KOZHIN, S.A.; YAKIMOVICH, S.I.; PIGULEVSKIY, G.V.

Chemical nature of "liquid pulegone oxide."
Zhur.ob.khim. 32 no.10:3455-3456 0 '62. (MIRA 15:11)

1. Leningradskiy gosudarstvennyy universitet.
(Menthenone)

KOZHIN, S.A.; KAYNOVA, G.G.

Preparation of stereochemically uniform carvomenthene oxide. Zhur.ob.khim. 34 no.5:1680-1681 My '64. (MIRA 17:7)

1. Leningradskiy gosudarstvennyy universitet.

KOZHIN, S.A.; FEDOROVA, L.N.

Composition of the essential oil from Sium latifolium L. Zhur. ob. khim. 34 no.10:3493-3496 O '64.

(MIRA 17:11)

1. Leningradskiy gosudarstvennyy universitet.

INGE-VECHTOMOV, S.G.; KOZHIN, S.A.

Comparison of the specificity of ultraviolet and X-ray action on the mutability in yeast. Issl. po gen. no.2:77-85 '64. (MIRA 18:4)

KOZHINA, I.S.; KOZHIN, S.A.

In memory of Georgii Vasil'evich Pigulevskii (December 11, 1888-September 19, 1964). Rast. res. 1 no.2:288-300 '65.
(MIRA 18:11)

1. Botanicheskiy institut imeni Komarova AN SSSR, Leningrad.

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

KOZHIN, S.P.

Results of helminthiasis control in Orekhovo-Zuyevo, Moscow Province. Med. paraz. i paraz. bol. 34 no. 5:575-576 S-O '65
(MIRA 19:1)

1. Submitted October 21, 1964.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

KOZHIN, Sergey Pavlovich; BALAKSHINA, M.S., red.; BALDINA, N.F.,
tekhn. red.

[Work experience of a school doctor]Iz opyta raboty shkol'nogo vracha. Moskva, Medgiz, 1962. 122 p. (MIRA 15:11)
(SCHOOL PHYSICIANS)

KOZHIN, S.P. (Moskva)

Remarks on the article by R.B. Kogan, and V.F. Shishkova, "Rationalization of medical service for school children." Sov. zdravookhr. 22 no.3:37-42 '63 (MIRA 17:1)

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

KOZHIN,V.D.; LEVITSKIY, N.I.; TSUKHANOVA,Ye.A.

Expansion of the theory of hydraulic mechanisms. Izv. AN
SSSR. Otd. tekh. nauk. no.2:141 F '55. (MIRA 8:8)
(Hydraulic machinery)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

AFONIN, A.P.; BABITSKIY, V.I.; BORISOV, D.S.; KOBRINSKIY, A.Ye.;
KOZHIN, V.D.; SAKAYAN, A.R.

Experimental investigation of the dynamics of an electric step-by-step motor. Teor. mash. i mekh. no.94/95:127-141 '63. (MIRA 16:11)

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

KOZHIN, V. F.

PA 49/49T77

USSR/Medicine-Publications
Medicine-Water Supply

Nov 48

"New Books" ½ p
"Gig i San" No 11

Lists new books, giving authors, publishing dates and prices. Includes V. F. Kozhin's "Water Supply" and A. G. Ginetsinskiy and A. V. Lebedinskiy's "Fundamentals of Human and Animal Physiology."

[redacted]

49/49T77

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

KOZHIN, V.I., gornyy inzhener

Choosing models of rotary bucket strippers for the Mikhaulovka deposit of the Kursk Magnetic Anomaly. Nauch. trudy MGI no.36: 5-13 '61.
(MIRA 17:3)

KOZHIN, V.M. [Kozhyn, V.M.]

Preparation of retted hemp by means of steaming the stalks in an autoclave. Leh.prom. no.1:28-30 Ja-Mr '62. (MIRA 15:9)
(Retting) (Hemp)

KOZHIN, V. M.

"Investigation of the Structure of Aminoacetic Silver," Zhur. Eksper. i Teoret Fiz., 9, No.9, 1939.

Dept. Photobiology, All-Union Inst. Experimental Medicine, Moscow.

Kozhin, V. M.

Low-temperature study of the structure of aromatic compounds. I. Anisotropic thermal expansion of naphthalene. V. M. Kozhin and A. I. Kitaigorodskii (Inst. Org. Chem., Akad. Nauk S.S.S.R., Moscow). *Zhur. Fiz. Khim.* 27, 634-41(1953).—X-ray measurements were made on a single crystal. The dimensions of the unit cell at 20° are $a = 8.218 \pm 0.005$, $b = 5.900 \pm 0.001$, $c = 8.640 \pm 0.0005$ A., $\beta = 122°55' \pm 10'$; at −195° these are 8.108, 5.938, 8.0189, 124°40'. The coeffs. of expansion along the major and minor axes of the mol. are 27.9 and 80.5, normal to the plane of the mol. 148.7 (all × 10^{-6}). The av. values for the principal coeffs. of expansion are $\alpha_{11} = 212.8 \pm 4.0$, $\alpha_{22} = 40.8 \pm 2.4$, $\alpha_{33} = 6.16$ or 5.1 ± 0.1 (all × 10^{-6}) [for α_{33} the value of 6.16 is given in the summary, the value 5.1 in the body of the article]. α_{33} coincides with axis b, α_{11} forms an angle of 44°10' with axis a. R. T. Myers

KOZHIN V.N.

USSR

Low-temperature investigation of the structure of aromatic compounds. II. Anisotropy of thermal expansion in anthracene. V. M. Kozhin and A. I. Kitaigorodskii. Zhur. Fiz. Kh[redacted]53); cf. C.A. 48, 1200f.—The coeffs. of thermal expansion of anthracene were detd. by x-ray diffraction; patterns were obtained at 20 and −190°. Values of α_1, α_2, and α_3 were $(11.7 \pm 3.3) \times 10^{-6}$, $(13.4 \pm 0.4) \times 10^{-6}$, and $(20.3 \pm 0.8) \times 10^{-6}$, resp.; here α_1 and α_3 are the coeffs. along the major axes of the ellipsoid of expansion, and α_2 is the coeff. along the minor axis. The direction of α_2 coincides with the crystallographic axis b, whereas that of α_1 forms an angle of 15° with axis a. The lattice parameters a, b, c, and β in that order are at 20°: 8.544 ± 0.010, 6.021 ± 0.010, 11.148 ± 0.010 kX, and 124°25' ± 10'; at −190°: they are 8.441 ± 0.010, 6.001 ± 0.010, 11.086 ± 0.010 kX, and 125°35' ± 10'. The coeffs. of expansion for the axes of the mol. (α_L, α_M, and α_N) are 0.1×10^{-6}, 35.7×10^{-6}, and 82.0×10^{-6}, resp., where L is the major axis of the mol., M is its minor axis, and N is the normal to the plane of the mol.

J. W. Lowenberg, Jr.

Кожин, В.М.

USSR.

Low-temperature modifications of ammonium nitrate on cooling and quenching. S. I. Vol'fkovich, S. M. Rubinchik, and V. M. Kozhin. *Bull. Acad. Sci. U.S.S.R. Div. Chem. Sci.* 1954, 167-74 (Engl. translation).—See C.A. 48, 10307i. H. L. H.

BI

Koshin, V. M.

Low-temperature modifications of ammonium nitrate on cooling and quenching. S. I. Vol'fkovich, S. M. Rabinchik and V. M. Koshin. *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* [illegible] —The existence of a low-temp. modification of NH_4NO_3 below −170°, designated modification VII, is substantiated by microscopic, x-ray and thermal analyses. On cooling molten NH_4NO_3 at a rate greater than 2° per min., an unstable transformation of modification II to IV takes place; on heating it is not observed. NH_4NO_3 at −80° consists principally of modifications V and IV. Modification III is absent, as shown by cooling curves on rapid cooling. NH_4NO_3 quenched at −196° consists of modifications IV and VII. Transformation of NH_4NO_3 at −50° and −60°, as indicated by some authors, was not observed.

V. N. Rednarski

KOZHIN, V.M.

Low-temperature modifications of ammonium nitrate, their cooling and quenching. S. I. Vol'kovich, S. M. Rubinchik, and V. M. Kozhin (*Izvest. Akad. Nauk SSSR, Otdel. khim. Nauk*, 1954, No. 2, 209–216).—The existence of a further modification of NH_4NO_3 (I), stable at normal pressure below 170°, and called modification VII, is demonstrated. When I is cooled at >2°/min., the metastable transformation II→IV occurs at 50°, but the reverse transformation on heating could not be detached. At 20°, I consists of the IV and V modifications and at −196°, of modifications IV and VII. No transformation was observed at −50° or −65°, although one has been claimed by some authors.

R. C. MURRAY.

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62-

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

KOZHIN, V.M.

Goniometer and oscillation X-ray diagram indexing by means of a coordinate grid. Trudy Inst.krist. no.9:313-316 '54. (MLRA 7:11)

1. Institut organicheskoy khimii Akademii nauk SSSR.
(Crystallography)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

KOZHIN, V. M.
USSR/Chemistry

Card 1/1

Authors : Kozhin, V. M.

Title : Crystalline structure of benzene

Periodical : Zhur. Fiz. Khim, 28, Ed. 3, page 566, March 1954

Abstract : The fundamentality of the value for the chemistry of the structure of the benzene right requires an accurate measurement of the inter-atomic C-C spaces. By calculating the roentgenograms obtained during rotation around the axes b and c of the crystal was confirmed the spatial group D^{15}_{2h} and the dimensions of the nucleus were established at -195°C. The reflections at greater angles (60-80°) were used in calculating the parameters of the nucleus. A reduction in the dimensions of the nucleus is connected with the reduction in temperature of the specimen. It is hoped, that the investigation at a temperature of -195°C will make it possible to obtain a sufficient number of reflections and to find the molecular structure of benzene on the basis of three-dimensional series of electron density. Two references.

Institution : Acad. of Sc. USSR, Institute of Org. Chem. Moscow

Submitted : November 16, 1953

KOZHIN, V. M.

"X-Ray Structural Investigation of Some Aromatic Compounds at Low Temperatures." Cand Phys-Math Sci, Inst of Crystallography, Acad Sci USSR, Moscow, 1955. (KL, No 8, 1955)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

KOZHIN, V.M.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 147 - 17/21

Authors : Kozhin, V. M., and Kitaygorodskiy, A. I.

Title : Low temperature investigation of the structure of aromatic compounds. Part 3. Crystalline and molecular structure of naphthalin

Periodical : Zhur. fiz. khim. 29/1, 1897-1908, Oct 1955

Abstract : A complete structural investigation of naphthalin was made at -195° C. Three-dimensional series were formulated and the coordinates of atoms and atomic functions were compared for temperatures of -195° and -20° C. An analysis of the interatomic spaces showed that the contration in the nucleus is due to the changes in the spaces between various molecules. Equalization of the intermolecular radii was observed during temperature drops. Five references: 4 USSR and 1 USA (1946-1953). Tables; diagrams.

Institution : Acad. of Sc., USSR, Inst. of Organoelemental Compounds, Moscow

Submitted : April 6, 1955

KOZHIN, V.M.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 147 - 14/22

Authors : Kozhin, V. M., and Kitaygorodskiy, A. I.

Title : Low temperature investigation of the structure of aromatic compounds. Part 4. The anisotropy of thermal expansion in benzene

Periodical : Zhur. fiz. khim. 29/11, 2074-2075, Nov 55

Abstract : The anisotropy of thermal expansion in benzene was measured on benzene monocrystals by means of x-ray structural analysis. The dimensions of an elementary nucleus for temperatures of -20 and -195°C were established. The mean thermal expansion coefficients in the direction of the main thermal deformation axes of the benzene crystal were determined. It was found that an increase in the molecule per one benzene ring is connected with a constant ratio of mean volumetric values of the expansion coefficients. Six references: 2 USSR, 2 USA, 1 Germ. and 1 Ital. (1924-1954). Drawing.

Institution : Acad. of Sc., USSR, Inst. of Organoelemental Compounds, Moscow

Submitted : April 6, 1955

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

KOZHIN, V. M.

KITAYGORODSKIY, A. I.; KOZHIN, Viktor Mikhaylovich; KOLOSOV, N. Ya.;
DUN-CHAY, Lyan; MNYUKH, Yuriy Vladimirovich; MJASNIKOVA, R. M.
MYASNIKOVA;

"Conditions of Formation and the Structure of Solid Solutions of Organic Substances"

a report presented at Symposium of the International Union of Crystallography Leningrad, 21-27 May 1959

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

SOV/70-4-2-11/36

AUTHORS: Kitaygorodskiy, A.I. and Kozhin, V.M.

TITLE: The Structure of Mixed Crystals in the System Anthracene-Phenanthrene (Stroyeniye smeshannykh kristallov sistemy antratsen-fenantren)

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 2, pp 209-213 (USSR)

ABSTRACT: Conditions for forming solid solutions have been formulated in accordance with the work of A.I. Kitaygorodskiy (Ref 1) and state that for the formation of a continuous solid solution isomorphism of the molecules is a necessary, but not a sufficient, condition. Two cases were examined; mixed symmetrical and asymmetrical molecules and mixed crystals, the molecules of which are symmetrical. This covers the phenanthrene-anthracene system where both molecules are symmetrical but have different symmetries. Theory would predict the impossibility of a continuous range of solid solutions even in the case of great similarity in the forms of the molecules and their packing in the crystals. Bradley and Marsh (Ref 3) showed by thermal analysis a continuous range of mixed crystals. Kofler (Ref 4) showed two phases microscopically with a

SOV/70-4-2-11/36

The Structure of Mixed Crystals in the System Anthracene-Phenanthrene

peritectic at 148° (31% anthracene). The present experiments showed the anthracene structure up to 20% phenanthrene and the phenanthrene structure up to 10% anthracene but no uniform structure in between. Liquidus and solidus temperatures were measured for various mixtures of the purified components. Except for the range 20-80% anthracene single crystals were grown - usually platy in form. The composition in the mixed crystals was found by U/V absorption spectroscopy. Anthracene crystals have the space group $C_{2h}^{5} - P2_1/c$ according to the work of Mathieson et al (Ref 5) with $Z = 2$. The parameters were found (using an RKU-86 camera) to be: a = 8.5206; b = 6.0010; c = 11.1377 ± ± 0.0001 kX; β = 124°33' ± 1.0. The cell of phenanthrene, transformed to correspond with that of anthracene, has a = 8.4310; b = 6.1406; c = 11.7584 ± 0.0001 kX and β = 127°22' ± 1'. The anthracene molecule has a centre

Card2/4

SOV/70-4-2-11/36

The Structure of Mixed Crystals in the System Anthracene-Phenanthrene

of symmetry but the phenanthrene molecule has not. Examination of the hol reflexions in the mixed crystals with up to 10% anthracene showed the phenanthrene structure and correspondingly for up to 20% phenanthrene. The solid solutions were well ordered. For mixed single crystals with 20% phenanthrene the dimensions were a = 8.5080; b = 6.0149; c = 11.1229 ± 0.0005 kX; β = 124°00' ± 10' . This change in parameters of 0.01 kX indicates that the phenanthrene molecules are well inserted into the space left by the neighbouring anthracene molecules. To show this, interatomic distances were calculated from the known structure of anthracene. The minimum intermolecular distances in the layers between H...H atoms is 3.05 kX and between H...C is 2.80 kX. The latter is less than the usually assumed distance of 2.97 kX. Between layers the H...H distances are 2.50 kX. As the phenanthrene structure has not been determined the analysis at the other end of the composition range cannot be made.

Card3/4

SOV/70-4-2-11/36

The Structure of Mixed Crystals in the System Anthracene-Phenanthrene

There are 3 figures, 1 table and 6 references, 2 of which are Soviet, 2 international, 1 German and 1 English.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy (Institute of Elemento-organic Compounds)

SUBMITTED: September 12, 1957

Card 4/4

KOZHIN, V.M.

Polymorphism of 1,8-dinitronaphthalene. Zhur. strukt. khim. 2 no.1:46-48 Ja-F '61. (MIRA 14:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Naphthalene)

L 323-64 EWP(q)/EWT(m)/EWP(B)/BDS AFFTC/ASD JD/MLK(a)

ACCESSION NR: AP3008372 S/0286/63/000/014/0021/0021

AUTHOR: Pisarev, N. M.; Kozhin, V. M. 62

TITLE: Free cutting stainless steel. 18 Class 18, No. 155813 16

SOURCE: Byulleten' izobret. i tovarn. znakov, no. 14, 1963, 21

TOPIC TAGS: free cutting stainless steel, free machining stainless steel, corrosion resistant steel, free machining steel, molybdenum sulfur phosphorus stainless steel. 27 27 16

ABSTRACT: A patent has been issued for a free machining stainless steel containing 0.35—0.45% C, 16—18% ~~Cr, 1.5—2.5% Ni~~, 0.7—1.2% Mn, and up to 0.5% Si. To improve mechanical and corrosion 16 properties 0.7—0.9% Mo, 0.15—0.2% S, and 0.08—0.15% P are added.

ASSOCIATION: none

SUBMITTED: 18May62 DATE ACQ: 29Oct63 ENCL: 00

SUB CODE: ML NO REF SOV: 000 OTHER: 000

Card 1/1

KOZHIN, V.M.

High temperature modification of 1,8-dinitronaphthalene. Zhur. strukt.khim. 5 no. 2:324 Mr-Ap '64. (MIRA 17:6)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ASADOV, Yu.G.; KORESHKOV, B.D.; PETROPAVLOV, N.N.; KOZHIN, V.M.; MNYUKH, Yu.V.

Measuring the density of th α and β phases of p-dichlorobenzene in a gradient tube. Kristallografiia 9 no.6:921-923 N-D '64.
(MIRA 18:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ROZENBERG, G.Ya. [Rozenberg, H.IA.]; KOZHIN, V.M. [Kozhyn, V.M.]

Complete mechanization of conveying operations in the steaming shops. Leh. prom. no.1:22-23 Ja-Mr '65. (MIRA 18:4)

IVANOVA, N.M.; KOZHINA, A.D.; PERELYGINA, L.I.; TARASOVA, V.A.; FURSOVA, Ye.I.; CHEREZOVA, R.S.; SHKOL'NIK, Ye.I.; SHLEYFMAN, Kh.I.

[Economy of Voronezh Province in 1960; collection of statistics] Narodnoe khoziaistvo Voronezhskoi oblasti v 1960 godu; statisticheskii sbornik. Voronezh, Voronezhskoe otd-nie Gosstatizdata, 1961. 139 p. (MIRA 15:6)

1. Voronezh. Oblastnoye statisticheskoye upravleniye.
(Voronezh Province--Economic conditions)

KOZHINA, Inna Ivanovna; STROGONOV, Yevgeniy Vasil'yevich; TOLKACHEV, Sergey
Sergeyevich; SHCHEMELEVA, Ye.V., red.; VODOLAGINA, S.D., tekhn.red.

[Manual for laboratory work in structural crystallography]
Rukovodstvo k laboratornym rabotam po strukturnoi kristalliografii.
[Leningrad] Izd-vo Leningr. univ. Vol.1. 1957. 105 p. (MIRA 11:3)
(Crystallography)

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

PHASE I BOOK EXPLOITATION 1179

Kozhina, Inna Ivanovna, Stroganov, Yevgeniy Vasil'yevich, and Tolkachev, Sergey Sergeyevich

Rukovodstvo k laboratornym rabotam po strukturnoy kristallografii, [ch.] II. (Manual for Laboratory Work in Structural Crystallography, pt. 2) [Leningrad] Izd-vo Leningr. univ-ta, 1958. 150 p. 2,000 copies printed.

Sponsoring Agency: Leningrad. Universitet.

Resp. Ed.: Tolkachev, S.S.; Ed.: Shchemeleva, Ye.V.; Tech. Ed.: Vodolagina, S.D.

PURPOSE: This book is intended for students of vuzes whose programs include the study of X-ray analysis.

COVERAGE: This second volume of the "Manual for Laboratory Work in Structural Crystallography" is devoted to problems concerning the use of X-rays in crystallographic analysis and gives a theoretical basis for the interaction of X-rays with a substance.

Card 1/5

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

Manual for Laboratory Work in Structural (Cont.) 1179

TABLE OF CONTENTS:

Ch. I. X-rays and Structural Crystallography

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

Manual for Laboratory Work in Structural (Cont.) 1179

SUPPLEMENT

Card 4/5

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Manual for Laboratory Work in Structural (Cont.) 1179

AVAILABLE: Library of Congress

Card 5/5

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2-17-59

SOV/54-58-3-16/19

AUTHORS: Tolkachev, S. S., Stroganov, Ye. V., Kozhina, I. I.

TITLE: The Structure of Lead Hydroxide (Preliminary Communication) (Struktura gidrata okisi svintsa - (Predvaritel'noye soobshcheniye))

PERIODICAL: Vestnik Leningradskogo universiteta. Seriya fiziki i khimii, 1958, Nr 3, pp 134-139 (USSR)

ABSTRACT: The crystal structure of metal hydroxides until now has only little been investigated because in general they are obtained in the form of amorphous precipitates. Lead hydroxide is able to dissolve in alkaline solutions and to crystallize from these solutions. In the present work the crystal structure of lead mono-hydroxide was found. Because of data obtained from radiographic investigations the formula $Pb(OH)_2$ must be ascribed to the crystal hydrate $PbO.H_2O$. In figure 3 the structure of $Pb(OH)_2$ is presented. In the crystalline form of $Pb(OH)_2$ the chemical bond is determined mainly by the interaction between the lead ion and the hydroxyl ions.

Card 1/2

The Structure of Lead Hydroxide SOV/54-58-3-16/19
(Preliminary Communication)

Nevertheless also the hydrogen and hydroxyl bonds play a considerable role in the structure. On the base of some information gathered and according to the approximation usually employed in crystallochemistry the hydroxyl ion may be represented by two spheres (Fig 4). This corresponds to the penetration of the proton into the sphere which gives an approximation of the oxygen ion (O^{2-}) within a distance of 1.13 Å from its center as well as of the domain of increased electron density formed around the proton. There are 5 figures and 3 references, 3 of which are Soviet.

SUBMITTED: March 24, 1958

Card 2/2

AUTHORS: Stroganov, Ye.V., Kozhina, I.I., Andreyev, S.N. 54-10-2-11/16

TITLE: The Structure of the Crystal $CoCl_2 \cdot 6H_2O$ (Struktura kristalla $CoCl_2 \cdot 6H_2O$)

PERIODICAL: Vestnik Leningradskogo Universiteta, Seriya fiziki i khimii, 1958, Vol. 10 Nr 2, pp. 109-116 (USSR)

ABSTRACT: Among the cobalt chlorides with different crystallization water content the compound $CoCl_2 \cdot 6H_2O$ has not yet been investigated with respect to its crystalline structure. The authors undertook to do this, hoping that knowledge of a new structure would contribute towards generalizing these crystal hydrates. As a result of radiostructural investigation the structure of the crystal $CoCl_2 \cdot 6H_2O$ was determined. The crystal is composed of ions Co^{2+}, Cl^- and H_2O molecules. The water molecules occur in the crystal in two states: 2/3 of all water molecules are in the immediate vicinity of the ions Co^{2+}. The distances between the centers of the water particles and the center of the ion Co^{2+} amount to 2.12 kX. 1/3 of all water molecules is far away from the particles Co^{2+} (3.20 kX). The water molecules which are nearest to the cobalt

Card 1/2

The Structure of the Crystal $CoCl_2 \cdot 6H_2O$ 54-10-2-11/16

form groups of 4 round each of the Co^{2+} ion and form a rectangle in the center of which the Co^{2+} is located. The water molecules located at a greater distance are grouped along a straight line from both sides of this rectangle. This line passes through the center of the rectangle and with its normal forms an angle of 40°. In the series of chlorine cobalt crystals with different content of crystallization water the anion particles in the octahedral vicinity of Co^{2+} ions are replaced by water molecules with an increasing water content in the crystal. Chlorine cobalt hexahydrate can be considered to be a complex compound. It consists of an octahedral complex $[Co^{2+} \cdot 4H_2O \cdot 2Cl^-]$ and 2 water molecules which border immediately upon the Cl^- anions. It is rational to ascribe the chemical formula $[Co(H_2O)_4Cl_2] \cdot 2H_2O$ to this substance in solid condition. There are 3 figures, 5 tables, and 3 references, allof which are Soviet.

SUBMITTED: November 19, 1957

AVAILABLE: Library of Congress

Card 2/2 1. Crystals--Structure 2. Crystal hydrates--Structural analysis

TOLKACHEV, S.S.; STROGANOV, Ye.V.; KOZHINA, I.I.

Structure of lead hydroxide; a preliminary report [with summary in English]. Vest. LGU 13 no.16:134-139 '58. (MIRA 11:11)
(Lead hydroxides)

5 (4)

AUTHORS: Vol'f, E., Tolkachev, S. S., Kozhina, I. I. SOV/54-59-2-13/24

TITLE: X-Ray Investigation of Titanium (II)- and Vanadium (II) Oxides (Rentgenograficheskoye issledovaniye zakisey titana i vanadiya)

PERIODICAL: Vestnik Leningradskogo universiteta. Seriya fiziki i khimii, 1959, Nr 2, pp 87-92 (USSR)

ABSTRACT: The lower oxides TiO and V_2O_3 to be investigated were obtained by vacuum coagulation from powdery hydrated titanium + TiO_2 at 1300, and from hydrated vanadium + V_2O_5 at 1600°. The V_2O_5 used was of the KhCh type. The analysis of the preparations was carried out by determining the increase in weight at the oxidation to TiO_2 and V_2O_5, respectively. For the qualitative evaluation of the extension of the homogeneous ranges as a preliminary investigation, powder diagrams were prepared by means of RPK-2 cameras. The samples were turned during photographing. The diagrams are shown in figures 1 and 2. The diagram of the vanadium (II) oxides shows that the vanadium (II)

Card 1/3

oxide has a wide homogeneous range, and that only at $VO_{1.32}$ new lines appear which belong to the V_2O_3. There are no intermediate phases between vanadium (II) oxide and V_2O_3. The lower limit of the vanadium (II) oxide as a homogeneous phase could be determined at $VO_{0.80}$ (upper limit at $VO_{1.28}$). In the titanium-oxygen system, $TiO_{0.40}$ - $TiO_{0.60}$ proved to be an independent phase, in the range $TiO_{0.83-90}$ two phases existed (TiO and $TiO_{0.48}$). The upper limit of the homogeneous range of the titanium (II) oxide was determined at $TiO_{1.20}$ (lower limit at $TiO_{0.89}$). The lattice parameters were determined by precision roentgenograms by means of the same camera RPK-2, taken according to the asymmetric method by Straumanis. The values of these parameters depending on the composition and production temperature of the preparations are compiled in table 1 (for the vanadium (II) oxides) and table 2 (for

X-Ray Investigation of Titanium (II)- and Vanadium (II) Oxides

SOV/54-59-2-13/24

the titanium (II) oxides) (also in figures 3, 4). The figures clearly show that the lattice parameter of the vanadium (II) oxide increases with increasing oxygen content, whereas the parameter of the titanium (II) oxide decreases with increasing oxygen content. The value of the lattice parameter found for $VO_{1.0}$ (4.069 Å) corresponds to the values found by Mathewson (Ref 8) and Rostoker (Ref 10), for titanium (II) oxide it lies near the value found by Anderson (Ref 3) (4.182 Å). There are 4 figures, 2 tables, and 10 references, 4 of which are Soviet.

SUBMITTED: July 1, 1958

Card 3/3

VOL'F, E.; TOLKACHEV, S.S.; KOZHINA, I.I.

Roentgenographic investigation of titanium and vanadium oxides. Vest. LGU 14 no.10:87-92 '59. (MIRA 12:6)
(Titanium oxides) (Vanadium oxides)

STROGANOV, Ye.V.; KOZHINA, I.I.; ANDREYEV, S.N.; KOLYADIN, A.B.

Crystal structure of crystal hydrate salts of transition metals. Part 2: Structure of the crystal $NiCl_2.4H_2O$. Vest. LGU 15 no.4: 130-137 '60. (MIRA 13:2)

(Nickel chloride crystals)

STROGANOV, Ye.V.; KOZHINA, I.I.; ANDREYEV, S.N.

Structure of crystals of $NiCl_2$ $6H_2O$. Vest LGU 15 no.16:109-112 '60.
(MIRA 13:8)

(Nickel chloride)

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

KOZHINA, I.I.

30800
S/054/61/000/004/007/009
B102/B138

24,7300(1153,1160,1454)

AUTHORS: Goryunova, N. A., Orlova, G. M., Danilov, A. V., Abramova, A. V., Plechko, R. L., Kozhina, I. I.

TITLE: Some quaternary analogs of germanium

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 4, 1961, 97 - 101

TEXT: Of the possible quaternary analogs of germanium which form tetrahedral phases, only the system ZnSe-GaAs has so far been investigated. The authors chose the system Cu-Ge-As-Se which has a tetrahedral phase of variable composition in the section Cu_2GeSe_3-$CuGe_2As_3$. The presence of this phase was verified and the physical and chemical properties of the phases were studied. 17 alloys from the above section were synthesized by fusion of the components in evacuated quartz ampoules at 750°C. Microstructure of the alloys was determined by means of an МИМ-7 (MIM-7) microscope and microhardness with a ПМТ-3 (PMT-3) tester. Thermographic analyses were carried out with normal as well as differential recording. X-ray structural analyses showed that the alloys ranging from 2.0

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APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

2

30866
S/054/61/000/004/007/009
B102/B138

Some quaternary analogs of...

$Cu_2GeSe_3 \cdot CuGe_2As_3$ to 4.0 $Cu_2GeSe_3 \cdot CuGe_2As_3$ were single-phase. The composition 1.5 $Cu_2GeSe_3 \cdot CuGe_2As_3$ contained two phases and $Cu_2GeSe_3 \cdot 0.4\ CuGe_2As_3$ three. The inhomogeneity increased with the As concentration of the composition. All alloys contained a sphalerite-type structure with lattice constant a = 5.54 ± 0.01 kX. A composition m:n = 1.6:1.0 - 4.0:1.0 gave single-phase alloys; (m = Cu_2GeSe_3, n = $CuGe_2Se_3$), m:n = 1.0:2.0; 3.0; 4.0 contained an additional phase with a = 5.20 ± 0.01 kX; m:n = 5.0:1.0; 4.5:1.0; 1.5:1.0; 1.2:1.0; 1.0:1.0 contained, apart from the common one, another sphaleritic phase with a = 4.41 ± 0.01 kX. The second ZnS-type phase was separated by zone melting of $Cu_2GeSe_3 \cdot CuGe_2As_3$ with an optimum rate of 0.5 - 1.5 cm/hr and 7 - 10 cycles. In the transition from the ternary Cu_2GeSe_3 to the quaternary As-containing system, from 83.3 mole% m + 16.7 mole% n the distorted chalcopyrite lattice is rearranged into the regular ZnS lattice. Lattice parameter and microhardness are not sensitive to composition. The homogeneous region of composition ranges from $Cu_5Ge_4As_3Se_6$ to

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2

30866
S/054/61/000/004/007/009
B102/B138

Some quaternary analogs of...

$Cu_9Ge_6As_3Se_{12}$. These materials might give a new combination of semiconductor parameters. There are 1 figure, 5 tables, and 10 references: 7 Soviet and 3 non-Soviet. The two references to English-language publications read as follows: C. H. L. Goodman. Nature 179, 828, 1957; J. Phys. and Chem. Solids, 6, 36, 1958.

4

Card 3/3

STROGANOV, Ye.V.; ANDREYEV, S.N.; KOZHINA, I.I.; SOLOV'YEV, V.Ye.

Crystal structure of crystal hydrates of transition metal salts Part 3: $CoBr_2 \cdot 6H_2O$ crystal structure. Vest LGU 16 no.16:114-119 '61. (MIRA 14:8)

(Cobalt halides)
(Crystal lattices)

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

GORYUNOVA, N.A.; ORLOVA, G.M.; DANILOV, A.V.; ABRAMOVA, A.V.; PLECHKO, R.L.;
KOZHINA, I.I.

Some quaternary analogs of germanium. Vest LGU 16 no.22:97-101
'61. (MIRA 14:11)
(Germanium alloys) (Semiconductors)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

BORISOVA, Z.U.; SHKOL'NIKOV, Ye.V.; KOZHINA, I.I.

Conductivity of crystallizing glasses $GeSe_{1,5-x}As_x (x \leq 0,5)$.
Vest.LGU 17 no.22:114-118 '62. (MIRA 15:12)
(Arsenic) (Vitreous materials—Electric properties)

S/054/62/000/001/006/011
B121/B138

26.2420

AUTHORS: Kozhina, I. I., Tolkachev, S. S., Borshchevskiy, A. S., Goryunova, N. A.

TITLE: Examination of the system GaAs - Ga_2S_3

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no.1, 1962, 122-127

TEXT: To study the interactions thoroughly, the intermediate stages were examined by X-ray, thermal, and microstructural analyses. The alloys were produced by direct fusion of gallium, arsenic, and sulfur in evacuated quartz ampoules between 1260 and 1300°C. Homogenization of the alloys was reached by annealing the samples at 900°C in evacuated quartz ampoules in a ТГ-3 (TG-3) crucible furnace. X-ray structural analyses were conducted in a РПК-2 (RPK-2) chamber 57.3 mm in diameter by the asymmetrical method. The microhardness of the alloys was determined with a ПМТ-3 (PMT-3) device. An ФПК-55 (FPK-55) device was used for differential thermal analysis. Altogether 17 alloys of varying compositions were studied in the section Ga_3As_3 - Ga_2S_3. Their coloring changed from gray with a metallic luster

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

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B121/B138

Examination of the system ...

(GaAs) to light yellow (Ga_2S_3). The heating and cooling curves of Ga_2S_3 showed three thermal effects at 997-1010° and 1065-1104°C, and a very weak effect at 1130°C. X-ray structural analyses showed the pure Ga_2S_3 phase to have a wurtzite lattice with the constants a = 3.65 Å and c = 6.01 Å; the interatomic distance of Ga - S is 2.00 Å. The wurtzite structure of Ga_2S_3 changes into a sphalerite structure by a GaAs addition of 3-4%. Further GaAs additions to Ga_2S_3 cause expansion of the sphalerite lattice structure. Orientation tests showed the alloys of gallium arsenide and gallium sulfide to be photosensitive. Non-homogeneous alloys, however, are more photosensitive than homogeneous ones. Equilibrium in the system Ga - Se - S is difficult to reach. If the alloys are sufficiently homogenized, they behave like systems with continuously solid solutions. There are 6 figures, 1 table, and 11 references: 8 Soviet and 3 non-Soviet.

SUBMITTED: May 23, 1961

X

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

L 25362-65 EWT(m)/T/EWP(t)/EWP(b) IJP(c) RDW/JD/JG 30
ACCESSION NR: AP4046738 S/0054/64/000/003/0154/0157 26 B

AUTHOR: Kozhina, I. I.; Tolkachev, S. S.

TITLE: On the distortion of valence angles in crystal lattices of the diamond-type ternary compounds 18

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 3, 1964, 154-157

TOPIC TAGS: valence angle distortion, crystal lattice, x ray diffraction, Grimm Sommerfeld rule, crystal structure, diamond type ternary compound

ABSTRACT: Some ternary compounds which follow the Grimm-Sommerfeld rule and which are formed by a cross substitution (C. H. L. Goodman, J. Phys. Chem. Solids 6, 4, 305 (1958)) exhibit deviations from the structural type of sphalerite. The authors have previously investigated a section of Cu_2GeSe_3-$CuGe_2As_3$ (Vestnik LGU #22, 4, 97 (1961)), and found a distorted diamond-type lattice. The distortion of the cubic lattice and the lowering of the symmetry to a tetragonal is caused, apparently, by the distortion of the valence angles due to the difference

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L 25362-65
ACCESSION NR: AP4043738

4

in energy characteristics of copper and germanium. A still larger distortion was found in $AgGe_2P_3$ which was analyzed by x-ray diffraction. In the compounds of the $A^{I}B^{IV}C_2^{V}$ type, the substitution of copper 11 by silver 22 atoms does not result in a considerable structural change. The authors are grateful to N. A. Goryunova and E. V. Tsvetkova for the research opportunity. Orig. art. has: 3 figures

ASSOCIATION: None

SUBMITTED: 14Dec62 ENCL: 00 SUB CODE: SS, GC

NR REF SOV: 004 OTHER: 004

Card 2/2

L 25665-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5001584 S/0054/64/000/004/0116/0120

15
13
B

AUTHOR: Kozhina, I.I.; Popov, Yu. O.; Tolkachev, S.S.

TITLE: Solid solutions in the system titanium-sulfur

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. [illegible], 1964, 116-120

TOPIC TAGS: titanium sulfide, titanium solid solution, titanium sulfur system, xray analysis, packing structure

ABSTRACT: The structure and phase composition of $TiS_{0.77}$ - $TiS_{1.97}$ titanium sulfides were studied experimentally to establish the existence and limits of homogeneous compositions and to investigate the results and conclusions of other workers. Homogenization of specimens prepared from high purity elements was achieved by 100-900 hr. heating at 1000-1050C. Samples containing less titanium than that corresponding to $TiS_{1.9}$ were heated to 900C to prevent decomposition. X-ray diffraction analysis revealed the existence of two regions of homogeneity and solid solutions. The first, existing within the composition limits $TiS_{0.77}$ - $TiS_{1.17}$, is based on the 9-layer, closely packed structure of the high temperature modification of TiS; the second, shown to exist within $TiS_{1.31}$ - $TiS_{1.97}$,

Card 1/2

L 57005-65 EWP(e)/EWT(m)/EWP(w)/EWP(i)/EWG(m)/EWA(d)/T/EWP(t)/EWP(b) Pq-4
IJP(c) RDW/JD/WH

ACCESSION NR: AP5017100 UR/0054/65/000/002/0086/0090 30

27

AUTHOR: Bobrov, A. I.; Borisova, Z. U.; Koshina, I. I. B

TITLE: Effect of thallium on the electrical conductivity and microhardness of vitreous and crystalline $AsSe_{1.5}Tl_x$ 18

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 2, 1965, 86-90

TOPIC TAGS: arsenic selenide, electrical conductivity, crystalline phase, microhardness, vitreous arsenic selenide, vitrocrystalline arsenic selenide, thallium addition 21

ABSTRACT: The thermal treatment of easily crystallizing glasses of the $AsSe_xTl_y$ system is not accompanied by their volume crystallization. The process of their crystallization commences from the surface and gradually spreads throughout the volume. In this connection, the authors produced and investigated vitreous, vitrocrystalline, and crystalline states in the $AsSe_{1.5}Tl_x$ system by gradually increasing the thallium content of alloys of arsenic selenide ($AsSe_{1.5}Tl_{0.1}$, 15

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AsSe$_{1.5}$Tl$_{0.5}$, and so on, until AsSe$_{1.5}$Tl$_{2.5}$). These alloys were obtained by the customary method of vacuum melting of elementary arsenic, thallium, and "rectifier-class" selenium and they were brought to vitreous state by either slow cooling from 700°C or by quenching in air from 500°C to 20°C in 5 min. The examination was performed by means of X-ray phase analysis and a metallographic microscope. As the Tl content increases (AsSe$_{1.5}$Tl$_{1.25}$, AsSe$_{1.5}$Tl$_{1.3}$), the crystalline phase of As$_2$Se$_3$ begins to appear in small quantities in the glasses, and as the Tl content is further increased, elementary arsenic or Tl$_2$Se get segregated in crystalline state. The microhardness of the vitreous alloys decreases with increasing Tl content, up to a point. The minimum microhardness is observed in AsSe$_{1.5}$Tl$_{1.5}$, which apparently contains commensurable amounts of crystalline and vitreous phases. Any further increase in the content of crystalline phase in the alloys leads to an increase in microhardness. The addition of 32 at.% Tl to vitreous arsenic selenide increases the conductivity of glasses by as much as six orders of magnitude. The electrical conductivity of the alloys was measured by the electrometric method, using graphite contacts. It was found that the addition of thallium to vitreous arsenic selenide leads to a proportional increase in the conductivity of the glas-

L-57005-65

ACCESSION NR: AP5017100

15

ses and an attendant decrease in the energy of electrical conductivity (which falls from 1.70 ev for $AsSe_{1.5}$ to 1.07 ev for $AsSe_{1.5}Tl_{1.2}$. As the thallium content increases to 50 at.% ($AsSe_{1.5}Tl_{1.5}$, $AsSe_{1.5}Tl_{2.5}$) the crystalline Tl_2Se occlusions apparently come into contact with each other and the conduction occurs along these occlusions. Orig. art. has: 3 figures, 2 tables.

ASSOCIATION: none

SUBMITTED: 11Sep64 ENCL: 00 SUB CODE: SS, MM

NO REF SOV: 006 OTHER: 002

Card 3/3

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

KOZHINA, I.I.; RISKIN, I.V.; ROGOVA, T.V.; TOLKACHEV, S.S.

Crystal structure and color in the system Cd - Zn - S.
Vest. LGU 20 no.4:128-136 '65. (MIRA 18:4)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

KOZHINA, I.I.; TOLKACHEV, S.S.

Thermal expansion of diamonds. Vest. LGU 20 no.10:91-94 '65.
(MIRA 18:7)

L 10950-66 EWP(e)/EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD/WH

ACC NR: AP6002350 SOURCE CODE: UR/0054/65/000/004/0173/0175

56
B

AUTHOR: Savan, Ya.; Kozhina, I. I.; Borisova, Z. U.

44,55 44,55 44,55

ORG: none

15,44 27 27 27

TITLE: Glass formation in the arsenic-selenium-bismuth system

65

SOURCE: Leningrad. Universitet./ Vestnik. Seriya fiziki i khimii, no. 4, 1965, 173-175

44,57

TOPIC TAGS: glass, crystallization, arsenic, selenium, bismuth, selenide

ABSTRACT: The As-Se-Bi alloys containing varied bismuth additions to the vitreous arsenic selenides have been synthesized from pure elements and studied by x-ray analysis to determine the effect of Bi on the limits of glass formation in the ternary system. The alloys contained As:Se ratios ranging from 50:50 to 10:90 at%, corresponding to AsSe-$AsSe_9$ with Bi partly substituted for Se. The largest region of glass formation which extended to about 4 at% Bi was observed in $AsSe_{1.5}$. Increasing the bismuth content over 4 at% caused the formation of a second crystalline phase which was shown to be bismuth selenide, Bi_2Se_3. Bi_2Se_3 crystallization was observed in all arsenic selenides containng a certain minimum percentage of Bi. The crystalline phase content increased with increasing Bi additions. Tabulated data and adiagram show that the minimum Bi content necessary to induce crystallization decreased when Se content was decreased or increased in relation to $AsSe_{1.5}$. The

Card 1/2 UDC: 542.65

2

L 10950-66

ACC NR: AP6002350

d

fact that Bi hampers glass formation is due to the increasing metallic character of the chemical bonds in the sequence As → Sb → Bi. Orig. art. has: 1 table and 1 figure. [JK]

SUB CODE: 11,20 / SUBM DATE: 05Sep64/ ORIG REF: 005/ ATD PRESS: 4170

OC

Card 2/2

KOZHINA, I.I.; KOROL'KOV, D.V.

X-ray diffraction study of rubidium and cesium bromotitanates.
Zhur. strukt. khim. 6 no.1:97-103 Ja-F '65.

(MIRA 18:12)

1. Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova.
Submitted July 22, 1963.

L 43978-66 EWT(m)/EWP(t)/ETI IJP(c) ES/JD/WW/JG

ACC NR: AP6022502 SOURCE CODE: UR/0054/66/000/001/0129/0132

AUTHOR: Kozhina, I. I.; Osipova, V. V.; Solntsev, V. M.; Tolkachev, S. S. (deceased)

37

B

ORG: none

TITLE: Certain properties of uranium pentoxide

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 1, 1966, 129-132

TOPIC TAGS: uranium compound, inorganic oxide, x ray analysis, heat resistance

ABSTRACT: The dimensions of the hexagonal cell of U_2O_5 were measured and the thermal stability of U_2O_5 was determined. The hexagonal cell size was established: $a = 6.814 \pm 0.001$ kX and $c = 4.118 \pm 0.001$ kX. The composition of the hexagonal phase of U_2O_5 obtained at low temperatures varies within the range $UO_{2.50}$ - $UO_{2.64}$. U_2O_5 is disproportionated at temperatures above 145°C to 2 phases: hexagonal and cubic. At temperatures of 145 - 170°C hexagonal U_3O_{8-x} and cubic UO_{2+y} are formed; and at 800 - 1000°C, hexagonal U_3O_{8-x} and cubic U_4O_9,

Card 1/2 UDC: 546.791-31:548.73

L 43978-66

ACC NR: AP6022502

0

$a = 5.43 \pm 0.01$ Å are formed. Orig. art. has: 3 tables.

SUB CODE: 07/ SUBM DATE: 02Jul65/ ORIG REF: 004/ OTH REF: 007

Card 2/2 ULR

SULIMOV, A.D.; LOBEYEV, M.V.; KOZHINA, I.N.; AL'TSHULER, A.Ye.; GUTMAN, A.B.;
SATYUGOV, V.M.

Hydrofining of distillate fractions from Eastern petroleums without introducing hydrogen from an external source. Khim.i tekh.topl.no.9: 1-11 S '56. (MLRA 9:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut Neftyanoy promyshlennosti, Novokuybyshevskiy neftepererabatyvayushchiy zavod.
(Petroleum--Refining)

KOZHINA, I. N.

11(4) PHASE I BOOK EXPLOITATION SOV/1319

Akademiya nauk SSSR. Bashkirskiy filial

Khimiya sero-organicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh; materialy II nauchnoy sessii (Chemistry of Sulfur-Organic Compounds Contained in Petroleum Products; Papers of the 2nd Scientific Session) v. 1. Ufa, Izd. Bashkirskogo filiala AN SSSR, 1958. 328 p. 1,500 copies printed.

Ed.: Sudarkina, K.I.; Editorial Board: Ayvazov, B.R., Mashkina, A.V., Obolentsev, R.D. (Resp. Ed.), Rozhdestvenskiy, V.P., and Shanin, L.L.; Tech. Ed.: Rakhimov, R. Kh.

PURPOSE: This book is intended for petroleum specialists of scientific research establishments, educational institutions, and petroleum refining plants.

COVERAGE: This collection is the first of a multivolume publication on the results of scientific research work carried out in the Soviet Union on the chemistry and technology of sulfur- and nitrogen-organic compounds during the period 1954-1955; and according to a coordinated research project outlined in 1956 by the sponsoring agency (Bashkir Branch, AS USSR).

Card 1/15

Sulimov, A.D., M.V. Lobeyev, I.N. Kozhina, A.Ye.Al'tshuler, A.S. Gutman, and V.M. Satyugov. Hydrogen Purification of Distilled Fractions of Eastern Petroleum Without the Introduction of Hydrogen From Without 135

A process of "automatic hydrogen purification" (avtogidroochistka) is described which consists in the use of hydrogen separated during the dehydrogenation of naphthene hydrocarbons, as proposed by F.W.B. Porter (Refs 1, 2). Desulfurization of kerosene distillates with initial sulfur content up to 0.8 percent was 90-95 percent after boiling at temperatures ranging from 140 to 300°C for 1000 hours; whereas, desulfurization of gas oil fractions of ~1 percent sulfur content was 60-80 percent after 200 hours at 200-350°C.

SOV/65-58-12-7/16

AUTHORS: Sulimov, A. D; Lobeyev, M. V; Kozhina, I. N; Piguzova, L. I, and Papko, T. S.

TITLE: The Effect of the Chemical Composition of an Aluminium-Cobalt-Molybdenum Catalyst on its Activity During Hydropurification and Auto-Hydropurification Processes (Vliyaniye khimicheskogo sostava alyumokobal'tmolibdenovogo katalizatora na yego aktivnost' v protsessakh gidroochistki i avtogidroochistki)

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr 12, pp 32 - 36 (USSR)

ABSTRACT: Hydrogenation-desulphurisation over oxide catalysts at 10 - 70 atms pressure of hydrogen, and temperatures of 360 - 420°C is the most effective method for purifying petroleum products. The authors investigated the desulphurisation and dehydrogenation activity of aluminium-cobalt-molybdenum catalyst and defined its optimum chemical composition. Diesel fuel from Romashkinsk petroleum was used in these tests. The composition of the diesel fuel is tabulated. Samples of the catalysts were prepared according to a process similar to that used in industry. Wet aluminium oxide was suspended in aqueous solutions of ammonium molybdate and cobalt

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SOV/65-58-12-7/16

The Effect of the Chemical Composition of an Aluminium-Cobalt-Molybdenum Catalyst on its Activity During Hydropurification and Auto-Hydropurification Processes

nitrate. The suspension was filtered on a vacuum filter until the moisture content equalled 70% and then pressed. The 4 x 4 mm tablets were dried first on air, then at 120 - 150°C, and finally at 650°C for 8 hours. A series of catalyst samples containing 20% of CoO and MoO_3, but with a different ratio of $CoO:MoO_3$ were prepared. Characteristics of these samples are given in Table 1. Most satisfactory results were obtained when the catalyst contained 1.9% CoO and 18.1% MoO_3 which corresponds to a molar ratio $CoO:MoO_3$ equal to 1:5. Other samples had the same molar ratio, but the total content of CoO and MoO_3 varied between 5 and 30%. After thermal treatment the catalyst was sulphonated during the hydropurification of the kerosine fraction between 120 and 240°C containing 0.6% sulphur; this process was carried out at 380°C, a pressure of 20 atms and a volume rate of the raw material supplied of 0.5 $hour^{-1}$. The catalyst was sulphonated for 24 hours.

Card 2/4 The same catalyst was tested for its dehydrogenation acti-

SOV/65-58-12-7/16

The Effect of the Chemical Composition of an Aluminium-Cobalt-Molybdenum Catalyst on its Activity During Hydropurification and Auto-Hydropurification Processes

vity during auto-hydropurification. The initial concentration of hydrogen in the circulating gas equalled 60%. Details on the concentration of hydrogen, temperature, initial pressure etc. are given. The constant pressure and concentration of hydrogen in the circulating gas were determined after 40 - 50 hours. Tables 2 and 3 give data on the desulphurisation and dehydrogenation activity of the catalyst. At constant partial pressure of hydrogen, catalysts containing 1.9 - 8.9% CoO and 18.1 - 10.7% MoO_3 have similar activity after desulphurisation. Catalysts containing more than 10% cobalt oxide and less than 10% of molybdenum trioxide were much less effective during desulphurisation. The dehydrogenation activity of the catalyst increases on increasing its molybdenum-trioxide content. Aluminium-molybdenum catalysts were most satisfactory, and aluminium-cobalt catalysts showed less activity. The authors recommend

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SOV/65-58-12-7/16

The Effect of the Chemical Composition of an Aluminium-Cobalt-Molybdenum Catalyst on its Activity During Hydropurification and Auto-Hydropurification Processes

as most suitable catalysts those containing 1.4 - 3% CoO and 13 - 17% MoO_3. There are 3 Tables and 7 References: 4 English, 1 German and 2 Soviet.

ASSOCIATION: VNII NP

Card 4/4

30220

S/081/61/000/019/065/085
B117/B110

11.0130

AUTHORS: Sulimov, A. D., Lobeyev, M. V., Kozhina, I. N.

TITLE: Hydrogenetive refining of distillate fractions from eastern petroleums without introduction of hydrogen from outside

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 421, abstract 19M156 (Sb. "Khimiya sera- i azotorgan. soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh". Ufa, v. 3, 1960, 365 - 376)

TEXT: The authors examined the autohydrogenetive refining of distillate fractions from eastern petroleums with the use of an aluminum-cobalt-molybdenum catalyst (KT). It was found that KT with a total content of CoO and MoO_3 ranging from 15 to 30% by weight differ only little as to their desulfurization activity. A catalyst with a CoO and MoO_3 content of 15 - 20% was found to have the maximum dehydrogenating activity. KT with a CoO content of 1.4 - 3.0% and a MoO_3 content of 13 - 17% are suited best for achieving autohydrogenetive refining. After examinations in laboratory

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Hydrogenetive refining of...

plants, the process was carried out on an industrial scale in a plant with an output of 450 m^3/24 hr (data for different kinds of raw material are given). It was shown that the degree of desulfurization in autohydrogenetive refining of gasoline-kerosene distillates with an S content of up to 0.8% by weight, which evaporate at 240 - 300°C, is 90 - 95% at an operating time of 800 - 1000 hr. The degree of desulfurization of diesel fractions boiling at 200 - 350°C is 50 - 80% at an operating time of 200 hr. [Abstracter's note: Complete translation.]

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SULIMOV, A.D.; KOZHINA, I.N.; TRAKHTENBERG, D.M.

Production of naphthalene from petroleum raw stock. Khim.i tekh.topl. i masel 10 no.1:17-20 Ja '65.

(MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

BOLOTINA, F.Ye.; GAMBARYAN, Kh.P.; DENISOVA, G.A.; DUBROVINA, L.I.; KOZHINA, I.S.; KYURKCHAN, V.N.; MAKAROVA, T.I.; PAVLOVA, U.G.; REZVETSOV, O.A.; SMIRNOVA, V.V.; SURZHIN, S.N., kand. tekhn. nauk; TAMAMSHYAN, S.G.; TRUSOVA, S.A.; FILOGRIYEVSKAYA, Z.D.; CHINENOVA, E.G.; SHISHKINA, N.N.; IL'IN, M.M., zasl. deyatel' nauki RSFSR, doktor biol. nauk prof., red.; PRITYKINA, L.A., red.; ZARSHCHIKOVA, L.N., tekhn. red.

[Spice and aromatic plants of the U.S.S.R. and their use in the food industry] Priano-aromaticheskie rasteniia SSSR i ikh ispol'zovanie v pishchevoi promyshlennosti. Moskva, Pishchepromizdat, 1963. 430 p. (MIRA 17:2)

KOZHINA I.S.,

Hydrocarbon isolimonene. G. V. Pigulevskii and I. S. Kozhina (Leningrad State Univ.). *Zhur. Obshchei Khim.* 25, 416-22(1955).—Dehydration of *dihydrocarveol*, b_{11} 106-7°, d_{20} 0.9200, n_D^{20} 1.4793, $[\alpha]_D^{20}$ 30.03°, according to Chugaev gave a mixt. of hydrocarbons which were freed of S by heating with Na, steam distg., shaking with Hg, and redistg. over Na, giving after repeated fractionation a specimen of pure *isolimonene* (I), b_{12} 56-6.5°, d_{20} 0.8320, n_D^{20} 1.4662, $[\alpha]_D$ −148.9°, $[\alpha]_C$ −113.1°, $[\alpha]_F$ −191.5°, $[\alpha]_V$ −235.0°, and a specimen of limonene, b_{14} 63-3.5°, d_{20} 0.8448, n_D^{20} 1.4725, $[\alpha]_D$ −123.7°. The Raman spectrum of I is 584(0.5), 695(1.5), 725(0.5), 772(0.5), 827(0.5), 884(0.5), 938(0.5), 964(0.5), 1014(0.5), 1072(1), 1102(1), 1149(2), 1217(2), 1282(3), 1320(3), 1366(2), 1390(3), 1429-54(4), 1641(5). That of limonene is: 470(0.5), 495(0.5), 524(0.5), 544(0.5), 639(0.5), 703(1), 760(4), 795(2), 888(2), 918(1), 958(0.5), 1019(0.5), 1051(0.5), 1083(1), 1112(0.5), 1155(2), 1206(1), 1283(0.5), 1308(0.5), 1370(3), 1431(4), 1457(4), 1643(5), 1676(5). I failed to yield a solid tetrabromide or nitrosochloride. Its oxidation with aq. $KMnO_4$ gave a liquid oxo acid $C_9H_{14}O_3$, whose semicarbazone m. 221-2°; the Ag salt was analyzed. I with dry HCl in AcOH gave an oily *dihydrochloride*, $[\alpha]_D^{20}$ −25°; the *dihydrobromide* is also an oil, $[\alpha]_D^{20}$ −11.6°. Cleavage of HCl from the former by heating with $PhNH_2$ gave a product b_{15} 50-50.5°, d_{20} 0.837, n_D^{20} 1.4730, $[\alpha]_D^{20}$ 91.1°, which also failed to give a solid tetrabromide. I with BzO_2H gave a *dioxide*, $C_{10}H_{16}O_2$, b_{11} 129-9.5°, d_{20} 1.0237, d_{25} 1.0231, n_D^{20} 1.4703, $[\alpha]_D^{20}$ −37.5°, $[\alpha]_C$ −29.28°, $[\alpha]_F$ −47.22°, $[\alpha]_V$ −53.68°. This heated 4 hrs. with H_2O acidified with H_2SO_4 gave a glycol, $C_{10}H_{16}(OH)_4$, a glassy mass. Hydrogenation of I over Pt black gave a satd. product, $C_{10}H_{20}$, b_{760} 165-6°, n_D^{20} 1.4434, $[\alpha]$ 0°. Thus I is *2,8(9)-p-menthadiene*. *Limonene* forms a *dioxide*, b_{12} 111-13°, d_{20} 1.0287, n_D^{20} 1.4690, $[\alpha]_D$ −55.92°, $[\alpha]_C$ −44.76, $[\alpha]_F$ −55.91, $[\alpha]_V$ −88.53. G. M. Kosolapoff

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KOZHINA, I.S.

Separation and identification of plant carbohydrates by means of paper partition chromatography. Bot.zhur. 41 no.9:1309-1314 S '56. (MLRA 9:11)

1. Botanicheskiy institut imeni V.L.Komarova Akademii nauk SSSR, Leningrad.
(Chromatographic analysis) (Plants--Chemical analysis) (Carbohydrates)

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

KOZHINA, I.S., KOROTKOVA, V.P.

Effect of certain preparations made from the leaves of Eucalyptus viminalis on the influenza virus [with summary in English]. Antibiotki 3 no.4:41-46 Jl-Ag '58 (MIRA 11:10)

1. Institut eksperimental'noy meditsiny AMN SSSR (Leningrad)
(VIRUSES, EFFECT OF DRUGS ON)
(EUCALYPTUS)
(INFLUENZA)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

KOZHINA, I.S.

Paper chromatographic study of the carbohydrate composition of fruit in plants of the carrot family (Umbelliferae). Trudy Bot. inst. Ser. 5 no.8:40-42 '61. (MIRA 14:7)
(Ammiaceae) (Carbohydrates)

KOZHINA, I.S.; DANILOVA, A.S.

Preparation of trans-isolimonene. Zhur. ob. khim. 31 no. 11:3781-3788 N '61. (MIRA 14:11)

1. Botanicheskiy institut Akademii nauk SSSR i Leningradskiy gosudarstvennyy universitet.
(Menthadiene)

KOZHINA, I.S.

Studying biologically active substances in higher plants.
Rast. res. 1 no.1:42-49 '65. (MIRA 18:6)

1. Botanicheskiy institut im. V.L. Komarova AN SSSR, Leningrad.

KOZHINA, I.S.; KOZHIN, S.A.

In memory of Georgii Vasil'evich Pigulevskii (December 11, 1888-September 19, 1964). Rast. res. 1 no.2:288-300 '65.
(MIRA 18:11)

1. Botanicheskiy institut imeni Komarova AN SSSR, Leningrad.

IL'IN, M.M.; KOZHINA, I.S.; TRUKHALEVA, N.A.

Cultivation and biochemical characteristics of some Althaea species in Leningrad Province. Trudy Bot. inst. Ser. 5 no. 13:198-215 '65. (MIRA 18:12)

GRUM-GRZHIMAYLOV, S.V.; KOZHINA, K.T.

Chlorides from crystal-bearing veins in the Polar Ural region
Min.sbor. no.12:351-362 '58. (MIRA 13:2)

1. Institut kristallografii AN SSSR, Moskva i Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.

(Ural Mountains--Chlorides)

KOZHINA, M.I.

USSR /Chemical Technology. Chemical Products and Their Application I-15

Treatment of solid mineral fuels

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31837

Author : Taskayev N.D., Kozhina M.I.

Inst : Institute of Chemistry, Academy of Sciences Kirgiz SSR

Title : Low Temperature Carbonization of Coal of the Kok-Yangakskoye Deposit in a Circulating Layer

Orig Pub: Tr. in-ta khimii AN KirgSSR, 1956, No 7, 109-117

Abstract: Laboratory experiments were carried out on low temperature carbonization of comminuted (0-7 mm) coal from the Kok-Yangakskoye deposit in a

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USSR /Chemical Technology. Chemical Products and Their Application I-15

Treatment of solid mineral fuels

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31837

furnace of a new design which operates according to the spouting principle, with a directionally circulating layer of coal. The furnace (a vertical steel pipe 150 mm in diameter and 1000 mm long) has an axial nozzle, 25 mm in diameter and 500 mm in length; through the nozzle flows the gas serving as heat-transfer agent (low-temperature retort coal gas), which entrains the coal particles that spout in the free area of the furnace above the nozzle and fall into the annular zone of the furnace, around the nozzle, where they form a dense descending layer; in the bottom part of the furnace the descending particles of coal (semi-coke) are again picked-up by the hot gas

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Treatment of solid mineral fuels

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31837

and ejected, through the nozzle, into the upper part of the furnace. The low-temperature retort coal gas on leaving the furnace passes through a system of dust- and tar separators and is then driven, by a blower, through a battery of electric heaters, from which it is returned, after being heated to a temperature of 600-700°, into the furnace. Excess gas and the semi-coke are withdrawn from the system. Yield of primary tar produced in this unit, at a carbonization temperature of 450-500°, amounted to 80.5% of the laboratory yield (obtained in an aluminum retort). It is reported that this procedure of low-tempera-

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USSR /Chemical Technology. Chemical Products and Their Application I-15

Treatment of solid mineral fuels

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31837

ture carbonization of coal fines can be recommended, provided that not only the tar is utilized, for the production of synthetic liquid fuel, but also the semi-coke and the gas, for power generation.

Card 4/4

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3

TASKAYEV, N.D.; KOSHOYEV, K.; KOZHINA, M.I.

Preparation of calcium carbide from brown coals of northern Uzbekistan. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 2 no.5:33-38 '60. (MIRA 13:9)
(Uzbekistan--Calcium carbide)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825810013-3"

TASKAYEV, N.D.; KOZHINA, N.I.

Conversion of fountain-type generators to air-steam blowing.
Izv. AN Kir. SSR. Ser. est. i tekh. nauk 2 no.5:27-31 '60.
(MIRA 13:9)
(Gas producers)