"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

MISHCHENKO, Yu.A.; BORESKOV, G.K.; GORGORAKI, V.I.

Catalytic activity of γ-irradiated silica gel in homomolecular oxygen exchange. Kin. i kat. 6 no.1:179-180 Ja-F '65.

(MIRA 18:6)

1. Fiziko-khimicheskiy institut imeni Karpova.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

SHENDRIK, M.N.; BORESKOV, G.K.; KIRILYUK, L.V.

Variation in the activity of a chromia-alumina catalyst in the process of butane dehydrogenation. Kin. i kat. 6 no.2:313-319 Mr-Ap '65. (MIRA 18:7)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

NEDUMOVA, Ye.S.; BORESKOV, G.K.; SLIN'KO, M.G.

Kinetics of isotope exchange between hydrogen and water vapors over nickel catalysts. Part 2: Effect of pressure on the reaction rate in the range of internal diffusion. Kin. i kat. 6 no.2:360-363 Mr-Ap '65. (MIRA 18:7)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva i Institut kataliza Sibirskogo otdeleniya AN SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORESKOV, G.K.

Third International Congress of Catalysis. Kin. i kat. 6 no.2: 366-369 Mr-Ap '65. (MIRA 18:7)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

L 5265-66 EWT(m)/EPF(c)/EPF(n)-2/EWP(t)/EWP(b) IJP(c) JD/GG

ACCESSION NR: AP5026474 SOURCE CODE: UR/0195/65/006/005/0842/0848

AUTHOR: Mishchenko, Yu. A.; Boreskov, G. K.

ORG: Physicochemical Institute im. L. Ya. Karpov (Fiziko-khimicheskiy institut)

TITLE: Nature of surface radiation defects in irradiated silica gel. Part 2. Catalytic properties of irradiated silica gel and isotope exchange reactions between hydrogen and deuterium

SOURCE: Kinetika i kataliz, v. 6, no. 5, 1965, 842-848

TOPIC TAGS: silica gel, color center, deuterium, hydrogen, gas adsorption, EPR spectrum, gamma irradiation, irradiation effect

ABSTRACT: An attempt is made to establish the nature of the active centers responsible for the catalytic activity of irradiated silica gel in the reaction of isotope exchange between hydrogen and deuterium under static conditions. Various types of silica gel samples were activated by heating in air at temperatures up to 600C, and then irradiated with Co^{60} γ-rays at -196C. The catalytic activity of silica gel is shown to depend strongly on its content of aluminum impurities and on the conditions of activation and irradiation. Symbatic changes

Card 1/2 UDC: 541.15'.124

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L 5265-66

ACCESSION NR: AP5026474

2

in catalytic activity are also observed with changes in hydrogen adsorption capacity, intensity of the sextet signal in ESR spectra, and annealing in vacuum and hydrogen. It is concluded that the color centers observed in optical and ESR spectra and due to the presence of aluminum atoms participate not only in the adsorption of hydrogen, but also in the reaction of catalytic exchange between hydrogen and deuterium. Orig. art. has: 4 figures, 6 tables, and 1 formula. [08]

27 27

SUB CODE: NP, GC, SS/SUBM DATE: 20May64/ ORIG REF: 003/ OTH REF: 004/

ATD PRESS: 4138

BC

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

ANDRUSHKEVICH, T.V.; POPOVSKIY, V.V.; BORESKOV, G.K.

Catalytic properties of oxides of metals of the IV period of the periodic system with respect to oxidation reaction. Part 1: Oxidation of methane. Ki. .i kat. 6 no.5:860-863 S-O '65. (MIRA 18:11)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

L 8495-66 EWT(m)/EWP(j)/T/EWP(t)/EWP(b) IJP(c) JD/RM

ACC NR: AP5026478 SOURCE CODE: UR/0195/65/006/005/0909/0915

AUTHOR: Yermakov, Yu. I.; Boreskov, G. K.; Slin'ko, M. G.; Skomorokhov, V. B.

ORG: Institute of Catalysis, SO AN SSSR (Institut kataliza SO AN SSSR)

TITLE: Kinetics and mathematical modeling of the process of suspension polymerization of ethylene on a chromium trioxide catalyst

SOURCE: Kinetika i kataliz, v. 6, no. 5, 1965, 909-915

TOPIC TAGS: polymerization rate, ethylene, mathematic model, chromium oxide

ABSTRACT: The kinetic relationships obtained by studying the suspension polymerization of ethylene on a chromium trioxide catalyst are considered mathematically. The process was simulated on an MN-14 analog computer. The experimental curves of the polymerization rate versus catalyst concentration and ethylene pressure are compared with the curves obtained by the computer, and it is shown that the mathematical description correctly expresses the relationships found experimentally. The proposed mathematical description may be used for calculating the optimum conditions of the reactor unit in an industrial application of the process of suspension polymerization. Orig. art. has: 4 figures and 14 formulas.

Card 1/2 UDC 541.124:542.952.6:547.313.2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

L 8495-66
ACC NR: AP5026478

SUB CODE: 07, 12 / SUBM DATE: 18Jul64 / ORIG REF: 007 / OTH REF: 002

BVK
Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

YUR'YEVA, T.M.; POPOVSKIY, V.V.; BORESKOV, G.K.

Catalytic properties of oxides of period 4 metals of the periodic system with respect to oxidation reactions. Part 2: Decomposition of nitrogen oxide. Kin. i kat. 6 no. 6:1041-1045 N-D '65 (MIRA 19:1)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR. Submitted September 11, 1964.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

KOLOVERTNOV, G.D.; BORESKOV, G.K.; DZIS'KO, V.A.; POPOV, B.I.; TARASOVA, D.V.; BELUGINA, G.G.

Iron-molybdenum oxide catalyst of methanol oxidation to formaldehyde. Part 1: Specific activity as a function of the catalyst composition. Kin. i kat. 6 no. 6:1052-1056 N-D '65 (MIRA 19:1)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR. Submitted January 25, 1965.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORESKOV, G.K.; SLIN'KO, M.G.

Mathematical modeling of chemical reactors. Khim. i tekh. topl. i masel 10 no.8:30-33 Ag '65. (MIRA 18:9)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORESKOV, G.K.

Development of research on heterogeneous catalysis; results of the 3d International Congress on Catalysis. Vest. AN SSSR 35 no.4:69-72 Ap '65. (MIRA 18:6)

1. Chlen-korrespondent AN SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

L 26356-66 EWT(m)/EWP(j) DIAAP JD/JW/JG/RM

ACC NR: AP6013382 SOURCE CODE: UR/0195/66/007/002/0284/0288

AUTHOR: Sazonov, L. A.; Sokolovskiy, V. D.; Boreskov, G. K.

ORG: Institute of Catalysis, SO AN SSSR (Institut kataliza SO AN SSSR)

TITLE: Homomolecular and isotopic exchange of oxygen on gadolinium oxide

SOURCE: Kinetika i kataliz, v. 7, no. 2, 1966, 284-288

TOPIC TAGS: gadolinium compound, oxygen, isotope

ABSTRACT: The reactions of homomolecular and isotopic exchange of oxygen on gadolinium oxide were studied over a wide temperature range (-78 to 500°C) in relation to the preliminary treatment of the oxide. The catalytic activity of the oxide in this reaction was found to be stable below 200°C. Heating of the catalyst in oxygen above 200°C, where the isotopic exchange of oxygen between the oxide and the gas phase begins, caused a change in catalytic activity at low temperatures. At high temperatures, the two reactions occur at similar rates and equal activation energies, indicating the presence of a common rate-determining step. Calcining of the catalyst in a vacuum at 700°C causes a high catalytic activity with respect to homomolecular exchange even at -78°C; this activity disappears after the oxide is heated in oxygen above 200°C. Two temperature regions with different activation energies were found for the low-temperature exchange. Orig. art. has: 3 figures, 2 tables, 2 formulas.

SUB CODE: 07/ SUBM DATE: 25Jan65/ ORIG REF: 005/ OTH REF: 001

Card 1/1 UDC: 546.662-31-44

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORESKOVA, Ye.G.; TOPCHIYEVA, K.V.; PIGUZOVA, L.I.

Catalytic activity of synthetic zeolites in the cracking of cumene. Kin. i kat. 5 no.5:903-909 S-O '64. (MIRA 17:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

LYGIN, V.I.; KAVTARADZE, N.N.; BORESKOVA, Ye.G. (Moskva)

Technique of specimen preparation for studying the chemisorption of gases on metals by infrared spectroscopy. Zhur. fiz. khim. 35 no. 4:932-933 Ap '61. (MIRA 14:5)

1. Akademiya nauk SSSR, Institut fizicheskoy khimii.
(Metals—Spectra) (Sorption)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORESKOVA, Ye.G.; LYGIN, V.I.; TOPCHIYEVA, K.V.

Infrared spectroscopy study of the nature of active centers in the cracking of cumene catalyzed by decationized zeolites. Kin.i kat. 5 no.6:1115-1118 N-D '64. (MIRA 18:3)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

L 16637-65 EWT(m)/EPF(c) Pr-4/Pb-4/Pa-4 ASD(p)-3 RM
ACCESSION NR: AP4047838 S/0195/64/005/005/0903/0909

AUTHOR: Boreskova, Ye. G.; Piguzova, L. I.; Topchiyeva, K. V.; B

TITLE: The catalytic activity of synthetic zeolites in the cumene cracking reaction

SOURCE: Kinetika i kataliz, v. 5, no. 5, 1964, 903-909

TOPIC TAGS: cumene, catalytic cracking, synthetic zeolite, quinoline, moleculer sieve, aluminosilicate catalyst

ABSTRACT: The authors note that synthetic zeolites are presently acquiring considerable importance not merely as adsorbents, but also as the catalytic agents in various reactions. The possibility of chemically modifying the surface of zeolites by means of ion exchange holds the promise that they may be useful in carrying out a number of catalytic processes. The molecular-sieve properties of zeolites give rise to the hope that it will be possible to obtain catalytic agents with considerably greater selectivity than those used at the present time. The authors point to two basic trends in the study of molecular sieves as catalysts: the approach from the point of view of the accessibility of the internal surface of the zeolites for reacting molecules and the removal of reaction products from

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ACCESSION NR: AP4047838

the pores; and the study of the character of the intermediate interaction, depending on the chemical properties and the electron structure of the catalytic agent. The present article deals with the second of these approaches and is devoted to a study of the catalytic activity of synthetic zeolites of type X and Y, the structure of which precludes any effect of pore size on reaction selectivity. The chemical composition of the samples varied widely both with respect to the nature and degree of the exchange of the replacing cation, and also with respect to the ratio of SiO_2/Al_2O_3 in the structure. The catalytic activity of the zeolites was determined according to the model reaction of cumene cracking, the kinetic mechanism of this reaction previously being studied on amorphous aluminosilicate catalysts. The adsorption heat values of all components of the reaction were determined, and it is shown that decationized zeolites possess maximum activity. The authors found a sharp increase in the activity of the type-X zeolite as its calcium ion content increased. A determination was made of the speed and activation energy constants of the reaction for all the samples studied. The contaminating effect of quinoline adsorption at high temperatures on the cumene cracking reaction in the case of decationized samples was established. The authors also discuss the problem of the nature of the active centers of various zeolite forms. Orig. art. has: 2 tables and 5 figures.

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

L 16637-65

ACCESSION NR: AP4047838

ASSOCIATION: Khimicheskiy fakul'tet, Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Department of Chemistry, Moscow State University)

SUBMITTED: 02Jun64 ENCL: 00 SUB CODE: OC

NO REF SOV: 002 OTHER: 007

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORESTNEVA, Z. YA.

Colloid Chemistry

Dissertation: "The Mechanism of the Formation of Colloid Particles." Dr Chem Sci, Sci Res Physicochemical Inst imeni L. Ya. Karpov, Moscow, 1953. (Referativnyy Zhurnal--Khimiya, Moscow, No 3, Feb 54)

SO: SUM 213, 20 Sept 1954

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

S/185/62/007/012/005/021
D234/D308

AUTHORS: Tovstyuk, K.D. and Borets', A.N., O.M.

TITLE: A graphical method of determining the optical mono-crystalline semiconductors by measuring the transmission

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 12, 1962, 1285 - 1290

TEXT: In a plane parallel plate of a thickness d, if $k^2/n^2 \ll 1$, the transmission of light is

$$T = \frac{J}{J_0} = \frac{(1 - r)^2 \cdot e^{-\alpha d}}{1 - r^2 e^{-2\alpha d}} . \qquad (3)$$

In order to find the absorption coefficient one must measure T in two specimens having different thicknesses d_1 and d_2 and equal reflection coefficients r. Since

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$$\ln\alpha = \ln \ln \frac{(1-r)^2 + \sqrt{(1-r)^4 + 4T^2r^2}}{2T} - \ln d = \ln \ln f_T(r) - \ln d. \quad (6)$$

one obtains two equations

$$\ln\alpha = \varphi_{T_1}(r) - \ln d_1, \quad (7)$$

$$\ln\alpha = \varphi_{T_2}(r) - \ln d_2.$$

To determine the absorption coefficient it is necessary to plot $\varphi_T(r)$ on transparent paper and to place two such graphs over one another on ordinary paper where coordinate axes are marked, the distances between the coordinate origins of the graphs and that of the paper being $\ln d_1$ and $\ln d_2$. The points of intersections of the curves give the solutions (7). Methods of other authors are reviewed. There are 2 figures, 1 table and 8 references: 5 Soviet-bloc and 3 non-Soviet-bloc.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

A graphical method ... S/185/62/007/012/005/021
D234/D308

ASSOCIATION: Chernivets'kyy derzhuniversytet
(Chernovtsy State University)

SUBMITTED: June 9, 1962

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETS, A.N. [Borets', O.M.]; STAKHIRA, I.M. [Stakhyra, I.M.]

Self-absorption edge in In_2Se single crystals. Ukr. fiz. zhur. 8 no.9:1026-1027 S '63. (MIRA 17:8)

1. Chernovitskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

Thermomagnetic and magnetic properties of PbSe. Ya. S. Budzhak.

Certain anomalous properties of p-type PbTe. P. M. Starik, P. I. Voronyuk.

Galvanomagnetic and thermomagnetic effects in HgTe. N. V. Gavaleshko.

Production and electrical properties of HgSe and the system HgSe-HgTe. I. M. Rarenko, V. M. Nikitenko.

Electrical properties of In_2Se. I. M. Stakhira, A. N. Borets.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETS, A.N. [Borets', O.M.]; STAKHIRA, I.M. [Stakhyra, I.M.]

Optical properties of In_2Se. Ukr. fiz. zhur. 9 no. 10:1074-1078 O '64 (MIRA 18:1)

1. Chernovitskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETS, M. N.

Magnetic properties of semiconductors. K. D. Tovstyuk.

This presentation consisted of the following papers:

Anisotropy of susceptibility of semiconductors. K. D. Tovstyuk, E. I. Slynko, I. M. Stakira, O. M. Boretz.

Magnetic and thermomagnetic properties of HgTe, PbTe, HgSe, PbSe. K. D. Tovstyuk, M. P. Gavaleshko, Ya. S. Budzhak, P. M. Starik, P. I. Voronyuk.

Magnetic susceptibility of CdTe and ZnTe. I. V. Potykevich, A. V. Savitskiy.

Magnetic properties of the system HgTe-CdTe. K. D. Tovstyuk, I. M. Rarenko, I. V. Potykevich.

Anisotropy of the thermal conductivity of CdSb. I. M. Pilat, L. I. Anatychyuk.

Electrical, magnetic, and optical properties of the system In_2Te_3-CdTe. I. V. Potykevich, A. I. Belyayev, S. V. Chepura.

Properties of crystals of CdSb doped with elements of groups IV and VI. S. M. [illegible]

[illegible] presented at the [illegible] Conference on Semiconductor Compounds, [illegible]

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

ACC NR: AP6026698 SOURCE CODE: UR/0181/66/008/008/2440/2445

AUTHOR: Borets, A. N.

ORG: Uzhgorod State University (Uzhgorodskiy gosudrastvennyy universitet)

TITLE: Density of electronic states in C_{2v}^{1}-C_{2v}^{10} crystals

SOURCE: Fizika tverdogo tale, v. 8, no. 8, 1966, 2440-2445

TOPIC TAGS: absorption coefficient, light absorption, electron density, crystal property

ABSTRACT: A study is made of the structure of isoenergy surfaces in the neighborhood of possible energy minima in C_{2v}^{1}-C_{2v}^{10} crystals. The density of the energy states is calculated for the general case, as well as the absorption coefficient for the permitted transitions. The detailed shapes of isoenergy surfaces were studied in an earlier paper by the author; here he illustrates only the cross sections and the general shapes of these surfaces. Conditions are given in which the center hole of the doughnut-shaped surface disappears and in which the surfaces mutually overlap at the center. Along the y axis there are two spherical surfaces, and a discontinuity appears in the paired points k_y^0. Equations derived for the surfaces are analyzed in detail. It is shown that the density states affect the optical, electrical, and other characteristics of

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ACC NR: AP6026698

such crystals as SbSI. The absorption of light by free carriers is also examined. The author thanks I. I. Boyko for valuable advice. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 03May65/ ORIG REF: 011/ OTH REF: 005

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

L 61686-65 EWT(1)/EWT(m)/EEC(t)/T/EWP(t)/EWP(b)/EED(b)-3 Pi-4 IJP(c) JD
ACCESSION NR: AP5011129 UR/0051/65/018/004/0712/0713
535.524: 543.422 = 15

AUTHORS: Borets, A. N.; Germovich, T. S.

TITLE: The use of polarized infrared radiation for determination of crystallographic axes in certain anisotropic semiconductors

SOURCE: Optika i spektroskopiya, v. 18, no. 4, 1965, 712-713

TOPIC TAGS: infrared spectroscopy, crystalographic orientation, anisotropic semiconductor, tellurium, cadmium antimonide

ABSTRACT: Polarized infrared radiation was used by the authors to orient hexagonal (Te) and rhombic ($CdSbIn_2Se$) crystals in the cleavage planes. The method consisted essentially in determining the angular dependence of the transmission for various wavelengths (both at the absorption edge and in the transparency region) by rotating the sample in polarized infrared light. The transmission was measured with an IKF-12 spectrometer. A stack of selenium layers served as the polarizer. The plots of the transmission for a plate of tellurium cut parallel to the cleavage

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ACCESSION NR: AP5011129

plane and for CdSb show that the index of refraction of tellurium has a much stronger anisotropy than that of CdSb. The results show that on the basis of original x-ray examination, or information taken from the literature, it is easy to accomplish optical coupling of semiconducting crystals and then orient them by using only the transmission curves. The results are compared with those obtained by the authors elsewhere for In_2Se (Ukr. fiz Zhurnal v. 9, no. 10, 1964). [The authors thank K. D. Tovstyuk for help and interest.] Original article has: 2 figures

ASSOCIATION: None

SUBMITTED: 09Apr64 [redacted] ENCL: 00 SUB CODE: OP, IC

NR REF SOV: 002 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

L 64506-65 EWA(h)/EWT(1)/T IJP(c) AT

ACCESSION NR: AP5012609 UR/0051/65/018/005/0825/0831 32 29 B
535.321 + 535.341

44,55

AUTHORS: Borets, A. N.; Grineva, S. I. 44,55

TITLE: Determination of the optical constants of semiconductors from the relative transmission 21,44,55

SOURCE: Optika i spektroskopiya, v. 18, no. 5, 1965, 825-831

TOPIC TAGS: optic constant, semiconducting material, optic transmission, light reflection

ABSTRACT: A graphic method is described for determining the optical constants of semiconductors by measuring the relative transmissions of plane-parallel samples of various thicknesses. A transcendental equation is derived for the ratio of the transmission of two samples of different thicknesses in terms of their reflection coefficients, and a nomogram is constructed to facilitate the calculation of the optical constants in terms of these equations. The use of the

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ACCESSION NR: AP5012609 3

nomogram is illustrated. The method proposed is particularly useful for work with double-beam spectrometers. The method was found to be in good agreement with data by others. A shortcoming of the method is that it can be used only when there are samples of at least three different thicknesses cut from the same crystal under test. 'The authors thank K. D. Tovstyuk for interest in the work.' Orig. art. has: 1 figure, 17 formulas, and 3 tables.

ASSOCIATION: None

SUBMITTED: 07Mar64 ENCL: 00 SUB CODE: OP, SS

NR REF SOV: 010 OTHER: 001

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

ACC NR: AR7000875 SOURCE CODE: UR/0058/66/000/009/E078/E079

AUTHOR: Borets, A. N.; Rakin, G. V.

TITLE: Infrared absorption in indium dopped CdSb

SOURCE: Ref. zh. Fizika, Abs. 9E638

REF SOURCE: Sb. Tezisy dokl. k XIX Nauchn. konferentsii. Uzhgorodsk. un-t, 1965, Ser. fiz. Uzhgorod, 1965, 68-72

TOPIC TAGS: infrared absorption, absorption spectrum, indium ligand complex, Hall effect, cadmium antimonide, cadmium antimonide crystal

ABSTRACT: The temperature dependence on the Hall effect sign, reflective capacity and the absorption spectrum within the 4—15μ wave range was investigated in indium dopped CdSb crystals (in concentration 0.001, 0.01, 0.1 and 1%). It has been shown that at 90 to 360K the 0.1% indium-containing samples possess n-type conductivity and the absorption is related to free electrons. At 0.001% concentration and cooling below 160K the Hall effect sign changes from negative to positive. These samples have an absorption band maximum at 14μ. On the

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basis of these data it is concluded that indium produces in CdSb a donor level which at 130K is by 0.09 electron volts below the bottom of the conduction zone. Yu. Zakis. [Translation of abstract] [AM]

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L 16368-65 EWT(m)/EWP(t)/EWP(b) IJP(c)/ESD(t)/SSD/AFWL/ASD(a)-5/AS(mp)-2/RAEM(a) RDW/JD

ACCESSION NR: AP4048864 S/0185/64/009/010/1074/1078

AUTHOR: Borets', O. M. (Borets, A. N.); Stakhy*ra, Y. M. (Stakhira, I. M.)

TITLE: Optical properties of In_2Se

SOURCE: Ukrayinsk'ky*y fizy*chny*y zhurnal., v. 9, no. 10, 1964, 1074-1078

TOPIC TAGS: In_2Se, optical property, crystal orientation, refractive index, indium selenide

ABSTRACT: The anisotropy of the optical properties of In_2Se single crystals was investigated. The orientation of the crystals was determined by x-ray analysis and by infrared polarized radiation, based on the aniostropy on the absorption edge. The spallation surfaces and polished surfaces of the samples were examined. A distinct interference pattern with beats was observed in unpolarized and polarized radiation where the electric vector did not coincide with any of the basic crystallographic directions. This was explained by the optical biaxiality of the In_2Se crystal. The two principal refractive indices were determined. A depend-

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L 16368-65
ACCESSION NR: AP4048864

4

ence between the absorption coefficients and the photon energy at room temperature for the three basic crystallographic directions was noted. A characteristic shape of the absorption edge with a break in the curve was obtained for the two basic crystallographic directions in the spallation plane. There was no such break when the electric vector was directed along the normal to the spallation plane. Transmission curves of 90 micron thick samples are presented for the three orientations of the crystal with respect to the electric vector. Temperature measurements indicated a complex mechanism of the basic transitions, but the complexity of the absorption edges made it impossible to interpret the nature of the basic transitions. "The authors thank K. D. Tovstyuk and P. A. Kotsyumas for advice and interest in the work and T. S. Gertovy*ch for assisting in the investigation." Orig. art. has: 7 figures and 1 equation

ASSOCIATION: Chernivyets'ky*y derzhuniversy*tet (Chernivyets State University)

SUBMITTED: 01Nov63 ENCL: 00

SUB CODE: GP, IC NO REF SOV: 003 OTHER: 001

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

GUK, Gennadiy Grigor'yevich; BORETS, L., red.; SHAYKOVA, N., tekhn. red.

[Icebreakers lead supply ship caravans] Ledokoly vedut karavany. Vladivostok, Primorskoe knizhnoe izd-vo, 1962. 130 p. (MIRA 17:1)

(Arctic regions--Ice-breaking vessels)
(Arctic regions--Shipping)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETS, V.M.

Carbohydrate metabolism in the period following transfusion. Zdrav. Bel. 6 no.11:32-33 N '60. (MIRA 13:12)

1. Iz Grodnenskoy oblastnoy bol'nitsy (glavnyy vrach S.B. Dulayev) nauchnyy rukovoditel' - professor G.Kh. Dovgyallo.
(BLOOD—TRANSFUSION) (CARBOHYDRATE METABOLISM)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETs, V. M., Cand. Med. Sci., -- (diss), "The functional condition of the liver during various dates of the post-transfusion period," Minsk, 1961, 18 pp, (Minsk State Medical Institute), 140 copies (KL-Supp 9-61, 188)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETS, V.M.

Influence of the transfusion of blood and its component on the antitoxic and protein-forming function of the liver. Zdrav. Bel. 7 no.3:19-22 Mr '61. (MIRA 14:3)

1. Grodnenskaya oblastnaya bol'nitsa (glavnyy vrach S.G.Dulayev) i kafedra biokhimii Grodnenskogo meninstituta (zaveduyushchiy - dotsent Yu.M.Ostrovskiy). Nauchnyy rukovoditel' raboty - professor G.Kh.Dovgyallo.
(BLOOD—TRANSFUSION) (LIVER)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

1. GINSBURG, I. F., BORETSKAYA, B. A., OZHEGOVA, A.I., LUNEGOVA, A. N.

2. USSR (600)

4. Polunochnoye Deposits - Manganese Ores

7. Study of the composition of the manganese ores of the Polunochnoye deposit. /Abstract./ Izv. Glav. upr. geol. fon. no. 2, 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETSKAYA, V.A.

Methods of polarographic analysis and their use in bulk analysis of ores. Trudy lab.geol.upr. no.1:63-75 '51. (MLRA 7:11)

1. TSentral'naya laboratoriya Ural'skogo geologicheskogo upravleniya.
(Ores--Sampling and estimation)
(Polarograph and polarography)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

5(2) PHASE I BOOK EXPLOITATION SOV/1846

Finkel'shteyn, D. N., and V. A. Boretskaya

Metody analiza mineral'nogo syr'ya; iz opyta raboty tsentral'noy laboratorii Ural'skogo geologicheskogo upravleniya (Methods of Mineral Analysis; From Experiences of the Ural Geologogical Administration) Moscow, Gosgeoltekhizdat, 1958. 183 p. Errata slip inserted. 5,000 copies printed.

Ed.: V. I. Titov; Tech. Ed.: O. A. Gurova; Ed. of Publishing House: V. P. Skvortsov.

PURPOSE: This book is intended for geologists, mining engineers, metallurgists, and chemical analysts in geological survey laboratories engaged in the mass analysis of mineral ore.

COVERAGE: The book reviews gravimetic, volumetric, optical, and

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polarographic methods of mineral analysis. The theoretical basis, required working conditions, limits of application, and possibliilities of eliminating the negative influences of impurities are given for each method. Special attention has been given to detailed descriptions of analytical procedures and their modifications, which depend upon variations in ore composition, as well as to the limitation in the fields of application or individual variations of these methods. The chapter "Polarographic Methods of Analysis" was written by V. A. Boretskaya, the remaining text by the co-author. The authors thank Yu. V. Karyakin, V. A. Oknina-Kazarinova, V. A. Terekhina, and V. I. Titov for reviewing the manuscript and making valuable suggestions. References are given at the end of each chapter.

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Methods of Mineral Analysis (Cont.)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETSKI, M., professor.

Methods for over-all mechanization in coal mines of Poland. Mekh. trud.rab. 10 no.10:43 O '56. (MIRA 10:1)
(Poland--Coal mining machinery)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

86379
S/020/60/133/006/030/031XX
B004/B067

1208, 2209, 1274

5.1190

AUTHORS: Avdeyenko, N. A., Boreskov, G. K., Corresponding Member of the AS USSR, and Zhvoronkova, K. N.

TITLE: Specific Catalytic Activity of Iron Films With Respect to the Reaction of Isotopic Exchange in Molecular Hydrogen

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 6, pp. 1354-1357

TEXT: The authors refer to published data according to which the catalytic and adsorptive properties of metal films differ from those of massive metals. In the present paper, they study the effect of sputtering and sintering conditions of iron films on their catalytic activity with respect to isotopic exchange in molecular hydrogen. The catalytic activity was measured statically in a vacuum chamber whose walls (before the sputtering of the iron film) were degassed at 500°C down to a pressure below 10^{-7} mm Hg. The films were condensed by heating lamellas of spectroscopically pure Hilger iron on the walls of the chamber whose

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Specific Catalytic Activity of Iron Films With Respect to the Reaction of Isotopic Exchange in Molecular Hydrogen

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temperatures were -196, +20°, or +300°C. It was found that the size a of the original iron crystals is constant for every condensation temperature (CT°). The following values are given: Table 1

CT°, °C	a, Å	Specific surface m^2/g
-196	60	125
20	300	25
300	4800	1.6

The surface of the film was volumetrically determined by adsorption of hydrogen or krypton at -196°C, 10^{-2} - 10^{-1} mm Hg. The catalytic activity was measured with an equivalent mixture of H_2 and D_2 at -196°C and 0.5 mm Hg. In the first experimental series, the following values were obtained for the constant K (g.mole/cm^2.sec) according to Table 2. In the second experimental series, the following was obtained (according to Table 3):

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Specific Catalytic Activity of Iron Films With Respect to the Reaction of Isotopic Exchange in Molecular Hydrogen

S/020/60/133/006/030/031XX
B004/B067

Table 2

CT°, °C	K.10^{12}	a, A
+20	2.3-3.3	300
+300	2.1-3.5	4800

Table 3

CT°, °C	K.10^{12}	a, A
-196	23	60
+20	8-13.7	300
+300	24.5	4800

The differences between the values of the two series were explained by insufficient degassing of the iron lamellas in the first series. The authors arrived at the conclusion that the specific activity of iron films remains almost unchanged, although the condensation temperature, the crystal size, and the specific surface were strongly changed. A slight decrease in the activity of films sintered at 300° or 550°C is explained by an increased concentration of impurities on the surface reduced by sintering. Another series of experiments was made with iron which was previously purified by melting it in vacuo. The following result was obtained for a film sintered at 300°C (according to Table 4):

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Specific Catalytic Activity of Iron Films With Respect to the Reaction of Isotopic Exchange in Molecular Hydrogen

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B004/B067

$K = (39-48).10^{-12}$, and for a film sintered at 550°C, $K = 20.10^{-12}$. Thus, the nearly constant activity of such films was proved in spite of the widely different methods of production. There are 4 figures, 4 tables, and 11 references: 6 Soviet, 4 British, and 1 German.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: May 11, 1960

Card 4/4

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETS, V.M., kand.med.nauk; KULESH, D.F., kand.med.nauk

Camphor-oil embolism. Zdrav. Bel. 9 no.2:63-64 F'63. (MIRA 16:7)

1. Iz kafedry fakul'tetskoy terapii (zav. - dotsent I.M.Dubogrey) Grodnenskogo meditsinskogo instituta.
(CAMPHOR—PHYSIOLOGICAL EFFECT) (EMBOLISM)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

PLEKHANOV, P.N., inzhener; BORETSKIY, A.A., dotsent, redaktor.

[Stakhanovite methods of trimming and cleaning steel castings] Stakhanovskie priemy obrubki i ochistki stal'nykh otlivok. Sverdlovsk, Gos. nauchno-tekhn. izd-vo mashinostroit.i sudostroit. litry [Uralo-Sibirskoe otd-nie] 1953. 46 p. (MLRA 7:3)
(Steel castings)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

ANAN'IN, AnatoliyAndreyevich; CHERNOBROVKIN, Viktor Petrovich; GORSHKOV, A.A., redaktor; VOLPYANSKIY, L.M., redaktor; BORETSKIY, A.A., retsenzent; DUGINA, N.A., tekhnicheskiy redaktor

[Smelting iron in cupola-furnaces] Plavka chuguna v vagranke. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1955. 66 p. (MIRA 9:3)

(Cast iron) (Cupola furnaces)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

Boretskiy, A.A.

PETUKHOV, P.Z., dektor tekhnicheskikh nauk, redaktor; MIKHAYLOV, G.P., dekton tekknicheskikh nauk, redakter; SOKOLOV, K.N., kandidat tekhnicheskikh nauk, redakter; SHUMAYEV, B.K., kandidat tekhnicheskikh nauk, redakter; GANAGO, O.A., kandidat tekhnicheskikh nauk, redakter; KAZAK, S.A., kandidat tekhnicheskikh nauk, redakter; BORETSKIY, A.A., detsent, kandidat tekhnicheskikh nauk, redakter; STUDNITSYN, B.P., vedushchiy redakter; DUGINA, N.A., tekhnicheskiy redakter.

[Examples of automatization and mechanization of production] Primery avtomatizatsii i mekhanizatsii proizvodstva. Moskva, Ges.nauchno-tekhn.izd-vo mashino-stroit.lit-ry, 1955. 285 p. (Iz opyta Ural'skikh i Sibirskikh zavodov, no.1). (MIRA 9:6) (Automation) (Machinery industry)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

KUZNETSOV, Georgiy Aleksandrovich; BORITSKIY, A.A., dotsent, retsenzent; VOLPYANSKIY, L.M., redaktor; DUGINA, N.A., tekhnicheskiy redaktor

[Copper alloy castings] Otlivki iz mednykh splavov. Pod red. L.M.Volpianskogo. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 56 p. (Nauchno-populiarnaia biblioteka rabochego-liteishchika, no.18) (MLRA 9:8)

(Copper alloys--Metallurgy)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

GORSHKOV, A.A., doktor tekhnicheskikh nauk; BORETSKIY, A.A., dotsent.

Origin of the word "vagranka" [cupola furnace]. Trudy Ural. politekh. inst. no.60:66-73 '56. (MLRA 9:10)

(Cupola furnaces) (Russian language--Words--History)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

KUZELEV, Mikhail Yakovlevich; SKVORTSOV, Aleksey Anatol'yevich; SMELYAKOV, Nikolay Nikolayevich; ZORNIN, B.F., kandidat tekhnicheskikh nauk, retsenzent; BORETSKIY, A.A., dotsent, otvetstvennyy redaktor; VOLFYANSKIY, L.M., inzhener, redaktor; GINZEL'MAN, N.R., inzhener, redaktor; DEMAKOV, A.F., inzhener, redaktor; ZAKHAROV, B.F., inzhener, redaktor; SVERNV, K.M., inzhener, redaktor; KOKOVINA, A.S., inzhener, redaktor; MESTEROV, B.A., inzhener, redaktor; RAZUMOVA, M.S., inzhener, redaktor; SIDORENKO, R.A., inzhener, redaktor; ROZENBERG, I.A., kandidat tekhnicheskikh nauk, redaktor; DUGINA, N.A., tekhnicheskiy redaktor

[Foundry worker's handbook] Spravochnik rabochego-liteishchika. Izd. 2-oe, dop. i perer. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 634 p. (MIRA 10:4)
(Founding)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

1. POLYAKOV, L. M.; BORETSKIY, A. B., Arch.

2. USSR (600)

4. Hotels, Taverns, etc.—Moscow

7. 17-story hotel building on Kalanchevskaia Street. Gor.khoz.Mosk. 23 no.7 1949.

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

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETSKIY, L., nauchnyy sotrudnik

Grippe. Nauka i zhizn' 25 no.5:77 My '58. (MIRA 11:5)

1. Institut virusologii Chekhoslovatskoy AN, Bratislava.
(Influenza)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETS'KYI, Mykhailo

BORETS'KYI, Mykhailo, redaktor.

[Ukraine in pictures] Fotoal'bom "Liubit' Ukrainu!" [Brooklyn, NY] Vid. M.Borets'kogo [1954] 256 p. [Ukrainian and English].
(Ukraine--Views)
(MIRA 8:3)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETTI, Z.

2948 621.791.052 : 621.91

Lisowski Z., Boretti Z. Welding Problems in Building Practice.

„Zagadnienia spawalnicze w budownictwie". Przegląd Spawalnictwa. No. 12, 1953, pp. 249—257, 8 figs.

An attempt at standardising certain fundamental definitions in welding practice. The authors review, essentially, the arc welding method, with particular reference to the technology of materials. They arrive at the following conclusions: 1) Commercial quality steel should be guaranteed as to its chemical composition and chemical properties. 2) Since welding of K52 steel is attended by certain difficulties and necessitates the use of a steel with a higher tensile strength, a compromise solution should be found to this problem, and a different quality of steel, say — K50, prepared. Considerable advantages would thus be gained without any technological difficulties. 3) Detailed conditions should be drawn up and introduced for the manufacture and acceptance tests of steel constructions. 4) Since scrupulous examination is the means of ensuring correct manufacture, training courses should be organised for inspectors. 5) Wider provision should be made at engineering faculties for designing welded steel constructions, due consideration being given to technological opportunities in manufacturing constructions to specific designs. 6) Welding processes should be mechanised and automatised; the widest possible use, with recourse to experience already acquired in the construction of the Palace of Culture and Science, should be made of the covered arc system, particularly for constructions calling for a high degree of reliability.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETTI, Z.

Principles of designing prefabricated welded reinforecment for reinforced-concrete hydrotechnic constructions. p. 314

Vol. 15, no. 8, Aug. 1955
GOSPODARKA WODNA
Warszawa

Source: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETTI, Z.

The problem of the resistance of sheet metal covering in water installations. p. 106.

GOSPODARKA WODNA. (Naczelna Organizacja Techniczna) Warszawa, Poland. Vol. 19, no. 3, Mar. 1959.

Monthly list of East European Accessions Index, (EEAI), LC, Vol. 8, no. 6, June 1959
uncla.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETTI, Zygmunt, prof., dr., inz.

Steel construction of hydraulic works in the light of the new designing directives. Gosp wodna 21 no.9:375-382 S '61.

1. Politechnika Warszawska.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETTI, Zygmunt (Warszawa)

Thin-walled steel constructions of hydraulic gates of water works in Poland. Archiw hydrotech 9 no.2:113-163 '62.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORETTI, Zygmunt, prof. dr inz.; GODLEWSKI, Bohdan, dr inz.; KEMPA, Czeslaw, dr inz.

Tension resistance of lateral construction joints in hydraulic concrete constructions. Gosp wodna 25 no.3:118-122 Mr '65.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, V.A., inzh.; ZVEGINTSEVA, K.V., inzh.; MOROZ, K.S., inzh.

Organization of model production welding at the "Compressor" Plant. Svar. proizv. no.2:20-23 F '61. (MIRA 14:1)

1. Zavod "Kompressor," Moskva (for Borevich). 2. Vsesoyuznyy proyektno-tekhnologicheskiy institut tyazhelogo mashinostroyeniya Mosgorsovnarkhoza (for Moroz).
(Moscow—Refrigeration and refrigerating machinery) (Welding)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z. I.

"The Theory of Local Fields." Sub 8 Mar 51, Mathematics Inst imeni V. A. Steklov, Acad Sci USSR

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z.I.

USSR/Mathematics - Homology Groups, Free Groups Jul/Aug 52

"Groups of Homologies Connected With a Free Group," Z. I. Borevich

"Iz Ak Nauk SSSR, Ser Matemat" Vol XVI, No 4, pp 365-384

Studies groups of homologies of a finite group G in a group which is connected in an essential manner with the representation of G in the form of a factor-group of a free group. Also gives a new demonstration of one of the reduction theorems of Eilenberg and MacLane, "Cohomology Theory in

219T69

Abstract Groups, I," Annals of Math, 48, 1947, 51-78. Cites A. G. Kurosh. "Theory of Groups," Moscow/Leningrad; 1944 and D. K. Faddeyev, "Factor-Systems in Abelian Groups With Operators," "Dok Ak Nauk SSSR" 58, 1947, 361-364. Submitted by Acad I. M. Vinogradov 24 Jan 52.

219T69

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

USSR/Mathematics - Modern Algebra, Sep/Oct 52
Cohomologies

"Groups ofHomologies of p-Extensions of a Regular Local Field," Z. I. Borevich

"Iz Ak Nauk SSSR, Ser Matemat" Vol 16, No 5, pp 427-436

Presents author's candidate dissertation carried out under the guidance of Prof D. K. Faddeyev. Establishes that the n-dimensional group (n greater or equal to 3) of homologies

226T68

of the p-extension of regular local field with Galois group G is isomorphic to the (n-2)-dimensional group of homologies of group G in an infinite cyclical group with identity operator. Cites Eilenberg and MacLane,"Cohomology Theory in Abstract Groups, I," Annals of Math, 48, 1947. Submitted by Acad I. M. Vinogradov, 16 Feb 1952.

226T68

BOREVICH, Z. I.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z. I.

600

Borevič, Z. I. On an Abelian group with operators. Doklady Akad. Nauk SSSR (N.S.) 91, 193–195 (1953). (Russian)

Let $G=F/R$ be a group which is presented as a factor group of a free group F on generators x_i. Define four G-modules Z, O, W, and R_0 as follows: Z is the additive group of integers, G operating simply; O is the group ring of G with integer coefficients; $W=\sum_i Odx_i$ is the free G-module with a base consisting of symbols dx_i, one for each generator x_i; and $R_0=R/[R,R]$ is the factor commutator group of the relation subgroup R, with G operating by conjugation. Introducing the notation $r\to\bar{r}$ and $u\to u^*$ for the natural maps $R\to R_0$ and $F\to G$ we define a sequence of G-homomorphisms

$$(1)\qquad 0\to R_0\xrightarrow{g}W\xrightarrow{f}O\xrightarrow{e}Z\to 0$$

by putting $e(1)=1$; $f(dx_i)=x_i^*-1$; and

$$g(\bar{r})=\sum_i(\partial r/\partial x_i)^*dx_i.$$

Here the Fox partial derivatives $\partial r/\partial x_i$ are the elements of the group ring of F defined by the identity

$$r-1=\sum_i(\partial r/\partial x_i)(x_i-1).$$

The author's main result is that the sequence (1) is exact. (Actually, he defines W differently, as the splitting module of a 2-cocycle of the extension $G\simeq F/[R,R]/R_0$, so that the sequence is obviously exact, and then must prove W is G-free.) He then mentions several homology and cohomology isomorphisms of the cup product [illegible] which involve a dimension shift of two, and which are immediate consequences of the existence of an exact sequence of type (1) which links R_0 to Z by way of two G-free modules.

J. T. Tate (New York, N. Y.)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z. I.

Borevič, Z. I. On homology theory in groups with operators. Dokl. Akad. Nauk SSSR, N.S. 104 [illegible]

[illegible]

$$H^{n+k}(G, \mathrm{Hom}(\partial\phi_j, A)) \cong H^n(G, \mathrm{Hom}(\partial\phi_{j+k}, A))$$

Using this observation the author infers that for any [illegible] like the above which contains a [illegible] additive groups of integers [illegible] and similarly [illegible] where $n \geq 1$, $k \geq 0$. For finite groups however it is inferred from the canonical chain-cochain complex and its dual, that the above statement [illegible]

$H_n(G, A) \cong H_{n+k}(G, \mathrm{Hom}(\partial\phi_k, A))$ and

$H^n(G, A) \cong H^{n+k}(G, A)$ [illegible]

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Borevič, Z. I.

and

$$H^n(G, A) \cong A \otimes H^n(G, J) + \mathrm{Tor}(A, H^{n+1}(G, J)).$$

W. T. van Est (Utrecht)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z. I.

Borevič, Z. I.; and Faddeev, D. K. Theory of homology in groups. I. Vestnik Leningrad. Univ. 11 (1956), no. 7, 3-39. (Russian)

This paper is expository and treats the following subjects (along with full proofs): Classical definitions of cohomology (homology) of groups. Resolutions, independence of the cohomology (homology) groups of the specific resolution used. Cohomology sequence for finite groups, relations between the cohomology of a finite group and its Sylow subgroups. Reduction theorems [see, e.g., Borevič, Dokl. Akad. Nauk SSSR (N.S.) 104 (1955), 5-8; MR 17, 583].

W. T. van Est (Utrecht).

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z.I.

Extension without simple ramification of a regular local field. Vest.Len.un.11 no.19:41-47 '56. (MLRA 10:1)
(Topology)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

Borevich, Z.I.

44-1-140

TRANSLATION FROM: Referativnyy zhurnal, Matematika, 1957, Nr 1, p 17, (USSR)

AUTHOR: Borevich, Z.I., Faddeyev, D.K.

TITLE: On the Theory of Holmology in Groups (K teorii gomologiy v gruppakh)

PERIODICAL: Tr. 3-go Vses. matem. s"yezda, 2, Moscow, AN SSSR, 1956, p 111

ABSTRACT: Bibliographic entry

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z.I.

Proof of the principal ideal theorem [with summary in English]
Vest. LGU 12 no.13:5-8 '57. (MIRA 10:11)
(Groups, Theory of)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

16(1)

AUTHORS: Borevich, Z.I., and Faddeyev, D.K. SOV/43-59-7-8/17

TITLE: Homology Theory in Groups. II. On Projective Resolvents of Finite Groups (Teoriya gomologiy v gruppakh. II. O proyektivnykh rezol'ventakh konechnykh grupp)

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1959, Nr 7(2), pp 72-87 (USSR)

ABSTRACT: The present paper is a continuation of [Ref 2]. Let G be a finite group, K be a commutative ring with unit element, $O = K[G]$ group ring of G over K. The authors consider only so-called admissible O-modules (A is admissible if it is a free K-module of finite rank). Two admissible O-modules are called equivalent, $A \sim B$, if there exist projective admissible O-modules P and Q so that $(A \dotplus P) \cong (B \dotplus Q)$. Let $\Phi : O \xleftarrow{\partial} K \xleftarrow{\partial} \Phi_0 \xleftarrow{\partial} \Phi_1 \xleftarrow{\partial} \dots \xleftarrow{\partial} \Phi_n \xleftarrow{\partial} \dots$ be a projective resolvent of G over K and $\Omega_n = \Omega_n(\Phi) = \partial\Phi_n$. Let the ring K have the property: If a free K-module of finite rank is represented as the sum $M \dotplus N$ of K-modules, where M is a free K-module, then also N is a free K-module. Under this assumption it is shown: The O-modules $\Omega_n(\Phi)$ and $\Omega_n(\Phi')$ are equivalent if Φ and Φ' denote two arbitrary resolvents. Let

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

Homology Theory in Groups. II. On Projective Resolvents of Finite Groups SOV/43-59-7-8/17

now G be a p-group and K be a complete local ring with the residue class field of characteristic p. Then there exists a minimal Φ for which all O-modules $\Omega_n(\Phi)$ up to isomorphisms are determined uniquely and are indecomposable. If G is neither cyclic nor a generalized quaternion group, then these $\Omega_n(\Phi)$ all are different. If K is the galois field GF(p), then for the minimal Φ of a p-group G there holds the isomorphism

$$H^n(G,K) \cong \mathrm{Hom}\,(\Omega_n/I\Omega_n, K) \cong \Omega^g_{n+1},$$

where I is the ideal of the group ring O generated by $\sigma - 1$ ($\sigma \in G$). 12 theorems and 17 lemmas are formulated altogether. There are 7 references, 1 of which is Soviet, and 6 American.

SUBMITTED: July 1, 1958

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z. I.; FADDEYEV, D. K.

Integral representations of quadratic rings. Vest. LGU 15 no.52-64 '60. (MIRA 13:9)

(Rings (Mathematics)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

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AUTHORS: Borevich, Z. I., Faddeyev, D. K.

TITLE: Integral Representations of Quadratic Rings 16

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1960, Vol.19, No.4, pp.52-64

TEXT: Let K be a quadratic algebraic number field and L an m-dimensional linear space over K. L can be understood as linear space over the field of the rational numbers. Let $\{l_1, \ldots, l_s\}$ ($s = 2m$) be an R-base of L. The set M of all linear combinations $a_1 l_1 + \ldots + a_s l_s$, where a_i are rational integers, is called a module in L. Let O be the ring of all integers of K. All numbers $\alpha \in K$, for which $\alpha M \subset M$, form a subring O_M (ring of the factors) of O. If a quadratic ring O_f ($(O:O_f) = f$) is contained in O_M, then M can be understood as O_f-module. M is called module in K, if $m = 1$.

At first the authors collect some known properties (Ref.2) of the modules and prove three lemmata. Then they treat in § 4 the decomposition theorem. Let A be a module in K; let AM denote the module consisting of the elements αx, $\alpha \in A$, $x \in M$. The exponent

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Integral Representations of Quadratic Rings

of a finite abelian group is defined to be the least common multiple of the orders of its elements.

Lemma 4: If the exponent of the factor group OM/M is equal to f, then O_M is identical with O_f.

Lemma 5: Let M be a module in L. In L there exists a K-basis $u_1, \ldots, u_m$ so that the set A of all coefficients ξ_1 in the decompositions $x = \xi_1 u_1 + \ldots + \xi_m u_m$ ($\xi_i \in K$) of the elements $x \in M$ is a module in K which belongs to the ring O_M.

Lemma 6: For every M in L it holds the decomposition into a direct sum of O_M - submodules: $M = Av \dot{+} M_1$ ($v \in M$), where A is a module in K which belongs to O_M.

Theorem 1: Let L be a linear m-dimensional space over the quadratic field K and M a module in L with the corresponding ring $O_M = O_{f_1}$. Then it is

(3) $M = A_1 v_1 \dot{+} \ldots \dot{+} A_m v_m \quad (v_i \in L)$;

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C 111/ C 333

Integral Representations of Quadratic Rings

where A_i is a module in K belonging to O_{f_i} $(i = 1, \ldots, m)$. Here it is

(4) $O_{f_1} \subset O_{f_2} \subset \ldots \subset O_{f_m}$.

(v_i can be chosen in M).

§ 5 Invariants. Lemma 7: Let $v_1, v_2 \in L$ be linearly independent over K. Let A_1, A_2 be modules in K which belong to the rings O_{f_1}, O_{f_2}. Then in L there exists u_1, u_2 such that

$A_1v_1 \dot{+} A_2v_2 = O_f u_1 + A_1A_2u_2$, where $O_f = O_{f_1} \cap O_{f_2}$.

For M let the decomposition

(6) $M = A_1v_1 \dot{+} \ldots \dot{+} A_mv_m$ $(v_i \in L)$

hold, where A_i are modules in K.

Lemma 8: The class C(M) of similar modules in K which contains the

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C 111/ C 333

Integral Representations of Quadratic Rings

module $A = A_1 \cdot \cdot \cdot A_m$, only depends on M and not on the representation (6).

Theorem 2: Two O_f-modules M and M' in the linear space L over K are operationally isomorphic relative to O_f, if and only if C(M) and C(M') are identical and OM/M and OM'/M' are isomorphic.

Theorem 3: Let $O_f = \{1, f\omega\}$ be subring of the ring of all integral numbers of K. All classes of the operationally isomorphic torsionless O_f-modules with finitely many generators correspond one-to-one to the systems $(f_1, \ldots f_m; C)$, where f_i are natural numbers, whereby f_i divides f_{i-1} and f_1 divides f, while C is the class of similar modules in K which belongs to the ring O_f.

Let H(f,m) be the number of classes of the operationally isomorphic O_f-modules which can be embedded in an m-dimensional linear space over K. It is

$$H(f, m) = \sum_{d|f} H(d, m-1).$$

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Integral Representations of Quadratic Rings

§ 6: Let M be a module over O_f. M is called shortable, if from the isomorphism of $M \dot{+} M'$ and $M \dot{+} M''$, where M' and M" are O_f-modules, it follows the isomorphism of M' and M".

Theorem 4: In order that the O_f-module M be shortable, it is necessary and sufficient that the ring of the factors O_g of C(M) has the property: If A' and A" are modules in K, the rings of which contain the factors O_f, then the similarity of A' and A" follows from the similarity of $O_g A'$ and $O_g A''$.

§ 7. Consequence for integer matrices.

Theorem 5: Let $\varphi(t) = t^2 + at + b$ be an irreducible polynomial with rational integers a and b; let α be zero of φ; K the quadratic field $R(\alpha)$ and $O_f = \{1, f\omega\}$, where $1, \omega$ is the fundamental base of K. Then the number of the classes of the unimodular equivalent integral matrices of order 2m, for which $\varphi(t)$ is a minimum polynomial, is equal to H(f,m) from § 5.

There are 2 German references.

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z.I.

Regular local fields. Vest. LGU 17 no.13:142-145 '62.
(MIRA 15:7)
(Field theory)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z.I.

Multiplicative group of a regular local field with a cyclic group of operators. Izv. AN SSSR. Ser. mat. 28 no.3:707-712 My-Je '64. (MIRA 17:6)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z.I.

Multiplicative group of cyclic p-extensions of a local field. Part 2. Vest. LGU 20 no.13:5-12 '65. (MIRA 18:7)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z.I.

Multiplicative group of cyclic p-extensions of a local field. Trudy Mat. Inst. 80:16-29 '65.

Group of principal units of the normal p-extension of a regular local field. Ibid.:30-44 (MIRA 18:7)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z.I.; SKOPIN, A.I.

Local field extensions with a normal basis for principal units.
Trudy Mat. inst. 80:45-50 '65. (MIRA 18:7)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z.I.; FADDEYEV, D.K.

Representations of orders with a cyclic index. Trudy Mat. Inst. 80:51-65 '65. (MIRA 18:7)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Z.I.; FADDEYEV, D.K.

Note on orders with a cyclic index. Dokl. AN SSSR 164 no.4:727-728 O '65. (MIRA 18:10)

1. Leningradskoye otdeleniye Matematicheskogo instituta im. V.A. Steklova AN SSSR. 2. Chlen-korrespondent AN SSSR (for Faddeyev).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BOREVICH, Zenon Ivanovich; VASIL'YEVA, N.N., red.

[Determinants and matrices; textbook for correspondence students] Opredeliteli i matritsy; uchebnoe posobie dlia zaochnikov. Leningrad, Izd-vo Leningr. univ., 1965. 164 p. (MIRA 18:10)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6

BORKOVCNA, MILOS

Synthetic analogs of the curare alkaloids. V. Bis(quaternary salts) derived from α,ω-diphenylα,ω-diaminoalkanes. Miroslav Protiva, Miloš Borovička and Jiří [illegible] (Ústav pro výzkum léčiv, Ústředí, Praha). *Chem. Listy* 49, 1812–7(1955); cf. *C.A.* 49, 9665f.—The Friedel-Crafts synthesis from C_6H_6 and dicarboxylic chlorides gave α,ω-diketones, $BzCH_2)_nBz$ (I, $n = 2$), (II, $n = 4$), (III, $n = 6$), and (IV, $n = 8$), which were transformed to the corresponding *dioximes* (V, $n = 4$), (VI, $n = 6$), and (VII, $n = 8$), whose hydrogenation yielded *diamines* $PhCH(NH_2)(CH_2)_nCH(NH_2)Ph$ (VIII, $n = 4$), (IX, $n = 6$), and (X, $n = 8$). VIII and MeI gave a bis(quaternary methiodide). Since the same procedure failed for IX and X, another method was chosen for the prepn. of the quaternary methiodides: I, II, and IV were reduced with $LiAlH_4$ to diols, $PhCH(OH)(CH_2)_nCH(OH)Ph$ (XI, XII, and XIII for $n = 2$, 4, and 8), and these transformed with $SOCl_2$ to the corresponding chlorides, $PhCHCl(CH_2)_nCHClPh$ (XIV, XV, and XVI for $n = 2$, 4, and 8), which with Me_2NH yielded bis(dimethylamines), $PhCH(NMe_2)(CH_2)_nCH(NMe_2)Ph$ (XVII, XVIII, and XIX for $n = 2$, 4, and 8), methylated with MeI to bis(quaternary salts), $PhCH(NMe_3)(CH_2)_nCH(NMe_3)PhI_2$ which are either ineffective or less effective than the decamethonium bromide. I-IV (yields in %, m.p. (from EtOH)): 55, 145–6°; 72, 109–7°; very good yield, 88°; 75%, 89–91°. V-VII were prepd. from II-IV with $NH_2OH.HCl$ and AcOK in aq. EtOH (yields in %, m.p.): 91, 222–3° (from AcOH); —, 195–6° (from dioxane); and 88%, 119–21° (from EtOH). Hydrogenation of V-VII

(over)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206320002-6"

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Synthetic Analogs

over Raney Ni in dioxane at 100° and 150 atm. initial pressure yielded 35% VIII, $b_{0.5}$ 180–2° [*di-HCl salt*, m. 330° (from EtOH-Et_2O)], 72% IX, $b_{0.5}$ 192–220° [*diformyl deriv.*, m. 188° (from EtOH)], and 49% X, $b_{0.5}$ 215–25° (decompn.) [*dipicrate*, m. 204–5° (from aq. EtOH); *diformyl deriv.*, m. 118° (MeOH-Et_2O)]; resp. Reduction of I, II, and IV with excess $LiAlH_4$ in Et_2O, eventually in Et_2O-C_6H_6, yielded 75% XI, m. 94–5° (from aq. EtOH), 87% XII, m. 102–3° (from MeOH), and 82% XIII, m. 70–1° (from C_6H_6-petr. ether); resp. The prps. coincide with those of XI-XIII prepd. from I, II, and IV by the Meerwein-Ponndorf reduction. Refluxing XI-XIII 2 hrs. with $SOCl_2$ in C_6H_6 gave 93% partly cryst. XIV (XIVa), m. 103–4° (from EtOH); oily XV, and oily XVI. Treating the dichlorides with a 30% soln. of Me_2NH in MeOH at room temp., heating the mixt. 4–5 hrs. at 100° in an autoclave, evapg. the solvent, alkalinizing the residue with NaOH, and extg. with Et_2O or C_6H_6 yielded: 40% XVII, $b_{0.4}$ 142–5° [*dimethiodide*, m. 219–20° (from EtOH-Et_2O)]; XIVa gave 39% XVII, $b_{0.4}$ 147–8° [*dimethiodide*, m. 177–8°]; 70% XVIII, $b_{0.4}$ 170–6° [*di-HCl salt*, m. 275–6° (from EtOH-Me_2CO); *dimethiodide*, m. 227–8° (from aq. EtOH)], also prepd. by refluxing VIII with MeI, NaOH, and MeOH 4 hrs.]; and 51% XIX, $b_{0.4}$ 168–203°, $b_{0.4}$ 190° [*dimethiodide*, m. 182° (from EtOH)].

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