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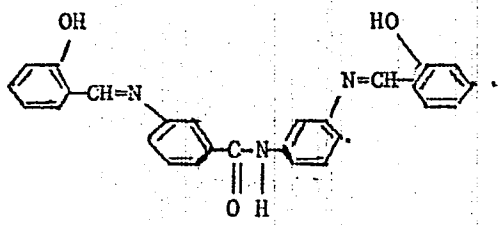
USSR

KIYAZHANSKIY, M. I., et al., Zhurnal Fizicheskoy Khimii, Vol XLVI, No 1, 1972, pp 178-180

III. 

The investigated multinuclear mono and bis-azomethynes in the crystal state reveal both photochromy and thermochromy. In contrast to the derivatives of salicylalaniline, the indicated compounds are luminescent, and the thermochromy and photochromy do not mutually exclude each other. Absorption spectra are presented. An explanation for the experimental data is offered by which on excitation in the benzoid form, phototransfer of a proton takes place with the formation of the quinoid form and subsequent emission either in the trans and cis-quinoid or only in the cis-quinoid. The latter is a specific characteristic of the crystalline state.

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USSR

UDC 629.12:532

OSIPOV, O. A.

"Effect of the Shape of the Transverse Cross Sections of a Ship on the Hydrodynamic Loads Causing Hull Vibration"

Tr. TsNII mor. flota (Works of the Central Scientific Research Institute of the Maritime Fleet), 1971, vyp. 134, pp 49-71 (from RZh-Mekhanika, No 11, Nov 71, Abstract No 11B393)

Translation: A study was made of the problem of determining the hydrodynamic forces acting on the transverse cross sections of a rigid ship's hull floating on a wavy surface of an ideal incompressible liquid. The forcing acting in each cross section depend on the degree of submergence of the outline in the liquid (the gravitational force), the outline submergence rate (the damping forces), the apparent mass of the liquid and the rate of its variation (the inertial forces). The known expressions for these forces are expanded in a Fourier series with respect to sines or cosines of the arcs which are multiples of the wave frequency, and five terms of the series are determined. The Fourier coefficients are calculated for different values of the parameters (the shape of the transverse cross section, the draft, the wave amplitude and wavelength). The analysis of the solutions obtained offered the possibility of

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USSR

OSIPOV, O. A., Tr. TsNII mor. flota, 1971, vyp. 134, pp 49-71

drawing a number of interesting conclusions regarding the nature of the active forces. In particular, it turned out that the high frequency component of the aggregate hydrodynamic force basically is determined by the part of the inertial force which depends on the apparent mass gradient.

In the second part of the paper, a study was made of the effect of the hydrodynamic impulsive forces on vibration of the ship. (These forces arise during vertical oscillations of the bow.) Here, the contact force and the part of the inertial force which depends on the apparent mass gradient are calculated for different values of the above-indicated parameters. The remaining forces are not considered since their impulse is small and cannot cause vibration of the ship's hull. In conclusion, in analyzing the results obtained the author draws a number of physical conclusions as applied to dry and loose cargo ships.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

1/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--CHELATE COMPOUNDS OF ARENEAZO,2,IMIDAZOLES. NEW EXAMPLE OF COMPLEXES WITH A METAL CHELATE JUNCTION POINT OF THE M PLUS 4N TYPE -U-

AUTHOR-(05)-GARNOVSKIY, A.D., KUZNETSOVA, L.I., ANDREYCHIKOV, YU.P., OSIPOV, O.A., SIMONOV, A.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSH. KHIM. 1970, 40(3), 710-11

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC AZOLE COMPOUND, ORGANIC COMPLEX COMPOUND, ACETATE, DIPOLE MOMENT, BROMINATED ORGANIC COMPOUND, HETEROCYCLIC OXYGEN COMPOUND, BENZENE DERIVATIVE, MOLECULAR STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/2022 STEP NO--UR/0079/70/040/003/0710/0711

CIRC ACCESSION NO--AP0132282

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

2/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0132282

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A 2:1 MIXT. (MOLAR) OF ARENEAZO,2,IMIDAZOLES AND APPROPRIATE METAL ACETATES IN MEOH GAVE I (M, COLOR, AND DIPOLE MOMENT GIVEN): NI PRIME POSITIVE POSITIVE, BROWN, 3.18; CO PRIME POSITIVE POSITIVE, GREEN, 4.40; AND II: CU PRIME POSITIVE POSITIVE, YELLOW BROWN, 2.04; NI PRIME POSITIVE POSITIVE, RED BROWN, 3.43; CO PRIME POSITIVE POSITIVE, BROWN, 4.78. IN THE SOLID STATE, EVIDENTLY THE STRUCTURE OF I IS A TETRAHEDRAL ARRANGEMENT, IN WHICH HALF OF THE MOL. IS ROTATED AT RIGHT ANGLES TO THE OTHER ABOUT THE HORIZONTAL AXIS. POSSIBILITY OF POLYMERIC OCTAHEDRAL STRUCTURE FROM FURTHER COORDINATION OF THE METAL WITH THE N PRIME3 ATOM OF IMIDAZOLE IS ALSO POSSIBLE, HOWEVER. FACILITY: ROSTOV.-NA-DONU GOS. UNIV., ROSTOV-ON-DON, USSR.

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USSR UDC 547.551.4 + 541.49 3

GARNOVSKIY, A. D. KOLODYAZHNYY, YU. V., ALIYEVA, S. A., KROKHINA, N. F., GRANDBERG, I. I., OSIPOV, O. A., and PRESNYAKOVA, T. M., Rostov-on-Don State University and All-Union Agricultural Academy imeni K. A. Timiryazev

"Complex Compounds of Metals With Nitrogen-Containing Ligands. XIX. Complexes of Tin Tetrachloride With 1-Pyridylpyrazoles and Their 5-Hydroxy(amino) Derivatives"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 5, May 70, pp 1114-1120

Abstract: Continuing their study of complexing in systems with several donor centers, the authors studied the interaction of tin tetrachloride with 1-(α, β or γ-pyridyl)pyrazoles and their 5-hydroxy and amino derivatives. The dipole moments of the resultant complexes were determined and their IR spectra studied for purposes of solving the question of the configuration and tautomerism of the ligands. A comparative study was made of the IR spectra of ligand and complex molecules in order to establish the localization site of the coordination bond.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

1/3 019 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--NITROGEN CONTAINING BISHETEROCYCLIC SYSTEMS. II. NATURE OF THE INFLUENCE OF THE 2,BENZIMIDAZOLYL RADICAL -U-

AUTHOR-(05)-KOLODYAZHNAYA, S.N., SIMONOV, A.M., KOLODYAZHNYY, YU.V., OSIPOV, O.A., BREN, V.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (2), 238-44

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IR SPECTRUM, UV SPECTRUM, HETEROCYCLIC NITROGEN COMPOUND, BENZIMIDAZOLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/1169 STEP NO--UR/0409/70/000/002/0238/0244

CIRC ACCESSION NO--AP0054070

UNCLASSIFIED

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UNCLASSIFIED PROCESSING DATE--09OCT70

2/3 019

CIRC ACCESSION NO--AP0054070

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE QUATERNARY SALTS ESP. OF 1,ARYL, 3,(BENZIMIDAZOL,2,YL)BENZIMIDAZOLIUM UNDERGO RING OPENING REACTIONS WITH WEAK BASES (SUCH AS NH SUB3 IN PYRIDINE) AT ROOM TEMP. THE SALTS WITH A FREE NH GROUP (I.E., WITHOUT THE 1,ARYL SUBSTITUENT) REACT SIMILARLY. NO YLIDE FORMATION WAS FOUND. THE RING OPENING PRODUCTS DEFORMYLATED BY HEATING. THE UV AND IR SPECTRA OF VARIOUS STARTING COMPDS., PRODUCTS, AND INTERMEDIATES WERE RECORDED. A CH SUB2 GROUP BETWEEN THE TWO IMIDAZOLE RINGS INCREASES STABILITY. THE RINGS ARE THEN OPENED ONLY IN THE PRESENCE OF STRONG BASES AT ROOM TEMP.; THE PRODUCTS ARE RECYCLIZED IN ACID MEDIUM. THE PROTONIZATION CONSTS. OF PK SUBA 1 AND PK SUBA2 OF MODEL COMPDS. WERE MEASURED IN MECN. THE FOLLOWING VALUES (7-7.5 HIGHER THAN THOSE MEASURED IN WATER) WERE OBTAINED FOR N,(,1,METHYLBENZIMIDAZOL,2,YL,SUBSTITUTED COMPDS. (COMP., PK SUBA1, PK SUBA2, AND M.P. GIVEN): IMIDAZOLE, 11.46, 5.34,-; BENZIMIDAZOLE, 9.91, 5.01,-; PYRAZOLE, 9.59, -,91-2DEGREES; INDAZOLE, 8.80, -, 171-2DEGREES; FOR N,(1,METHYLBENZIMIDAZOL,2,YL,METHYLENE SUBSTITUTED COMPDS.: IMIDAZOLE, 13.73, 9.25, 150DEGREES; BENZIMIDAZOLE, 12.58, 9.21, 165-6DEGREES; PYRAZOLE, 12.27, 4.29, 109.5-10.0DEGREES; INDAZOLE, 12.03, 4.72, 167-8DEGREES; FOR SUBSTITUTED BENZIMIDAZOLES: N,ET, 13.22,-,-; N,PR, 13.22,-,-. THE QUATERNARY SALTS WERE PREPD. BY MELTING AT 140-50DEGREES EQUIMOLAR AMTS. OF N,ALKYLBENZIMIDAZOLE WITH 2,CHLORO OR Z, (CHLOROMETHYL)BENZIMIDAZOLE.

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3/3 019 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0054070

ABSTRACT/EXTRACT--THUS, THE FOLLOWING DERIVS. OF N,(BENZIMIDAZOL,2,YL),O,PHENYLENEDIAMINE WERE PREPD. (M.P. GIVEN): N,ME,N,FORMYL, 207-8DEGREES; N,ME, 226-7DEGREES; N,PH, 268-9DEGREES; SIMILARLY, N,PH AND N,ET,N PRIME,(1,METHYLBENZIMIDAZOL, 2,YL,O,PHENYLENEDIAMINES, M. 183-4DEGREES AND 222-3DEGREES, RESP., WERE OBTAINED. N,METHYL,N,FORMYL,N PRIME,(1,METHYLBENZIMIDAZOL,2,YL, METHYLENE),O,PEHNYLENEDIAMINE, M. 164-5DEGREES WAS PREPD.

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UNCLASSIFIED PROCESSING DATE--27NOV70

1/2 020

TITLE--COMPLEXES OF TITANIUM AND TIN TETRACHLORIDES WITH ACETYLACETONE IMINES -U-

AUTHOR-(03)-KOGAN, V.A., SOKOLOV, V.P., OSIPOV, O.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 833-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--TITANIUM CHLORIDE, TIN CHLORIDE, ACETONE, IMINE, COMPLEX COMPOUND, UV SPECTRUM, IR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0824 STEP NO--UR/0079/70/040/004/0833/0838

CIRC ACCESSION NO--AP0134557

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

2/2 020 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134557

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING THE AROM. AMINES WITH AC SUB2 CH SUB2 IN HEXANE GAVE THE APPROPRIATE ANILS WHICH TREATED WITH METAL CHLORIDES IN C SUB6 H SUB6 GAVE THE FOLLOWING COMPLEXES (WHERE A EQUALS ACETYLACETONE ANIL; L EQUALS ACETYLACETONE O,METHYLANIL; A PRIME EQUALS ACETYLACETONE P,NITROANIL; A DOUBLE PRIME EQUALS ACETYLACETONE HEXYLIMINE; AND A TRIPLE PRIME EQUALS ACETYLACETONE DODECYLIMINE): TICL SUB4.A SUB2, RED, M. 153DEGREES; TICL SUB4.L SUB2, RED, M. 140DEGREES; TICL SUB4.A PRIME SUB2, RED, M. 128DEGREES; SNCL SUB4.A SUB2, COLORLESS, M. 152DEGREES; SNCL SUB4.L SUB2, COLORLESS, M. 142DEGREES; SNCL SUB4.A PRIME SUB2 COLORLESS, M. 120DEGREES; THE COMPLEXES WITH A DOUBLE PRIME AND A TRIPLE PRIME WERE FORMED IN 2:1 RATIO WITH TICL SUB4 AND IN 4:1 RATIO WITH SNCL SUB4, ON THE BASIS OF SPECTROSCOPIC DATA ONLY AS THE COMPLEXES COULD NOT BE ISOLATED. THE UV AND IR SPECTRA OF THE COMPLEXES INDICATE A DONOR ACCEPTOR BOND BETWEEN THE METAL AND THE O ATOM OF THE CARBONYL GROUP. FACILITY: ROSTOV.-NA-DONU GOS. UNIV., ROSTOV-ON-DON, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

UNCLASSIFIED PROCESSING DATE--13NOV70

2/2 027

CIRC ACCESSION NO--AP0128493

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BIS(SALICYLAL)DICHLOROTITANIUM AND HEXYLAMINE IN HOT MEPH WITH A TRACE OF ACOH GAVE TICL SUB2. 2R PRIME2 WHERE HR PRIME2 EQUALS N,HEXYLSALICYLALDIMINE: SN AND ZR ANALOGS WERE PREPD. SIMILARLY FROM REACTION PRODUCTS OF SALICYLALDEHYDE (R PRIME3) AND SN OR ZR CHLORIDES, WHICH GAVE PPTS. OF COMPN. MCL SUB4.2R PRIME3, WHICH HEATED IN DECAHYDRONAPHTHALENE UNTIL HCL EVOLUTION HAD CEASED, GAVE THE APPROPRIATE CHELATES. THUS WERE OBTAINED TICL SUB2 R SUB2 PRIME1, SNCL SUB2 R SUB2 PRIME1, ZRCL SUB2 R SUB2 PRIME1 WHERE HR PRIME1 SALICYLIDENEANILINE, AND TICL SUB4.2HR PRIME1, TICL SUB4.2HR PRIME1 (PRIME15 N), CUR SUB2 PRIME1, TICL SUB4.2HR PRIME2 AND TICL SUB2.2R PRIME2. THUS NEW CHELATES OF MCL SUB2.2R TYPE WERE PREPD. AND THEIR STRUCTURE CONFIRMED BY IR SPECTRA. FACILITY: ROSTOV. GOS. UNIV., ROSTOV, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

1/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--PALLADIUM (II) N CYCLOHEXYLSALICYLALDIMINATES -U-

AUTHOR-(03)-OSIPOV, O.A., MINKIN, V.I., TUMAKOVA, ZH.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. STRUKT. KHIM. 1970, 11(1), 154-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PALLADIUM COMPOUND, ORGANIC COMPLEX COMPOUND, DIPOLE MOMENT, MOLECULAR STRUCTURE, POLYNUCLEAR HYDROCARBON, HETEROCYCLIC BASE COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1235 STEP NO--UR/0192/70/011/001/0154/0155

CIRC ACCESSION NO--AP0116697

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

UNCLASSIFIED PROCESSING DATE--30OCT70

2/2 010

CIRC ACCESSION NO--AP0116697

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PROOF THAT THE N,ALKYLSALICYLALIMINATES OF PD (II) WITH ALDYL GROUPS CONTG. BRANCHING AT THE ALPHA C ATOM BELONG TO THE FAMILY OF COMPDS. WITH A NONPLANAR CONFIGURATION OF THE CHELATE UNIT IS CONDUCTED BY DETN. OF DIPOLE MOMENTS OF A SERIES OF COMPLEXES OF THE TYPE I, WHERE R EQUALS H, NET SUB2 AND R PRIME2 EQUALS ARYL, N,ALKYL. THE DATA IS IN AGREEMENT WITH THE CONCEPT CONCERNING THE INFLUENCE OF THE STRUCTURE OF THE SUBSTITUTE UPON THE N ATOM IN THE CHELATE UNIT OF DIVALENT METALS WITH N SUBSTITUTED SALICYLALDIMINES. THE FACT THAT THE STRUCTURE OF THE N,ALKYL GROUP APPEARS TO BE SIGNIFICANTLY MORE MARKED THAN THAT OF N,ARYL CONFORMS TO THE DATA CONCERNING THE FREE ENERGY OF THE EQUIL: SQUARE IN EQUILIBRIUM TETRAHEDRON. FACILITY: ROSTOV. GOS. UNIV., ROSTOV, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

1/2 020 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--STRUCTURE AND TAUTOMERISM OF O,HYDROXYALDEHYDE ANILS STUDIED BY AN INFRARED SPECTROSCOPIC METHOD -U-

AUTHOR--MINKIN, V.I., OSIPOV, O.A., SHEYNKER, V.N.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 23-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IR SPECTRUM, SPECTROSCOPIC ANALYSIS, MOLECULAR STRUCTURE, ALDEHYDE, HYDROXYL GROUP, AMINE DERIVATIVE, IMINE, BENZENE DERIVATIVE, STEREOCHEMISTRY, TAUTOMERISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1044 STEP NO--UR/0076/70/044/001/0023/0028

CIRC ACCESSION NO--AP0104442

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

2/2 020 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104442

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IR SPECTRA OF PHN:CHAR (I) AND PH PRIME15 N:CHAR WERE MEASURED IN THE SOLID STATE AND IN CCL SUB4, DIOXANE, AND CHCL SUB3 (AR EQUALS PH, O-HOC SUB6 H SUB4 (II), 3,HYDROXY,2,NAPHTHYL (III), 2,METHOXY,1,NAPHTHYL, 2,HYDROXY,1,NAPHTHYL (IV), 1,HYDROXY,2,NAPHTHYL (V), AND 2,HYDROXY,1,ANTHRYL (VI)) (NU(AR) AND NU(C:N) ARE GIVEN IN A TABLE). VALENCE VIBRATION OF THE C:N BOND IS COMPLEX AND GIVES 2 ABSORPTION BANDS. THE RESULTS CONFIRM THE EXISTENCE OF BENZENOIDQUINONOID TAUTOMERISM FOR SOLNS. OF I (AR EQUALS IV, V), AND PROVE THE ENOL IMINE STRUCTURE FOR I (AR EQUALS II, III) AND KETO AMINE STRUCTURE FOR I (AR EQUALS VI, AND 9,HYDROXY,10,PHENANTHRYL).

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC: 541.49-546.82-546.811-547.388

KOGAN, V.A., SOKOLOV, V.P., and OSIPOV, O.A., Rostov-on-Don State University, Rostov, Ministry of Higher and Secondary Specialized Education RSFSR

"Complex Compounds of Titanium and Tin Tetrachlorides With Acetylacetone Imines"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 4, Apr 70, pp 833-838

Abstract: The authors synthesized and studied compounds of titanium and tin tetrachlorides with acetylacetone arylimines (acetylacetonaniline, acetylacetone-p-toluidine, acetylacetone-p-nitroaniline) and acetylacetone alkylimines (acetylacetone hexylimine, acetylacetone dodecylimine). The composition of the resultant complex compounds was established and their electron and vibration absorption spectra were studied. It is suggested that molecular complexes with a metal-oxygen donor-acceptor bond are formed.

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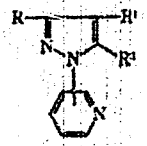
Acc. Nr: AP0100370 Abstracting Service: CHEMICAL ABST. Ref. Code: 5170 UR 0409

110632b Nitrogen-containing biheterocyclic systems. I. Dipole moments and structure of 1-pyridylpyrazoles. Alieva, S. A.; Kolodyazhnyi, Yu. V.; Garnovskii, A. D.; Osipov, O. A.; Grandberg, I. I.; Krokhina, N. F. (Rostov-na-Donu Gos. Univ., Rostov-on-Don, USSR). *Khim. Geterotsikl. Soedin.* 1970, (1), 45–9 (Russ). The dipole moments of 1-pyridylpyrazoles and their amino derivs. were detd. in C_6H_6 at 25° with 5×10^{-3}–2×10^{-1} mole fraction. Comparison of exptl.



and vectorially calcd. dipole moments shows that 1-pyridyl pyrazoles, and 1-(3- or 4-pyridyl)5-aminopyrazoles have nonplanar configuration; the planar angle between the pyrazole and pyridine rings was calcd. For 1-(2-pyridyl)-5-aminopyrazoles the planar trans configuration is assumed due to intramol. H

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AP0100370

bonding. The following data were obtained (R, R^1, R^2, position attachment of pyridine ring, and planar angle between two rings given): Me, H, Me, 2, 58°; Me, H, Me, 3, 84°; Me, H, Me, 4, 0°; Pr, Et, NH_2, 3, 66°; $PhCH_2$, Ph, NH_2, 3, 56°; p-MeC_6H_4, H, NH_2, 3, 80°; Et, Me, NH_2, 4, 0°; Me, H, Cl, 1, 0°; Me, H, NH_2, 2, 0°; $PhCH_2$, Ph, NH_2, 2, 0°; Et, Me, NH_2, 2, 0°; Pr, Et, NH_2, 2, 0°; p-$H_2NC_6H_4$, H, NH_2, 2, 0°.

S. K. Banerjee

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

1/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--IMIDAZO(4,5 F) QUINOLINE. II. UV ABSORPTION AND LUMINESCENCE OF IMIDAZO(4,5 F) QUINOLINE AND ITS QUATERNARY SALTS -U-

AUTHOR-(05)-KHRISTICH, B.I., KNYAZHANSKIY, M.I., OSIPOV, O.A., ASMAYEV, O.T., SIMONOV, A.M.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (2), 234-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--UV SPECTRUM, ABSORPTION SPECTRUM, LUMINESCENCE, IMIDAZOLE, QUINOLINE, QUATERNARY SALT, ACTIVIATION ENERGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1109 STEP NO--UR/0409/70/000/002/0234/0237

CIRC ACCESSION NO--AP0104507

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

2/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0104507

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE UV ABSORPTION SPECTRUM OF THE TITLE COMPD. IS VERY SIMILAR TO THAT OF NAPHTHO(1,2-D)IMIDAZOLE AND INDICATES THAT PROTONATION OCCURS ON THE QUINOLINE N ATOM. LUMINESCENCE SPECTRA WAS STUDIED IN THE 17,000-24,000 CM PRIME NEGATIVE1 REGION AND A MAX. WAS FOUND AT 458-96 NM. A POLAR MEDIUM FACILITATES THE TRANSITION OF THE EXCITED MOLS. IN THE POLAR FORM WITH HIGHER PROTON ACCEPTOR PROPERTIES. THE EXCITATION ENERGY FOR THE IMIDAZO-QUINOLINIUM SALT IS REDUCED DUE TO THE POSITIVELY CHARGED N ATOM WHICH SHIFTS THE ELECTRON CHARGE IN THE SAME SENSE AS THE ABSORPTION OF A PHOTON DOES. THE IRRADN. OF THE QUATERNARY SALT DOES NOT INVOLVE ENERGY ABSORPTION CONNECTED WITH THE CHANGE OF N HETEROATOM HYBRIDIZATION.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

Titanium

USSR UDC 541.49 546.831 546.821 546.811

KOGAN, V. A., SOKOLOV, V. P., OSIPOV, O. A., Rostov State University, Rostov, Ministry of Higher and Secondary Specialized Education RSFSR

"Chelate Compounds of Titanium, Zirconium and Tin With Schiff Bases"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 2, Feb 70, pp 322-324

Abstract: The authors prepared coordination compounds of titanium with salicylal-n-hexylamine (R^2) and of zirconium and tin with salicylalaniline (R^1), with all compounds conforming to the composition $MeCl_2.2(R-H)$ (R = Schiff bases). The chelate character of the resultant complexes was established by the method of IR spectroscopy.

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USSR UDC 541.623:547.241

SHVETS, A. A., OSIPOV, O. A., and MOISEYEVA, O. A.

"Keto-Enol Tautomerism of Certain Substituted ω-(dipheny;phosphinyl)aceto Phenones"

Leningrad, Zhurnal Obshchey Khimii, Vol XLIII (CV), No 1, 1973, pp 59-61

Abstract: Some results are presented from studying the keto-enol equilibrium of diphenylphosphinylaceto phenones containing different substitutions in the phenyl ring on the carbonyl group. The investigated β-ketooxides of the phosphines were obtained with a 60-80% yield by the effect of the ethyl ester of diphenyl phosphonous acid on the solution of substituted ω-bromacetophones in toluene at 110-120° by a procedure similar to the one used by T. Ya. Medved', et al. [Izv. AN SSSR, ser. khim., No 1707, 1965]. The substituted diphenyl phosphinyl acetophenones were obtained by Arbuzov regrouping [B. A. Arbuzov, et al., Izv. AN SSSR, ser. khim. 669, 1965]. By bromometric titration in methanol, the content of the enol form in the compounds was found. The logarithm of the keto-enol equilibrium constant is related linearly to the Hammett constants of the substitutions.

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UDC:661.862(541.444+546.12);541.49

USSR

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P., and MASLIN, D. N.

"Complexes of Organometallic, Hydride, and Halide Compounds of Aluminum"

Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh Soyedineniy Alyuminiya [English Version Above], Moscow, Nauka Press, 1970, 296 pages

Annotation: This book deals with the physical and chemical properties and synthesis of complexes of aluminum formed of its organic, hydride, and halide compounds with organic and inorganic addends. Particular attention is given to the molecular structure of the complexes and the strength of bonds in them. The spectral characteristics of complexes and the role of complex formation in the synthesis of compounds of aluminum and their solubility are analyzed. Plans of the dissociation of complexes in the liquid phase are discussed, and the nature of ions is analyzed in detail. Cathode and anode processes

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ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P., MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

in the electrolysis of melts and solutions and problems of practical electrodeposition of aluminum and electrochemical synthesis in non-squeous media are discussed.

The book is designed for a broad range of persons interested in general problems of complex formation, chemicals operating with organic aluminum and hydride compounds, and electrochemists specializing in non-aqueous solutions. The broad range of factual material allows the book to be used as a reference work as well. 94 tables; 45 figures; 1,697 biblio. refs.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1"

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1"

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1"

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USSR

OSIPOV, O. V.

"Problem of Internal Information Supply in Large Automatic Control Systems and One Partial Solution"

Obshch. Georiya Sistem [General Systems Theory -- Collection of Works], Kiev, 1972, pp 43-55 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V678).

Translation: Large ACS typically contain files too large for the capabilities of the machines of the ACS. Therefore, it is natural to perform a sequence of preliminary processing operations on the initial files, thus decreasing their volume.

The problem is stated of determining the size of a file n_0 from the interval of permissible files $[n_1, n_2]$ which is optimal in the following sense: an attempt is made to adjust two contradictory trends; on the one hand, as the size of the file increases, the time required to solve the problem increases, while on the other hand the quality of the solution generally also increases.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

1/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--EFFECT OF INTERNAL ALPHA IRRADIATION ON THE CHARACTERISTICS OF THE ANION EXCHANGER AV,23M -U-

AUTHOR-(05)-NIKOLAYEV, V.M., VYSOKOSTROVSKAYA, N.B., PARAMONOVA, V.I., OSIPOV, S.V., FROLOV, V.I.

COUNTRY OF INFO--USSR

SOURCE--RADIOKHIMIYA 1970, 12(1), 127-32

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--ALPHA RADIATION, ANION EXCHANGE RESIN, PLUTONIUM ISOTOPE, MECHANICAL STRENGTH, PARTICLE SIZE/(U)AV23M ION EXCHANGE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1206 STEP NO--UR/0186/70/012/001/0127/0132

CIRC ACCESSION NO--AP0128624

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

2/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0128624

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AV,23M RESIN WAS SUBJECTED TO ALPHA IRRADN. FROM ABSORBED (FROM NITRATE SOLNS.) PRIME238 PU (FOR DIFFERENT TIMES, SO THAT THE RADIATION DOSE REACHED UP TO 4 TIMES 10 PRIME8 RAD). THE SWELLING OF THE RESIN INCREASED WITH INCREASING DOSE, AND THE RESIN BECAME SOL. IN 7.5 M HNO SUB3; THE SOLY. INCREASED LINEARLY WITH THE DOSE, TO 14PERCENT AFTER IRRADN. WITH A DOSE OF SIMILAR TO 3 TIMES 10 PRIME8 RAD. THE INCREASE IN SWELLING AND SOLY. IS ATTRIBUTED TO THE DESTRUCTION OF CROSSLINKING. THE COLOR OF THE RESIN CHANGED FROM LIGHT YELLOW TO RED, AND THE AV. PARTICLE SIZE INCREASED SOMEWHAT AS A RESULT OF IRRADN. THE SORPTION CAPACITY OF THE RESIN DECREASED BY 10PERCENT ON IRRADN. WITH 2.57 TIMES 10 PRIME8 RAD; THE LOSS OF EXCHANGE GROUPS WAS 1.18 GROUPS-100 EV. ALTHOUGH THE TOTAL AMT. OF PRIME238 PU SORBED ON THE RESIN IN CONTACT WITH SOLN. DECREASED WITH TIME (AS A RESULT OF THE DECREASE IN CAPACITY AND OXION. OF THE PU TO THE HEXAVALENT STATE), THE AMT. OF IRREVERSIBLY SORBED PU INCREASED FROM 0 IN THE CASE OF NONIRRADIATED RESIN TO 8 MG-KG IN THE CASE OF RESIN IRRADIATED WITH 2.4 TIMES 10 PRIME8 RAD. THE MECH. STRENGTH OF THE NONIRRADIATED RESIN AND THE RESIN IRRADIATED WITH A DOSE OF 2.57 TIMES 10 PRIME8 RAD WAS 355 AND 85 G-GRAIN, RESP.

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USSR UDC 541.15

PARAMONOVA, V. I., VYSOKOOSTROVSKAYA, N. B., NIKOLAYEV, V. M., OSIPOV, S. V., and FROLOV, V. I.

"Effect of Internal Alpha-Irradiation on Characteristics of Anion Exchanger AV-23M"

Leningrad, Radiokhimiya, Vol 12, No 1, 1970, pp 127-132

Abstract: The article describes results of a study of the effect of internal alpha-irradiation dose on the capacity, basicity, swelling capacity, mechanical grain strength and solubility of vinylpyridine anion exchanger AV-23M, as well as the distribution of some fission products of Zr-95 + Nb-95, Ce-144 + Pr-141, Ru-106 + Rh-106. The isotope Pu-238 was used for irradiation. The principal result of the action of alpha radiation was found to be the breakdown of resin cross-linkage. This is manifested in increased swelling capacity and decreased grain strength. Internal alpha-irradiation of the resin results in its dissolution, with complete dissolution, according to estimates, setting in at a dose of about (2.5 - 3.8) $\cdot 10^4$ g·hr Pu-238/kg

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USSR

PARAMONOVA, V. I., et al., Radiokhimiya, Vol 12, No 1, 1970, pp 127-132

absolutely dry resin.

At a maximum dose equal to $2.57 \cdot 10^8$ rad there is a mere 10 percent decrease in capacity and practically no change in basicity. According to resultant data the capacity loss rate constant was estimated to be $K = (0.27 \pm 0.1) \cdot 10^{-9}$ rad^{-1} and the radiation-chemical reaction yield $G_0 = 1.18 \pm 0.45$ exchange groups/100 ev.

Dissolution of the resin and the decrease in its capacity result in the appearance of plutonium-238 in solution. Not less than 70 percent of the plutonium found in solution is oxidized to the hexavalent state.

Alpha-irradiation results in changed resin sorption characteristics. The amount of irreversibly sorbed plutonium increases with

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USSR

PARAMONOVA, V. I., et al., Radiokhimiya, Vol 12, No 1, 1970, pp 127-132

irradiation dose, but even at the maximum dose it is an insignificant quantity (hundredths of a percent of the initially sorbed quantity of plutonium).

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

1/2 028 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--MECHANISM OF FORMATION OF NEGATIVE RESISTANCE IN SEMICONDUCTORS DURING IMPURITY BREAKDOWN -U-

AUTHOR-(03)-ZAYTSEV, A.N., ZVEZDIN, A.K., OSIPOV, U.U.

COUNTRY OF INFO--USSR

SOURCE--PIS'MA ZH. EKSP. TEOR. FIZ. 1970, 11(5), 257-60

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELECTRON TEMPERATURE, ELECTRON DENSITY, SEMICONDUCTOR CONDUCTIVITY, PHONON EQUILIBRIUM, ELECTRON RECOMBINATION, SEMICONDUCTOR IMPURITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/0996 STEP NO--UR/0386/70/011/005/0257/0260

CIRC ACCESSION NO--AP0115017

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

2/2 028 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0115017

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOME OF THE MECHANISMS ARE CONSIDERED WHICH RESULT IN THE LACK OF A ONE VALUED DEPENDENCE OF THE TEMP. OF THE HOT ELECTRONS OR OF THEIR CONCN. ON THE ELEC. FIELD AND, THEREBY, IN THE EXISTENCE OF NEG. RESISTANCE. THE FOLLOWING MECHANISMS WERE CONSIDERED: THE NEG. DIFFERENTIAL RESISTANCE IS DUE TO A LACK OF EQUIL. FOR THE PHONONS, IT IS DUE TO THE RELAXATION OF THE ENERGY IN THE IONIZATION AND RECOMBINATION PROCESSES, IT IS DUE TO THE SCREENING OF THE IMPURITY POTENTIAL BY THE NONEQUIL. ELECTRONS. FACILITY: MOSK. INST. RADIOTEKH. ELEKTRON AVTOMAT., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC 533.92:621.039.61

KONOVALOV, V. G., MARTNIN, V. G., OSIPOV, V. A.

"Study of the Characteristics of a Beam-Plasma Discharge With an Anti-cathode"

Fiz. plazmy i probl. upravl. termoyader. sinteza. Resp. mezhved. sb. (Plasma Physics and Problems of the Controlled Thermonuclear Fusion. Republic Interdepartmental Collection), 1972, No. 3, pp 23-30 (from RZh-Fizika, No 11, Nov 72, Abstract No 11G282)

Translation: A beam-plasma discharge with an anticathode in a magnetic trap with mirrors is investigated. The discharge occurs in a mode with a developed high-frequency beam-centrifugal instability. It is shown that the frequency characteristics of the oscillations that were measured experimentally coincide with the theoretical characteristics. A nonlinear interaction between the longitudinal electron waves and waves of the high-frequency beam-centrifugal instability is observed. The plasma-beam system occurring in this mode is characterized by heating of the ion component of the plasma. Heating of the ion component was recorded with three different analyzers. It was shown that the most probable value of ion energy was 1-1.8 kev in the range of discharge currents and magnetic fields studied.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC 539.37:539.40

BULAT, S. I., GRIGOROVICH, V. K., OSIPOV, V. G., and TIKHONOV, A. S., Moscow

"Ductility and Strength of Alloys in the Copper-Nickel Systems"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 2, Mar-Apr 71, pp 157-161.

Abstract: Results are presented from an experimental study of the ductility and strength characteristics of copper-nickel alloys at the temperatures of hot deformation and at room temperature. The ductility and strength were studied in extension and during hot rolling. The greatest deformation resistance at room temperature is that of the alloy of copper with 60% nickel. As the temperature increases, this maximum is displaced toward the more refractory component -- nickel. The strength maxima correspond to the minima of relative reduction in area, elongation, and permissible reduction in rolling. These factors are interpreted from the thermodynamic standpoint.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC: 621.372.54

YASINSKIY, I. M. and OSIPOV, V. G.

"Designing Band Piezoelectric Filters"

Sb. tr. Nauchno-tekhn. konferentsii prof.-prepodavat. sostava Vses. zaochn. elektrotekhn. in-ta svyazi (Collected Transactions of the Scientific Technical Conference of the Professorial-Instructor Staff, All-Union Correspondence Electrical Engineering Communication Institute) No. 5, Moscow, 1970, pp 94-101 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3A193)

Translation: A method of design by operating attenuation, based on the use of a preliminary computation of a low-frequency prototype, is explained. It is shown that the latter can be realized in the form of a bridge filter with parallel coils and piezoelectric resonators, or in the form of a differential bridge system. Two illustrations, bibliography of two. N. S.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC 539.4

BULAT, S. I., OSIPOV, V. G., TIKHONOV, A. S.

"Effect Which the Nature of Distribution of the Second Phase has on the Ductility of Kh18N10T Stainless Steel"

V sb. Protsessy formoizmeneniya met. i splavov (Processes of Deformation of Metals and Alloys--collection of works), Moscow, "Nauka", 1971, pp 137-140 (from RZh-Mekhanika, No 10, Oct 71, Abstract No 10V785)

Translation: It is experimentally established that the technological ductility of Kh18N10T stainless steel during rolling depends not only on the average content of the second phase, but also on the nature of the distribution of this phase through the cross section of the strip being rolled. Two cases of ferrite distribution through the cross section of a Kh18N10T steel strip are established: accumulation of ferrite in the central part and almost total absence on the surface of the strip; an insignificant quantity of ferrite in the center, and accumulation in the form of short lines on the surface of the strip. Authors' abstract.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC 539.37:539.40

BULAT, S. I., GRIGOROVICH, V. K., OSIPOV, V. G., and TIKHONOV, A. S., Moscow

"Ductility and Strength of Alloys in the Copper-Nickel Systems"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 2, Mar-Apr 71, pp 157-161.

Abstract: Results are presented from an experimental study of the ductility and strength characteristics of copper-nickel alloys at the temperatures of hot deformation and at room temperature. The ductility and strength were studied in extension and during hot rolling. The greatest deformation resistance at room temperature is that of the alloy of copper with 60% nickel. As the temperature increases, this maximum is displaced toward the more refractory component -- nickel. The strength maxima correspond to the minima of relative reduction in area, elongation, and permissible reduction in rolling. These factors are interpreted from the thermodynamic standpoint.

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USSR

UDC: 539.374

OSIPOV, V. G. and GANIN, N. P.

"Distribution of Tangential and Normal Stresses in a Disc and a Rectangular Plate Compressed between Horizontal Blocks"

V sb. Plastich. deformatsiya tugoplavk. met. i spets. splavov (Plastic Deformation of Refractory Metals and Special Alloys--collection of works) Moscow, "Nauka" 1970, pp 5-16 (from RZh-Mekhanika, No. 8, Aug 70, Abstract No. 8V474)

Translation: The solution of the problem of stress distribution in a disc and a rectangular plate compressed between two horizontally positioned blocks is given on the basis of an analysis of isochromes and isoclines obtained with a polariscope. For the solution, the "tangential stress difference" method was used; it permits determining the tangential and normal stresses, expressed by the conditional number of their units (the "band number") at any point in the elastically deformed model together with the generally known equation $\tau_{xy} = 0.5(\sigma_1 - \sigma_2)\sin 2\psi$. Bibliography of three. Author's abstract.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC: 621.372.543.2(088.8)

OSIPOV, V. G.

"A Wide-Band Filter for the Superhigh Frequency Range"

USSR Author's Certificate No 262284, filed 22 Apr 68, published 2 Jun 70 (from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11D77 P)

Translation: This Author's Certificate introduces a filter which contains quartz resonators connected in a bridge with differential transformers in the input and output circuits. To expand the passband, the filter is equipped with additional loops made in the form of cavity resonators and connected between the windings of the above-mentioned transformers.

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Nickel

USSR

UDC: 539.37

OSIPOV, V. G., TIKHONOV, A. S., and SHORSHOROV, M. Kh.

"Mechanism of Superplasticity of a Nickel-Chromium Alloy of Eutectic Composition"

Moscow, Fizika i Khimiya Obrabotki Materialov, no 6, Nov-Dec 70, pp 76-81

Abstract: A discussion is presented of the experimental study of the effect of superplasticity in the Ni+Cr(49%) alloy close in its chemical composition to an eutectic concentration in the Ni-Cr system. A number of possible mechanisms of this phenomenon are analyzed. On the basis of calculating the vacancy creep rate and assessing the contribution of vacancies to the growth of cavities on deformation, it is suggested that diffusion (vacancy) viscosity referred to by R. F. Nabarro and C. Herring may be one of several possible mechanisms controlling the effect of superplasticity in the alloy Ni+49% Cr.

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USSR

UDC 615.371:576.851.45/.015.2:615.835.5/.015.4:612.112.3

OSIPOV, V. I., VOROB'YEV, A. A., IGONIN, A. M., ZEMSKOV, Ye. M., and PATRIKEYEV, G. T.

"Electron Microscopic Studies of Phagocytosis Kinetics of Plague Vaccine Strain EV by Pulmonary Macrophages in Guinea Pigs on Intratracheal Immunization"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1973, pp 42-44

Abstract: Electron microscope studies were conducted on phagocytosis of a live plague vaccine, strain EV, administered into the tracheas of guinea pigs. The results showed that 5 to 15 minutes after administration the majority of the bacterial cells adhered to the surfaces of alveolar macrophages. This was followed by the formation of pseudo-pods, invagination, and vesicle formation. After 45 to 60 minutes the vast majority of the bacterial cells were within the macrophages, with only individual microbes located extracellularly. After 90 minutes the endocytic vesicles contained only amorphous masses and in only a few cases could residues of the vaccine be identified.

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USSR

UDC 577.3

KAVERZNEVA, Ye. D., MAKSIMOV, V. I., and OSIPOV, V. I., Institute of Organic Chemistry imeni N. D. Zelinskiy, Academy of Sciences USSR, Moscow

"Structural Disturbances in Lysozyme and Ribonuclease A After Gamma Irradiation in a Dry State"

Moscow, Biofizika, Vol 16, Vyp 4, Jul/Aug 71, pp 581-588

Abstract: Dry lysozyme and ribonuclease A were irradiated with 30 Mrad. Subsequent analyses of the structure and chemical properties of these substances revealed that while dry ribonuclease exhibited signs of an overall disturbance of its conformation, the tertiary structure of dry lysozyme was disturbed to a much smaller degree: its tryptophan content was reduced, but the changes were local. The severity of the deviations from the initial state was increased after dissolution and fractionation. It is concluded that ionizing irradiation of proteins in the dry state always induces certain small, primary, localized changes in the molecules, even though these changes may be difficult to detect. When the irradiated proteins are subsequently dissolved, a chain of secondary structural rearrangements takes place in the protein molecules.

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USSR

UDC 669.293.5.296.537.312.62.539.374

SAVITSKIY, Ye. M., BARON, V. V., FROLOV, V. A., STARKOV, V. N., KORCHAGIN, P. A. ARKUSHA, T. I., OSIPOV, V. N., SERDYUKOV, Yu. A.

"Cathode-Ray Melting and Deformation of Superconducting Niobium-Zirconium Alloys Under Industrial Conditions"

Probl. Sverkhprovodyashch. Materialov [Problems of Superconducting Materials -- Collection of Works], Moscow, Nauka Press, 1970, pp.187-192. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 I785 by the authors).

Translation: Industrial modes of melting ingots 90 mm in diameter and weighing up to 45 kg in a cathode ray furnace by the method of double vacuum remelting, and modes of hot pressing of ingots into bars 50 mm in diameter and forging of pressed bars to 18-22 mm in diameter are developed for alloys of Nb with Zr. Bars produced by cathode ray melting, hot pressing, and forging are used to produce wire 0.2 mm in diameter, the mechanical and superconducting properties of which are measured. 2 figs; 16 biblio refs.

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USSR

UDC: 537.312.62

SAVITSKIY, Ye. M., BARON, V. V., FROLOV, V. A., STARKOV, V. N., KORCHAGIN, P. A., ARKUSHA, T. I., OSIPOV, V. N., SERDYUKOV, Yu. A.

"Electron-Beam Melting and Deformation of Superconducting Niobium-Zirconium Alloys Under Industrial Conditions"

V sb. Probl. sverkhprovodyashch. materialov (Problems of Superconducting Materials--collection of works), Moscow, "Nauka", 1970, pp 187-192 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D554)

Translation: Cycles for smelting ingots 90 mm in diameter weighing up to 45 kg in an electron-beam furnace by the method of double vacuum remelting, and schedules for hot-pressing the ingots into bars 50 mm in diameter and for forging the pressed bars to a diameter of 18-20 mm are worked out under industrial conditions for niobium-zirconium alloys. Wire 0.2 mm in diameter is made from the bars produced by the methods of electron-beam melting, hot-pressing and forging, and the mechanical and superconducting properties of this wire are measured. Two illustrations, bibliography of sixteen titles. Resumé.

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USSR

UDC 669.018.4.537.312.62

SAVITSKIY, Ye. M., BARON, V. V., FROLOV, V. A., STARKOV, V. N., KORCHAGIN, P. A., ARKUSHA, T. I., OSIPOV, V. N., and SERDYUKOV, Yu. A.

"Cathode Ray Melting and Deformation of Superconducting Niobium-Zirconium Alloys Under Industrial Conditions"

Problemy Sverkhprovodyashchikh Materialov [Problem of Superconducting Materials — Collection of Works], Moscow, Nauka Press, 1970, pp 187-192

Translation: Modes for production of ingots 90 mm in diameter weighing up to 45 kg in a cathode ray furnace by double vacuum remelting, and modes of hot pressing of ingots into bars 50 mm in diameter and forging of the pressed bars to diameters of 18-20 mm have been developed under industrial conditions for alloys of niobium with zirconium. Wire 0.2 mm in diameter has been produced from the bars manufactured by cathode ray melting, hot pressing, and forging; the mechanical and superconducting properties of the wires are measured.

2 figures, 16 biblio. refs.

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USSR

OSIPOV, V. P., SOROCHENKO, Ya. I., and ZAVGORODNIY, V. I., Chair of Infectious Diseases, Tselinograd Medical Institute

"Recurrence of Typhoid Fever Within a Year"

Alma-Ata, Zdravookhraneniye Kazakhstana, No 8, 1971, p 76

Abstract: A 19-year-old male was admitted to the hospital with a diagnosis of typhoid fever, intestinal bleeding, ascariasis, and trichuriasis. He responded to antibiotic therapy and was discharged in good condition. Follow-up examination showed him to be healthy. But 10 months later he was rehospitalized with similar symptoms. This rare recurrence of typhoid within a year is attributed to the presence of worms which, as in the case of acute dysentery, are believed to weaken the process of immunity formation. The patient did not receive specific anhelminthic therapy because of the lack of effective and safe drugs to treat trichuriasis.

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OSIPOV V.P.

AN0012150

UR 9013

AUTHOR-- V. A. YEFIMOV, CORRESPONDING MEMBER OF THE UKRAINIAN ACADEMY OF SCIENCES, DIRECTOR, THE INSTITUTE OF FOUNDING PROBLEMS /IFP/

NEWSPAPER-- PRAVDA UKRAINY, JANUARY 11, 1970, P 2, COLS 1-3

ABSTRACT-- THE AUTHOR DIRECTED A PROGRAM AT THE IFP, THE RESULT OF WHICH WAS A NEW HIGH-SPEED TEEMING OF 17-23 TON INGOTS OF THE OPEN-HEARTH STEEL. THE "CORRUGATED" INGOT WALLS PREVENT THE FORMATION OF CRACKS IN RIMMED STEEL INGOTS. THE NEW METHOD INCREASED THE POURING RATE BY A FACTOR OF 8-10 AND CUT THE TIME BY A FACTOR OF 2.5. THE NEW METHOD IS PRACTICED AT THE METALLURGICAL PLANT IMENI IL,ICH IN ZHDANOV AND THE CHEREPOVETS PLANT. CANDIDATE OF TECHNICAL SCIENCES V. N. SAPKO AND ENGINEER V. V. SHEPELEV PARTICIPATED IN THE RESEARCH PHASE OF THIS PROGRAM.

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AN0012150

THE INSTITUTE ALSO CONDUCTED RESEARCH INTO UNDER-SLAG POURING OF STEEL /ENGINEER V. P. OSIPOV, A DEPARTMENT HEAD, CANDIDATE OF TECHNICAL SCIENCES N. YA. YASHCHUK, ET. AL./ AND COLLABORATED WITH PATON,S INSTITUTE OF ELECTRIC WELDING IN DEVELOPING THE PRODUCTION TECHNOLOGY OF THIS PROCESS. AS A RESULT, THE PRODUCTION TIME HAS BEEN REDUCED TO ONE-TENTH, AND THE AMOUNT OF REJECTS BY A FACTOR OF 2-32, DEPENDING UPON THE GRADE OF STEEL.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC 615.472:615.837.3

LEONT'YEV, A. P., MINCHENKOVA, B. I., and OSIPOV, V. T., All Union Scientific Research Institute of Medical Instrumentation Construction, Moscow

"Emitters for Ultrasound Therapy Apparatus"

Moscow, Meditsinskaya Tekhnika, No 5, Sep/Oct 73, pp 21-25

Abstract: Four types of ultrasound emitters have been developed -- two of the pencil type and two with side emitting surfaces. These emitters are highly effective, capable of operating for a long time at an intensity of 5 w/ cm^2 without noticeable overheating of the emitting surface. They are primarily designed for a serial ultrasound therapeutic apparatus "Ultrasound T-5." The use of piezotransformers with face surfaces makes it possible to get away from the overlaid protective elements, thus improving the utilization characteristics of these emitters making them suitable for the use in internal cavities.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

Inorganic Compounds

USSR UDC 541.451:546.791

OSIPOVA, V. V.

"Oxidation of U_2O_5 at Temperatures Below 100°C"

Leningrad, Radiokhimiya, Vol 12, No 6, 1970, pp 839-843

Abstract: Experimental data are reported on the oxidation of U_2O_5 at temperatures below 100°C. Higher temperatures were not considered, since at 145° the U_2O_5 disproportionates into two phases. It was determined that the kinetics of this oxidation may be satisfactory described by the diffusion mechanism. The final product of the oxidation of U_2O_5 below 100°C is $UO_{2.635}$. The activation energy for the diffusion is 16 ± 3 kcal/mole; it is the same whether the process is being carried out in air or in oxygen; the oxidation rate is somewhat higher for oxygen than for the air medium.

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1/2 038 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--ZIRCONIUM INTERMETALLIDES AND THEIR EFFECT ON THE CORROSION PROPERTIES OF ZIRCONIUM ALLOYS -U-

AUTHOR-(03)-YEVSTYUKHIN, A.I., KOROBKOV, I.I., OSIPOV, V.V.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, AKADEMIYA NAUK SSSR, ATOMNAYA ENERGIYA, VOL 28, NO 3, MAR 70, PP 201-206

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CORROSION RATE, ZIRCONIUM ALLOY, WATER, OXYGEN, CHEMICAL REACTION KINETICS, METAL HEAT TREATMENT, COPPER COMPOUND, TIN COMPOUND, NICKEL COMPOUND, IRON COMPOUND, MOLYBDENUM COMPOUND, OXIDE FILM

CONTROL MARKING--NO RESTRICTIONS

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CIRC ACCESSION NO--AP0130736

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UNCLASSIFIED

CIRC ACCESSION NO--AP0130736 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN INVESTIGATION WAS MADE OF THE PROPERTIES OF INTERMETALLIDE IMPURITIES AND THEIR EFFECT ON THE CORROSION PROPERTIES OF ZIRCONIUM ALLOYS IN WATER AND VAPOR. THE MICROHARDNESS AT VARIOUS TEMPERATURES, THE STRUCTURE OF THE INTERMETALLIDES, AND THE COMPOSITION OF OXIDE FILMS WERE STUDIED. THE MATERIALS USED AND THE EXPERIMENTAL TECHNIQUE ARE DESCRIBED IN DETAIL. IT WAS ESTABLISHED THAT: 1) THE CORROSION OF PURE INTERMETALLIDES (ZRFE SUB2, ZRMO SUB2, ZR SUB2 NI, ZR SUB4 SN, ZR SUB2 CU) IN THE 400-800DEGREESC TEMPERATURE RANGE OCCURS MORE RAPIDLY THAN OF PURE ZIRCONIUM, BOTH IN OXYGEN AND WATER VAPOR; 2) ZRMO SUB2 HAS THE LOWEST OXIDIZING RATE AND ZR SUB2 NI THE HIGHEST; ZR SUB4 SN HAS A LOW OXIDIZING RATE AT 300-400DEGREESC, BUT THIS RATE INCREASES SHARPLY WITH INCREASING TEMPERATURE; 3) A CONNECTION EXISTS BETWEEN THE KINETICS OF OXIDATION, THE STRUCTURE, AND COMPOSITION OF OXIDE FILMS, OCCURRING ON THE INTERMETALLIDE SURFACE; 4) ZR SUB2 NI, ZR SUB4 SN, AND ZR SUB2 CU ARE SOFTENED BY HEATING IN THE 350-450DEGREESC TEMPERATURE RANGE, WHILE ZRMO SUB2 AND ZRFE SUB2 RETAIN THEIR HARDNESS UP TO 700DEGREESC.

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USSR UDC 614.73:[541.15:542.2

CHISTOV, Ye. D., OSIPOV, V. Ye., SPRYGAYEV, I. F., SOLODNIKHINA, L. D., and DZHAGATSPANYAN, R. V.

"Radioactive Contamination in a Radiochemical Reactor"

Moscow, Figiyena i Sanitariya, No 6, 1970, pp 76-80

Abstract: A study of the design and mode of operation of the RS-2.5, the first Soviet industrial radiochemical reactor, which is used to sulfochlorinate saturated hydrocarbons and initiate Co^{60} gamma radiation is presented. It consists of a central axial irradiating unit, Co^{60} sources hermetically sealed in spherical cassettes, nonradioactive spheres, storage place for sources, distributing mechanisms, and biological protection. Radiocontamination of the inactive spherical elements of the reaction is well below the level permitted for radioactive preparations. Additional sealing of radioactive Co^{60} preparations in cassettes would decrease the possibility of the casing of the sources breaking and contaminating the atmosphere.

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JPRS 56674
1 Aug 73

UDC 550.838.08

COMPENSATION OF STATIC FIELDS OF FERROSONDE MAGNETOMETER CARRIER

[Article by Iu.M. Osipov (Leningrad Institute of Precision Mechanics and Optics); Leningrad, Geofizicheskaya Apparatura, Russian, No 50, 1973, pp 47-52]

A ferrosonde magnetometer mounted on a mobile carrier is influenced by the magnetic interference caused by the carrier's magnetic masses. One of the main interferences is the constant of the interference determined by the effect of the magnetically hard carrier iron. It can be indicated by the expression

$$\Delta T_p = X_p \cos\alpha + Y_p \cos\beta + Z_p \cos\gamma, \qquad (1)$$

where X_p, Y_p and Z_p = components of interference constant in respect to axes of the carrier's x, y and z coordinates; α, β, γ = inclination angle of ferrosonde's longitudinal axis to axes of x, y, z coordinates [5].

The interference field is uniform in the ferrosonde's space. The interference constant is compensated either by a system of rings with constant current or by permanent magnets. The maximum degree of compensation is provided by rings with constant current, e.g. the Helmholtz rings or a system of paired rings [3]. With the aid of such rings, we achieve a greater uniformity of compensation field in the space of the test MSE; this provides high quality of compensation. However, the application of rings requires additional power sources and also a system of supply lines. In addition, the rings are awkward and can not be installed everywhere. The interference compensators, utilizing permanent magnets, have high reliability, are simple in design and possess small dimensions and low weight. Their shortcomings are the relative complexity of adjusting and clamping the compensation magnets in position.

Let us examine certain questions in the use of compensators employing permanent magnets.

At the point of installing the test MSE of a ferrosonde, the value and direction of a permanent magnet's compensation field depend on the value of its magnetic moment P_M, distance R between the magnet and the test MSE, as well as on their mutual arrangement. The magnetic moment is determined by the brand of steel, shape of magnet, method and extent of magnetization; the P_M-value is usually known or can be measured. In distinction from a rod made of magnetically soft material, the magnetic moment P_{M_i} of which constitutes a function of the position of the rod's longitudinal axis relative to the total

OSIPOV, Yu. M.
OSIPOV

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OSTPOV, YU. M.

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TECHNICAL TRANSLATION

16

AKM | FSTC-HT-23-2015-72

29 Nov 72

ENGLISH TITLE: PROBLEMS OF LASER BEAM DATA TRANSMISSION PROCEEDINGS OF THE FIRST ALL-UNION CONFERENCE, KIEV, SEPTEMBER 1968

FOREIGN TITLE: PROBLEMY PEREDACHI INFORMATSII LAZERNYM IZLUCHENIYEM

AUTHOR: I. A. DERYUGIN, ET AL.

SOURCE: KIEV ORDER OF LENIN STATE UNIVERSITY IMENI T.G. SCHEVCHENKO

Translated for FSTC by ACSI

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- Title Page -

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC 51

KARTSEV, V. S., MAYZLIN, I. YE., OSOKIN, V. V.

"Compiling the Optimal Steel Output Schedule in an Open-Hearth Shop"

V sb. Mat. vopr. upr. proiz-vom (Mathematical Problems of Production Control--collection of works), Moscow, vyp. 3, 1971, pp 87-99 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V403)

No abstract

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC 622.362:622.778

VODYANITSKIY, YU. N., Candidate of Technical Sciences, TSELGI, and OSIPOV, YU. B., Candidate of Geological and Mineralogical Sciences, Moscow State University

"The Effect of a Magnetic Field on the Breakdown of Iron Coated Quartz Aggregates in Water"

Moscow, Steklo i Keramika, No 5, May 73, pp 8-10

Abstract: The authors study the magnetic properties of iron coated quartz aggregates and the structure of the iron bearing film on the surface of quartz particles. Lyuberetskiy quartz sand (SiO_2 97 percent) was used in the study. The following is the chemical composition of the iron bearing film by percent: 30 SiO_2, 26 Al_2O_3, 29 Fe_2O_3, 5 CaO, and 10 other. The magnetic susceptibility and magnetization of the sand and film were determined on magnetic scales at various temperatures and field intensity. At T=25°C the magnetic susceptibility of the sand does not depend on field intensity. The susceptibility of the iron bearing film at T=25°C is $x=15.5X10^{-6}$, while the paramagnetic susceptibility component is $x=12.10^{-6}$. In heating the iron bearing substance (iron-clay) to 700°C, magnetic susceptibility falls to $x=5\cdot10^{-6}$ and the ferromagnetic component to zero. Variation in the intensity of magnetization of the iron bearing film was determined during heating and cooling in a field of H=7500 amp/cm. The heating curve has an inflection in the 240-270°C

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

VODYANITSKIY, YU. N., et al, Steklo i Keramika, No 5, May 73, pp 8-10

range. This is evoked by the phase transition of a strongly magnetic mineral. A scanning electron microscope was used for studying the structure and thickness of the film. In order to calculate the number of aggregates, the sand was processed with a saturated Na_2SO_4 solution using the methodology for determining the cold resistance of concrete fillers (GOST 8269-64). The aggregates constitute 0.8-0.9 percent weight of the sand. The iron bearing aggregates appear to be the sources for increased Fe_2O_3 content. Iron bearing aggregate breakdown testing was done with the aid of a magnetic field in a Lyuberetskiy chamber. The results show that an alternating magnetic field of industrial frequency breaks down aggregates in water. This makes it possible to remove iron oxides from sand.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

OSIPOV, Yu. S.

meteorology

(3)

Meteorology Source: JPRS #51831 22 Aug '72

UDC 551.508(24-59)

MOVABLE DEVICE FOR GRADIENT TEMPERATURE AND WIND VELOCITY MEASUREMENTS IN THE ATMOSPHERE

[Article by Yu. S. Osipov, A. F. Novalev, V. I. Pakhomov, Institute of Experimental Meteorology; Moscow, Meteorologiya i Gidrologiya, Russian, No 6, 1972, submitted 16 June 1972, pp 102-105]

A device mounted on two trucks for measuring the wind velocity and temperature distribution in the ground layer of the air is described.

When developing a method for dispersing "warm" fogs by warm jets from jet engines, the necessity arose for a detailed investigation of the nature of the behavior of the warm jet in the atmosphere as a function of the meteorological conditions and operating conditions of the engine.

The projects in France and the USA [4,5] demonstrated the theoretical possibility of scattering fog by warm jets. The most significant question now is the choice of the principles of efficient placement of the jet engines with respect to the takeoff and landing strips of airports.

The Institute of Experimental Meteorology of the Main Administration of the Hydrometeorological Service began the investigation of characteristic warm jets from jet engines in 1970 for which it was necessary primarily to create a movable measuring meteorological device. This device was mounted on two trucks one of which is used to raise the meteorological sensors above the Earth's surface, and the recording equipment is placed in the other.

A general view of the device appears in Figure 1. The motor vehicle on which the meteorological sensors are placed has a folding 18 meter boom comprising two movable hinged, approximately equal parts. The upper part of the boom can be set in the vertical plane at practically any angle to the lower part, and the lower part can be arranged within the limits of 0-180 degrees with respect to the ground surface. The entire boom can turn completely around the vertical axis at an angle on the order of 300 degrees. All of this permits variation of the location of the sensor as a function of the purpose of the experiment, setting the boom either vertically or horizontally.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

Meteorology

OSIPOV, Yu. S.

UDC 551.510.42:551.511.3

RELATION OF THE TRANSVERSE DISPERSION OF AN ADMIXTURE IN THE GROUND LAYER OF THE ATMOSPHERE WITH TURBULENT CHARACTERISTICS

[Article by Candidate of Physical and Mathematical Sciences Yu. S. Osipov, Institute of Experimental Meteorology: Moscow, Meteorologiya i Gidrologiya, Russian, No 6, 1972, submitted 21 April 1961, pp 42-50]

An analysis was performed on a series of diffusion experiments from a low-point source (two meters above the Earth's surface) over a level, uniform underlying surface. Simultaneously with the diffusion experiment, a set of meteorological observations were made in the lower 8-meter layer of the atmosphere. On the basis of similarity theory, these data were used to determine the characteristics of the turbulent regime. A comparison of the turbulent characteristics with the diffusion data demonstrated the possibility of application of the relations obtained on the basis of the statistical theory of turbulent diffusion to calculate the transverse diffusion of the admixture. Values of the constant A_2 were obtained which relate the kinetic energy of the transverse wind velocity component to the dynamic friction velocity v_*. The values of A_2 found agree with the data of other authors.

In calculating the dispersion of the admixture in the direction transverse to the mean wind, it is possible to use the approach based on the statistical theory of turbulent diffusion using a description of turbulence in the Lagrange coordinates. Here, in a number of theoretical papers [1, 2, 15] it was demonstrated that for calculation of the diffusion it is sufficient to have data on the Euler turbulent characteristic which are appreciably simpler to measure. However, in practice the calculations of the dispersion of the admixture on the basis of the measured turbulent characteristics are performed extremely rarely. On the other hand, this is connected with the fact that at the meteorological stations there are no instruments for measuring the turbulent characteristics, and on the other hand, it is connected with the fact that reliable statistical methods of calculation have not been developed which could be used for practical purposes.

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Mathematics/mechanics

GURIA

SO: JPRS 55808
26 APRIL 1972

OSIPOV, Yu. S.

MINIMAX ABSORPTION IN DIFFERENTIAL-DIFFERENCE GAMES

[Article by Yu. S. Osipov, Institute of Mathematics and Mechanics of the Ural Science Center of the USSR Academy of Sciences, Sverdlovsk; Moscow, Doklady Akademii Nauk SSR, Russian, Vol 273, No 1, 1972, submitted 10 July 1971, pp 32-35]

The sufficient conditions of successful completion of a differential-difference rendezvous game are presented. The structure of the extremal rendezvous strategies is explained. The basis for the argument is the concept of minimax programmed absorption introduced in reference [1] and modified for application to the investigated class of problems.

The article is adjacent to the studies [1-7].

Let us consider a controlled system

$$\dot{x}(t) = A(t)x(t) + A_\tau(t)x(t-\tau) + f(t, u, v). \tag{1}$$

Here x is the n-dimensional phase vector; the r_1-dimensional vector u and the r_1-dimensional vector v are the control inputs subordinate to the first and second players, respectively, and bound by the conditions $u \in \mathcal{P}$, $v \in \mathcal{Q}$, where $\mathcal{P}, \mathcal{Q}$ are compactums; the matrices A(t) and $A_\tau(t)$ are continuous in the given interval $[t_0, 0]$; the function f(t,u,v) is continuous in $[t_0, 0] \times \mathcal{P} \times \mathcal{Q}$; $\tau = \text{const} \geq 0$. Hereafter, the following notation is also used: $x_t(s) = x(t+s)$ (here and hereafter s varies within the limits of $-\tau \leq s \leq 0$); E_n is the Euclidian n-dimensional vector space, $\|x\|$ is the symbol of the norm in E_n; $\mathcal{H}$ is the space of the functions x(s) summed with the square $\|x(s)\|$, with the norm

$$\|x(s)\|_{\mathcal{H}} = \left(\|x(0)\|^2 + \int_{-\tau}^{0} \|x(s)\|^2 ds\right)^{1/2};$$

$C_{[-\tau,0]}$ is the space of the continuous functions x(s) with the norm $\|x(s)\|_{\mathcal{H}} = \max_s \|x(s)\|$. The symbol $\mathcal{B}$ will denote any of the specific spaces $\mathcal{H}$ or $C_{[-\tau,0]}$, $\|x(s)\|_{\mathcal{B}}$ — the norm in $\mathcal{B}$. We shall call the pair $p = \{t, x(s)\}$, $t \in [t_0, 0]$, $x(s) \in \mathcal{B}$ the game position. The strategy U of the first player is the rule

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placing the set $\mathcal{U}(p) \subset \mathcal{P}$ in correspondence to each position p. The second player can select any method of formation of the control input v generating a realization of $v = v[t]$ with values in Q measurable in $[t_0, \theta]$.

Let the symbol Δ denote overlapping of the interval $[t_0, \theta]$ by the half-intervals $[\tau_i, \tau_{i+1})$, $\tau_0 = t_0$, $i = 0, 1, \ldots$, $\Delta = \sup(\tau_{i+1} - \tau_i)$. Let $p_0 = (t_0, x_0(s))$ be the given position. The approximation movement $x[t, p_0, U]_\Delta$ is any absolute function $x[t]_\Delta$ which is continuous in $[t_0, \theta]$ and satisfies the condition $x[t_0 = s]_\Delta = x_0(s)$ and for almost all t, the equality

$$\dot{x}[t]_\Delta = A(t)x[t]_\Delta + A_1(t)x[t-\tau]_\Delta + f(t, u[t], v[t]),$$

where

$$u[t] = u[\tau_i] \in U(\tau_i, x_\Delta[t]_\Delta), \quad \tau_i \leq t < \tau_{i+1}, \quad i = 0, 1, \ldots$$

The function $x[t, p_0, U]$ is called the movement of the system (1) from the position p_0 corresponding to the strategy U if there is a sequence of overlappings $\{\Delta_j\} \to 0$ such that a sequence of movements $x[t, p_0, U]_{\Delta_j}$ uniformly converges to $x[t, p_0, U]$ in $[t_0, \theta]$. The set of movements $x[t, p_0, U]$ is not empty.

<u>Problem 1.</u> The system (1), the time interval $[t_0, \theta]$, the initial position $p_0 = (t_0, x_0(s))$ and the closed set $\mathcal{M}$ are given. It is required to construct the strategy U_0 of the first player guaranteeing satisfaction of the condition $x[\theta] \in \mathcal{M}$ for any movement $x[t] = x[t, p_0, U]$ (that is, for any method of formation of the control v of the second player).

Let us introduce some definitions. Let each $t \in [t_0, \theta]$ be placed in correspondence to a nonempty set $\mathcal{M}_t \subset \mathcal{M}$. Let us set

$$r(t, x(s)) = \inf_{z \in \mathcal{M}_t} \|x(s) - z(s)\|_T.$$

Let $\{z^k(s)\}$ be a minimizing sequence of elements $\mathcal{M}_t$ for the functional $\|x(s) - z(s)\|_T$. The symbol $Z(t, x(s))$ denotes the set of partial limits of the sequence of vectors $\{z^{(k)}(0)\}$. Also let $\mathcal{M}_\theta = \{y = z(0) \mid z(s) \in \mathcal{M}_\theta\}$.

<u>Definition 1.</u> The minimax extremal for the system of sets $\mathcal{M}_t$, $t_0 \leq t \leq \theta$, will be the strategy U^m of the first player given by the sets $\mathcal{U}(p)$, constructed by the rule

$$\mathcal{U}^m(t, x(s)) = \{u_0 \mid \min_{u \in Q} (z - x(0)) f(t, u_0, v) = \max_{u \in U} \min_{v \in Q} (z - x(0)) f(t, u, v)\}$$

at least for one $z \in Z(t, x(s))$.

Let $\mathcal{F}^m(t, u)$ be the function which places the closed subset $\mathcal{F}^m(t, u) \subset \mathcal{G}$ in correspondence to each pair (t, u) so that the set

$$\mathcal{F}(t, \mathcal{F}^m) = \mathrm{co}\{f(t, u, v) \mid v \in \mathcal{F}^m(t, u), \quad u \in \mathcal{P}\}$$

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

OSIPOV, YU. YU., DMITRIYEV, B. S.

"Effect of Xerophagia and Hypokinesis on the Indices of Water-Salt Metabolism in Rats"

Moscow, V sb. Aktual'n. vopr. kosmich. biol. i med. (Current Problems in Space Biology and Medicine--collection of works), 1971, pp 211-212 (from RZh-Biologicheskaya Khimiya, No 21, Nov 71, Abstract No 21F1367)

Abstract: A study was made of the dynamics of body weight, electrolytic composition of plasma and whole blood, hematocrit value and hydration of whole blood, erythrocytes and tissues of the internal organs, muscles and skin. A seven-day diet of dry food caused a considerable increase in the hematocrit value and a reduction in the hydration of whole blood. The sodium and potassium concentration in the blood plasma increased noticeably, and hydration of the tissues of internal organs, muscles, skin and erythrocytes decreased; there was no change of water concentration in the liver tissues. By the end of the experiment, the weight

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OSIPOV, YU. YU., et al, V sb. Aktual'n. vopr. kosmich. biol. i med., 1971, pp 211-212

reduction of the animals was 33 percent of the initial weight. The combined action of limited movement and xerophagia caused changes of a similar nature. Weight loss in these animals was 34 percent. The hematocrit value reached was higher than in rats kept on a dry diet alone, although the water concentration in the whole blood of the hypokinetic animals was higher. The sodium concentration in the blood plasma was high, but did not reach the values observed in the animals allowed freedom of movement. The potassium concentration in the blood plasma was normal. The water content in the tissues of internal organs in the animals with freedom of movement decreased, but was somewhat closer to the values for intact rats. Increased water content was observed in the liver tissues. Thus depriving animals of water under conditions of restricted movement causes less intensive changes in the water-salt status of the rats than in the case of xerophagia alone, which may be an indication of the competence of the system of osmoregulation under the given experimental conditions. Resume.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR UDC 669.295.004.2

FEYGIN, B. G., BELOSKURSKAYA, G. I., POMAZKINA, L. G., OSIPOVA, I. A.

"The Problem of Labor Hygiene in Titanium Production"

Tr. In-ta krayev. patol. KazSSR, (Works of the Institute of Regional Pathology, Kazakh SSR), 1970, Vol 19, pp 55-57, from RZh-Metallurgiya, No 2, 1971, Abstract No 2G199 by A. Tseydler)

Translation: Preliminary data on the general morbidity of workers in titanium production indicate that there are harmful factors influencing the morbidity of the respiratory organs and nasopharynx.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

1/2 007 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--INFLUENCE OF THE SOLUBILITY OF TABLETED SUBSTANCES ON THE EFFECTIVENESS OF THE DISINTEGRATING ABILITY OF STARCH -U-

AUTHOR-(04)-SHTEYNGART, M.V., OSIPOVA, I.D., NOSOVITSKAYA, S.A., BORZUNOV, YE.YE.

COUNTRY OF INFO--USSR

SOURCE--FARMATSIYA (MOSCOW) 1970, 19(1), 17-20

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DRUG INDUSTRY, STARCH, SOLUBILITY, AQUEOUS SOLUTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0171 STEP NO--UR/0466/70/019/001/0017/0020

CIRC ACCESSION NO--AP0119167

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

2/2 007 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119167

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN COMPARATIVE INVESTIGATIONS IT WAS SHOWN THAT TABLETS PREPD. FROM VARIOUS DRUGS WITH STARCH SHOW DIFFERENT DISINTEGRATION RATES, WHEN IMMERSED IN WATER. TABLETS WITH WATER INSOL. DRUGS DISINTEGRATE WELL AND QUICKLY. WATER SOL. DRUGS FORM MORE DURABLE TABLETS WITH STARCH, APPARENTLY BECAUSE OF THE DIMINISHING SORPTION CAPACITY OF STARCH. TABLETS OF STARCH WITH SUBSTANCES CAUSING GLUEING OF STARCH (IODIDES, CHLORIDES, BROMIDES, BENZOATES), DISINTEGRATE POORLY. TO FORM TABLETS FROM WATER SOL. AND STARCH GLUEING SUBSTANCES, NO STARCH SHOULD BE USED. FACILITY: KHAR'KOV. NAUCH.-ISSLED KHIM. FARM. INST., HARKOV, USSR.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

1/2 026 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--HYGIENIC INVESTIGATION OF FOOD PRODUCTS CANNED WITH AN ANTIBIOTIC NYZINE -U-

AUTHOR-(03)-BOGORODITSKAYA, V.P., SHILLINGER, YU.I., OSIPOVA, I.N.

COUNTRY OF INFO--USSR

SOURCE--GIGIYENA I SANITARIYA, 1970, NR 5, PP 37-40

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FOOD CANNING, ANTIBIOTIC, TOXICITY/(U)NYZINE ANTIBIOTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1643 STEP NO--UR/0240/70/000/005/0037/0040

CIRC ACCESSION NO--AP0112637

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

2/2 026 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112637

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VEGETABLE PRODUCTS CANNED WITH AN ANTIBIOTIC NYZINE WERE EXAMINED FOR RESIDUAL CONTENT OF THE COMPOUND. GREEN PEAS WERE FOUND TO CONTAIN FROM 25 TO 40 MG AND POTATOES AND TOMATOES UP TO 100 MG OF NYZINE PER KILOGRAM WEIGHT OF THE PRODUCT EXAMINED. THESE PRODUCTS HAD NO NOXIOUS EFFECT ON EXPERIMENTAL MICE. NYZINE MAY BE CONSIDERED TO BE NONTOXIC IN AMONTS IT IS USED IN FOOD CANNING INDUSTRY. FOOD PRODUCTS TREATED WITH NYZINE ARE QUITE INNOCUOUS AND MAY BE USED WITHOUT RESTICTIONS. FACILITY: INSTITUT PITANIYA AMN SSSR, MOSCOW.

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USSR

UDC 621.791.3:669.715+669.14.018.8

KOBYLYANSKIY, I. F., KONONENKO, Yu. F., GUSEV, V. R., TSVETKOV, Yu. F., OSIPOVA, K. Ya., LEPANOV, N. S., and CHULKOV, Ye. I., Engineers

"Soldering of Aluminum and Its Alloys With Stainless Steel"

Moscow, Svarochnoye Proizvodstvo, No 11, Nov 70, pp 41-44

Abstract: A method has been developed for fluxless soldering allowing firm attachment of aluminum and its alloys to steel for parts and units working at temperatures up to 400°C. The hypoeutectoid alloy produced during soldering greatly limits the formation and growth of the intermetallide layer around the soldered joint due to the high heating rate to 640°C and low force of external clamping of the parts being connected (1 kg/cm^2).

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC:669.187.5

ZAYTSEV, B. Ye., GOTIN, V. N., SHCHERBAKOV, A. I., SERGYEV, A. B., ZHITKOV, N. K., OKOROKOV, G. N., BOYARSHINOV, V. A., TULIN, N. A., VOYNOVSKIY, Ye. V., TOPILIN, V. V., POZDEYEV, N. P., SHALIMOV, Al. G., OSIPOVA, L. A., CHERNOV, Yu. V., and RAZANOV, T. S.

"Specifics of Vacuum Arc Remelting of Nickel-Based Alloys and Stainless Steels With Reverse Arc Polarity"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of Works], No 75, Metallurgiya Press, 1970, pp 181-183

Translation: Results are presented from a study of vacuum arc remelting of nickel alloys in a crystallizer 380-480 mm in diameter with thermocouples calked in length and height. The rate of melting with reverse polarity is 20% higher with identical bath depth of liquid metal. This is a result of more intensive heat transfer from the walls of the crystallizer during melting with reverse polarity. The macrostructure, chemical composition N, O, H and mechanical properties of the metal produced by melting with forward and reverse polarity are identical. The ingot produced with reverse polarity had no corona. 2 figures; 1 table; 1 biblio. ref.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC 669-172:541.12.036

KLEYN, G. A., OSIPOVA, L. Kh., GRISHKOV, G. N., MIKHAYLOV, S. M., and VOLKOV, O. V.

"Effect of Temperature on the Physical and Mechanical Properties of Oriented Molybdenum Single Crystals"

Monokristally Tugoplavkikh i Redkikh Metallov [Single Crystsls of Refractory and Rare Metals -- Collection of Works], Nauka Press, 1971, pp 153-158

Translation: A study was made of the effect of temperature (1,000°C) on the anisotropy of the physical and mechanical properties of molybdenum single crystals grown in the [001], [110], [111], and [112] directions. 3 Tables; 3 Figures; 8 Bibliographic References.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC 669.187.2.083

GOTIN, V. N., ZAYTSEV, B. YE., SHCHERBAKOV, A. I., ZHITKOV, N. K., OKOROKOV, G. N., BOYARASHINOV, V. A., VOYNOVSKIY, YE. B., TOPILIN, V. V., SHALIMOV, AL. G., OSIPOVA, L. M., CHERNOV, YU. V., ROZANOVA, T. S., and LAKTIONOV, V. S.

"Influence of Wall Thickness of Crystallizer and Consumption of Cooling Water on Conditions of Formation of Ingot During Vacuum Arc Remelting"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of Works], No 75, Metallurgiya Press, 1970, pp 178-180

Translation: In a vacuum arc furnace in a crystallizer (C) 160 mm in diameter with a current of 2.0-3.7 ka, the influence of wall thickness of C and temperature of cooling water on conditions of formation of ingot of complexly alloyed nickel-based alloys is studied. C with wall thicknesses of 30 and 18 mm were studied, the temperature on the outer surface of the C reaching 75°C in the first case, 105°C in the second. The temperature of the internal surface of the C was identical, 140-150°C. Neither a change in C thickness nor a change in water consumption from 11 to 22 m^3/hr influenced the depth of the liquid metal bath, i.e., both repeated rolling of the C and reduced water consumption were permissible. 2 figures.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

1/2 030 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--OIL EMULSION COOLANTS FOR ENGINES -U-

AUTHOR-(05)-BUTKOV, N.A., OSIPOVA, L.M., VOLKOV, A.S., DRESKOV, A.A., KOZHIN, V.P.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,585

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--03MAR70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, PROPULSION AND FUELS

TOPIC TAGS--EMULSION, CHEMICAL PATENT, HEAT TRANSFER FLUID, THIOL, MERCAPTAN, BENZENE DERIVATIVE, ORGANIC AZOLE COMPOUND, PHOSPHATE ESTER, ANTICORROSION AGENT, MARINE ENGINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/0088 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0127715

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

2/2 030 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AA0127715

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN OIL EMULSION FOR COOLING SHIP ENGINES, HAVING IMPROVED ANTICORROSION AND ANTICAVITATION PROPERTIES AND IMPROVED HEAT TRANSFER, CONTAINS H SUB2 O 98-9, AROMATIZED OIL 0.712-1.424, NA SULFONATE 0.070-0.140, K NAPHTHENATE 0.180-0.360, 1,4 BUTYNEDIOL 0.010-0.020, MERCAPTOBENZOTHIAZOLE 0.003-0.006, CR STEARATE 0.005-0.0010, AND ALKYLZINC DITHIOPHOSPHATE 0.020-0.040PERCENT.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

USSR

UDC[537.226+537.311.33]:539.16.04

ZAKHAROVA, YE. K., ZUBOV, V. G., and OSIPOVA, L. P.

"Effect of Pile Irradiation on Structure and Various Properties of Crystalline and Fused Quartz"

Vozdeystviye reaktornogo oblucheniya na strukturu i razlichnyye svoystva kristallicheskogo i plavlenogo kvartsa (cf. English above), Moscow State University, Chair of Scientific Information, Chair of General Physics, Moscow, 1971, 131 pp, ill., bibliography with 236 titles, No 3465-71 Dep (from RZh-Fizika, No 2, Feb 72, Abstract No 2YE1533 DEP from authors' abstract)

Translation: A survey is made of data in the literature on the effect of pile irradiation on various physical properties of crystalline and fused quartz: density, refractive index, specific rotation, elastic constants, thermal and dielectric properties, absorption spectra, Raman spectra, X-ray photographs, etc. The analogy between a radiative and temperature α-β transition is considered, as well as the effect of annealing on radiation effects. The general pattern of radiation damage in fast neutron-irradiated quartz is discussed. Bibliography with 236 titles.

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USSR

UDC: 681.327.67

MOTOROV, N. G., OSIPOVA, M. M., RAKOV, M. A., TUZOV, V. M., Physicomechanical Institute, Academy of Sciences of the Ukrainian SSR

"A Multistable Pulse-Width Element for the Superhigh-Frequency Range"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 4, 1970, p 32, Patent No 260282, filed 30 Oct 68

Abstract: This Author's Certificate introduces a multistable pulse-width element for the superhigh-frequency range. The unit contains a self-oscillator and a phase detector. As a distinguishing feature of the patent, speed is increased and reliability is improved by connecting the phasing input of the self-oscillator to the reference voltage source through a frequency multiplier, and putting a resonance switch between the self-oscillator and detector. The output of the phase detector and the reference voltage source are connected through a summing circuit to the controlling input of the resonance switch.

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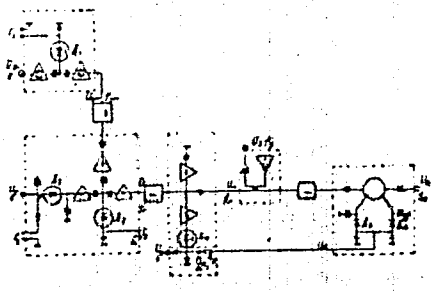
MOTOROV, N. G., et al, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 4, 1970, p 32, Patent No 260282, filed 30 Oct 68



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USSR

UDC 547.242

CHADAYEVA, N. A., KAMAY, G. KH., MAMAKOV, K. A., OSIPOVA, M. P.

"Interaction of Thioacid Esters of Trivalent Arsenic with Alkyl Halides"

Leningrad, Zhurnal Obshchey khimii, Vol XLII (CIV), No 1, 1972, pp 125-129

Abstract: A study was made of the interaction of thioacid esters of trivalent arsenic with alkyl halides to discover the mechanism of this reaction. The explanation is based on the following representation:

$$R_2\ddot{A}sSR' + R''Hlg \longrightarrow \left[R_2\overset{R''}{\overset{|}{A}}sSR'\right]^+ Hlg^- \begin{cases} \xrightarrow{a} R_2AsR'' + R'SHlg \\ \xrightarrow{b} R''(R)AsSr' + RHlg \end{cases} \quad (A)$$

$$R_2As\ddot{S}R' + R''Hlg \longrightarrow \left[R_2\overset{R''}{\overset{|}{A}}sSR'\right]^+ Hlg^- \longrightarrow R_2AsHlg + R'SR'' \quad (B)$$

The reaction conditions, analytical data and physical constants of some of the products are tabulated. The interaction of thioacid esters of trivalent arsenic with alkyl halides leads to breaking of the AsS bonds with the formation 1/2

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CHADAYEVA, N. A., et al., Zhurnal Obshchey khimii, Vol XLII (CIV), No 1, 1972, pp 125-129

of the corresponding halogenoarsines and sulfur-containing compounds.

Experimental procedures, physical properties and yields are presented for three of these compounds.

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Acc. Nr. AP0029117

Ref. Code: UR 0246

PRIMARY SOURCE: Zhurnal Nevropatologii i Psikhiatrii, 1970, Vol 70, Nr 1, pp 128-131

THE INFLUENCE OF AMINAZINE ON ADRENALINE, NORADRENALINE, DOPAMINE AND DOPA EXCRETION IN NORMALS AND IN THE MANIC PHASE OF THE MANIC-DEPRESSIVE PSYCHOSIS

E. Sh. Matlina, M. S. Osipova

The authors studied the influence of aminazine (50 mg in injections) on the adrenaline, noradrenaline, dopamine and DOPA urine excretion in normals and in patients in the manic phase of the manic—depressive psychosis. The urine was collected during 24 hours in separate portions. It was demonstrated that after 3 hours after the introduction of aminazine there was an increase in the excretion of adrenaline, dopamine and DOPA and a drop in the excretion of noradrenaline in normals. These changes can be conditioned by the activization of

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the cortical layer of the suprarenals as well as by the inhibition of related noradrenaline from the adrenergic granules and an absorbtion of it by the circulating blood. The authors assume that aminazine may directly influence the stimulation of catecholamine biosynthesis. In granules with a manic phase of the maniedepressive psychosis the influence of aminazine on the excretion of adrenergic substances is expressed later: in 9 hours after the introduction of aminazine and may be expressed in the increase of adrenaline, noradrenaline and DOPA excretion. They assume that aminazine in such cases does not arrest noradrenaline in the adrenergical granules.

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1/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--PYRROMECAINE ANESTHESIA DURING INSTRUMENTAL DIAGNOSTIC INVESTIGATIONS IN PATIENTS WITH PULMONARY PATHOLOGY -U-

AUTHOR-(05)-KUZIN, M.I., PRYANISHNIKOVA, N.T., OSIPOVA, N.A., KHADZHYEVA, S.N., GUZNOV, G.I.

COUNTRY OF INFO--USSR

SOURCE--KHIRURGIYA, 1970, NR 6, PP 58-62

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANESTHETIC, DIAGNOSTIC METHODS, RESPIRATORY SYSTEM DISEASE, LUNG

CONTROL MARKING--NO RESTRICTIONS

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PROXY FICHE NO----FD70/605003/D09 STEP NO--UR/0531/70/000/006/0058/0062

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2/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139541

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CLINICAL TRIALS OF PYRROMECAINE, A NEW SOVIET MADE LOCAL ANESTHETIC, EFFECTED IN 102 PATIENTS WITH SURGICAL PULMONARY PATHOLOGY DEMONSTRATED THIS PREPARATION CAPABLE OF PRODUCING AN EFFECTIVE ANESTHESIA OF THE RESPIRATORY TRACT, ENSURING PERFORMANCE OF COMPLICATED DIAGNOSTIC PROCEDURES (BRONCHOGRAPHY, BRONCHOSPIROGRAPHY). AS REGARDS ITS POTENCY AND QUICKNESS OF ANESTHETIC ACTION PYRROMECAINE IS SUPERIOR TO NOVOCAINE AND IS EQUAL TO DICAINE. SIDE EFFECTS OF THE PREPARATION ARE INSIGNIFICANT.

FACILITY: KAFEDRA FAKUL'TETSKOY KHIRURGII I MII I. M. SECHENOVA, INSTITUT FARMAKOLGII, MOSKVA.

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KUZIN, M. I., OSIPOVA, N. A., YEFIMOVA, N. V., and BOGDANOVA, E. A., Chair of Faculty Surgery, First Moscow Medical School imeni I. M. Sechenov

"Effect of Phentanyl and Dehydrobenzperidol on the Human Central Nervous System"

Moscow, Khirurgiya, No 1, 1970, pp 95-101

Abstract: Changes in the bioelectrical activity of the human brain vary with the depth of neuroleptic analgesia (NA). Light NA is characterized by the dominance and decreased frequency of the alpha rhythm; deep NA, by the dominance of the slow delta and theta rhythms. The absence of desynchronization in the EEG and the cutaneous galvanic reaction to light and pain suggest that the system of afferent conduction is effectively blocked during NA. The isolated use of dehydrobenzperidol produced only minor changes in the EEG and total electrical activity. Phentanyl caused a shift toward the low-frequency range, with the delta-and theta-waves perdominating, and threefold or more increase in the total electrical activity. 1/2

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KUZIN, M. I., et al., Moscow, Khirurgiya, No 1, 1970, pp 95-101

Reorganization of the EEG waves in response to rhythmic light stimulation ceased under the influence of dehydrobenzperidol alone or combined with phentanyl. Phentanyl promoted assimilation of high frequencies of light flashes and blocked the effect of dehydrobenzperidol previously administered. This indicates that phentanyl has a central activating influence.

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Acc. Nr: AP0044853 6 Ref. Code: UR0531

PRIMARY SOURCE: Khirurgiya, 1970, Nr 1, pp 95-101

ON THE EFFECT OF PHENTANYL AND DEHYDROBENZPERIDOL ON THE HUMAN CENTRAL NERVOUS SYSTEM

Kuzin, M. I.; Osipova, N. A.; Yefimova, N. V.; Bogdanova, E. A.

The results of analysis of the spontaneous bioelectric activity, frequency composition of the elecroencephalogram, electroencephalographic and dermogalvanic reactions to pain and rhythmic light stimuli testify to inhibition in the system of afferent conduction with extinguishing of cortical and dermogalvanic reactions to external stimuli in this type of anesthesia.

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USSR UDC 581.132.1

OSIPOVA, O. P., KHEYN, KH. YA., and NICHIPOROVICH, A. A., Institute of Plant Physiology imeni K. A. Timiryazev, Academy of Sciences USSR, Moscow

"Activity of the Photosynthetic Apparatus of Plants Grown at Different Light Intensities"

Moscow, Fiziologiya Rasteniy, Vol 18, No 2, Mar/Apr 71, pp 257-263

Abstract: The activity of the photosynthetic apparatus of leaves of Vicia fava plants grown at two light intensities, 10^5 and 4×10^3 erg/cm^{2}sec, was studied. Determination of light photo-synthesis curves by the radiometric method (as described by Kheyn and Nichiporovich in Fiziologiya Rasteniy 17, 1284, 1970) showed the difference in the photosynthetic capacity of "shadow" and "light" leaves at both low and saturating light intensities. The rate of the Hill reaction determined on the basis of the reduction of $K_3Fe(CN)_6$ in chloroplasts isolated from "shadow" leaves was somewhat higher than for chloroplasts from "light" leaves.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202310019-1

Acc. Nr: AP0038058 Ref. Code: UR 0326

PRIMARY SOURCE: Fiziologiya Rasteniy, 1970, Vol 17, Nr 1, pp 5-13

VARIATION OF THE PIGMENT COMPOSITION AND STRUCTURE OF CHLOROPLASTS INDUCED BY CHLORAMPHENICOL

M. K. NIKOLAYEVA, M. P. VLASOVA, O. P. OSIPOVA

K. A. Timiriazev Institute of Plant Physiology, USSR Academy of Sciences, Moscow

In developing young bean leaves low concentrations of chloramphenicol inhibit chloroplast protein synthesis and lower the amount of green pigments and to a lower extent, the amount of yellow ones. The drop in chlorphyll content was mainly due to decrease of chlorophyll a content. The chlorophyll a remaining in the plants was less photo-stable compared to that in the control plants. Electron microscopic studies did not reveal any violation of differentiation of the chloroplast membrane system in plants treated with 5 mg/l chloramphenicol. An antibiotic concentration of 100 mg/l resulted in inhibition of development of the stroma lamellae, a slight increase of granum size and change in their arrangement. A decrease of chloroplast stroma density is also observed at all concentrations but was most pronounced at 100 mg/l of chloramphenicol. The possibility of the fine structure of the chloroplast membrane being altered as a result of absence of part of the protein or pigments is discussed.

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OSIPOVA, V. A.

JPRS 55886

4 May 1972

UDC 536.21:223.621.762

THERMOPHYSICAL PROPERTIES OF POWDERED METAL COMPOSITIONS OF THE SYSTEM Al_2O_3-Mo

[Article by V.A. Osipova, Kh. A. Krwear; Moscow, Atomnaya Energiya, Russian, No 2, February 1972, signed to press 8 July 1971, p 162]

This paper is a continuation of the investigations begun in reference [1], which permitted us to determine the thermophysical properties of the powdered metal compositions 80% Al_2O_3+20% Mo and 60% Al_2O_3+40% Mo (wt %) at temperatures of 500-1300° K. Aluminum oxide served as the original powder of the ceramic component. The chemical composition of the molybdenum powder is given below (wt %):

Mo	W	Ta	Nb	Ti	Zr
—	—	—	—	—	—
99.91	0.046	0.03	0.01	0.03	0.03

Dispersion analysis showed that 90% of the original powder consists of particles 0.001-0.003 mm in size, and 10% -- 0.005-0.01 mm in size. The mean density of the 80% Al_2O_3+20% Mo sample is 4450 kg/m^3, and in the 60% Al_2O_3+40% Mo it is equal to 5120 kg/m^3. The overall porosity of the powdered metal compositions lay in the range of 1-4%. The test bars were produced by baking; their diameter was 40 mm; their height was about 70 mm. The samples were taken from individual disks, 5-10 mm thick.

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