENKO, T.S.

Studying the pathogenicity of yeastlike fungi of the genus Candida isolated from pathological material. Visnyk Kyiv.un. no.5. Ser. biol. no.2:88-90 '62. (MIRA 16:5)

(MONILIASIS)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDA, VLADIMIR.

Pruvodce Libercem, s planem mesta. (Plan mesta nakreslil Evzen Nikenday. 1, vyd.) Liberec, Krajske nakl., 1958. 56 p. CZECHOSLOVAKIA

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 11, Nov. 1959
Uncl.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

NOVIKOV, B.G. [Novykov, B.H.]; MOSHKOV, Ye. A. [Moshkov, IE. O.]; RUDA, L.B.

Intensity of reproduction of domestic and wild birds under conditions of a varying light rationing[with summary in English]. Dop. AN URSR no. 4:464-466 '58. (MIRA 11:8)

1. Kiivs'kiy derzhuniversitet ta institut zoologii AN URSR. Predstaviv akademik AN URSR O.P.Markevych [A.P.Markevich].
(Birds)
(Light--Physiological effect)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDABANYA, B.

-phy

M

Preparation of Rudabanya iron ores. B. Vécsey. *Kohászati Lapok* 6, No. 3, 50-62(1951).—Rudabanya Fe ores consist of limonite, siderite, and ankerite; the Fe content is low and variable, and extraction of barytes is necessary. Results of laboratory and full-scale prepn. tests are given. By roasting in a reducing atm. the Fe content is increased to 35.8%; the residue contains $BaSO_4$ 77.7 and Fe 3.74%. By roasting and subsequent magnetic separation, the Fe content is increased from 23.6% to 40-42% and the $BaSO_4$ content is reduced to 7-9%; the residue contains Fe 5.8-7.7% and $BaSO_4$ 45-67%. B. A.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

AUTHOR: Gulyayev, B.B. SOV/2--58-4-37/39

TITLE: Conference on Crystallisation of Metals (Soveshchaniye po kristallizatsii metallov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 4, pp 153 - 155 (USSR)

ABSTRACT: This conference was held at the Institut mashinovedeniya AN SSSR (Institute of Mechanical Engineering of the Ac.Sc. USSR) on June 28-31, 1958. About 400 people participated and the participants included specialists in the fields of foundry, metallurgy, crystallography, physics, welding, heat, physical chemistry, mathematical physics and other related subjects. In addition to Soviet participants, foreign visitors included Professor D. Czikl (East Germany) and M.I. Chvorinov (Czechoslovakia). This conference on crystallisation of metals was the fourth conference relating to the general problem of the theory of foundry processes.

Crystallisation of Steel and Alloys with Special Properties. The following papers were read: V.I. Lapitskiy, N.I. Stupar', K.P. Rudachev, V.L. Oleksyenko, A.I. Marinov - "Certain Methods of Reducing Non-uniformities of Large Castings (up to 20 t) made of Rimming Steel"; V.K. Novitskiy, A.B. Mikul'chin and V.V. Blinov - "Influence of Internal Crystallisers on the Structure and Properties of Steel Ingots"; M.I. Chvorinov (Czechoslovakia) - "On the Crystallisation of Steel"; A.P. Pronov - "Crystallisation of Continuously Cast Ingot and Influence on it of the Properties of Liquid Steel"; L.I. Morozenskiy and O.D. Zigel' -

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"Influence of Movement of the Metal in the Liquid Core on the Crystallisation of Steel Ingots and Castings", M.N. Guglin, A.A. Novikova and B.B. Gulyayev - "Crystallisation and Mechanical Properties of Steels at Elevated Temperatures"; V.Ye. Meymark - "Influence of Inoculation on the Deformation of the Crust and the Speed of Solidification of Ingots"; G.P. Ivanov - "Thermal Stresses and Deformation in the Crust of a Crystallising Ingot"; V.G. Gruzin and P.I. Yamnikov - dealt with problems of formation of the primary structure of structural steel and the influence on it of the temperature of pouring.

The features of crystallisation of castings made of alloys with special properties and of austenitic steels were dealt with in the following papers: I.I. Goryunov - "Influence of Inoculation on the Structure and on the Physico-mechanical Properties of High-alloy Steels"; F.F. Khimushin, F.V. Aksenov, N.P. Ladiko and N.Ya. Rodina - "Occurrence of Non-uniformities in High-temperature alloys During Crystallisation and Heat Treatment" and "Experimental Investigation of the Process of Crystallisation of Cast Blades Made of Refractory Alloys"; A.M. Yuferov considered the process of recrystallisation of steel.

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APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAJEV, V.; BUBEN, J.

Network of seismic stations near Kladno. Vysl ban vyzk 3:77-95 '64.

1. Institute of Mining, Czechoslovak Academy of Sciences, Prague.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

ACCESSION NR: AP4045692 S/0250/64/008/008/0514/0515

AUTHOR: Rudak, E. A.; Firsov, Ye. I.

TITLE: Determination of the spin in the 0.416 Mev energy level of the Fe-55 nucleus from the (d, p) and (n, Gamma) reactions

SOURCE: AN BSSR. Doklady*, v. 8, no. 8, 1964, 514-515

TOPIC TAGS: electron spin, Fe-55 nucleus, iron atom, deuteron bombardment, neutron bombardment, (d.p) reaction, (n.Gamma) reaction

ABSTRACT: The authors discuss the possibility of a single-valued determination of the spin in the 0.416 Mev energy-level of the $Fe^{55}$ nucleus by juxtaposing the intensity of the protons from the $Fe^{54}$ (d, p) $Fe^{55}$ reaction and the intensity of the $\gamma$-rays from the $Fe^{54}$ (n, $\gamma$) $Fe^{55}$ reaction which correspond to transitions to identical levels of the product nucleus. Referring to the work of Bockelman, and Lane and Wilkinson, they indicate the validity of the expression

$$(\Gamma^2_{n\gamma}/\Gamma^2_{dp})a/(\Gamma^2_{n\gamma}/\Gamma^2_{dp})b = r^2_a/r^2_b, \quad (1)$$

for the neutron bands $\Gamma^2_{dp}$ and $\Gamma^2_{n\gamma}$ determined from (d, p) and (n, $\gamma$) reactions,

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ACCESSION NR: AP4045692

provided that the wave functions of the initial and final state of both reactions can be represented in the form of the product of a wave function of the target nucleus and a wave function of a neutron revolving about the target nucleus. A diagram is presented which shows nuclear decay for $Fe^{55}$ from a captured state to the 0.416 Mev excitation level and then the basic state during an $Fe^{54}$ (n, $\gamma$) $Fe^{55}$ reaction. Orig. art. has: 1 figure.

ASSOCIATION: Institut fiziki AN BSSR (Institute of Physics, AN BSSR)

SUBMITTED: 20Jan64 ENCL: 00 SUB CODE: NP

NO REF SOV: 002 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

FIRSOV, Ye.I. [Firsau, IA.I.]; RUDAK, E.A.

Analysis of background conditions in the tangential channel of the reactor of the Radio Engineering Institute of the Academy of Sciences of the White Russian S.S.R. Vestsi AN BSSR. Ser.fiz.-mat.nav. no.1:73-76 '65.

Analysis of the spectra of separated isotopes from the (n, $\gamma$) reaction using the reactor of the Radio Engineering Institute of the Academy of Sciences of the White Russian S.S.R. Ibid.:77-79. (MIRA 19:1)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAK, E.A.

Some characteristics of the 1.90 Mev. level of the $Cr^{51}$ isotope. Vestsi AN BSSR. Ser.fiz.-mat.nav. no.2:113-114 '65. (MIRA 19:1)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 45192-65 EWT(m) Peb DIAAP

ACCESSION NR: AP5009827 UR/0367/65/001/002/0235/0249

13
10
B

AUTHORS: Rudak, E. A.; Firsov, Ye. I.

19

TITLE: Gamma-ray spectra from the (n,γ) reaction in Cr-50, Cr-52, and Cr-53

SOURCE: Yadernaya fizika, v. 1, no. 2, 1965, 235-249

TOPIC TAGS: gamma spectrum, neutron gamma reaction, chromium isotope, thermal neutron capture, gamma spectrometry, gamma transition scheme

ABSTRACT: Spectra of gamma rays accompanying the capture of thermal neutrons from the IRT reactor of AN BSSR were investigated using a Compton magnetic gamma spectrometer with 2% resolution and 0.3-MeV lower limit. The sample was placed in an extended tangential channel opposite the center of the reactor core. The thermal neutron flux at the sample was $\sim 10^{12}$ neut/cm$^2$ sec and the cadmium ratio was approx-

Card 1/2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 45192-65

ACCESSION NR: AP5009827

3

imately 50. The samples were separated Cr isotopes having ~70 g-barn for the product of the mass and the (n,γ) cross section. Energies and intensities of observed gamma rays from $Cr^{51,54,55}$ are tabulated and compared with those obtained in preceding investigations. The gamma transition schemes from the capture states in these chromium isotopes are determined from the data and their main features are discussed. "We thank L. V. Groshev and A. M. Demidov for valuable suggestions and for direct experimental assistance." Orig. art. has: 9 figures and 3 tables.

ASSOCIATION: Institut fiziki Akademii nauk Belorusskoy SSR (Institute of Physics, Academy of Sciences Belorussian SSR)

SUBMITTED: 22Jul64 ENCL: 00 SUB CODE: NP

NR REF SOV: 005 OTHER: 031

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Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 4582-66 EWT(m)/EWP(t)/EWP(b)/EWA(h) IJP(c) JD

ACCESSION NR: AP5020257 UR/0367/65/002/001/0084/0091

29
28
B

AUTHOR: Loskutova, N. G.; Rudak, E. A.; Firsov, Ye. I.

TITLE: Gamma ray spectrum from the reaction $Fe^{54}(n, \gamma)Fe^{55}$ 17

SOURCE: Yadernaya fizika, v. 2, no. 1, 1965, 84-91

TOPIC TAGS: iron, 21 gamma spectrum, gamma transition, radioactive decay scheme

ABSTRACT: The reaction was induced with thermal neutrons derived from the IRT reactor of AN BSSR and investigated with apparatus designed for investigating (n, γ) reactions in separated isotopes by the Institut fiziki (Institute of Physics) AN BSSR, consisting of a Compton magnetic γ spectrometer of 2% resolution and 0.3-Mev γ-ray threshold. The iron sample was enriched to 78.1% in $Fe^{54}$. The following γ-ray energies (in Mev) and intensities (% in parentheses) were observed: 9.31 (61), 8.98(12), 7.27(3.0) doublet, 6.82(2.0), 6.27(3.0), 5.75(2.5), 5.50(2.0), 5.37(1.3), 4.73(3.0) doublet, 4.55(1.4), 44.6(1.5), 4.17*(1.5), 3.79*(1.7), 3.38* (1.5), 3.07*(4.0) doublet, 2.90*(1.0), 2.67*(1.5), 2.63*(1.0), 2.47*(2.4), 2.05* (2.5), 1.92*(2.5), 1.63*(1.5), 1.5*(1.5), 1.32*(1.0), 1.24*(1.0), and the groups of lines at 0.93*(10.0) and 0.41*(29.0). Asterisk denotes γ rays observed for the first time). A scheme for the decay fo $Fe^{55}$ from the capturing level is proposed

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 4582-66

ACCESSION NR: AP5020257

on the basis of the data, and its main features are discussed. The level scheme is shown in Fig. 1 of the Enclosure. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: Institut fiziki Akademii nauk Belorusskoy SSR (Institute of Physics, Academy of Sciences, Belorussian SSR)

SUBMITTED: 13Nov64 ENCL: 01 SUB CODE: NP

NR REF SOV: 002 OTHER: 016

Card 2/3

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 4582-66
ACCESSION NR: AP5020257

ENCLOSURE: 01

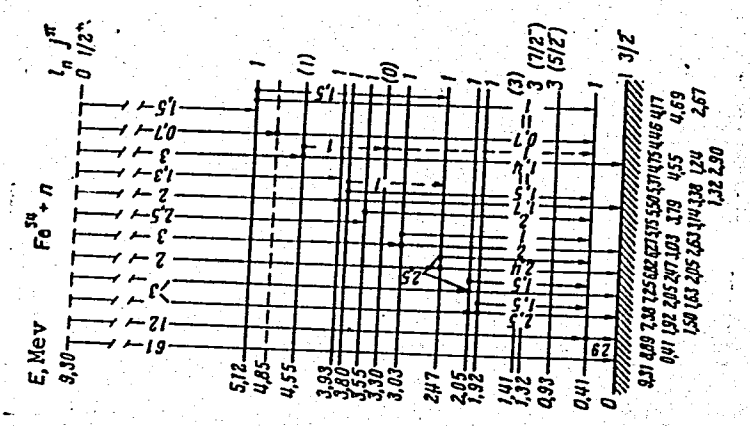


Fig. 1. Scheme of gamma transitions of $Fe^{55}$ from the capture state

Card 3/3

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 48995-65 EWA(h)/EWT(m) DM

ACCESSION NR: AP5014013 UR/0089/65/018/003/0285/0287

AUTHOR: Rudak, E. A.; Firsov, Ye. I.

TITLE: Method for studying gamma-emission in (n, gamma) reaction on separate isotopes

SOURCE: Atomnaya energiya, v. 18, no. 3, 1965, 285-287

TOPIC TAGS: gamma ray, isotope, spectroscopy, spectrometer

ABSTRACT: Studies of gamma emission in (n, gamma) reaction on various isotopes were carried out in a tangential reactor column using a Compton spectrometer with a resolving power of 2% and measuring minimum of 0.3 Mev. The specimen in a graphite container was placed opposite from the center of the active zone in a reactor where a flux of thermal neutrons was about $3 \times 10^{12}$ n/cm$^2$ sec. The gamma beam of the specimen was collimated by a system of lead collimators and extracted from the reactor channel to the Compton spectrometer radiator. The distance between the specimen and spectrometer radiator was 4.5 cm. The recoil electrons knocked out from the radiator within 1° from the incident beam were captured by a magnetic field on the orbit and momentum analyzed. Orig. art. has 4 figures.

Card 1/2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

L 48995-65

ACCESSION NR: AP5014018

ASSOCIATION: none

SUBMITTED: 20Apr64 ENCL: 00 SUB CODE: NP, OP

NO REF SOV: 004 OTHER: 000 NA

Card 2/2 mb

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

OBOZNYY, V., kamenshchik; GATILOV, L., plotnik; GOL'TSMAN, Ye.; RUDAK, L.; ZHILOV, V.

On a matter of concern to many. Sov.profsoiuzy 7 no.9:29-30 My '61. (MIRA 14:4)

1. Brigada kommunisticheskogo truda stroitel'no-montazhnogo upravleniya No.6 tresta "Kurskpomstroy" (for Obosnyy). 2. Stroitel'no-montazhnoye upravleniya No.5 tresta "Kurskpromstroy (for Gatilov). 3. Redaktor mnogotirazhnoy gazety "Na stroyke" (for Gol'tsman). 4. Prorab "Promtekhmontazha" (for Rudok). 5. Neshtatnyy korrespondent zhurnala "Sovetskiye profsoyuzy" (for Zhilov).

(Ryshkovo--Construction workers)
(Restaurants, lunchrooms, etc.)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAK, M.I.

Accelerated growing of seedlings. Put' i put.khoz. 4 no.6:34 Je '60. (MIRA 13:7)

1. Nachal'nik lesopitomnika, stantsiya Mozheyevka, Belorusskoy dorogi.
(Nursery stock) (Fruit)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

CHERNYSHOV, B.; RUDAK, Ye.

New wage schedules in a copper mine. Sots. trud no.4:103-108 Ap '57 (MIRA 10:6)

1. Nachal'nk otdela truda i zarabotnoy platy Degtyarskogo rudoupravleniya (for Chernyshov). 2. Nachal'nik normativno-issledovatel'skogo otdela (for Rudak).
(Degtyarka--Copper mines and mining) (Wages)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

BELYAYEV, V.; BOCHAROV, V.; RUDAK, Ye.; UST'YANTSEV, A.

Potentialities for increasing labor productivity in the copper mines of the Urals. Biul. nauch. inform.: trud i zar. plata no.7:5-12 '59. (MIRA 12:10)

(Ural Mountain region--Copper mines and mining)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

CHERNYSHEV, B.; RUDAK, Ye.; KRUSHENOK, D.

A copper mine after its system of wages was put in order. Sots. trud no.9:98-106 '58. (MIRA 11:10)

1.Nachal'nik otdela truda i zarabotnoy platy Upravleniya tsvetnoy metallurgii Sverdlovskogo svnarkhoza (for Chernyshev). 2.Nachal'nik laboratorii organizatsii proizvodstva instituta "Unipromed'" (for Rudak). 3.Nachal'nik otdela truda i zarabotnoy platy Degtyarskogo mednogo rudnika (for Krushenok).

(Degtyarsk--Copper mines and mining)
(Wages and labor productivity)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAK, Ye.G.

Expansion of the Degtyarka mine. Biul. TSIIN tsvet. met. no.19/20:27-29 '57. (MIRA 11:5)
(Degtyarka--Copper mines and mining)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAK, YE. G.

RUDAK, Ye.G., gornyy inzhener; MERZLYAKOV, V.I., gornyy tekhnik; ZYRYANOV, A.I.; gornyy tekhnik; MINEYEV, B.V., gornyy tekhnik.

Comparison of CM-506, PR-30k, TP-4 and KTsM-4 rock drill performance. Gor.zhur.no.9:72 S '57. (MIRA 10:9)

1. Degtyarskoye rudoupravleniye.
(Rock drills)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

ANTONOV, B.V.; RUDAK, Ye.G.; TRUBIN, G.L.

[Driller in underground operations of non-ferrous mines] Buril'shchik na podzemnykh rabotakh rudnikov tsvetnoi metallurgii; uchebnik dlia podgotovki rabochikh. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1953. 263 p. (MLRA 6:10)

(Mining engineering) (Boring)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

NUDAEV, A K

SBORNIK ZADACH PO NACHERTATELNOI GEOMETRII (Descriptive Geometry Problems - Textbook), 1946

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

"Changes at Different Ages in the Electrocolloidal Properties (I E T - Isoelectrical Point) of the Tissue Protoplasm of Rabbits Raised Under Different Conditions." (p. 270) by Nikitin, V. N., Basina, Ya. A., Batozskaya, T. A., Braylovskaya, S. A., Volovik, M. P. Rudaeva, A. V. Kharkov State University.

SO: Journal of General Biology (Zhurnal Obshchey Biologii) Vol. XIII, No. 4, July-August, 1952.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAKOFF (K. I.), HARZSTEIN (N. G.), & SHISHKIOVA (MME N. A.). **Catenularia fuliginea als Erreger einiger Defekte bei der gezuckerten Kondensmilch.** [*Catenularia fuliginea* as the agent of some defects in sweetened condensed milk.]—*Microbiology*, ix, pp. 45-52, 1940. [Russian. Abs. in *Chem. Zbl.*, cxi (ii), 15, p. 2103, 1940.]

*Catenularia fuliginea* [regarded by van Luijk as a synonym of *Torula sacchari*: *R.A.M.*, viii, p. 66; xiii, p. 701], was isolated at the Pan Russian Institute for Agricultural Microbiology, Moscow, from some 97 per cent. of condensed milk samples invaded by the chocolate-brown mould, which assumes the form of spots, clumps, 'buttons', and the like, of a brown, reddish, or yellowish colour and imparts to the milk an unpleasant cheesy taste and smell. The optimum temperature for the development of the mould ranges from 20° to 25° C., no growth occurring from −5° to +5° and little at 10° or 30°. *C. fuliginea* thrives in the presence of a saccharose content of 61 to 63 per cent. and is only slightly retarded at 65·5 per cent., whereas at these concentrations *Aspergillus* and *Penicillium* make little progress. The spores of *C. fuliginea* are destroyed by pasteurization. Contamination takes place from the atmosphere in the final phases of manufacture.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

27

CA

PROCESSES AND PROPERTIES INDEX

**Sesame oil from the Far East.** RUDAKOV AND BELOPOLSKII. *Masloboino Zhirovoe Delo* 1931, No. 2-3, 60; *Chimie & industrie* 27, 636(1932).—An oil obtained by hand-pressing of sesame seed from the Far East had the following characteristics: d. 0.9234, $n_{20}$ 1.4740, acid no. 0.89, sapon. no. 191.01, unsaponifiable 0.23%, Hehner no. 94.85, I no. 113.21, thiocyanate no. 72.74, satd. fatty acid (via Bertram) 14.70%. The compn., calcd. from Kaufmann's formula, is: unsatd. glycerides 15.77, oleic acid glycerides 37.50, linoleic acid glycerides 46.7%. The satd. acid content is high for such a relatively high I no.

A. PAPINEAU-COUTURE

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

BC

B II D

Sesamé oil from the Far East. [illegible] and [illegible] ([illegible], [illegible], [illegible], [illegible]).—The hand-pressed oil had $d$ 0·9234, $n^{20}$ 1·4740, acid val. 0·[illegible], sap. val. 191·[illegible], unsaponifiable matter 0·[illegible]%, Hehner val. 94·[illegible], I val. 113·21, CNS val. 72—74, saturated fatty acids (Bertram) 14·76%. The composition (by Kaufmann's formula) is: unsaturated glycerides 15·77, oleic acid glycerides 37·50, linoleic acid glycerides 46·7%. Ch. Abs.

COMMON ELEMENTS

COMMON VARIABLES INDEX

OPEN

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

AUTHOR INDEX

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAKOV, A. (Leningrad)

Device for fastening the reel of the electric cable. Pozh.delo 8 no.1:25 Ja '62. (MIRA 15:1)
(Fire departments--Equipment and supplies)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

KIRILLOV, S.; RUDAKOV, A.

What hampers the manufacturing of good clothes. Sov. torg. 35 no.3:7-8 Mr '62. (MIRA 15:3)

(Clothing industry)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAKOV, A.

Let's be more exact in determining the demand of merchandise. Sov. torg. 37 no.11:34-35 N '63. (MIRA 16:12)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAKOV, A.

This is important. Pozh.delo 6 no.1:6 Ja '60. (MIRA 13:5)

1. Nachal'nik parosilovogo tsekha Moskovskogo zavoda "Kompressor", chlen pozharno-tekhnicheskoy komissii.
(Gas welding and cutting)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAKOV, A., general-mayor

Thirtieth anniversary of the airborne infantry. Voen. vest. 39 no. 7:8-10 Jl '60. (MIRA 14:2)

(Parachute troops)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

KUDAKOV, A.

Useful activities of a small group of workers. Pozh. delo 7 no. 2:25 F '61. (MIRA 14:2)

1. Otvetstvennyy sekretar' Byuro sodeystviya ratsionalizatsii i izobretatel'stvu Upravleniya pozharnoy okhrany Leningradskogo oblispolkoma.
(Fire departments--Equipment and supplies)
(Electronic apparatus and appliances--Technological innovations)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAKOV, A.

On the job training. Prom.koop. 14 no.1:40 Ja '60.
(MIRA 13:5)

1. Zamestitel' predsedatelya pravleniya Revyakinskoy metalloprokatnoy arteli po orgmassovoy rabote i kadram.
(Revyakino--Evening and continuation schools)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

Rudakov, A.

SOV-107-58-8-19/53

AUTHORS: Prokhorov, V. Chairman of the SW and VHF Sections; Cherepnenko, N., Chairman of the Radio Club Council,; Rudakov, A., Head of Amur Oblast Radio Club; Shkurov, Ye., Chairman of the Amur Oblast Committee of DOSAAF.

TITLE: Are the Radio Amateurs of the Zero Region at Fault? (Vinovaty li radiolyubiteli nulevogo rayona?)

PERIODICAL: Radio, 1958, Nr 8, p 14 (USSR)

ABSTRACT: The authors explain the points system used in amateur radio competitions and show how it is biased against radio operators in the zero region (Far East and Siberia) compared with operators in the European part of the USSR. To rectify this, a new points system is suggested in which the points awarded increase with the distance over which contact is made. The present point system takes into account the disappointing results achieved in competitions by zero region operators.

1. Radio operators--Performance

Card 1/1

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAKOV, A.

The artel grows, and the people grow. Prom. koop. 12 no.6:7 Je '58. (MIRA 11:6)

1.Zamestitel' predsedatelya pravleniya Revyakinskoy metalloprokatnoy arteli.

(Tula Province--Rolling (Metalwork))

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

PROKHOROV, V.; CHEREPNENKO, N.; RUDAKOV, A.; SHKUROV, Ye.

Is it the fault of the zero-zone radio amateurs? Radio no.8:14 Ag '58. (MIRA 11:9)

1. Predsedatel' sektsii korotkikh i ultrakorotkikh voln (KV i UKV) Amurskogo oblastnogo radiokluba (for Prokhorov). 2. Predsedatel' soveta Amurskogo oblastnogo radiokluba (for Cherepnenko). 3. Nachal'nik Amurskogo oblastnogo radiokluba (for Rudakov). 4. Predsedatel' Amurskogo oblastnogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu (for Shkurov).
(Radio shortwave)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

MOLDAKOVA, A.

Mycorhiza. Nauka i zhizn' 20 no.4:30-31 Ap '53. (MLRA 6:5)
(Mycorhiza)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAKOV, A.; VASIL'YEV, G.; BRONER, R.; MOLCHANOV, V.

Proposals made by engineers. Pozh.delo 8 no.12:25 D '62. (MIRA 16:1)

(Fire prevention--Technological innovations)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAKOV, A.A.; VERNER, E.O.; IVANOV, M.Ye.; FURMANOV, Z.Z.

Automatic regulation of temperature in thermostating canned foods. Kons.i ov.prom. 15 no.11:35-38 N '60. (MIRA 13:10)

1. Vinnitskiy sovnarkhoz.
(Canning industry--Equipment and supplies) (Thermostat)

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YUDITSKIY, D.G.; RUDAKOV, A.A.

Rapid cooking of raw material. Spirt. prom. 25 no.6:5-10 '59. (MIRA 12:12)

(Alcohol)

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PROTSAK, I.Ye.; PRIYMAK, V.A.; RUDAKOV, A.A.; SMOTRICH, A.B.; YUDITSKIY, L.G.

Manufacturing liquid fodder yeast from molasses waste and an experiment in feeding cattle. Spirt.prom. 25 no.1:36-38 '59. (MIRA 12:2)

(Yeast) (Feeding and feeding stuffs) (Molasses)

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L 8127-66 EWT(m)/EWP(j)/EWA(c) RPL JW/RM

ACC NR: AP5025021 SOURCE CODE: UR/0286/65/000/016/0081/0081

AUTHORS: Koton, M. M.; Kudryavtsev, V. V.; Rudakov, A. P.; Bessonov, M. I.

ORG: none

TITLE: Method for obtaining polyimides. Class 39, No. 173931 [announced by the Institute for High-Molecular Compounds, AN SSSR (Institut vysokomolekulyarnykh soyedineniy AN SSSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 81

TOPIC TAGS: polyimide, diamine, polycondensation

ABSTRACT: This Author Certificate presents a method for obtaining polyimides by the polycondensation of aromatic diamines and the dianhydride of tetracarbonic acid. To increase the variety of polyimides, the dianhydride of butanetetracarbonic-1,2,3,4 acid is used as the starting material.

SUB CODE: OC/ SUBM DATE: 20Oct64

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Card 1/1 UDC: 678.675.4'4.002.2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAKOV, A.P.; BESSONOV, M.I.; KOTON, M.M.; POKROVSKIY, Ye.I.; FEDOROVA, Ye.F.

High-temperature isomeric transformations in polyimides. Dokl. AN SSSR 161 no.3:617-619 Mr '65. (MIRA 18:4)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Koton).

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RUDAKOV, A.P.

AID Nr. 972-31 21 May

MECHANISM OF RUBBER WEAR (USSR)

Rudakov, ~~A. P.~~, and Ye. V. Kuvshinskiy. Vysokomolekulyarnyye soyedineniya, v. 5, no. 3, Mar 1963, 417-423. S/190/63/005/003/020/024

The wear of rubber has been studied at the Institute of Macromolecular Compounds, Academy of Sciences USSR, with special equipment permitting 1) visual observation and cinemicrophotography of the phenomena occurring as a smooth steel indenter slides back and forth on a rubber surface and 2) study of the effects of the number of indenter passes, contact pressure, and gaseous medium. The experiments were conducted at room temperature with filled butadiene (СКБ, СКД), butadiene-styrene (СКС-30-А), carboxylated (СКС-30-1), isoprene (natural, СКИ), and butyl rubbers and with unfilled СКИ and nairit. Rubber wear was shown to be the result of degradation. The rubber surface becomes tacky, and the wear mechanism is a continuous rolling up and removal of this tacky surface layer. In some cases the presence of oxygen affects the nature of the wear: the wear of isoprene rubbers in air was shown to differ from that in He. In air, it is accompanied

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AID Nr. 972-31 21 May

MECHANISM OF RUBBER WEAR [Cont'd] S/190/63/005/003/020/024

by the separation of an oily liquid indicating the development of oxidation, which is also observed in the case of СКС-30-А. The wear processes of СКД and СКС-30-1 in air and in He are identical. It is also shown that the degradation of rubber is not associated with the evolution of the heat of friction. Changing the temperature of the experiment affects the development of the process considerably. For example, at temperatures above the softening point of polymethyl methacrylate, its wear is similar to that of rubber, but at lower temperatures the wear is different: particles are chipped off of the unchanged material. The results of the study lead to the general conclusions that the wear of rubber is closely linked to the development of mechanochemical degradation. [BAO]

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KOZLOV, F.R.; KOSYGIN, A.N.; ZASYAD'KO, A.E.; NESMEYANOV, A.N.; ANTROPOV, P.Ya.; YELYUTIN, V.P.; RUDAKOV, A.P.; KIRILLIN, V.A.; TOPCHIYEV, Al-dr V.; BLAGONRAVOV, A.A.; SHEVYAKOV, L.D.; SHILIN, A.A.; MEL'NIKOV, N.V.; KRASNIKOVSKIY, G.V.; TOPCHIYEV, A-y V.; BOYKO, A.A.; BRATCHENKO, B.F.; GRAFOV, L.Ye.; KUZ'MICH, A.S.; KRATENKO, I.M.; MAN'KOVSKIY, G.I.; PLAKSIN, I.N.; AGOSHKOV, M.I.; SPIVAKOVSKIY, A.O.; POCHENKOV, K.I.; KRASOZOV, I.P.; KOZHEVIN, G.V.; LINDENAU, N.I.; KUZNETSOV, K.K.

Academician A.A.Skochinskii; obituary. Bezov.truda v prom. 4 no.11: 18-19 N '60. (MIRA 13:11)

(Skochinskii, Aleksandr Aleksandrovich, 1873-1960)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

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KOZLOV, F.R.; KOSYGIN, A.N.; ZASYAD'KO, A.F.; NESMEYANOV, A.N.; ANTROPOV, P.Ya.; YELYUTIN, V.P.; RUDAKOV, A.P.; KIRILLIN, V.A.; TOPCHIYEV, Aleksandr V.; BLAGONRAVOV, A.A.; SHEVYAKOV, L.D.; SHILIN, A.A.; MEL'NIKOV, N.V.; KRASNIKOVSKIY, G.V.; TOPCHIYEV, Aleksey V.; BOYKO, A.A.; BRATCHENKO, B.F.; GRAFOV, L.Ye.; KUZ'MICH, A.S.; KRATENKO, I.M.; MAN'KOVSKIY, G.I.; PLAKSIN, I.N.; AGOSHKOV, M.I.; SPIVAKOVSKIY, A.O.; POCHENKOV, K.I.; KRASOZOV, I.P.; KOZHEVIN, G.V.; LINDENAU, N.I.; KUZNETSOV, K.K.

Academician A.A.Skochinskii; obituary. Mast.ugl. 9 no.11:22 N '60. (MIRA 13:12)

(Skochinskii, Aleksandr Aleksandrovich, 1873-1960)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

KOZLOV, F.R.; KOSYGIN, A.N.; ZASYAD'KO, A.F.; NESMEYANOV, A.N.; ANTROPOV, P.Ya.; YELUTIN, V.P.; RUDAKOV, A.P.; KIRILLIN, V.A.; TOPCHIYEV, Aleksandr V.; BLAGONRAVOV, A.A.; SHEVYAKOV, L.D.; SHILIN, A?A?; MEL'NIKOV, N.V.; KRASNIKOVSKIY, G.V.; TOPCHIYEV, Aleksey V.; BOYKO, A.A.; BRATCHENKO, B.F.; GRAFOV, L.Ye.; KUZ'MICH, A.S.; KRATENKO, I.M.; MAN'KOVSKIY, G.I.; PLAKSIN, I.N.; AGOSHKOV, M.I. SPIVAKOVSKIY, A.O.; POC:ENKOV, K.I.; KRASOZOV, I.P.; KOZHEVIN, G.V.; LINDENAU, N.I.; KUZNETSOV, K.K.

A.S.Skochinskii; obituary. Vest.AN SSSR 30 no.11:73-75 N '60. (MIRA 13:11) (Skochinskii, Aleksandr Aleksandrovich, 1874-1960.)

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L 52534-65 EWT(1)/EWA(h) Peb GW

ACCESSION NR: AT5012714 UR/2585/64/000/007/0173/0193

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B+1

AUTHOR: Rudakov, A.G.

TITLE: Some problems in the methodology of studying wave-perturbations and separating them from the reflected wave background. II. Separation of the reflected waves

SOURCE: Voprosy dinamicheskoy teorii rasprostraneniya seysmicheskikh voln, no. 7, 1964, 173-193

TOPIC TAGS: seismic wave perturbation, oscillation statistical property, wave perturbation separation, signal background separation, reflected wave background, seismic element grouping, seismic emitter grouping, seismic receiver grouping

ABSTRACT: This is a continuation of an experimental investigation which concentrated on the study of regular seismic wave-like perturbations (Voprosy dinamicheskoy teorii rasprostraneniya seysmicheskikh voln, no. 6, 1962). The results of the first part supplied the preliminary choice of rational observation conditions, such as the intervals for instrument disposition, depth of explosion charges, filtration procedures, and grouping parameters. However, in many cases, data concerning the regular wave-perturbations proved insufficient for distinguishing the useful signal from the perturbation background.

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ACCESSION NR: AT5012714

Consequently, further studies covered the irregular seismic perturbations and the presence of complex reflecting boundaries. The results show that: 1) a complete separation of reflected waves is possible only after a detailed study of the wave-field supplying the signal-perturbation relationship with the instruments; 2) new methodological approaches permit the separation of the regular perturbation field components from the background of irregular oscillations and the decomposition of the wave packets of wave-perturbations within the interference zones; 3) the study of the regular perturbation field components should, in general, be considered only as a first step in the experimental analysis of mixed oscillations; 4) for the studies of the statistical properties of the mixed oscillations (after the damping of the dominant regular wave perturbations) in the presence of intensive irregular and essentially nonideally regular oscillations (over the reception interval), one must apply perturbation analysis which does not assume the regularity of seismic signals, and the development of such methods of analysis is of considerable interest for regions with complex seismologic conditions; 5) the group parameter calculations are based on the frequency theory of grouping; in certain cases (flat part of the depression in which the experiments were carried out), the excitation and reception parameters determined from the parameters of the weakening of the regular wave-perturbations prove to be sufficient for the separation of the reflected waves, while

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ACCESSION NR: AT5012714

others (adyry zone) demand a sharp increase in the number of elements within the groups to achieve a weakening of the intensive background due to irregular oscillations; 6) the most effective approach in the experimental region seems to consist of consist of multi-element grouping of emitters and receivers; and 7) the most complicated situation in the seismologic sense is encountered in those observation intervals for which the useful signals corresponding to nonsharp, coarse, boundary regions appear on the seismograms in the form of an interferential, unresolved recording, and the low-frequency, regular wave-perturbations and irregular oscillations which are formed at the upper portion of the cut and superposed on this recording exceed the useful signals in intensity. The article contains a thorough description of the experimental arrangements. Orig. art. has: 7 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 014 OTHER: 000

Card 3/3

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445910008-9

RUDAKOV, A.G.

Comparative efficiency of groups of receivers and sources. Razved. i prom. geofiz. no.50:38-44 '63. (MIRA 18:3)

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