"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, L., inzh. (Voronezh)

Protect the rights of inventors. Izobr.i rats. no.1:52 Ja '61. (MIRA 14:1)

(Building—Technological innovations)

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KUPRIYANOV, L.A.

11(4) PHASE I. BOOK EXPLOITATION SOV/2925

Baku. Azerbaydzhanskiy nauchno-issledovatel'skiy institut neftepererabatyvayushchey promyshlennosti imeni V. V. Kuybysheva.

Sbornik trudov, vyp. 2. (Collection of Works, No. 2) Baku, Azneftoizdat, 1958. 373 p. Errata slip inserted. 500 copies printed.

Additional Sponsoring Agency: Azerbaydzhan. Ministerstvo neftyanoy promyshlennosti.

Ed. of Publishing House: T.B. Al'tman; Editorial Board: V.S. Aliyev, Candidate of Chemical Sciences, V.S. Gutyrya, Doctor of Chemical Sciences, A.M. Kuliyev, Doctor of Chemical Sciences, N.M. Indukov, Candidate of Technical Sciences, V.Ya. Masuzyan, Candidate of Chemical Sciences, F.G. Suleymanova, Candidate of Technical Sciences, A.M. Levshina, Candidate of Chemical Sciences, N.B. Al'tman, Candidate of Chemical Sciences, I.M. Orudzheva, Candidate of Technical Sciences, M.M. Melik-Zade, Candidate of Chemical Sciences.

PURPOSE: This collection of articles is intended for chemical engineers, technicians, and refiners concerned with advanced methods of petroleum conversion.

COVERAGE: The collection presents an analysis of different types of crudes extracted in Azerbaydzhan and of the products recovered from these crudes through petroleum conversion processes. The dewatering, desalting and demulsifying of crudes is described and the suitability of these crudes for the recovery of diesel fuels is discussed. Results of catalytic cracking performed over a fluidized bed synthetic catalyst and the chemical composition of gasoline produced by two-stage catalytic cracking are analyzed. Attrition and deactivation of catalysts as well as catalyst circulation in a hyperflow system are reviewed. Various lube oil additives and the production of different types of oils and of carbon black are outlined. References accompany individual articles.

Masuzyan, V.Ya., M.K. Danivelyan, K.I. Antonova, Kh.M. Sultanova, and A.S. Arustamov. Preliminary Treatment of Baku Crudes for Refining 16

Agayeva, S.M., V.V. Yeremkhin, A.G. Ismaylov, A.V. Kudinov (deceased), L.A. [illegible], M.N. Nadirova, A.B. Tartaryan (deceased), [illegible]. Azerbaydzhan Crudes as a Raw Material Source for Diesel Fuels 34

Nasirov, A.B., V.S. Gutyrya, and D.I. Zul'fugarly. Effect of Certain Conditions of Catalytic Cracking Performed Over a Fluidized Synthetic Silica Alumina Catalyst on the Formation of Aromatic Hydrocarbons in Gasoline 44

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KUPRIYANOV, M., inzhener.

From editions that are out of date or written by others ("Russian compressed-gas automobiles." A.K.Strel'nikov. Reviewed by M.Kupriianov). Avt.transp. 32 no.3:39-40 Mr '54. (MLRA 7:8)
(Automobiles--Engines(Compressed gas)) (Strel'nikov, A.K.)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

NIKITIN, N.; KUPRIYANOV, M.

New methods in planning urban gas supply systems. Zhil.-kom. khoz. 10 no.1:20-21 '60. (MIRA 13:5)

1. Glavnyy inzhener instituta Giproniigaz Saratov (for Nikitin).
2. Nachal'nik otdela gazosnabzheniya gorodov instituta Giproniigaz, Saratov (for Kupriyanov).
(Saratov--Gas distribution)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.F.; FESENKO, Ye.G.

X-ray diffraction structure analysis of phase transitions in Sr_2FeNbO_6. Kristallografiia 6 no.5:794-795 S-O '61. (MIRA 14:10)

1. Fiziko-matematicheskiy nauchno-issledovatel'skiy institut pri Rostovskom-na-Donu gosudarstvennom universitete.
(X-ray crystallography) (Strontium compounds)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.F.; FESENKO, Ye.G.

X-ray diffraction study of phase transition in Sr_2FeTaO_6.
Kristallografiia 7 no.2:315-316 Mr-Ap '62. (MIRA 15:4)

1. Fiziko-matematicheskiy nauchno-issledovatel'skiy institut pri Rostovskom-na-Donu gosudarstvennom universitete.
(Strontium tantalate) (X-ray crystallography)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M. F.; FESENKO, Ye. G.

X-ray diffraction study of phase transitions in certain compounds of the perovskite type. Kristallografiia 7 no.3: 451-453 My-Je '62. (MIRA 16:1)

1. Fiziko-matematicheskiy nauchno-issledovatel'skiy institut pri Rostovskom gosudarstvennom universitete.

(X-ray crystallography) (Perovskite)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

ACCESSION NR: AP3000768 S/0070/63/008/003/0356/0362

AUTHOR: Kupriyanov, M. F.; Filip'yev, V. S.

61
59

TITLE: X-ray studies of minor deformations in complex perovskites

SOURCE: Kristallografiya, v. 8, no. 3, 1963, 356-362

TOPIC TAGS: perovskite structure, x-ray powder photograph, unit cell, superlattice

ABSTRACT: The authors examined a method of determining minor distortions in perovskite structure for the purpose of finding optimal conditions for photographing these distortions. They propose a method of determining type of distortion by relative width of lines on powder diagrams. The method was employed in the study of a number of complex perovskites with the general formula Sr sub 2 B sup I B sup II O sub 6, where B sup I represents Ta and Nb and B sup II represents Fe, Mn, Y, Yb, Pr, Sm, Nd, and La. The parameters of these compounds were determined by reciprocal photography with a RKE camera. The camera was focused on lines with N = 10 for chromium radiation and with N = 20 for cobalt. The precision of measuring the parameters of the perovskite amounted to 0.001 kX for linear values and 2' for angular values. For the high-temperature photographs a RKOSET type camera was employed. High-temperature phase transitions with insignificant distortions of the perovskite cell are a characteristic feature of

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L 12802-63
ACCESSION NR: AP3000768

the investigated compounds. The authors conclude that appreciable differences in transition temperatures of compounds containing rare earths and compounds with iron are probably due to differences in the transition mechanism. Orig. art. has: 4 figures and 5 tables.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvenny"y universitet (Rostov State University)

SUBMITTED: 09Jul62 DATE ACQ: 21Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 005 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

FILIP'YEV, V.S.; KUPRIYANOV, M.F.; FESENKO, Ye.G.

Production and analysis of complex compounds of the type $A_2B^{I}B^{II}O_4$. Kristalografiia 8 no.5:790-791 S-O '63. (MIRA 16:10)

1. Rostovskiy gosudarstvennyy universitet.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

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ACCESSION NR: AP4030641 S/0048/64/028/004/0669/0674

AUTHOR: Fesenko, Ye.G.; Filip'yev, V.S.; Kupriyanov, M.F.

TITLE: Concerning the crystallochemistry of perovskites of complex composition [Report, Symposium on Ferromagnetism and Ferroelectricity held in Leningrad 30 May to 5 June 1963]

SOURCE: AN SSSR. Izv. Ser.fiz., v.28, no.4, 1964, 669-674

TOPIC TAGS: perovskite, complex perovskite, complex perovskite lattice parameter, complex perovskite superstructure

ABSTRACT: A large number of perovskites with the complex composition $A_2BB'O_6$ were synthesized and some of their properties are discussed. In the general formula A represents a divalent cation and B and B' represent cations, the sum of whose valences is eight. Among the compounds synthesized are the 112 in which A is Ba or Sr, and either B is Ta or Nb and B' is any one of 20 trivalent ions, or B is W or Mo and B' is any one of 8 divalent ions. Synthesis of the 56 analogous compounds in which A is Pb was attempted, but most of the resulting materials did not have the perovskite structure. The syntheses were performed with analytic grade reagents and employing

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ACCESSION NR: AP4030641

conventional ceramic techniques. The structures were determined by x-ray powder diffraction photographs. In addition to the above compounds, a number of perovskites in which A is Ba or Sr and B is Re, Os or U are included in the discussion. The properties of these compounds were taken from work of A.W.Sleight, R.Ward and J.Longo (J. Amer.Chem.Soc.83,1088,1961; Inorg.Chem.1,245,1962; Ibid.790,1962). The mean lattice parameter a (the cube root of the volume of the unit cell) was plotted against the radius $R_{B'}$ of the B' ion. For fixed A and B, the points lay close to a straight line, and the several lines for the different A and B ions all had the same slope $da/dR_{B'} = 0.55$. In order to obtain smooth curves, it was necessary to employ the radii given by L.H.Ahrens (Geochim.et cosmochim.acta,2,3,155,1952) for all the ions except Sc^{3+} and Mg^{2+}; for these two ions the common radius 0.75 Å was required, which differs by about 10% (in both directions) from the accepted radii of these ions. For large values of $R_{B'}$ ($R_{B'}/R_A > 0.8$), the points fell below the line and the materials had the more closely packed structure of $(NH_4)_3AlF_6$. The structure is metastable in the transition region, and it is possible to obtain materials with either structure, depending on the conditions of synthesis. Superstructure lines were observed in the patterns of all the compounds for which either the valences of the B and B' ions differed by more than two, or the radii of the B and B' ions differed by more than 9%. This sufficient condition on the ion radii for the appearance of superstructure

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ACCESSION NR: AP4030641

is consistent with findings of F.Galasso and W.Darby (J.Phys.Chem.66,1,131,1962). The nature of superstructure in perovskite and in the $(NH_4)_3AlF_6$ structure is discussed, and it is concluded that several tungstenates assigned to the latter structure by S.G.Steward and H.P.Rooksby (Acta crystallogr.,4,503,1961) are in fact perovskites. Orig.art.has: 1 formula and 4 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 30Apr64 ENCL: 00

SUB CODE: IC NR REF SOV: 017 OTHER: 012

Card 3/3

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compound, niobium compound, tantalum compound, indium compound, lute-

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L 7834-66 EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EPA(w)-2/EWP(t)/EWP(b)/EWA(h)

ACC NR: AP5028122 IJP(c) JD/WH SOURCE CODE: UR/0048/65/029/011/2068/2071

AUTHOR: Sholokhovich, M.L.; Novikova, L.V.; Varicheva, V.I.; Kramarov, O.P.; Kupriyanov, M.F.

ORG: Rostov-on-the Don State University (Rostovskiy-na-Donu gosudarstvennyy universitet)

TITLE: Preparation of solid solutions of barium and lead titanates from water-soluble compounds and characteristics of such solutions /Report, Fourth All-Union Conference on Ferroelectricity held at Rostov-on-the Don 12-16 September 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 11, 1965, 2068-2071

TOPIC TAGS: ferroelectric material, solid solution, barium titanate, lead, titanate, dielectric constant, Curie point

ABSTRACT: Chemically pure (Ba, Pb)TiO_3 solid solutions were prepared from water-soluble reagents by coprecipitation from titanium tetrachloride, barium chloride, and lead nitrate solution, and by the exchange reaction between potassium titanyl oxalate and lead and barium nitrates. The chemical procedures are discussed in some detail and the properties of the solid solutions are described briefly. Lead titanyl oxalate synthesized at room temperature from titanium tetrachloride and lead nitrate by the method of B.V.Strizhkov, A.V.Lapitskiy, and L.G.Vlasov (Zh. prikl. khim., 34, 673 (1960)) was always contaminated with lead chloride, as were also the coprecipated mix-

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ACC NR: AP5028122

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tures of lead and barium titanyl oxalates. It was not possible so to adjust the pH as to eliminate this contamination. Lead chloride also precipitated when the synthesis was performed at 80°C by the method of W.S.Clabaugh, E.M.Swiggard, and R.Gilchrist (J. Res. Natl. Bur. Standards, 56, No. 5, 289 (1956)) and could only be removed (together with some of the titanyl oxalates) by prolonged washing with hot water. X-ray studies of the coprecipitated materials clearly showed the formation of tetragonal solid solutions after heating to 800°. The degree of tetragonality decreased regularly from lead to barium. The resulting chemically pure solid solutions sintered poorly and it was not possible to obtain dense ferroelectric ceramics by sintering in air at 1100 to 1300°. The Curie point of a ceramic of the composition $(Ba_{0.95}, Pb_{0.05})TiO_3$, derived from the temperature dependence of the dielectric constant at 1 megacycle/sec, was 153°. This is considerably higher than the approximately 140° Curie point usually obtained for ceramics of this composition prepared from technical grade materials. The increase of the Curie temperature is ascribed to the purity of the material. The dielectric constant itself was lower than is usually obtained for ceramics of this composition, owing to the large porosity due to poor sintering. Orig. art. has: 1 figure and 3 tables.

SUB CODE: GC, SS, EM SUBM. DATE: 00/ ORIG. REF: 009 OTH. REF: 002

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Card 2/2 DJP

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KUPRIYANOV, M.I.

Talk by a locomotive engineer. Elek. i tepl. tiaga no.1:29-31. '57.
(MIRA 12:3)

1.Starshiy mashinist elektrodepo, Zlatoust Yuzhno-Ural'skoy dorogi.
(Electric locomotives)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.I., mashinist.

Our obligation--300,000 kilometers without wheel assembly repair. Elek. i tepl. tiaga no.2:10 F '57. (MLRA 10:5)
(Zlatoust--Locomotives)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.P., inzhener.

Leather uniformity for shoe uppers. Leg.prom.15 no.9:37-38 S '55. (Shoe industry) (MLRA 9:1)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.P., inzhener.

Technological method of testing materials for footwear uppers.
Leg.prom. 16 no.9:26-28 S '56. (MLRA 9:11)
(Leather--Testing)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.P.

Topography of stretch and layout of leather for shoe uppers. Leg. prom. 17 no.10:27-29 O '57. (MIRA 10:12)
(Shoe industry)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.P., inzh.; PAVLENKO, Yu.S., inzh.; CHIZHMAKOV, V.P., inzh.

Using the method of forced oscillations in determining mechanical properties of leather and shoe components. Izv.vys.ucheb.zav.; tekh.leg.prom. no.4:59-63 '58. (MIRA 11:12)

1.Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti.
(Leather--Testing) (Shoe manufacture--Testing)
(Oscillations)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.P.

Interrelationship between the indices of mechanical properties and minimum stretch of leather for footwear uppers. Leg.prom. 18 no.6:37-39 Je '58. (MIRA 12:10)
(Leather)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.P., inzh.

Elastic stiffness of leather for footwear uppers. Izv.vys. ucheb.zav.; tekh.leg.prom. no.3:66-70 '59. (MIRA 12:12)

1. Moskovskiy tekhnologicheskiy institut legkoy promyshlennosti. Rekomendovana kafedroy tekhnologii obuvi.
(Leather)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.P., insh.; ZYBIN, Yu.P., doktor tekhn.nauk prof.

Nonuniformity of leather stretchability. Izv.vys.uchob.zav.; tekh.leg.prom. no.5:106-120 '59. (MIRA 13:4)

1. Moskovskiy tekhnologicheskiy institut legkoy promyshlennosti. Rekomendovana kafedroy tekhnologii obuvnogo proizvodstva.
(Shoe manufacture) (Leather--Testing)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M. P. Cand Tech Sci — (diss) "Certain Rules and Parameters for the Distribution of Expansion in Chrome Leather For Shoe Surfacing," Moscow, 1960, 15 pp, 150 copies (Moscow Technological Institute of the Light Industry) (KL, 46/60, 125)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

PLATUNOV, K.M., kand.tekhn.nauk, dotsent; SOTNIKOV, V.M., dotsent; KUPRIYANOV, M.P., inzh.; ZYBIN, Yu.P., doktor tekhn.nauk, prof.

Wear resistance of soles made from various areas of belting leather. Nauch.trudy MTILP no.18:61-75 '60. (MIRA 15:2)

1. Kafedra tekhnologii izdeliy iz kozhi Moskovskogo tekhnologicheskogo instituta legkoy promyshlennosti.
(Leather--Testing)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.P., kand.tekhn.nauk

Some problems in the methodology of the processing of experimental data in studying leather properties. Izv.vys.ucheb.zav.; tekh.leg. prom. no.1:81-88 '62. (MIRA 15:2)

1. Ukrainskiy nauchno-issledbvatel'skiy institut kozhevenno-obuvnoy promyshlennosti. Rekomendovana kafedroy tekhnologii obuvnogo proizvodstva Moskovskogo tekhnologicheskogo instituta legkoy promyshlennosti.

(Leather—Testing)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.P., kand.tekhn.nauk; DERBAREMDIKER, M.L., kand.tekhn.nauk

Plastic-elastic properties of leather materials for shoe uppers. Report No.2. Nauch.-issl.trudy Ukr NIIKP no.13:175-180 '62. (MIRA 18:2)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M. P., kand. tekhn. nauk; BABAYEV, E. A., inzh.

Protective antishock devices for special footwear. Kozh. obuv. prom. 4 no.10:16-17 O '62. (MIRA 15:10)

(Clothing, Protective) (Shoe manufacture)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

BABAYEV, E.A., inzh.; KUPRIYANOV, M.P., kand.tekhn.nauk

Special footwear for foundry workers. Kozh.-obuv.prom. 4 no.11: 25-27 N '62. (MIRA 15:11)

(Clothing, Protective)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOVA, G.N., inzh.; YELEN, B.L., inzh.; KUPRIYANOV, M.P., kand. tekhn. nauk

Accuracy of area measurement of stiff leather with measuring machines. Izv. vys. ucheb. zav.; tekh. leg. prom. no.4:98-104 '63. (MIRA 16:10)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti. Rekomendovana kafedroy tekhnologii obuvnogo proizvodstva Kiyevskogo tekhnologicheskogo instituta legkoy promyshlennosti.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, M.P.

Cementing method for toe lasting on the ASG-4 machine without lugs. Kozh.-obuv.prom. 6 no.1 29-30 Ja '64. (MIRA 17:4)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

Kupriyanov, M.S.

BEYN, I.B.; MIRONOV, V.P., starshiy elektro-mekhanik; NIKOLAYEV, F.F., starshiy elektro-mekhanik; KUPRIYANOV, M.S.

Two block systems. Avtom., telem. i sviaz' 2 no.1:38 Ja '58. (MIRA 11:1)

1. Starshiy inzhener Leningrad-Sortirovochnoy Moskovskoy distantsii signalizatsii i svyazi Oktyabr'skoy dorogi (for Beyn). 2. Starshiy elektromekhanik Leningrad-Finlyandskoy distantsii signalizatsii i svyazi (for Kupriyanov).
(Railroads--Signaling--Block system)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

SMIRNOV, V.A.; KUPRIYANOV, M.S.; CHERKASOVA, A.Ya.; OKULOVA, G.V.

Designing city gas systems according to optimal criteria with the use of electronic digital computers. Stroi. truboprov. 9 no.1:22-25 Ja '64. (MIRA 17:3)

1. Saratovskiy gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut po ispol'zovaniyu gaza v narodnom khozyaystve.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KASHNITSKIY, L.A.; KUPRIYANOV, N.F.; MAKOGONOV, V.A.; FARBMAN, I.B., redaktor; POLUSINA, K.S., tekhnicheskiy redaktor

[Instructions for planning, accounting and calculating the cost of oil and gas production] Instruktsiia po planirovaniiu, uchetu i kal'kulirovaniiu sebestoimosti dobychi nefti i gaza. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1956. 123 p. (MLRA 9:7)

1. Russia (1923- U.S.S.R.) Ministerstvo neftyanoy promyshlennosti.
(Petroleum industry) (Gas, Natural)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, N.P. (Vladivostok)

Treatment of trichomonal and other forms of chronic nongonorrheal urethritis in males by injecting artificial gastric juice. Vest. derm.i ven. 34 no.9:73-75 '60. (MIRA 13:11)
(TRICHOMONIASIS) (URETHRA--DISEASES) (GASTRIC JUICE)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPREYANOV, N.S.

Merchandise turnover in the pharmacy chain. Apt.delo 3 no.2:17-19 Mr-Ap '54. (MLRA 7:4)

1. Nachal'nik planovogo otdela Glavnogo aptechnogo upravleniya SSSR.
(Drug industry)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, N.S.

Awarding prizes to pharmacy workers for the fulfillment and overfulfillment of the drug turnover plan. Apt.delo 6 no.2:52-55 Mr-Ap '57. (MIRA 10:6)
(PHARMACY)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KLYUYEV, M.A.; KUPRIYANOV, N.S.

Results of an inventory of drug supplies in drugstores. Apt. delo 9 no.3:10-14 My-Je '60. (MIRA 14:3)

1. Glavnoye upravleniye meditsinskogo mezhrespublikanskogo snabzheniya i sbyta Ministerstva zdravookhraneniya SSSR.
(DRUGS)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, N.S.

Some remarks on the 1961 plan for the drugstore network. Apt. delo 10 no. 1:4-7 Ja-F '61. (MIRA 14:2)

1. Nachal'nik planovo-finansovogo otdela Glavmedsnabsbyta Ministerstva zdravookhraneniya SSSR.
(DRUG STORES)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

S/081/62/000/022/062/088
B166/B144

AUTHORS: Kupriyanov, N. V., Chirimanov, P. A., Zolotova, O. P., Gracheva, T. A.

TITLE: Production of coumarone-indene resins from pyrolysis products

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 487, abstract 22P75 (Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya, no. 9, 1961, 13-16)

TEXT: To produce coumarone-indene resins, light oil fractions (160-200°C and 160-180°C) were polymerized in four stages (at 20-60°C with $AlCl_3$ as a catalyst): dephenolization with a weak alkali solution, drying with sulfuric acid, polymerization followed by neutralization and washing of the polymerization product, and steam distillation of the solvent. The effects of initial products, catalysts (H_2SO_4, $AlCl_3$) and process temperature (0 - 60°C) on the yield and quality of the resin were studied. The article shows how these resins can be used in the production of

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Production of coumarone-indene resins ... S/081/62/000/022/062/088
B166/B144

asbestos resin tiles, and it also gives their physicomechanical properties.
[Abstracter's note: Complete translation.]

Card 2/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

S/191/62/000/003/002/010
B101/B147

AUTHORS: Rastunin, I. V., Kuprianov, N. V., Chirimanov, P. A., Zolotova, O. P., Gracheva, T. A.

TITLE: Production of indene cumarone resins from products of petroleum pyrolysis

PERIODICAL: Plasticheskiye massy, no. 3, 1962, 3-5

TEXT: On suggestion of the Gosstroy (Gosstroy USSR), research was carried out in 1959-60 for production of indene cumarone resins (ICR) from petroleum by the Vostochnyy uglekhimicheskiy institut (Eastern Institute of Coal Chemistry), Sverdlovsk, the zavod "Neftegaz" ("Neftegaz" Plant) Gor'kiy, and the Institut neftekhimicheskikh protsessov AN AzerbSSR (Institute of Petrochemical Processes AS Azerbaydzhanskaya SSR), Baku. The present paper gives results obtained by the "Neftegaz" Plant. Light oil from petroleum pyrolysis was found to be the best initial material. Other products such as distillation residues yielded ICR of too dark coloring (222-636 of the iodimetric scale). $AlCl_3$ proved to be better than 91% H_2SO_4. It produced brighter ICR with a higher softening point (~ 120°C) and higher yields

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(32-36%). From the light oil fraction (boiling range 166-212°C), the fractions 160-180°C and 160-200°C gave the best yields (35.8 and 39.9%, respectively) with softening points at 112.5 and 111°C, and bright coloring (35 and 35.4 of the iodimetric scale). Optimum polymerization occurred between 40 and 60°C. The process takes place in four stages: (1) Removal of phenols by alkali; (2) dehydration by H_2SO_4; (3) polymerization, neutralization, and washing; (4) distilling-off of the solvent with vapor. Asbestos resin plates, resilience 29.5-42.4 kg·cm/cm^2, hardness 3.04-3.62 kg/mm^2, water adsorption 0.55-0.89%, were produced from ICR with softening point 105-110°C by the Kiyevskiy zavod "Stroyindustriya" (Kiyev "Stroyindustriya" Plant). The plates meet the requirements of BTU (VTU). A floor covered with such plates is being under observation now. ICR produced from petroleum is 60% cheaper than ICR from raw materials of the coal-tar chemical industry. Even with the present price for ICR, the floor with ICR plates is 40% cheaper than boarded floor, and 70% cheaper than inlaid floor (data found by the Institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR (Institute of New Building Materials of the Academy of Construction and Architecture USSR)). There are 1 figure and 3 tables.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, P.A., prof. [deceased]

Prospectives of development of thoracic surgery. Vest. khir. 91 no.8:3-10 Ag'63 (MIRA 17:3)

1. Deystvitel'nyy chlen AMN SSSR.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

1964

DECEASED

Medicine

1963

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, R.B., inzh.; SHTABINSKIY, A.B., inzh.

Leading petroleum workers in Azerbaijan. Bezop.truda v prom. 3 no.8:32 Ag '59. (MIRA 12:11)

(Azerbaijan—Petroleum workers)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, S.I., kand.biol.nauk

Production of polymerized tricresol for treating pericementitis.
Stomatologiia 37 no.6:57-58 N-D '58 (MIRA 11:12)
(TRICRESOL)
(PERIODONTIA)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

GORCHAKOV, V.A., kand.med. nauk; KUPRIYANOV, S.N.; GASPAROVA, D.N.

Foreign bodies of the larynx, trachea, and bronchi according to materials of the clinic of the Turkmenistan Medical Institute for the last tehn years. Zhur. ush., nos. i gorl. bol. 23 no.5:67 S-O'63 (MIRA 17:3)

1. Iz kafedry otorinolaringologicheskikh zabolevaniy (zav. - dotsent B.Kh. Ibragimov) Turkmenskogo meditsinskogo instituta.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, S.N.

KUPRIYANOV, S.N., student

Penetrability of penicillin into the cerebrospinal fluid. Vest. oto-rin. 16 no.3:80 My-Je '54. (MLRA 7:7)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. prof. I.V.Korsakov) Turkmenskogo meditsinskogo instituta.
(CEREBROSPINAL FLUID,
*penicillin, penetrability rate)
(PENICILLIN, in cerebrospinal fluid,
*penetrability rate)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

GORCHAKOV, V.A.; KUPRIYANOV, S.H.

Methods for increasing the effectiveness of treatment in intracranial complications of suppurative otitis. Zdrav. Turk. 3 no.2:16-19 Mr-Ap '59. (MIRA 12:8)

1. Iz kliniki laringologicheskikh bolezney Turkmenskogo gosudarstvennogo meditsinskogo instituta im. I.V.Stalina.
(EAR--DISEASES)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

SMOL'NIKOV, V. P.; STEPANYAN, Ye. P.; KUPRIYANOV, S. S.; KRAMARENKO, L. Ye.

Inversion of the symptomatology in curarization. Eksper. khir. i anest. no.2:62-66 '62. (MIRA 15:6)

1. Iz laboratorii anesteziologii (zav. - kandidat meditsinskikh nauk V. P. Smol'nikov) i laboratorii biokhimii (zav. - doktor biologicheskikh nauk Ye. P. Stepanyan) Instituta grudnoy khirurgii (dir. - prof. S. A. Kolesnikov, nauchnyy rukovoditel' - akad. A. N. Bakulev) AMN SSSR.

(MUSCLE RELAXANTS)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

ZOL'NIKOV, S.M., kand.med.nauk; PARFENOV, A.P.; ROSLAVLEVA, N.G.; KUPRIYANOV, S.S.

Stimulation of the central nervous system with megimide during heart surgery. Khirurgiia no.9:63-66 '62. (MIRA 15:10)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akad. A.N.Bakulev) AMN SSSR.
(GLUTARIMIDE) (HEART--SURGERY)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, S.T.

AUTHOR: Kupriyanov, S.T. 121-4-21/32

TITLE: A Machine for Cutting Rubber by Milling (Stanok dlya obrabotki reziny sposobom frezerovaniya)

PERIODICAL: Stanki i Instrument, 1958, No. 4, p.36 (USSR).

ABSTRACT: A simple milling machine is illustrated, incorporating an extraction fan for removal of the gas released through partial combustion of the rubber.

There are 2 figures.

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1. Milling cutters-Application

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

Kupriyanov, S. Ye.

USSR/Physical Chemistry - Photochemistry. Radiation Chemistry. Theory of the Photographic Process, B-10

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 470

Author: Tunitskiy, N. N., Kupriyanov, S. Ye., and Tikhomirov, M. V.

Institution: Academy of Sciences USSR

Title: Effect of Electrons of Different Energies on the Ionization and Dissociation of Some Hydrocarbon Halides

Original Periodical: Sb. rabot po radiatsionnoy khimii, Moscow, Publishing House of the Academy of Sciences USSR, 1955, 223-240

Abstract: The ionization and dissociation of halogen derivatives of hydrocarbons has been carried out with a type MS-1 mass spectrometer, supplemented as follows: (1) automatic scanning of the mass spectrum, (2) automatic recording of the mass spectrum, and (3) introduction of the sample into the ion source. The mass spectra of CH_4, CH_3Cl, CH_2Cl_2, $CHCl_3$, CCl_4, CH_3Br, and CH_3I have been recorded with electron energies of 100 ev. It is shown that as the number of halide atoms

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

USSR/Physical Chemistry - Photochemistry. Radiation Chemistry. Theory of the Photographic Process, B-10

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 470

Abstract: in the molecule increases, the maximum intensity of the ionic current shifts from the region of molecular ions to that of ions formed by the splitting off of an atom, i.e., dissociation begins to overshadow ionization. Anomalous ions and some secondary processes which occur during ionization and dissociation were investigated. The formation of H_2X^+ was observed in the mass spectra of some halogen derivatives of methane. The dependence of the ionization and dissociation of the molecules CH_3I, $C_2H_2Cl_4$, CH_3Br, and CH_3Cl on the electron energy (up to 1,100 ev) was investigated. It is shown that as the energy of the ionizing electrons increases, the mass spectra contained fewer fragment ions.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, S.Ye.; DZHAGATSPANYAN, R.V.; TIKHOMIROV, M.V.; TUNITSKIY, N.N.

Mass-spectrometric method of analysing chlorine derivatives of methane. Zav.lab.21 no.10:1182-1188 '55. (MLRA 9:1)

1.Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni L.Ya.Karpova.
(Mass spectrometry) (Methane)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, S.Ye.; POTAPOV, V.K.

Negative ion formation near the slit of the mass-spectrometer source. Dokl AN SSSR 103 no.3:449-452 Jl'55. (MLRA 8:11)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni L.Ya. Karpova. Predstavleno akademikom V.N.Kondrat'yevym
(Ions)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, S Ye

USSR/ Physical Chemistry - Molecule. Chemical Bond B-4

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7168

Author : Kupriyanov, S.Ye., Tikhomirov, M.V., and Potapov, V.K.

Title : Disintegration of Positive Ions on Collision with Molecules

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, Vol 30, No 3, 569-570

Abstract : The disintegration of ions accelerated up to 2,500 v caused by collisions with molecules of the residual gas in the analyzer of a type MS-1 mass spectrometer has been investigated. The ions formed by the disintegration have a fractional apparent mass M* ($M^* = M_1^2/M_2$, where M_1 and M_2 are the masses of the ions before and after disintegration). The fractional peaks produced by the disintegration of CO^+, CO_2^+, CH^+, and CH_2^+ formed by the dissociation ionization of CO, CO_2, C_2H_2, C_2H_4, CH_2Br_2, and CH_2I_2 were investigated.

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USSR/ Physical Chemistry - Molecule. Chemical Bond B-4

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7168

The intensity of the disintegrating ions is proportional to the pressure in the analyzer and to the intensity of the starting ions. When the energy of the ionizing electrons is increased, the fraction of disintegrating ions is increased; the increase is particularly sharp for electron energies in the neighborhood of the ionization potential of the starting ions. This is possibly related to an increase in the excitation of the starting ions. Increasing the energy of the starting ions (up to 3,000 v) also increases the probability of disintegration. Numerical values for the probability of the disintegration of the ions investigated are given ($\sim 10^{-17}$ cm^2).

Card 2/2 - 15 -

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, S.Ye.; DZHAGATSPANYAN, P.V.; POTAPOV, V.K.

Mass spectrometric analysis of mixtures containing tetrachloroethane, trichloroethylene, and isomers of dichloroethylene. Khim.prom. no.5:274-277 Jl-Ag '57. (MIRA 10:12)

(Mass spectrometry)
(Ethane--Analysis)
(Ethylene--Analysis)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, S.Ye.; POTAPOV, B.K.

Decay of H_2, HD and D_2 in single collisions with hydrogen, deuterium, and air molecules. Zhur. eksp. i teor. fiz. 33 no.1: 311-312 Jl '57. (MLRA 10:9)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova.
(Collisions (Nuclear physics)) (Hydrogen--Isotopes)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, S.Ye.

AUTHOR: KUPRIYANOV, S.Ye., POTAPOV, V.K. 56-7-66/66

TITLE: The Decay of H_2^+, HD^+ and D_2^+ Ions on the Occasion of a Single Collision with Hydrogen-, Deuterium-, and Air Molecules (Raspad ionov H_2^+, HD^+, i D_2^+ pri odnokratnykh stolknoveniyakh s molekulami vodoroda, deyteriya i vozdukha. Russian)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki 1957, Vol 33, Nr 7, pp 311 - 312 (U.S.S.R.)

ABSTRACT: If H_2^+, HD^+, and D_2^+ Ions which were accelerated up to 3000 v, are sent through hydrogen, deuterium, and air (gas pressure 5.10^{-4} torr), these ions decay as a result of a single collision with the gas molecules. The relative probability q_1, q_2, q_3, q_4 of the decays

1.) $H_2^+ \rightarrow p + H$

2.) $D_2^+ \rightarrow d + D$

3.) $HD^+ \rightarrow p + D$

4.) $HD^+ \rightarrow d + H$ was determined as follows:

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

56-7-66/66

The Decay of H_2^+, HD^+ and D_2^+ Ions on the Occasion of a Single Collision with Hydrogen-, Deuterium-, and Air Molecules

	q_1	q_2	q_3	q_4
Hydrogen	0,9	1,0	0,4	0,9
deuterium (82°/o D)	1,3	1,0	0,4	1,0
air	1,1	1,0	0,4	1,0

(With 1 table and 4 Slavic references).

ASSOCIATION Physical-Chemical Institute im. L.Ya. Karpov (Fiziko-khimicheskiy Institut im. L.Ya. Karpova)

PRESENTED BY

SUBMITTED 30.4.1957

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

KUPRIYANOV, S.E.

21(8) p 3 PHASE I BOOK EXPLOITATION SOV/1140

Vsesoyuznoye soveshchaniye po radiatsionnoy khimii. 1st, Moscow, 1957.

Trudy (Transactions of the First Conference on Radiation Chemistry) Moscow, Izd-vo AN SSSR, 1958. 330 p. 4,000 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk, and U.S.S.R. Ministerstvo khimicheskoy promyshlennosti.

Editorial Board: Bakh, N.A. Professor (resp. ed.); Medvedev, S.S., Corresponding Member, Academy of Sciences, USSR; Veselovskiy, V.I., Professor, Dolin, P.I., Doctor of Chemical Sciences; Miller, N.B., Candidate of Chemical Sciences; Tsetlin, B.L., Candidate of Chemical Sciences (Secretary). Eds. of Publishing House: Trifonov, D.N. and Bugayenko, L.T.; Tech. Ed.: Moskvicheva, N.I.

PURPOSE: This book publishes the reports of the First All-Union Conference on Radiation Chemistry in Moscow, March 25 - 30.

COVERAGE: This collection includes fifty-seven reports and follow-up discussions of each sub-group of reports classified as follows:

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1) primary functions in radiation-chemical processes,
2) radiation chemistry of water solutions (inorganic and organic systems),
3) radiation-electrochemical processes,
4) the effect of radiation on substances which take part in biochemical processes,
5) radiation chemistry of simple organic systems,
6) radiation effects on polymers, and
7) sources of radiation.

According to the editors, the discussions reveal differences in points of view of Soviet scientists on various problems of radiation chemistry; specifically, the mechanism of the action of radiation on concentrated water solutions, the practical importance of radiation-galvanic phenomena, the mechanism of the action of radiation on polymers, etc. The editors also note that the conference revealed inadequate development in some important areas of radiation chemistry, particularly the theory of initiation of radiolysis, and the action of radiation on solid bodies.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610013-2

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PART I. PRIMARY FUNCTIONS IN RADIATION-CHEMICAL PROCESSES

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TUNITSKIY, N.N.; TIKHOMIROV, M.V.; KUPRIYANOV, S.Ye.; KOLOTYRKIN, V.M.; GUR'YEV, M.V.; POTAPOV, V.K.

Studies in the field of mass spectrometry. Probl.fiz.khim. no.1:122-128 '58. (MIRA 15:11)

1. Laboratoriya adsorbtsionnykh protsessov Nauchno-issledovatel'skogo fiziko-khimicheskogo instituta im. Karpova.

(Mass spectrometry)

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Kachestvo materialov dlya poluprovodnikovoy tekhniki (Quality of Materials for Semiconductor Technology) Moscow, Metallurgizdat, 1959. 192 p. (Series: Its: Trudy, 1957-1958, vyp. 8-30) 3,600 copies printed.

Sponsoring Agencies: USSR. Sovet Ministrov. Gosudarstvennyy komitet po khimii; Akademiya nauk SSSR. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.

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PURPOSE: This book is intended for technical personnel engaged in the manufacture and utilization of semiconductors.

COVERAGE: This book treats methods of obtaining quality semiconductor materials and presents current standardized specifications for semiconductors and auxiliary materials. The book is divided into three parts. Part I consists of 16 reports delivered at two conferences in January 1957 and December 1958 at the Fiziko-khimicheskiy institut imeni L.Ya. Karpova (Institute of Physics and Chemistry imeni L.Ya. Karpov) by members of 36 participating institutes and industrial plants. The reports deal with the standardization of characteristics of pure semiconductor materials and describe spectral and spectrochemical analysis, and chemical, vacuum-fusion, polarographic, and radioactivation methods for studying semiconductor materials and determining impurities in them, along with the equipment used.

PART I. REPORTS ON METHODS FOR THE DETERMINATION OF MICROIMPURITIES IN SEMICONDUCTOR MATERIALS PRESENTED AT THE CONFERENCES ON THE QUALITY OF SEMICONDUCTOR MATERIALS

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KUPRIYANOV, S.Ye.

Dissociation of CH_4^+, CH_3^+, CH_2^+, H_2O^+, OH^+ ions as a result of single collisions with atoms and molecules of various gases. Kin.i kat. 3 no.1:13-17 '62. (MIRA 15:3)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova.
(Mass spectrometry) (Ions) (Gases)

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KUPRIYANOV, S.Ye.

Dissociation of excited ions. Zhur. fiz. khim. 36 no.1:218-219 Ja '62. (MIRA 16:8)

1. Fiziko-khimicheskiy institut im. L. Ya. Karpova.
(Ionization) (Mass spectrometry)

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S/056/62/043/003/004/063
B125/B102

AUTHORS: Kuprianov, S. Ye., Perov, A. A., Tumitskiy, N. N.

TITLE: Cross sections for dissociation of D_3^+ ions on D_2^+ and D^+ ions in collisions with deuterium molecules

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 763-764

TEXT: The D_3^+ dissociation cross section resulting from single collisions with D_2^0 molecules were determined at energies between 30 and 100 kev of the D_3^+ ions, using a mass spectrometer with two magnetic analyzers. These collisions took place at $p \sim 3 \cdot 10^{-4}$ mm Hg in a collision chamber between two magnetic analyzers. The D^+ and D_2^+ formation cross sections $\sigma = I^* kT/Ipl$ have the following values

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at the energies of the D_3^+ ions in kev	30	40	50	60	70	80	90	100
$\sigma(D^+)$	0.6	0.9	0.9	0.8	1.2	1.2	1.2	1.3
$\sigma(D_2^+)$	0.8	1.1	1.0	0.9	1.1	1.2	1.2	1.2

I^* and I are the secondary and primary ion currents, [illegible] is the effective length of the chamber. The increase of the cross section below 50-60 kev is probably due to the excitation of D_3^+ ions. The second increase of the cross sections at energies between 50 and 60 kev and more is due to the ionization of D_3^+ ions. The detachment of two electrons from the D_3^+ ions might be important at energies above 100 kev. The D^+ and D_2^+ production cross sections agree within the limits of measurement accuracy ($\sim$ 25%). There is 1 table.

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KUPRIYANOV, S.Ye.; PEROV, A.A.; TUNITSKIY, N.N.

Dissociation cross sections for 3.5 - 100 kev. D_2^+ ions in collision with D_2 molecules. Zhur. eksp. i teor. fiz. 43 no.5:1636-1637 N '62. (MIRA 15:12)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.
(Dissociation) (Deuterium) (Ions)

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L 18136-63 EWP(j)/EPF(c)/EWT(1)/EWT(m)/BDS/ES(w)-2 AFFTC/ASD/ESD-3/IJP(C)/
SSD Pc-4/Pr-4/Pab-4 RM/WW/MAY

ACCESSION NR: AP3004510 S/0048/63/027/008/1102/1109

80

AUTHOR: Kupriyanov, S.Ye.; Perov, A.A.

TITLE: Dissociation of polyatomic ions in collisions with gas atoms and molecules /Report presented at the Second All-Union Conference on the Physics of Electronic and Atomic Collisions held in Uzhgorod 2-9 Oct 1962/

SOURCE: AN SSSR, Izvestiya,ser.fiz.,v.27, no.8, 1963, 1102-1109

TOPIC TAGS: dissociation cross section , ion dissociation , ion-molecule collision , water, ammonium, methane, propane, ethylene, mass spectrometery

ABSTRACT: Most previous investigations of dissociation of polyatomic ions have been performed with the aid of conventional mass-spectrometers, which are not suitable for precise quantitative measurements. In the present work dissociation of water, ammonium, methane, ethylene and propane ions as a result of collisions with gas molecules was investigated by means of a special double mass spectrometer (S.Ye.Kupriyanov and A.A.Perov, Zhur.tekh.fiz.,33, 823, 1963). The dissociation cross sections were evaluated for single ion-molecule encounters by the formula $\sigma = I^*kt/Ipl$, where I and I* are the initial and resultant ion currents, k is Boltzmann's cons-

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ACCESSION NR: AP3004510

tant, T is the absolute temperature and p is the pressure of the gas in the collision chamber and l is the effective length of the chamber. The working pressure in the ion source was about 3×10^{-5} mm Hg; the pressure in the collision chamber about 2×10^{-4}; the vacuum was higher in other parts of the spectrometer. Curves are given for the variation of the dissociation cross section for CH_4^+ ions from methane in collisions with air and deuterium as a function of the ion energy; the curves vary in character, depending on the dissociation process, but the total curve has a very broad maximum. Curves for the other investigated compounds and ions are reported to be generally similar. The cross sections for many dissociation processes are tabulated. Orig.art.has: 3 formulas, 3 figures and 3 tables.

ASSOCIATION: none

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ACCESSION NR: AP3003952 S/0057/63/033/007/0823/0831

63

AUTHOR: Kupriyanov, S.Ye.; Perov, A.A.

57

TITLE: Investigation of dissociation of methane, ammonium and water ions as a result of collisions with molecules in the energy range from 3.5 to 100 keV

SOURCE: Zhurnal tekhnicheskoy fiziki, v.33, no.7, 1963, 823-831

TOPIC TAGS: ion dissociation, ion-molecule encounter, ammonium, water, methane mass spectrometry

ABSTRACT: Investigation of the disintegration of accelerated ions in their passage through a gas can yield information on the nature of the physical processes that play a significant role in ionic-molecular reactions. At low energies, charge exchange and reactions leading to formation of heavy particles predominate. At higher energies (several keV) various dissociation processes begin to dominate. Earlier studies of dissociation of methane ions, for example, were carried out on ordinary mass spectrometers and in most cases the top ion energy did not exceed 2-3 keV. For the purpose of the present extensive investigation the authors developed the double mass spectrometer with three variable width slits diagramed in Fig.1 of the Enclosure. The ions were accelerated to from 3.5 to 100 keV. Dissociation

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cross sections were measured for methane ions in encounters with air and deuterium molecules and for ammonium and water ions in encounters with air molecules. A group of typical cross section versus ion energy curves are shown in Fig.2 of the Enclosure. (The data for other ions and molecules are also presented.) The experimental results are discussed in considerable detail. Thus, the cross section variations as a function of ion energy for ions with an equal number of hydrogen atoms are similar. The total cross section decreases with decrease in the number of H atoms in the initial ion. The dissociation spectra are reminiscent of the mass-spectra of the corresponding molecules. With increasing energy the cross sections for dissociation with detachment of one, two, three or four H atoms approach each other; so that for CH_4 ions, for example, the various cross section curves merge at 70-90 keV. "We desire to express our gratitude to Prof.N.N.Tunitskiy for discussion of the results." Orig.art.has: 9 figures and 2 tables.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im.L.Ya.Karpova, Moscow (Physicochemical Scientific Research Institute)

SUBMITTED: 06Apr62 DATE ACQ: 07Aug63 Encl: 02

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KUPRIYANOV, S.Ye.; TUNITSKIY, N.N.; PEROV, A.A.

Dissociation of D_2^+ ions in collisions with molecules in the energy range 3.5 to 100 Kev. Zhur. tekh. fiz. 33 no.10:1252-1259 O '63. (MIRA 16:11)

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KOLOTYRKIN, V.M.; KUPRIYANOV, S.Ye.

Dissociation of CH^+ and CH_2^+ ions. Zhur. fiz. khim. 37 no.12:2769-2771 D '63. (MIRA 17:1)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.

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KUPRIYANOV, S.Ye.; LATYPOV, Z.Z.

Ionization of positive ions by electrons. Zhur. eksp. i teor. fiz. 45 no.3:815-816 S '63. (MIRA 16:10)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.
(Ionization)

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KUPRIYANOV, S.Ye.; PEROV, A.A.

Spontaneous and forced decay of two-charge ions. Dokl. AN SSSR 149 no.6:1368-1370 Ap '63. (MIRA 16:7)

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(Ions) (Dissociation)

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AUTHOR: Kupriyanov, S.Yo.

TITLE: Investigation of the dissociation of doubly charged ions. Dissociation of doubly charged CO ions

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TOPIC TAGS: ion dissociation, doubly charged ion dissociation, spontaneous dissociation, tunnel effect dissociation, collision dissociation, CO^{2+}

ABSTRACT: The dissociation of CO^{2+} ions was investigated with the double mass spectrometer described elsewhere (N.N.Tunitskiy, S.Yo.Kupriyanov and A.A.Perov, Izv.AN SSSR,Otd.khim.nauk,11,1945,1962; S.Yo.Kupriyanov and A.A.Perov, ZhTF,33,823,1963). The investigation was undertaken because of the availability of the double mass spectrometer and the existence of conflicting data on the subject, all of which were obtained with single mass spectrometers and are therefore easily misinterpreted. The double mass spectrometer consisted of two sector-type magnetic analyzers. A beam of 5.6-keV CO^{2+} ions was selected by the first analyzer from the initial ion beam (source not described). This beam passed through a collision chamber and was

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