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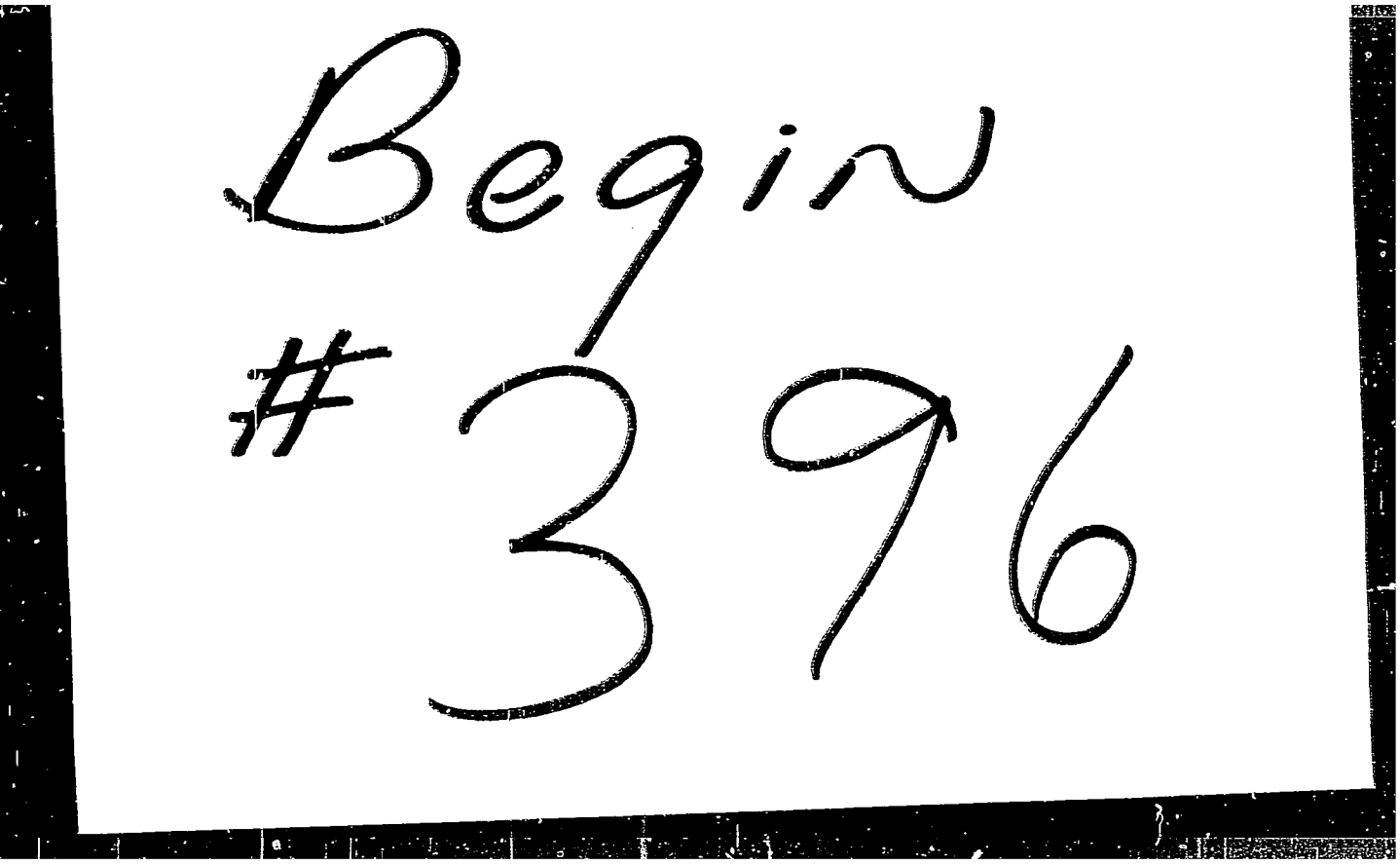

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SIROTA, N.N.; GOLOLOBOV, Ye.M.; SHELEG, A.U.; OLEKHNOVICH, M.M.

Possibilities and limits in the application of X-ray diffraction study of the nature of chemical bonds in crystals. Izv.AN SSSR. Neorg.mat. 1 no.10:1673-1683 O '65. (MIRA 18:12)

1. Institut fiziki tverdogo tela i poluprovodnikov AN BSSR, Minsk. Submitted July 5, 1965.

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PHASE I BOOK EXPLOITATION SOV/4018

Akademiya nauk Belorusskoy SSR. Fiziko-tekhnicheskiy institut

Sbornik nauchnykh trudov, vyp. 5 (Collected Scientific Papers of the Institute of Engineering Physics, Academy of Sciences Belorusskaya SSR, No. 5) Minsk, Izd-vo AN BSSR, 1959. 235 p. Errata slip inserted. 1,100 copies printed.

Ed. of Publishing House: L. Mariks; Tech. Ed.: I. Volokhanovich; Editorial Board: V.P. Severdenko, Academician, Academy of Sciences BSSR (Chief Ed.), K.V. Gorev, Academician, Academy of Sciences BSSR, M.N. Bodyako, Candidate of Technical Sciences, and V.A. Parkhutik, Candidate of Technical Sciences.

PURPOSE: This book is intended for technical personnel and scientific workers.

COVERAGE: This collection of 23 articles covers the following subjects: small draft rolling analysis of wire-drawing, design of drop-forging dies, impact upsetting, examination of the effect of temperature on plastic deformation, sulphidation and carburizing processes, the phenomena of pulse-discharge, etc. [illegible]

Olekhnovich, N.M.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

SIROTA, N.N.; OLEKHNOVICH, N.M.; SHELEG, A.U.

Distribution of electron density in silicon. Dokl.AN BSSR 4 no.4: 144-147 Ap '60. (MIRA 13:10)

1. Otdel fiziki tverdogo tela i poluprovodnikov AN BSSR.
(Silicon)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

60067

24.7100

AUTHORS: Sirota, N. N., Academician of the AS BSSR, Olekhnovich, N. M., Sheleg, A. U.

S/020/60/132/01/042/064
B004/B007

TITLE: The Determination of the Distribution of Electron Density in Crystals

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 132, Nr 1, pp 160 - 163 (USSR)

TEXT: The electron density distribution ρ and its value at a certain point $(x, y, z,)$ is determined by summation of a three-dimensional Fourier series (1). The number of terms in this series is limited by the number of experimentally determinable reflections. The authors mention the methods which were suggested for the purpose of further increasing the precision of the determination of electron density (extrapolation of the f-curve, introduction of a temperature coefficient), and point out the errors arising in this connection. They then explain their method, which makes use of the value of the atomic scattering factor, which may be determined by means of CuKα radiation as well as by less hard radiations. The authors divide the value of the scattering factor into two parts with a density distribution $\rho_1(\vec{r})$ and $\rho_2(\vec{r})$, where $\rho_1(\vec{r})$ corresponds to the density of the electrons near the atom and is described by

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The Determination of the Distribution of Electron Density in Crystals

the Gauss function $\rho_1(\vec{r}) = A \exp(-\alpha r^2) \cdot \rho_2(\vec{r})$, on the other hand, corresponds to the electron density of the outer electrons, which, in the case of high reflection indices, cause only a slight change in the course of the f-curve. Figure 1 shows the course of the f_1-curve and the f_2-curve for diamond, where $f - f_1 = f_2$. f_2 corresponds to the unknown density ρ_2 of the outer electrons, which may thus be determined from the difference. For the electron density in an arbitrary point of the crystal, $\rho(\vec{r}) = \rho_1(\vec{r}) + \rho_2(\vec{r})$. This equation is expanded into a series (6). Figure 2 shows the results obtained by calculating the electron density for diamond in the direction [111] according to the method suggested and by means of a temperature factor at 7500°K and 20°C. Figure 3 shows the calculation for the points 0, 0, 0; 1/8, 1/8, 1/8 and 1/2, 1/2, 1/2 according to both methods between 0 and 15000°K. There are 3 figures, and 18 references, 7 of which are Soviet.

Card 2/3

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The Determination of the Distribution of Electron Density in Crystals

S/020/60/132/01/042/064
B004/B007

ASSOCIATION: Otdel fiziki tverdogo tela i poluprovodnikov Akademii nauk BSSR (Department of the Physics of Solids and Semiconductors of the Belorussian Academy of Sciences)

SUBMITTED: January 5, 1960

Card 3/3

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

89737

24.7700 1143, 1043, 1150

S/020/61/136/003/025/027
B004/B056

AUTHORS: Sirota, N. N., Academician of the AS BSSR, and Olekhnovich, N. M.

TITLE: Electron Density Distribution in Indium Arsenide

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 3, pp. 660-662

TEXT: It was the purpose of this work to clarify the factors to which the specific physical properties of arsenides $A^{III}B^{V}$ with sphalerite structure are due. This concerns the semiconductor properties, the markedly high carrier mobility, and the great width of the forbidden band. The study was carried out on a crystalline InAs (the synthesis is described in Ref.1), which was ground to fine powder (6 - 8μ). X-ray diffraction patterns were made at room temperature, and Cu Kα-radiation by means of a УРС-50-И (URS-50-I) apparatus. From the experimental data obtained, the following was calculated: The square of the structural amplitude F^2 and the atomic scattering factors f_{In} and f_{As}. Herefrom, the distribution of the electron

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Electron Density Distribution in Indium Arsenide

S/020/61/136/003/025/027
B004/B056

density was obtained. Fig. 3 shows the distribution in the unit cell of InAs in the plane (110). Fig. 4 shows the same in the plane (110) and the direction [111] and [113]. The results obtained are discussed. Special attention is drawn to the "bridge" of the electron density, which takes its course in the direction [111] in the interval 1/2 1/2 1/2 - 3/4 3/4 3/4, attains a value of 0.20 electron/A^3 at 5/8 5/8 5/8, and drops at the point 3/4 3/4 3/4 to 0.03 eletron/A^3. This "bridge" does not exist in germanium. The "bridge" between the coordinates 000 and 1/4 1/4 1/4 in the direction [111] was observed also in germanium, silicon, and diamond. The data obtained will contribute towards clarifying the interatomic interaction in InAs. There are 4 figures and 5 references: 4 Soviet and 1 German.

ASSOCIATION: Otdel fiziki tverdogo tela i poluprovodnikov Akademii nauk BSSR (Department of Solid-state Physics and Semiconductors of the Academy of Sciences BSSR)

SUBMITTED: September 16, 1960

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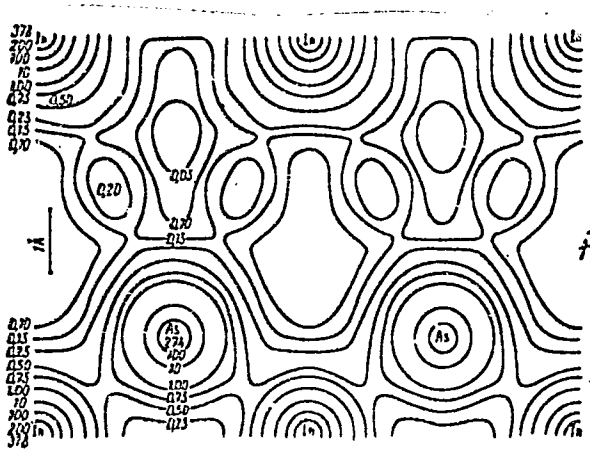

Fig. 3

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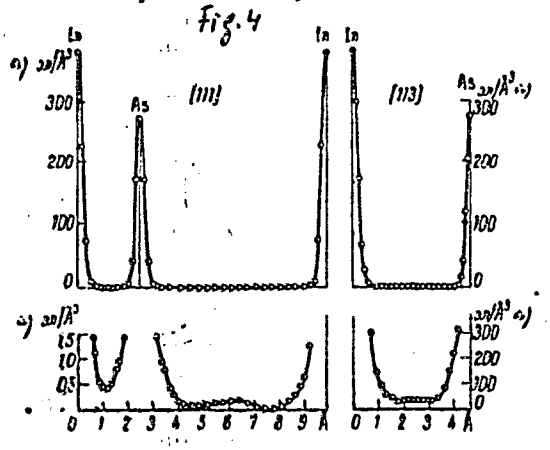
Fig. 4



Legend to Fig. 4. 1) electrons/A^3.

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S/020/61/136/004/023/026
B028/B060

9,4300 (also 1043, 1143, 1150)

AUTHORS: Sirota, N. N., Academician AS BSSR, and Olekhnovich, N. M.

TITLE: Electron Density Distribution in Gallium Arsenide

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 4, pp. 879-881

TEXT: The specimens used for the experiment were purified by zone melting. X-ray pictures were taken by CuKα radiation at room temperature and recorded by a УРС-50 (URS-50) recorder and a Geiger-Müller counter. The line intensity was calculated from data recorded by the automatic potentiometer ЭПП-09 (EPP-09). The amplitude squares (F^2) were calculated for three types of lines: (F_1^2), (F_2^2), and (F_3^2). The atomic scattering factors f for gallium and arsenic ions were calculated for given F^2 (Fig.1). Fig. 2 shows the logarithm of the atomic scattering factors as a function of Σh_i^2. If $\Sigma h_i^2 > 12$ for arsenic and $\Sigma h_i^2 > 10$ for gallium ions, ln f is a linear function of Σh_i^2. Fig. 4 shows the electron density

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Electron Density Distribution in Gallium Arsenide

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B028/B060

distribution among the ions Ga-As-Ga in the direction [11$\bar{1}$] (Fig. 4a), and among GaAs ions in the direction [11$\bar{3}$] (Fig. 4b) in the (110) plane. In the plane (110) between neighboring Ga ions and As ions in the direction [111] , one finds "bridges" with increased electron density with a minimum value of 0.49 el/A^3 between the points 000 and 1/4 1/4 1/4. Similar "bridges" are observed in SiO_2, Ge, and InAs crystals. In GaAs and InAs, electron density almost vanishes in the direction [11$\bar{1}$] near the points 3/4 3/4 3/4. In addition there are no "bridges" in GaAs in the direction [11$\bar{3}$] , but an electron density minimum (groove) similar to those found in Ge and Si crystals. For an electron density level of 0.5 el/A^3, the ionic radius of Ga is 0.8 A, and that of As, 1.65 A. In the direction [11$\bar{3}$] , it is only 1.3 A for As. For an electron-density level of 0.25 el/A^3, Ga had an ionic radius of 1.3 A, while As had one of 1.45 A. The following values were obtained for InAs: for 0.5 el/A^3: In = 0.9 A; As = 1.2-1.1 A; for 0.25 el/A^3: In = 1.5 A; As = 1.35 A. There are 4 figures and 3 Soviet references.

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Electron Density Distribution in Gallium Arsenide

S/020/61/136/004/023/026
B028/B060

ASSOCIATION: Otdel fiziki tverdogo tela i poluprovodnikov Akademii nauk BSSR (Department of Solid-state Physics and Semiconductors, Academy of Sciences BSSR)

SUBMITTED: September 19, 1960

Legend to Fig. 1: $F^2 = f\Sigma h_i^2$ for GaAs (a); atomic scattering factors (σ) for As ions (I) and gallium ions (II) in GaAs.

Legend to Fig. 2: $\ln f = g\Sigma h_i^2$ in GaAs for As ions (o-o-o) and Ga ions (x-x-x-).

Legend to Fig. 4: electron density distribution in the directions [111] (a) and [11$\bar{3}$] (σ) in the (110) plane of a GaAs unit cell; 1) el/A.

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B028/B060

Fig. 1

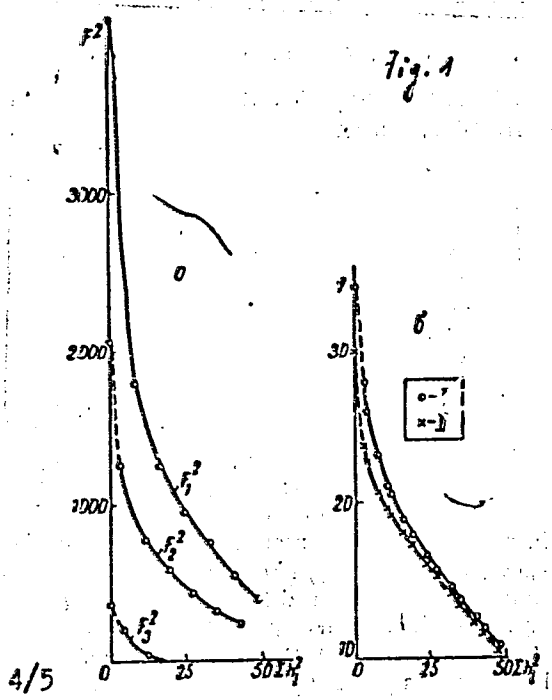
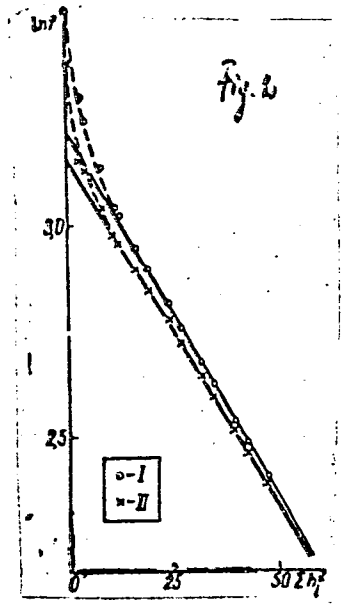


Fig. 2



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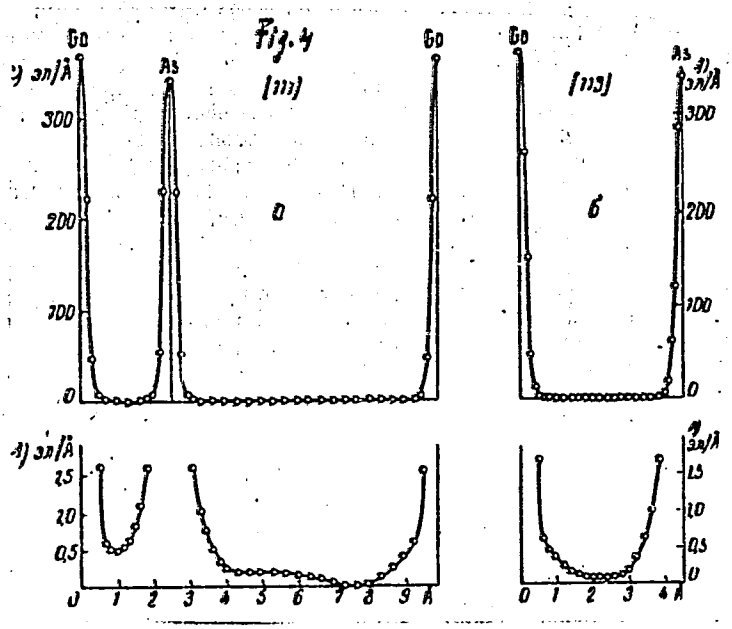

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S/020/61/139/004/010/025
B104/B209

24.7900

AUTHORS: Sirota, N. N., Academician AS BSSR, and Olekhnovich, N. M.

TITLE: Density distribution of 3d-shell electrons causing ferromagnetism in nickel, cobalt, and iron

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 4, 1961, 844-846

TEXT: Using the known form factors of neutron scattering the authors studied the distribution of those electrons in nickel, cobalt, and iron causing ferromagnetism. The amplitude P of neutron scattering is determined by the relation $P = e^2 \mu fS/mc^2$, where f denotes the unit form factor of neutron scattering, and S the effective quantum number. S is determined from the magnetic moment of the element under examination: $S = \mu/2$. The following magnetic moments were used in this calculation: 2.22 for Fe; 1.74 for Co; 0.60 for Ni. The fS values as calculated after data taken from R. Nathans et al. (Phys. Chem. Solids, 10, 138 (1959); Phys. Rev. Letters, 2, 254 (1959)) are shown in Fig. 1 for iron (curve 1), nickel (curve 2), and for cobalt (curve 3). By means of a three-dimensional Fourier expansion or by

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Density distribution of 3d-shell ...

an approximation it is possible to calculate electron density at any point of a unit cell as well as the radial distribution of the 3d-electrons which cause ferromagnetism. Fig. 2 illustrates the electron density (Fig. 2a) and the radial density of 3d-electrons in the three metals studied. The graphs show that the electron density in all three metals attains a maximum near the center of the nucleus. On the other hand, the radial electron densities attain maxima at 0.44 Å for nickel, at 0.40 Å for iron, and at 0.39 Å for cobalt (Fig. 2b). Further discussions on the basis of experimental data about the amplitudes of atomic scattering (G. W. Brindley: Phil. Mag., 21 778 (1936)) lead to the conclusion that the "magnetic" electrons do not exert any essential influence upon electron density between the nickel atoms. There are 4 figures and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION: Otdel fiziki tverdogo tela i poluprovodnikov Akademii nauk BSSR (Division of the Physics of Solids and Semiconductors, Academy of Sciences BSSR)

SUBMITTED: May 8, 1961

Card 2/4

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

S/020/62/143/002/017/022
B145/B138

AUTHORS: Sirota, N. N., Member of the AS BSSR,
and Olekhnovich, N. L.

TITLE: Electron density distribution in aluminum arsenide at 20 and -100°C

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 2, 1962, 370 - 372

TEXT: In a study of compounds $A^{III}B^{V}$, the atomic scattering factors of aluminum and arsenide ions in aluminum arsenide were determined. The measurement and calculation methods had been described earlier (DAN, 136, no. 3, 660 (1961)). The samples were obtained from the initial components using the two-temperature method (evacuated quartz ampoules, 650 and 1150°C, duration of synthesis 5 hrs). The arsenide crystals were comminuted in argon atmosphere to a particle size below 15 - 20 μ. The diagrams were plotted using a [illegible] - 50 (URS - 50 I) instrument with a Geiger counter and Cu K[illegible] radiation in argon atmosphere. A cold N_2 jet was applied for low-temperature measurements. Results show that the curves in the

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Electron density distribution ...

$\ln f_i - \sum_{j=1}^{3} \cdot h_j^2$ diagram approach a linear course as from $\sum_{j=1}^{3} h_j^2 > 12$.

The density distribution for this part of electrons can therefore be described by the Gaussian curve $\rho_1 = A \exp(-ar^2)$. The resulting data, characterized by ρ_1 (See Table 1), show that, with a temperature drop, ρ_1 changes in such a way that the height of the Gaussian curve grows near the atomic center, whereas the dispersion of the curve itself becomes less. The distribution in the outer part of the ions is characterized by ρ_2, which is determined by the difference $f_2 = f - f_1$ (f being the experimental value of atomic scattering factors and f_1 the value calculated from the Gaussian distribution). On a temperature drop, f_2 grows both with Al and with As. In other words, the electron density distribution changes in the outer part of the ions. The analysis of electron density distribution

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

S/020/63/148/001/013/032
B102/B186

AUTHORS: Sirota, N. N., Member of AS BSSR, Olekhnovich, N. M.

TITLE: Roentgenographic determination of the diamagnetic susceptibility of certain ion and semiconductor compounds

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 1, 1963, 71 - 73

TEXT: The lattice magnetic susceptibility

$$\chi = \chi_d + \chi_p = -\frac{Ne^2}{6mc^2}\sum_i \overline{r_i^2} + \frac{2}{3}N\sum_{j\neq i}\frac{|M(j,i)|^2}{E_j - E_i}, \qquad (1)$$

is represented as the sum of the diamagnetic (Langevin) component and the paramagnetic (Van Vleck) component; M(j, i) is an off-diagonal element of the magnetic moment, E_j-E_i the forbidden-band width, and $\sum_i r_i^2$ the sum of the mean squares of the electron orbit radii. The first term can be determined experimentally from the electron density of the lattice, the second from the amount that the electron density distribution deviates from spherical distribution. These terms were determined for the arsen-

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Roentgenographic determination ...

ides and antimonides of Al, Ga, and In, and also for NaCl, KCl, CaF_2 and Cu_2O. The calculations were made using a method by Sirota (DAN, 142, 1278, 1962). The following main results were obtained from the X-ray measurements:

	$-\chi_d \cdot 10^6$ per mole	$-\chi_{exp} \cdot 10^6$
NaCl	30.7	30.3
KCl	41.1	39.0
CaF_2	29.6	28.0
Cu_2O	41.6	36.0

	$-\chi_d \cdot 10^6$	$-\chi^*_{exp} \cdot 10^6$	$-\chi^*_{d\ theor} \cdot 10^6$	ΔE, ev
GaAs	51.2	32.4	[illegible]	1.4
InAs	71.9	55.3	[illegible]	0.47
GaSb	65.9	38.4	[illegible]	0.77
InSb	80.1	65.9	77.77.2	0.26

For AlAs and AlSb χ_d was $-47.4 \cdot 10^{-6}$ and $-58.6 \cdot 10^{-6}$, ΔE was 2.2 ev and 1.60 ev, respectively. The values of χ^*_{exp} and $\chi^*_{d\ theor}$ are taken from Busch and Kern, Helv. phys. acta, 32, 24, 1959. The dependence of χ_d and χ_p on the position of the component elements in the periodic system follows

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ACCESSION NR: AP3005435 S/0020/63/151/005/1079/1080

54
53

AUTHORS: Sirota, N. N. (Academician); Glekhnovich, N. M.

TITLE: Paramagnetic component of the magnetic susceptibility of semiconductor compounds A sup 3 B sup 4 determined by X-ray diffraction analysis

SOURCE: AN SSSR. Doklady*, v. 151, no. 5, 1963, 1079-1080

TOPIC TAGS: paramagnetic component of magnetic susceptibility, semiconductor, X-ray diffraction analysis, aluminum, gallium, indium, Al, Ga, In, paramagnetic component, magnetic susceptibility

ABSTRACT: An experimental method for determining the paramagnetic component of magnetic susceptibility by X-ray diffraction is developed further in this paper. It was applied for determination of the shape and deviation from spherical symmetry of the covalent "bridges" formed by Sp^3-electrons. The computational results for the paramagnetic component for arsenides and antimonides of aluminum, gallium, indium are given. Authors showed that X-ray diffraction method permits an independent determination of the dia- and paramagnetic moments. Orig.

ASS: Department of solid state physics and semiconductors, Academy of Sciences USSR

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKHNOVICH, N.M. [Aliakhnovich, M.M.]

Magnetic susceptibility of certain $A^{III}B^{V}$ type semiconducting compounds as shown by X-ray diffraction analysis data. Vestsi AN BSSR Ser. fiz.-tekh. nav. no.1:35-43 '64 (MIRA 17:7)

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SIROTA, N.N., akademik, otv. red.; DORFMAN, Ya.G., prof., red.; OLEKHNOVICH, N.M., kand. fiz.-matem. nauk, red.; GOLODUSHKO, V.Z., red.

[Chemical bonds in semiconductors and solids] Khimicheskaia sviaz' v poluprovodnikakh i tverdykh telakh. Minsk, Nauka i tekhnika, 1965. 366 p. (MIRA 18:7)

1. Akademiya nauk BSSR, Minsk. Institut fiziki tverdogo tela i poluprovodnikov.

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L 7924-66 EWA(k)/EWT(1)/EWT(m)/EPF(n)-2/EPA(w)-2/EWA(m)-2/EWA(h) IJP(c) LHB/AT

ACC NR: AP5027928 SOURCE CODE: UR/0363/65/001/010/1673/1683

AUTHOR: Sirota, N. N.; Gololobov, Ye. M.; Sheleg, A. U.; Olekhnovich, N. M.

ORG: Institute of Solid State Physics and Semiconductors, Academy of Sciences, BSSR, Minsk (Institut fiziki tverdovo tela i poluprovodnikov Akademii nauk BSSR)

TITLE: Potential and limitations of the use of x-ray diffraction methods for studying the nature of chemical bonding in crystals

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 10, 1965, 1673-1683

TOPIC TAGS: x-ray diffraction analysis, neutron diffraction, electron density, electron diffraction analysis, chemical bonding, crystal structure analysis

ABSTRACT: The experimental determination of electron density distribution in crystals involves measurement of the intensities of x-ray scattering peaks, finding of structural amplitudes, calculation of the form factors of ions, reduction of the values obtained to absolute zero temperature, and summation of three-dimensional Fourier series. Each of these operations is discussed in detail. X-ray diffraction methods make it possible to give quantitative experimental expressions to the wave functions of electrons in crystal lattices. Of great significance to the study of chemical bonding is the possibility of estimating the electron density distribution over the electron shells. For example, the use of form factors obtained by neutron and x-ray scattering has permitted the determination of the distribution of all electrons, including those with unpaired spins, in the 3d shell in the lattice of ferromagnetics and

UDC: 541.57:548.19

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L 7924-66

ACC NR: AP5027929

19

antiferromagnetics. However, X-ray-, electron-, and neutron-diffraction methods cannot as yet solve problems involving electron distribution at low densities or when the density changes are slight (not exceeding 0.02 – 0.05 el/A^3). For example, it is not possible at the present time to determine by x-ray diffraction the number of electrons which migrate from the valence band to the conduction band under the influence of thermal motion or photo-electric effects in semiconductor crystals. Despite such limitations, these methods are of paramount importance for studying electron density distributions in crystals. Orig. art. has: 7 figures.

SUB CODE: SS, GC, IC / SUBM DATE: 05Jul65 / ORIG REF: 019 / OTH REF: 011

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

L 13632-66 EWT(d)/EWT(l)/EWT(m)/EPF(n)-2/EWP(t)/EWP(k)/EWP(b)/EWA(c) IJP(c)

ACC NR: AP6001670 JD/WW/JW/HW/RM SOURCE CODE: UR/0053/65/087/004/0723/0730

AUTHOR: Olekhnovich, N. M.; Anufriyev, Yu. D.; Parshin, A. Ya.

ORG: none

TITLE: Eleventh all-union conference on low-temperature physics

SOURCE: Uspekhi fizicheskikh nauk, v. 87, no. 4, 1965, 723-730

TOPIC TAGS: physics conference, low temperature physics, superconductivity, cryogenic engineering, thermodynamics, liquid helium, solid state physics, heat conductivity, superfluidity, current density, magnetic field, magnetoresistance, crystal anisotropy, thermomagnetic effect, thermal emf

ABSTRACT: The Eleventh All-Union Conference on Low-Temperature Physics was held in Minsk at the Institute of Solid-State Physics and Semiconductors of the Belorussian Academy of Sciences from 27 June through 2 July 1964. More than 400 delegates, including representatives of almost all the organizations in the Soviet Union which are conducting low-temperature research, and scientists from East Germany, Poland, Czechoslovakia, Bulgaria, Hungary, and Yugoslavia, were present. The more than 100 papers presented dealt with the properties of helium, superconductivity, the physical properties of condensed media, low-temperature thermodynamics, cryogenic engineering, and other problems. The chairman of the Scientific Council on Low Temperature Physics, N. Ye. Alekseyevskiy, discussed the state-of-the-art in low temperature physics and remarked on the fruitfulness of conferences in the area as well.

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as the necessity for further coordination of the subjects being investigated. A group of Georgian physicists (R. A. Bablidze, G. V. Gudzhabidze, and Dzh. S. Tsakadze), working under the direction of Academician E. L. Andronikashvili, presented a review on the phase transition in rotating liquid helium. The first part of their paper was concerned with the relaxation of quantun eddies. The second part dealt with the generation of vortices during the cooling of rotating He below the λ-point. It was determined that during rotation of He II with an angular velocity corresponding to the maximum of the vortex damping, the disappearance of vortices during transition over the λ-point proceeds very slowly. The time of the formation of vortices was shown to be $\tau = \tau_0 \exp[-(\omega-\omega_{0c})/\alpha]$, where ω_{0c} is the critical angular velocity for a given vessel, ω is the angular velocity of rotation, $\tau \approx 900$ sec, and $\alpha \approx 1.18\ \text{sec}^{-1}$. It was also determined that the inner surface of the rotating glass does not exert any influence on the formation of the vortex filaments. G. A. Gamtsemlidze reported on results of measurements of the damping of torsional vibrations of a disk in He II after the stopping of the rotating liquid. Khar'kov physicists I. V. Bogoyavlenskiy, N. G. Bereznyak, and B. N. Yesel'son reported on an investigation of the state He^3-He^4 mixtures. They established that in a pressure range from 50 to 140 atm the diagram representing the state of the He^3-He^4 mixture is of peritectic type. L. P. Mezhov-Deglin reported on the thermal conductivity of solid He^4 (whose properties are being intensively studied in Moscow) in a temperature range from 0.5 to 2.5°K and

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pressures up to 185 atm. The maximum values for thermal conductivity were approximately three times higher than the best results obtained previously, which attests to the high quality of the crystals investigated. R. N. Gurzhi discussed his theory describing the dependence of thermal conductivity of such crystals on temperature. Kapitsa's jump on the He^4—copper boundary was also surveyed in this work. The superfluidity of the light isotope He^3 was treated in a report by V. P. Peshkov. In experiments with three-staged magnetic cooling of a block of paramagnetic salt, having liquid He^3 in its pores, Peshkov showed that at a temperature of 0.0055° K the specific heat of He^3 has a maximum. Such behavior of the specific heat is attributed to the phase transition of He^3 into a new state. A rather large number of papers was devoted to superconductivity. N. B. Brandt and N. I. Ginzburg investigated the influence of high pressures (up to 30,000 atm) on the superconductivity properties of various metals. The nontransient metals (Cd, Sn, In) display a decrease of T_k when the pressure decreases, while $dH_k/dT|_{T_k}$ remains constant, thus indicating that the density of states N(O) on the Fermi surface is constant. A decrease of T_k at N(O) = const can be linked with a decrease of the electron-phonon interaction parameter in the microscopic theory of superconductivity. Another mechanism apparently takes place in the transition metals (Zt, Ti). Here, an increase in $dH_k/dT_k|_{T_k}$ and T_1 when the pressure increases can be observed. It can thus be concluded that N(O) increases when the pressure increases. T. A. Ignat'yeva, B. G. Lazarev,

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ACC NR: AP6001670

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L. S. Lazareva, and V. I. Makarov reported on the influence of impurities (Hg, Bi, Sb) on the variation of T_k in thallium under pressure, and on the dependence of the pressure effect on the concentration and valence of impurity atoms. They found that the effect of pressure at a sufficiently large concentration becomes negative independently of the kind of impurity. Yu. Bychkov, I. N. Goncharov, M. Litominskiy, I. Ruzhichka, and I. S. Khukhareva measured the critical current densities in large magnetic fields on Nb-80% Zr wires subjected to different thermal treatment. A. I. Fusinov and Ye. A. Shapoval discussed the dependence of the energy gap of a superconductor and of the depth to which a magnetic field penetrates into it on the magnitude of the field in the case of the mirror reflection of electrons from the surface of metals. The extreme cases of absolute zero and temperatures close to T_k were investigated for Pippard and London superconductors. Also obtained for Pippard metals ($\varkappa^2 \ll 1$) were formulas for a temperature range not too close to T_k ($\varkappa^2 \ll 1 - (\frac{T}{T_k}) \ll 1$), where a non-localizable situation occurs. In a region of localizability, the results coincide with the Ginzburg-Landau theory. In previous theoretical works, R. N. Gurzhi predicted that at low temperatures, when the probability is small of collisions occurring between the excitation sources (electrons and phonons) associated with the processes of transfer, the transfer phenomena can display a series of interesting peculiarities. Gurzhi presented two more reports on this subject at the

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conference. In one report, the high-frequency properties of very pure metals were investigated at low temperatures. Apparently, electron-phonon processes not associated with transfer processes exert a substantial influence on the skin-effect. In particular, a wide range of frequencies appears in which the surface impedance depends on the frequency and the temperature, unlike the general cases of normal and anomalous skin-effect. V. L. Gurevich, V. M. Muzhdaba, R. V. Parfenyev, Yu. A. Firsov, and S. S. Shalyt submitted a report on the experimental observation of a new type of oscillations of magnetoresistance of indium electron antimonide. The physical basis of this phenomenon is associated with a resonance scattering of the current carriers on optical phonons in strong magnetic fields $\Omega\tau \gg 1$, where Ω is a cyclotron frequency and τ is the relaxation time of conduction electrons. On diagrams of the transverse and longitudinal magnetoresistances, the authors discovered a series of oscillation extremums periodic with the reverse field. The period of the oscillations is in a good agreement with the theoretical formula. L. E. Gurevich and B. L. Gel'mont established that in metals and semimetals when there is a temperature gradient a new type of wave appears at low temperatures, the so-called thermomagnetic waves (TMW). TMW were investigated both in the presence and in the absence of an external field. The conditions for a weak attenuation without a magnetic field were found. When an electromagnetic wave is incident on a body which has a temperature gradient, the refracted wave can become an amplifying wave if there is a magnetic

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field. The anisotropy of the Mossbauer effect on single crystals of white tin was investigated by N. Ye. Alekseyevskiy, A. P. Kir'yanov, Yu. A. Samarskiy, and V. I. Nizhankovskiy. Their data confirmed the previously observed change in the anisotropy of the effect with temperature. They also measured chemical shifts of the Mossbauer line in different intermetallic compounds of tin within a wide range of temperatures. V. A. Bryukhanov, N. N. Delyagin, and V. S. Shpinel' also measured the chemical shift by means of the Mossbauer effect method and calculated the change in electron density in Sn^{119} nuclei by introducing them into different metal sheets as an impurity. In their opinion, a relationship exists between the electron density in the nucleus of the impurity atom and the dynamic characteristics of the sheet. L. E. Gurevich and I. Ya. Korenblit studied the thermal emf of ferromagnetic metals at low temperatures. Longitudinal and transversal thermal emf were investigated in a range of magnetic fields and temperatures in which an exchange member played the basic role in magnon energy and the magnons were scattered primarily by electrons. A dependence of thermal emf on temperature was determined. Two reports dealt with superconductive resonators which can be used for acceleration. B. I. Verkin, O. M. Dmitriyenko, V. M. Dmitriyev, G. Ye. Churilov, and Yu. M. Borodavko reported on an investigation of superconductive resonators of the 3-cm range prepared from lead by various means. I. S. Sidorenko and Ye. I. Revutskiy investigated the

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high-frequency properties of lead superconductive films deposited on current-carrying surfaces of copper resonators. [FSB: v.2, no. 2]

SUB CODE: 20 / SUBM DATE: none

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKHNOVICH, N. V.

AID P - 3447

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 14/32

Authors : Olekhnovich, N. V., and V. K. Yasnyy, Engs.

Title : Automatic control of insulation of 380-v electric installations

Periodical : Elektrichestvo, 10, 57-59, O 1955

Abstract : The authors describe in detail an apparatus for the automatic control of insulation of 380-v electric installations, designed by N. V. Olekhnovich and developed by both authors. The device was used in operational conditions, mostly in networks with insulated neutral. The installation and operation of the apparatus are simple and economical. One table, 1 photograph, 4 diagrams, 3 references (1946-1952) (2 Soviet).

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KONSKAYA, M.S. [Kons'ka, M.S.], kand. tekhn. nauk; OLEKHNOVICH, N.Ye. [Olekhnovych, N.IE.]

Use of a cone plastometer for quality control in the processing of the porcelain body. Leh. prom. no.3:33-36 Jl-S '64. (MIRA 17:10)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

GLEKHKOVICH ENGINEER V. A.

Hydraulic engineering

Calculating the strengthening of banks and river beds against washout. Gidr. stroi. 22 No. 4, 1952.

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

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKHNOVICH, V.

Determining the rated navigable water level. Avt.dor.17 no.1:27 Ja-Ag'54. (MLRA 8:10)

(Bridges)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKHNOVICH, V. A.

Olekhnovich, V. A.

"Bridge crossings with flooded approaches under lowland conditions." Min Higher Education Ukrainian SSR. Kiev Automobile and Road Inst. Kiev, 1956. (Dissertation for the Degree of Candidate in Technical Sciences)

Knizhnaya Letopis'
No. 25, 1956. Moscow

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKHNOVICH, V.A., kand. tekhn. nauk; CHAYKOVSKIY, G.N., kand. tekhn. nauk, dots.

Investigating water-flow conditions in models of circular culvert pipes. Trudy Kiev. avt.-dor. inst. no.3:121-128 '57. (MIRA 11:5)
(Hydraulic models)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

BONDARENKO, A.I.; OLEKHNOVICH, V.A.

Moisture and temperature conditions and the stability of roadbeds. Avt.dor. 22 [i.e.23] no.9:6-8 S '60. (MIRA 13:9)
(Soil moisture) (Road construction)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

BONDARENKO, A.I., kand.tekhn.nauk; OLEKHANOVICH, V.A., kand.tekhn.nauk

Stability of earth roadbed and weather and climate conditions.
Avt. dor. 25 no.2:18 F '62. (MIRA 15:2)
(Roads)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKHNOVICH, V.A., kand.tekhn.nauk; IEVCHENKO, M.T., inzh.

Deformation of concrete and reinforced concrete linings of some irrigation canals in the Ukraine. Gidr. i mel. 16 no.1:35-38 Ja '64. (MIRA 17:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut gidrotekhniki i melioratsii.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

KOZHEVNIKOV, P.V., prof.; OLEKHNOVICH, V.I.; TRAVIN, G.Ye.; KOSHELEVA, L.N.

Results of dispensary treatment of skin diseases in Leningrad. Vest. derm. i ven. 32 no.6:41-48 N-D '58. (MIRA 12:1)

1. Iz Leningradskogo gorodskogo kozhno-venerologicheskogo dispansera.
(SKIN-DISEASES, ther.
dispensery serv., results (Rus))

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKHNOVSKIY, S.

AID P - 740

Subject : USSR/Aeronautics

Card 1/1 Pub. 135 - 7/21

Author : Olekhnovskiy, S., Lt. Col.

Title : Determination of magnetic course angles in the region of the geographic pole

Periodical : Vest. vozd. flota, 10, 38-40, O 1954

Abstract : The author explains the position of magnetic meridians in the vicinity (100-150 km) of the magnetic and geographic North Poles. Diagrams.

Institution : None

Submitted : No date

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKHOVA, V.Ye.

New design of a neutralizer with conical bottom. Gidroliz. i lesokhim. prom. 15 no.7:21 '62. (MIRA 16:8)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy tsellyuloznoy i bumazhnoy promyshlennosti.
(Hydrolysis)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKIEWICZ, M.

Mathematical Reviews
Vol. 15 No. 2
Feb. 1954
Analysis

✓ **Olekiewicz, M. Tables of expected values and variances of numbers of runs in random sequences with probabilities of exceeding expected values.** Ann. Univ. Mariae Curie-Sklodowska. Sect. A. 5 (1951), 147–159 (1953). (Polish and Russian summaries)

Let R equal the number of runs observed in a sequence of n observations each of which may take one of two values. If one of these values occurs less frequently than the other let f_{min} represent the number of occurrences of the first and f_{max} the number of occurrences of the second. Given f_{min} and f_{max}, one may obtain $E(R)$, the conditional expectation of R, $D^2(R)$, the conditional variance of R, and $P[R>E(R)]$, the conditional probability that R exceeds $E(R)$. Tables are given for $E(R)$, $P(R>E(R))$, $D^2(R)$ and $D^2(R/n)$ for $1 \leqq f_{min} \leqq f_{max} \leqq 20$. An example is given indicating how the tables of $P(R>E(R))$ may be used to combine the results of a number of independent experiments. *H. Chernoff.*

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKIEWICZ, M.

Mathematical Reviews
Vol. 15 No. 2
Feb. 1954
Analysis

Olekiewicz, M. An extended table of Student's t distribution for one-sided and two-sided tests of significance at 5 and 1% probability levels. Ann. Univ. Mariae Curie-Skłodowska. Sect. A. 5 (1951), 161–163 (1953). (Polish and Russian summaries)

A table of Student's t is given for one-sided and two-sided tests of significance at 5% and 1% probability levels. The degrees of freedom covered are 1(1)30(2)100; 120 and ∞.

H. Chernoff (Stanford, Calif.).

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

★ Czechowski, T.; Olekiewicz, M.; Perkal, J.; and Wiśniewski, W. L., Editors. Statystyka jako metoda poznawcza. [Statistics as a method of research.] Polskie Towarzystwo Przyrodników im. Kopernika. Państwowe Wydawnictwo Naukowe, Warsaw, 1956. 238 pp. zł 15.10. 8

Proceedings of a conference arranged by the Copernican Society of Polish Naturalists. The volume contains seven papers, by M. Fisz, W. Sadowski, T. Czechowski, J. Perkal, M. Lacki, M. Kacprzak and M. Olekiewicz, and a record of the discussion. The central points of the discussion are the role of statistics in scientific research and the desirable form of cooperation between the naturalist and the statistician. *J. Neyman* (Berkeley, Calif.).

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

KRYSICKI, W. (Lodz); OLEKIEWICZ, M. (Lublin)

Generalized joint problem of Bayes and Bernoulli. Zastos mat 7 no.1:77-103 '63.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

Bv. abs.

A111-9 Nervous System

Rate of regeneration of amphibian peripheral nerves at different temperatures. L. Lubinska and M. Olekiewicz (*Acta Biol. exp., Poland*, 1950, 15, 129—148).—Regeneration of crushed peripheral nerves of frogs and toads occurs between temp. limits 9—26°, which is approx. the same range as required for cellular division of amœba. At constant temp. elongation of regenerating fibres proceeds at uniform rate throughout the length of the nerve. Below 17° the rate is constant, but above this temp. it increases rapidly, and at 26° attains 3—4 times the rate at 17°. The latent period leading to appearance of new nerve sprouts is more greatly influenced by temp. than is the rate of regeneration, and decreases rapidly from 10—22°. [illegible]

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKIEWICZ, M.

JURAND, A.; MARON, K.; OLEKIEWICZ, M.; SKOWRON, S.

Effect of excision of the telencephalon on regeneration rate in the tail in Xenopus laevis tadpoles. Fol. biol., Warsz. 2 no.1:3-29 1954.

1. Zaklad Biologii AM, Zaklad Zoologii Doswiadczalnej PAN w Krakowie. Kierownik: prof. dr St. Skowron. Zaklad Statystyki Matematycznej UMCS w Lublinie. Kierownik: prof. dr M.Olekiewicz.

(MESENCEPHALON, physiology,
eff. of excisn. on regen. of Xenopus laevis tail)
(REGENERATION,
eff. of telencephalon excis. on regen. of Xenopus laevis tail)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKIEWICZ, M.

MARON, K.; OLEKIEWICZ, M.; SKOWRON, S.

Further studies on the effect of excision of the telencephalon on regeneration. Fol. biol., Warsz. 2 no.2:77-85 1954.

1. Zaklad Biologii AM. Zaklad Zoologii Doswiadczalnej PAN w Krakowie. Kierownik: prof. dr S.Skowron. Zaklad Statystyki Matemat. UMCS w Lublinie. Kierownik: prof. dr M.Olekiewicz.

(MESENCEPHALON, physiology,
eff. of excis. on regen. of tail in tadpoles)
(REGENERATION,
eff. of mesencephalon excis. on tail regen. in tadpoles)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKMINSKIY, S.; KYUMIN, S.

Reduction of enterprise losses creates a reserve for the increase of accumulations. Fin.SSSR 20 no.12:12-20 D '59.
(MIRA 12:12)

(Efficiency, Industrial) (Finance)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKMINSKIY, S.; RYUMIN, S.

Potentials for increasing accumulations in industry. Fin. SSSR 23 no.7:33-40 Jl '62. (MIRA 15:7)
(Industrial management) (Capital)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKMINSKIY, S.

Financial organs in the effort against the unprofitableness of enterprises. Fin.SSSR 37 no.10:8-11 O '63. (MIRA 17:2)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKMINSKIY, S.; RYUMIN, S.

Report analysis of enterprises is the important means for uncovering potentials. Fin.SSSR 38 no.2:36-43 F '64. (MIRA 17:2)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKS, S.; TSINBERG, Ye.

Effect of a single instillation of insulin into the conjunctival sac on the blood sugar content in rabbits with alloxan diabetes. Probl. endok. i gorm. 6 no. 3:77-79 My-Je '60. (MIRA 14:1)
(DIABETES) (INSULIN) (CONJUNCTIVA)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

SOKOLOVEROVA, I.M.; BOCHKAREVA, A.A.; VOLODINA, Ye.P.; OLEKS, S.; TSINBERG, Ye.

Effect of repeated instillations of insulin into the conjunctival sac on the course of alloxan diabetes. Biul. eksp. biol. i med. 53 no 4: 64-66 Ap '62. (MIRA 15:4)

1. Iz kafedry patologicheskoy fiziologii (zav. - dotsent I.M. Sokoloverova) i kafedry glaznykh bolezney (zav. - dotsent A.A. Bochkareva Orenburgskogo meditsinskogo instituta (dir. - dotsent S.S.Mikhaylov). Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Parinym).

(DIABETES) (INSULIN) (CONJUNCTIVA)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSA, A.P.

Torsion of the greater omentum. Vest.khir. 75 no.4:131-132 My '55.
(MLRA 8:8)

1. Iz Irshavskoy rayonnoy bol'nitsy (glavn. vrach. -S.S.Golopatyuk) Zakarpatskoy oblasti. Irshava, Zakarpatskoy obl., rayonnaya bol'nitsa.

(INTESTINAL OBSTRUCTION,
great omentum, surg.)
(OMENTUM,
great, volvulus, surg.)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSA, A.P. (Zakarpatskaya oblast', Irshava, ul. Molotova, d.8)

Plastic suction tip for evacuating the intestinal contents in surgery for acute intestinal obstruction. Nov.khir.arkh. no.1: 80-82 Ja-F '57. (MLRA 10:6)

1. Irshavskaya rayonnaya bol'nitsa, Zakarpatskoy oblasti.
(MEDICAL INSTRUMENTS AND APPARATUS)
(INTESTINES--OBSTRUCTION)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

KULIKOV, N.; OLEKSA, P.M.; KATSIN, I.S.; OS'MAGA, I.I.

Eliminate excessive load testing of bridge cranes. Metallurg 10 no.6:34 Je '65. (MIRA 18:6)

1. Glavnyy mekhanik Nizhne-Tagil'skogo kombinata (for Kulikov). 2. Glavnyy mekhanik Donetskogo metallurgicheskogo zavoda (for Oleksa). 3. Starshiy inzh. Otdela glavnogo mekhanika po kranam Donetskogo metallurgicheskogo zavoda (for Katsin). 4. Pomoshchnik nachal'nika martenovskogo tsekha po oborudovaniyu Donetskogo metallurgicheskogo zavoda (for Os'maga).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

ALEKSEYEV, V.S.; BILYUGA, T.G.; TALDYKIN, O.Ye.; OLEKSANDRUK, A.M.; TIMOSHENKO, A.G.; MALUKHA, N.N.; MINKO, A.F.; SHABEL'NYUK, V.S.; GIRENKO, P.P.; MAZENKO, V.V.

Amount of alkaloids of the 1-methylpyrrolizidone series in the groundsel Senecio borysthenicus Andz. during different vegetation periods and the effect of mowing upon the alkaloid content of the aftergrowth. Nauch. dokl. vys. shkoly; biol. nauki no.2: 152-154 '62. (MIRA 15:5)

1. Rekomendovana kafedroy farmatsevticheskoy khimii Dnepropetrovskogo meditsinskogo instituta.
(SENECIO) (PYRROLIZINE)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSENKO, L.G., master

Speeded up kilning of bricks in rotary kilns [L.G. Oleksenko]
Rats. i izobr. predl. v stroi. no.6:104-107 '58. (MIRA 11:10)

1. Bogodukhovskiy kirpichnyy zavod, Khar'kov.
(Kilns, Rotary)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

ACCESSION NR: AP4040429 S/0302/64/000/002/0058/0059

AUTHOR: Oleksenko, P. F.; Svechnikov, S. V. (Candidate of technical sciences)

TITLE: Preamplifying correcting stage for photovaristors

SOURCE: Avtomatika i priborostroyeniye, no. 2, 1964, 58-59

TOPIC TAGS: photovaristor, FSK-M photovaristor, preamplifier, correcting preamplifier, correcting preamplifier photovaristor

ABSTRACT: Two quadripoles intended for correcting the inertia of a photovaristor are discussed. The first consists of two resistors and one capacitor (see Fig 3b, Enclosure 1), and the second includes a 2-tube positive-feedback preamplifier (Fig 3c) which acts as a negative resistance. Simplified connection diagrams, data, and oscillograms are given in Enclosure 1 for a Soviet-made FSK-M photovaristor. Orig. art. has: 3 figures and 3 formulas.

ASSOCIATION: Institut poluprovodnikov AN UkrSSR (Institute of Semiconductors, AN UkrSSR)

SUBMITTED: 00 DATE ACQ: 24Jun64 ENCL: 01

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

Cord 1/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

ACCESSION NR: AP4040429

ENCLOSURE: 01

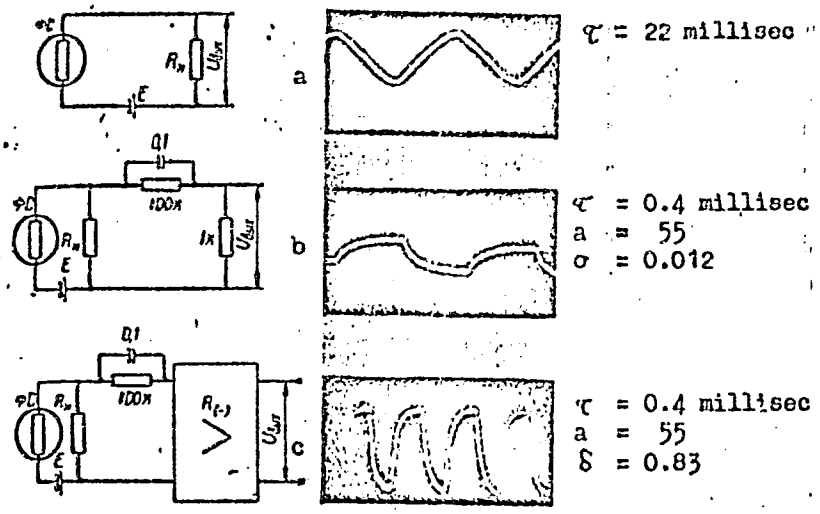

Fig 3: Correcting quadripoles schemes and oscillograms (each mark is equal to 0.2 millisec)

Card 2/2

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09010472

L 4495-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) IJP(c) BB/GG

ACC NR: AP5023269 UR/0302/65/000/003/0026/0027
621.142.353.3

AUTHOR: Krasnikov, N.I.; Oleksenko, P.F.; Svechnikov, S.V. (Candidate of technical sciences)

TITLE: High-speed division analog computer

SOURCE: Avtomatika i proborostroyeniye, no. 3, 1965, 26-27

TOPIC TAGS: analog computer, computer circuit, computer design, automatic control system, semiconductor device

ABSTRACT: This article describes a high-speed analog device for the division of unipolar pulses of arbitrary spectral shape (0-10^5 cps) with a dynamic range of 300 and 50 with respect to the divisor and dividend. The circuit was designed at Institut poluprovodnikov AN UkrSSR (Institute of Semiconductors, AN UkrSSR). The circuit diagram is presented, and static and dynamic characteristics are given, as well as the theoretical description of the device. The device may be widely used in automatic control systems and in the field of computing. Orig. art. has: 4 formulas and 3 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: IE, DP, EC

NO REF SOV: 001 OTHER: 002

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

L 06390-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6010289 (N) SOURCE CODE: UR/0103/66/000/003/0142/0147

AUTHOR: Zyuganov, A. N. (Kiev); Oleksenko, P. F. (Kiev); Svechnikov, S. V. (Kiev)

ORG: none

TITLE: The effect of load resistance upon the transient characteristics of photoresistances

SOURCE: Avtomatika i telemekhanika, no. 3, 1966, 142-147

TOPIC TAGS: photoresistance, photoconductive cell, electronic feedback, cadmium selenide, cadmium sulfide

ABSTRACT: The photocurrent of CdS and CdSe single-crystal photoconductive cells with linear In-Ga contacts is analyzed. The CdS cells were tested with dc and with ac (f = = 100 kc) on a simulated circuit model under transient conditions. The space charge plays an important role in the nonlinear behavior of the photocurrent. The load of photoresistance may distort considerably its transient characteristics, partially on account of the feedback. This is an important consideration in the design and calculation of hardware used in correction circuits and compensation networks. Formulas that are adequate for the computation of the transient characteristics of photoresistances are developed. Orig. art. has: 5 figures, 22 formulas.

SUB CODE: 09/ SUBM DATE: 10Apr64/ ORIG REF: 002/ OTH REF: 001

Card 1/1 UDC: 621.383.42

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

BARKALOV, I.A.; OLEKSENKO, V.P.

Relationship between underground water and stratigraphic relief structure of the Dzhezkazgan- Ulu-Tau region. Vest.AN Kazakh.SSR 14 no.10:71-77 O '58. (MIRA 11:12)
(Dzhezkazgan District--Water, Underground)
(Ulu-Tau District--Water, Underground)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSENKO, V.P., BAHKALOV, I.A., POTAPOCHKIN, V.M.

History of valleys in the western part of the Sary-Su--Tengiz watershed. Izv. AN Kazakh. SSR. Ser. geol. no.1:34-47 '60.
(Kazakhstan--Valleys)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OSTROV[illegible], V.[illegible]; [illegible] V.V.

[illegible] method in [illegible]
[illegible] region in central Kazakhstan. [illegible]
[illegible], SSR no. 4, 130-135 [illegible]. (MIRA 14:6)
(Karaganda Province--Terraces (Geology))

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSENKO, V.P.

Tectonic development of the Dzhezkazgan—Ulu-Tau region in the Mesozoic and Cenozoic. Izv. AN Kazakh.SSR. Ser.geol. no.6:65-75 '62. (MIRA 16:5)

(Kazakhstan—Geology, Structural)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSENKO, V.V.

LAPITSKIY, V.I., doktor tekhn. nauk, prof.; MARINOV, A.I., inzh.; OYKS, G.N., doktor tekhn. nauk, prof.; OLEKSENKO, V.V., inzh.; ORLOV, V.I., kand. tekhn. nauk; HUDICHEV, K.P., inzh.; STUPAR', N.I., kand. tekhn. nauk, dots.

Reducing the inhomogeneity of large rimming steel ingots (up to 18 t.). Izv. vys. uchab. zav.; chern. met. no.2:19-33 F '58. (MIRA 11:5)

1. Dnepropetrovskiy metallurgicheskiy institut, Moskovskiy institut stali i zavod "Zaporozhstal'."

(Steel ingots)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSENKO, V.V.

PHASE I BOOK EXPLOITATION SOV/4344

Soveshchaniye po teorii liteynykh protsessov, 4th

Kristallizatsiya metallov; trudy soveshchaniya (Crystallization of Metals; Transactions of the Fourth Conference on the Theory of Casting Processes) Moscow, Izd-vo AN SSSR, 1960. 325 p. 3,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: B. B. Gulyayev, Doctor of Technical Sciences, Professor; Ed. of Publishing House: V. S. Rzheznikov; Tech. Ed.: S. G. Tikhomirova.

PURPOSE: This book is intended for metallurgists and scientific workers. It may also be useful to technical personnel at foundries.

COVERAGE: The book contains the transactions of the Fourth Conference (1958) on the Theory of Casting Processes. [The previous 3 conferences dealt with hydrodynamics of molten metals (1955), solidification of metals (1956), and shrinkage processes in castings (1957)]. General problems in the crystal-lization of metals, including the crystallization of constructional steels, alloy steels with special properties, cast iron, and of nonferrous alloys, are discussed. Recognition is given to D. K. Chernov and N. T. Gudtsov and their students, B. B. Gulyayev and A. G. Spasskiy, for their contributions to the understanding of the basic problems involved in the theory of crystallization of ferrous and nonferrous metals and alloys. Academician A. V. Shubnikov is also mentioned in connection with his work on the planning of research on crystal formation. References accompany several of the articles.

II. CRYSTALLIZATION OF CONSTRUCTIONAL STEEL

(60)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

LAPITSKIY, V.I.; STUPAR', N.I.; RUDICHEV, K.P.; OLEKSENKO, V.V.; YAITSKIY, A.K.

Pouring rimmed steel into bottle shaped ingot molds. Izv. vys. ucheb. zav.; chern. met. 6 no.11:65-69 '63. (MIRA 17:3)

1. Dnepropetrovskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

ISAYEV, Ye.I.; LEUSOV, Yu.I.; OLEKSENKO, V.V.; LAPITSKIY, V.I., prof. nauchnyy rukovoditel' raboty.

Using exothermic ferromanganese in the manufacture of medium-manganese steel. Izv. vys. ucheb. zav.; chern. met. 7 no.12: 36-40 '64 (MIRA 18:1)

1. Dnepropetrovskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

LAPITSKIY, V.I., doktor tekhn. nauk [deceased]; LEUSOV, Yu.I.; ISAYEV, Ye.I., kand. tekhn. nauk; OLEKSENKO, V.V.

Intensification of the process of steel deoxidation. Met. i gornorud. prom. no.3:28 My-Je '65. (MIRA 18:11)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSEVICH, V. P.

OLEKSEVICH, V. P. -- "Electromagnetic field of a Decade Transmission Line and Its Parameters." Sub 11 Apr 52, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov. (Dissertation for the Degree of Candidate in Technical Sciences).

SO: Vechernaya Moskva, January-December 1952

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

SHISHKIN, Nikolay Fedorovich, kand.tekhn.nauk; OLEKSEVICH, Valeriy Pavlovich; DANILIN, Petr Yakovlevich; MIKHEYEV, Yuriy Aleksandrovich; SYCHEV, Leonid Ivanovich. Prinimali uchastiye: SHALAGINOVA, T.S., inzh.; SMORODINSKIY, Ya.M., kand.tekhn.nauk; KALINICHENKO, M.F., inzh.; CHASHKIN, Ye.V., inzh.; ASTAF'YEV, V.D., inzh.; PROKOF'YEV, V.I., vedushchiy konstruktor; ROGOV, V.A., starshiy master; MOSKALENKO, V.M., laborant; GERASIMOV, N.F., laborant; POPOV, N.A., kand.fiziko-matem. nauk; KALINICHENKO, M.F., inzh.; LYUBIMOV, N.G., otv.red.; ALADOVA, Ye.I., tekhn.red.; PROZOROVSKAYA, V.L., tekhn.red.

[Protection of the electric equipment and cable networks in mines] Zashchita shakhtnykh elektroustanovok i kabel'nykh setei. Pod red. N.F.Shishkina. Moskva, Ugletekhizdat, 1959. 242 p. (MIRA 12:3)
(Electricity in mining) (Electric cables)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

AUTHOR: Gulyayev, B.B. SOV/24-58-4-37/39

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 N.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. Bunachev, V.L. Oleksayenko, A.I. Marinov - "Certain Methods of Reducing Non-Uniformities of Large Castings (up to 20 t) made of Rimming Steel"; V.I. Novitskiy, A.B. Mikul'chin and V.V. Blinov - "Influence of Internal Crystallisers on the Structure and Properties of Steel Ingots"; N.I. Chvorinov (Czechoslovakia) - "On the Crystallisation of Steel"; A.P. Pronov - "Crystallisation of Continuously Cast Ingot and Influence on it of the Properties of

Card6/10 Liquid Steel"; L.I. Morozenskiy and O.D. Zigel' - "Influence of Movement of the Metal in the Liquid Core on the Crystallisation of Steel Ingots and Castings"; N.N. Guglin, A.A. Novikova and B.B. Gulyayev - "Crystallisation and Mechanical Properties of Steels at Elevated Temperatures"; V.Ya. Meymark - "Influence of Inoculation on the Deformation of the Crust and the Speed of Solidification of Ingots"; G.P. Ivantsov "Thermal Stresses and Deformation in the Crust of a Crystallising Ingot"; V.G. Gruzin and P.I. Yampol'skiy 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. Lashko and N.Ya. Rodina - "Occurrence of Non-uniformities in High-temperature alloys During Crystallisation and Heat

Card7/10 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: 06/15/2000 CIA-RDP86-00513R001238010001-5

OSTROVSKIY, V.N.; OLEKSEYENKO, V.P.

Indicator value of vegetation in mapping river terraces in the Dzhezkazgan-Ulutau region of central Kazakhstan. Trudy MOIP 8: 159-162 '64. (MIRA 17:12)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

SUROWCOWA-SWIDZINSKA, Alicja; TARKOWSKA-GAWRON, Barbara; HAWLING, Tadeusz; OLEKSIN, Danuta

Clinical course of smallpox during its epidemic in Wrocław in 1963. Przegl. epidem. 18 no.2:165-172 '64.

1. Ze Szpitala Epidemicznego w Szczodrem.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

SUROWCOWA-SWIDZINSKA, Alicja; HAWLING, Tadeusz; OLEKSIN, Danuta

Cases of hemorrhagic diathesis in smallpox patients during the 1963 Wroclaw epidemic. Pol. tyg. lek. 20 no.34:1277-1279 23 Ag '65.

1. Ze Szpitala Epidemicznego w Szczodrem (Kierownik: dr. Alicja Surowcowa-Swidzinska).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

L 15693-63 EPF(c)/EWT(m)/BDS/T-2 AEDC/AFFTC/APGC Pr-4
BN/WW/DJ

ACCESSION NR: AR3003599 S/0081/63/000/008/0597/0597

SOURCE: RZh. Khimiya, Abs. 8P156

68
67

AUTHOR: Oleksin, N. Ye., Starobinets, I. S., Tolstenev, V. S.

TITLE: Commercial paraffins and lubricants from the petroleums of Western Turkmenia

CITED SOURCE: Tr. Turkm. fil. Vses. neft. n.-i. in-ta, vy*p. 3, 1961, 97-108

TOPIC TAGS: paraffin production, lubricant production, petroleum fractionation

TRANSLATION OF ABSTRACT: Basic results are given of the work carried out in the Turkmen Branch, VNIINP for the investigation under laboratory conditions of the processes of obtaining commercial paraffins and lubricants from the petroleums of western Turkmenia. The initial raw materials which were used were the fractions 300-400° and 400-500° obtained upon vacuum distillation of the black oils of paraffin petroleums of Kum-Dag and Western Cheleken; use was also made of the refinery black oil from a petroleum mixture from Western Turkmenia. A technological plan was proposed for obtaining lubricants and paraffins which

Card 1/2

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L 15693-63

ACCESSION NR: AR3003599

satisfy the requirements of technical standards for petroleum products. This attests in principle to the possibility of the production of the indicated products under plant conditions, for which a change is necessary in the scheme of the preparation of the petroleums of Western Turkmenia from a fuel variant to a fuel-oil variant; in the given case the production is contemplated of motor fuel, of low-freezing lubricants, and also of high-melting and low-melting paraffins. I. B.

DATE ACQ: 12Jun63 SUB CODE: CH, PL ENCL: 00

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSIN, P.Ye.; SEREDA, Ya.I.

Obtaining α-olefins for ozonsynthesis by cracking low-melting n. paraffins. Neft. i gaz. prom. no.2:47-50 Ap-Je '63. (MIRA 17:11)

1. Institut geologii goryuchikh iskopayemykh AN UkrSSR.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSIN, P.Ye.; SEREDA, Ya.I.

Certain features of the vapor-phase cracking of low-melting n. paraffins in order to obtain petrochemical raw stock. Neft. i gaz. prom. no.2:52-54 Ap-Je '64. (MIRA 17:9)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSIV, B.I.

Some new data on the stratigraphy of Jurassic sediments in eastern Transbaikalia. Geol.sbor. [Lvov] no.7/8:403-413 '61. (MIRA 14:12)

1. Gosudarstvennyy universitet imeni Ivana Franko, L'vov.
(Transbaikalia--Geology, Stratigraphic)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5

OLEKSIV, B.I.; ANASHKINA, K.K.; GRIGORCHUK, G.Yu.; PAUL'MANN, V.I.

Lower and upper age boundaries of Jurassic marine sediments in the Gazimur Zavod region (eastern Transbaikalia). Visnyk L'viv.un. Ser.geol. no.1:32-37 '62. (MIRA 16:7)
(Transbaikalia--Deep-sea sediments) (Transbaikalia--Geological time)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238010001-5"

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GRIGORCHUK, G.Yu.; OLEKSIV, B.I.

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(PANCREAS,
juice, electrophoresis of enzymes (Pol))
(ENZYMES, determination,
in pancreatic juice, electrophoresis (Pol))

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juice, esterases in protein fractions in dog (Pol))

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on pancreatic enzyme content in dog (pol))
(PILOCARPINE, effects,
same (Pol))
(PANCREAS,
juice, eff. on enzyme content of secretin, pancreatic enzymes & pilocarpine (Pol))

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