"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Acc. Nr: AP0036525 K Ref. Code: UR 0069

PRIMARY SOURCE: Kolloidnyy Zhurnal, 1970, Vol 32, Nr 1, pp 32-36

INVESTIGATION OF ADSORPTION OF 2,4-DINITROPHENYL HYDRAZONE OF METHYLETHYLKETONE FROM SOLUTIONS ON GRAPHITIZED CARBON BLACK

Vorontsov, V. V.; Kuznetsova, L. P.; El'nekov, Yu. A.

Summary

Graphitization of channel black leads to great increase of adsorption of 2,4-dinitrophenyl hydrazone of acetone from its solution in C_6H_5OH due to the diminishing role of specific interaction of the solvent molecules with carbon black and increasing role of nonspecific interaction with it of hydrazone molecules. Increasing localization degree of adsorbed molecules with decreasing adsorption temperature leads to the appearance on the carbon black surface covered with a dense monolayer of a second layer of less densely packed molecules of 2,4-DNPHH MEK. Weaker adsorption of 2,4-DNPHH MEK on carbon black from CCl_4 compared to that from alcohol is due to higher adsorption of CCl_4 on carbon black and greater solubility of 2,4-DNPHH MEK in CCl_4.

1/1 REEL/FRAME 19721373 7 Dn.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--THERMODYNAMIC STUDY OF THE TRANSITION OF ADSORBED BENZENE TO A CRYSTALLINE STATE -U-

AUTHOR-(05)-BEREZIN, G.I., KISELEV, A.V., KOZLOV, A.A., KUZNETSOVA, L.V., FIRSOVA, A.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 541-3

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BENZENE, CRYSTAL, HEAT CAPACITY, ADSORPTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1422 STEP NO--UR/0076/70/044/002/0541/0543

CIRC ACCESSION NO--AP0116869

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UNCLASSIFIED PROCESSING DATE--23OCT70

2/2 019

CIRC ACCESSION NO--AP0116869

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TRANSITION OF C SUB6 H SUB6, ADSORBED IN A POROUS ADSORBENT, FROM THE STATE OF CAPILLARY CONDENSATE TO A CRYST. PHASE OCCURS AT 0 TO MINUS 50DEGREES. THIS WAS EVIDENCED BY A SHARP MAX. IN THE TEMP. DEPENDENCE OF THE HEAT CAPACITY OF ADSORBENT CONTG. C SUB6 H SUB6 IN THE ABOVE TEMP. INTERVAL. THE TRANSITION OF ADSORBED C SUB6 H SUB6 TO THE CRYST. PHASE IS ACCOMPANIED BY A SHARP DECREASE IN THE MAX. ADSORPTION CAPACITY A SUBS. THE VALUES A SUBS WERE VIRTUALLY CONST. BELOW AND ABOVE THE TEMP. INTERVAL OF PHASE TRANSITIONS. FACILITY: INST. FIZ. KHIM., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

AA0043443 Kuznetsova, L.V. UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 3-70

230111 CONCENTRATED CYANAMIDE SOLUTIONS as an intermediate in the manufacture of crystalline cyanamide, obtained by vacuum evaporation of dilute 5-10° solutions acidified by sulphuric acid, are produced more effectively by evaporating in two stages, at maximum residual pressures of 60 and 30 mmHg respectively, and by bringing the cyanamide solution concentration to 20-30% in the first stage. In an example, after feeding 10 m^3/h of 5% cyanamide solution acidified to pH 4.5-5.5 into a tank, 30-50 m^3/h of the solution were circulated via an evaporator and a separator back to the tank. Vapour was fed into the inner-tube space of the evaporator at below 3 atm. steam also being passed into a surface condenser, where it was condensed and mixed with calcium cyanide; the residual pressure was 50-60 mmHg. 2.4 m^3/h of 20% solution were passed from the first tank to a second tank for repetition of the above-men-

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19761782

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

AA0043443

tioned cycle, the steam and vapor being condensed in a mixing condenser. 1.2 m^3/h of 40% solution were passed to the collector tank, at a total loss of cyanamide in solution of not more than 5%.

2.11.66. as 1111777/23-26. V G.GOLOV et alia. Dzerzhinski Sec. Nitrogen Ind. and Organic Synthesis Products Res. Inst. (18.3.69.) Bul.34/ 30.10.68. Class 12k. Int.Cl. C01c.

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19761783

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

AA0043443

AUTHORS: Golov, V. G.; Kuznetsova, L. V.; Fel'dshteyn, I. B.; Zatsepina, M. B.; Strigina, G. A.

Dzerzhinskiy Filial Gosudarstvennogo Nauchno-Issledovatel'skogo i Proyektnogo Instituta Azotnoy Promyshlennosti i Produktov Organicheskogo Sinteza

19761784

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UNCLASSIFIED PROCESSING DATE--13NOV70

1/2 010

TITLE--PREPARATION OF CRYSTALLINE CYANAMIDE -U-

AUTHOR-(04)-GOLOV, V.G., KUZNETSOVA, L.V., VODOPYANOV, V.G., IVANOV, M.G.

COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(3), 198-200

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--CRYSTAL, CALCIUM COMPOUND, CYANAMIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0531 STEP NO--UR/0064/70/046/003/0198/0200

CIRC ACCESSION NO--AP0124226

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 010 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0124226

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN ORDER TO PREVENT FORMATION OF H SUB4 C SUB2 N SUB4 (I) IN THE MANUFG. OF H SUB2 CN SUB2 (II), A CACN SUB2 SUSPENSION IN H SUB2 O IS TREATED WITH CO SUB2 AT LESS THAN 20-5DEGREES. THE CA PRIME2 POSITIVE IONS ARE THEN REMOVED FROM THE RESULTING 5PERCENT II SOLN. BY ION EXCHANGE BY THE TECHNIQUE OF GOL'DBERG, ET AL. (1966), THE PH IS ADJUSTED TO 4.5-5.5 BY THE ADDN. OF H SUB2 SO SUB4, AND THE SOLN. IS CONCD. BY A 2 STAGE VACUUM EVAPN. PROCESS TO 30PERCENT II BY EVAPN. AT 40DEGREES AND TO 70-80PERCENT II BY EVAPN. AT 20DEGREES. THE II IS THEN CRYSTD. BY COOLING THE SOLN. TO MINUS 15DEGREES; THE PRODUCT CONTAINS 5PERCENT H SUB2 O, 1OPERCENT I AND THE BALANCE II. A PRODUCT OF LOWER I CONTENT (4.5PERCENT) MAY BE OBTAINED BY HEATING THE CRYSTALS TO 20DEGREES AND REMOVING THE LIQ. PHASE. THE II MAY BE STORED FOR UP TO 1 MONTH AT 20DEGREES BUT MORE PROLONGED STORAGE REQUIRED STABILIZATION OF THE II (TO PREVENT FORMATION OF I, E.G., UNSTABILIZED II IS QUANT. CONVERTED TO I WITHIN 11 MONTHS AT 20DEGREES) BY THE ADDN. OF 1PERCENT OF BAOH OR 0.2PERCENT OF IODINE; AFTER THE STABILIZATION, THE MOLTEN (AT 45-50DEGREES) II MAY BE FROZEN AND GRANULATED BY CRUSHING.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC: 632.95

SERGEYEV, L. I., KULAKOV, V. N., BELYSHEV, L. K., KUZNETSOVA, M. G., SAKHNOV, N. S.

"Experience in the Use of N-1 Fraction as a Herbicide"

Moscow, Khimiya seraorgan. soyedin., soderzhashchikhsya v neftyakh i nefteproduktakh--sbornik (Chemistry of Organosulfur Compounds Present in Petroleum and Petroleum Products--collection of works), T. 9,"Vyssh. shkola", 1972, pp 60-65 (from RZh-Khimiya, Vol 10, May 73, abstract No 10N594 by T. A. Belyayeva)

Translation: Data are presented on the physiological activity and possibility for practical utilization of the narrow fraction of high-sulfur aromatic extract called N-1. The initial raw material was light gas oil of catalytic cracking. The sulfurous aromatic compounds are extracted with furfurol and "kalosha" gasoline. After the solvents are driven off, a sulfur-aromatic concentrate is obtained from which a narrow fraction is isolated by rectification with the following characteristics: boiling range 250-285°C, density 0.99, molecular weight 152, sulfur content 4.6%, content of aromatic hydrocarbons 78%, including 56% bicyclic. The hydrocarbons are chiefly dimethyl

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

SERGEYEV, L. I., et al., Chemistry of Organosulfur Compounds Present in Petroleum and Petroleum Products -- collection of works, T. 9, "Vyssh. shkola", 1972, pp 60-65

naphthalines. The organosulfur compounds consist mainly of alkyl derivatives of benzothiophene. For using N-1 fraction as a herbicide or growth stimulator, aqueous emulsions are prepared using OP-7 or OP-10. Laboratory and field experiments are done with concentrations of 0.00001, 0.0001, 0.001, 0.01, 0.1, 1 and 10%. Depending on the concentration, N-1 fraction has herbicidal (0.01-10%) or stimulating (0.001-0.0001%) properties for flowering plants. Even a 1% emulsion of N-1 is heavily damaging to Stellaria media (chickweed). In the appropriate quantities N-1 is a contact herbicide and is most effectively used in controlling annual weeds.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Materials

USSR UDC: 537.312.62

BAYKOV, A. I., KUZNETSOVA, M. I., MEL'NIKOVA, L. V.

"Mechanical and Superconducting Properties of Alloys in the Niobium-Titanium System and Their Field of Application"

Nauchn. tr. N.-i. i proyektn. in-t redkomet. prom-sti (Scientific Works of the Scientific Research and Design Institute of the Rare Metals Industry), 1971, 32, pp 98-110 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D532)

Translation: Alloys in the niobium-titanium system with a titanium concentration of more than 40 percent (atomic) have a higher critical magnetic field (H_{k2}) than in the case of niobium-zirconium and niobium-titanium-zirconium alloys. The highest magnetic field is attained on an alloy with 60 percent (atomic) titanium. 60T alloy wire is used for making superconducting solenoids. Ten illustrations, three tables, Bibliography of nine titles. Resumé.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC: 537.312.62

BAYKOV, A. I., KUZNETSOVA, M. I., SHADSKIY, D. V., MEL'NIKOVA, L. V., MIKHAYLOV, S. M., GORBACHEVA, L. S.

"Technological and Superconducting Properties of 60T Alloy"

V sb. Probl. sverkhprovodyashch. materialov (Problems of Superconducting Materials--collection of works), Moscow, "Nauka", 1970, pp 193-202 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D555)

Translation: This article deals with the technological superconducting properties of 60T alloy. It is shown how the mechanical properties depend on the degree of cold deformation and the diameter of the wire. The mechanism of deformation of the alloy at high temperatures is considered. It is found that the high plastic properties of the alloy permit cold drawing of wire at a rate of 100 m/min. An investigation is made of the effect which intermediate annealing and quenching as well as final annealing have on the density of the critical current as a function of the external magnetic field. Seven illustrations, four tables, bibliography of four titles. Resumé.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC 669.295.5.018.5.537.312.62

BAYKOV, A. I., KUZNETSOVA, M. I., SHADSKIY, D. V., MEL'NIKOVA, L. V., MIKHAYLOV, S. M., GORBACHEVA, L. S.

"Technological and Superconducting Properties of 60 T Alloy"

Probl. Sverkhprovodyashch. Materialov [Problems of Superconducting Materials -- Collection of Works], Moscow, Nauka Press, 1970, pp. 193-202. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 E791 by the authors).

Translation: The technological and superconducting properties of 60 T alloy are studied. The dependence of mechanical properties on the degree of cold deformation and diameter of wire is shown. The mechanism of deformation of the alloy at high temperatures is studied. It is established that the high plastic properties of the alloy allow cold drawing of wire to be performed at a rate of 100 m/min. The influence of intermediate annealing and hardening, as well as final annealing, on the critical current density is studied as a function of the external magnetic field. 7 figs; 4 tables; 4 biblio refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC 669.293.5.295.018.5.537.312.62

BAYKOV, A. I., KUZNETSOVA, M. I., MEL'NIKOVA, L. V.

"Mechanical and Superconducting Properties of Alloys in the Niobium-Titanium System and Area of Their Application"

Nauchn. Tr. N-i. i Proyektn. In-t Redkomet. Prom-sti [Scientific Works of Scientific Research and Planning Institute for the Rare Metals Industry], 1971, Vol. 32, pp. 98-110. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 I782 by the authors).

Translation: Alloys in the system Nb-Ti with contents of Ti > 40 at.% have higher critical magnetic field than the alloys Nb-Zr and Nb-Ti-Zr. The highest magnetic field is produced in the alloy with 60 at.% Ti. A wire of this 60 T alloy has been used in the manufacture of superconducting solenoids. 10 figs; 3 tables; 9 biblio refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UDC 661.183.123

USSR

KOLOMEYTSEV, O. P., and KUZNETSOVA, N. N.

"Synthesis and Characteristics of Large-Lattice Ion Exchange Resins"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 45, Vyp 9, 1972, pp 1978-1982

Abstract: The particular resins considered are the N-substituted methacrylamides: N, N-dimethylaminoethylmethacrylamide (DMAEMA) and N,N,N-trimethylaminoethylmethacrylamide iodide (ITMAEMA). The yield and strength of the resins are functions primarily of the amount of "seed" material and the concentration of the monomer. The ion exchange capacity for the resins in 0.1N HCl and 0.1N NaCl vary from about 3-5 meq/g. Cycles of regeneration reduced values to about 3.5 from the initial range of 3.5-5. Copolymerization of DMAEMA or ITMAEMA with N,N-hexamethylenedimethacrylamide may produce a weakly or strongly alkaline anion exchange resin particularly useful for the adsorption of the ions of organic compounds.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 019 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--FAR INFRARED ABSORPTION IN N GERMANIUM CAUSED BY IMPURITY INTERACTION -U-

AUTHOR-(04)-DEMESHINA, A.I., KORCHAZHKINA, R.L., KUZNETSOVA, N.N., MURZIN, V.N.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(2), 428-30

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--IR IRADIATION, ABSORPTION, GERMANIUM SEMICONDUCTOR, SPECTROSCOPIC ANALYSIS, PHOSPHORUS, GALLIUM, ELECTRON SHELL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0571 STEP NO--UR/0449/70/004/002/0428/0430

CIRC ACCESSION NO--AP0105556

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 019 UNCLASSIFIED PROCESSING DATE--19SEP70

CIRC ACCESSION NO--AP0105556

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FAR IR SPECTROSCOPY WAS USED TO STUDY THE INITIAL STAGES OF THE INTERACTION OF FINE DONOR IMPURITIES IN GE AT LOW CONCNS. WHEN THE ELECTRON SHELLS OF ONLY THE CLOSEST IMPURITY ATOMS OVERLAP. SAMPLES OF GE, DOPED WITH P AND COMPENSATED WITH GA HAVING DEGREES OF COMPENSATION 0.05-0.5 WERE USED. THE DATA FOR SAMPLES CONTG. THE SAME CONCN. OF P BUT DIFFERENT DEGREES OF COMPENSATION SHOWED GOOD AGREEMENT WITH THEORETICAL RESULTS. FOR SAMPLES WITH COMPENSATION 0.45, WHICH FALLS OUTSIDE THE LIMITS OF APPLICABILITY, THE VALUE OF THE ABSORPTION COEFF. PER UNIT OF COMPENSATION INCREASES AS THE CONCN. OF THE DONOR IMPURITY INCREASES IN AGREEMENT WITH THE MAIN CONCLUSIONS OF THE THEORY. THE DIFFERENCE WHICH IS OBSD. IS ATTRIBUTED TO THE POSSIBLE NARROWING OF THE ABSORPTION BAND AND A SHIFT OF ITS MAX. TO SHORTER WAVELENGTHS.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC 533.922

AVRAMENKO, M. I., KUZNETSOV, V. S., KUZNETSOVA, N. P., NIKOL'SKIY, N. A., and FIDEL'SKAYA, R. P.

"Calculation of Phase Focusing of Intensive Bunches of Charged Particles in Direct-Action Accelerators"

Moscow, Atomnaya Energiya, Vol 32, No 5, May 72, pp 437-440

Abstract: The study of particle dynamics in direct-action accelerators requires consideration of the Coulomb interaction of particles in a bunch, as well as the velocity spread of the particles. Such a problem is complicated to solve in a full volume, since the particle motion has to be considered in a six-dimensional coordinate and velocity space. To simplify the problem, it is assumed that the longitudinal motion of the particles of the bunch does not depend on their radial coordinates, nor the radial motion of the particles on their axial coordinates. It is also assumed that the particle density distribution in the transverse phase space is microcanonical and at a given moment of time is the same for any cross-section of the bunch μ = const. These assumptions permit reducing the six-dimensional problem of the phase

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

AVRAMENKO, M. I., et al., Atomnaya Energiya, Vol 32, No 5, May 72, pp 437-440

focusing of a bunch to a two-dimensional problem concerning the longitudinal coordinates and velocities of particles. The article considers a nonstationary case. No constraints are imposed on the particle density distribution function in the longitudinal phase space. A description is given of the calculation method used to study peculiarities of the formation of intensive bunches of nanosecond duration in direct-action accelerators. A diagram is given showing successive variations in the configuration of the longitudinal phase volume, the linear charge density distribution, and the longitudinal Coulomb repulsive force along a bunch during passage through an accelerator. It is shown that, due to the nonlinearity of the longitudinal Coulomb forces, the configuration of the longitudinal phase volume of the bunch is considerably distorted, which phenomenon limits the bunching factor.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 052 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--INFLUENCE OF THE NUMBER OF PORES AND THEIR DIMENSIONS ON THE THERMAL CONDUCTIVITY OF POROUS GRAPHITES -U-

AUTHOR-(04)-LUTKOVA, A.I., MUSTAFINA, F.N., TSAREV, V.YA., KUZNETSOVA, N.P.

COUNTRY OF INFO--USSR

SOURCE--KHIM. TVERD. TOPL. 1970, (3), 107-14

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--THERMAL CONDUCTIVITY, GRAPHITE, POROSITY, THERMAL EFFECT, RADIATION EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0855 STEP NO--UR/0467/70/000/003/0107/0114

CIRC ACCESSION NO--AP0137883

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 052 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0137883

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SPECIMENS OF TWO TYPES OF GRAPHITE WITH POROSITY CHANGING 54-78PERCENT WERE PREPD. AND THE EFFECTIVE THERMAL COND., LAMBDA, WAS INVESTIGATED AT 500-2600DEGREESK. THE EFFECTIVE DIAM. OF PORES WAS 50-700 MU. THE PREDOMINANT INFLUENCE OF CONDUCTION OF HEAT ON THE LAMBDA VALUE WAS OBSD. WHILE RADIATION AND CONVECTION INCREASED LAMBDA TO 8PERCENT MAX. AT SMALLER THAN OR EQUAL TO 2300DEGREESK.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

K

USSR UDC 539.217.1 + 549.212

KUZNETSOVA, N. P., LUTKOVA, A. I., MUSTAFINA, F. N., and TSAREV, V. YA.

Effect of the Number of Pores and Their Size on the Heat Conductivity of Porous Graphites"

Moscow, Khimiya Tverdogo Topliva, No 3, May-Jun 70, pp 107-114

Abstract: The effective heat conductivity of two types of porous graphite materials was studied in the 500-2600° K range. The materials of the first type were subdivided into five groups with practically the same general porosity (60-65 percent), but with varying effective pore diameter. The four groups of the second type of materials had a varying general porosity, but a similar effective pore diameter. The heat conductivity was measured by the tube method under indirect heating of the specimen at 500-1000° K, and by the Powell-Schofield method at 1200-2600° K. There was found to be good agreement between the results obtained by both methods. The principal com-

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

KUZNETSOVA, N. P., et al., Khimiya Tverdogo Topliva, No 3, May-Jun 70, pp 107-114

ponent of the effect heat conductivity of porous graphites is contact heat conductivity. The proportion of the radiation component and the component caused by the heat conductivity of the gas filling the pores does not exceed 8 percent of the effective heat conductivity of the material at temperatures below 2300° K. A study was made of the applicability of the Russel, Loeb and Eucken formulas for calculating the effective heat conductivity of porous graphites. Calculations of the effective heat conductivity at a temperature below 1000° K according to the Russel formula were found to give satisfactory agreement with experimental data.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--RECOVERY PHENOMENA IN SACCHAROMYCES CEREVISIAE. I. LETHALITY AND MITOTIC RECOMBINATION INDUCED BY GAMMA RAYS AND CHEMICALS IN UV

AUTHOR-(03)-OLTEANU, V., KUZNETSOVA, O.B., ARMAN, I.P.

COUNTRY OF INFO--USSR

SOURCE--GENETIKA 1970, 6(2), 123-9

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SACCHAROMYCES, UV RADIATION BIOLOGIC EFFECT, RADIATION SENSITIVITY, MICROORGANISM MUTATION, RADIATION INDUCED MUTATION, MITOSIS, INORGANIC ACID, NITROGEN COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/2051 STEP NO--UR/0473/70/006/002/0123/0129

CIRC ACCESSION NO--AP0122280

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0122280

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. LETHALITY AND MITOTIC RECOMBINATION INDUCED BY UV, GAMMA RAYS, NITROUS ACID, AND NITROSOGUANIDINE (I) HAVE BEEN STUDIED IN UV SENSITIVE DIPLOID S. CEREVISIAE. THE SUPERSENSITIVE STRAIN PG-61 AND WILD TYPE PG-60 DEMONSTRATED APPROX. EQUAL RESISTANCE TO THE LETHAL EFFECT OF IONIZING RADIATION AND NITROSOGUANIDINE. AFTER 20 AND 40 MIN. EXPOSURES TO NITROUS ACID, THE SURVIVAL RATE OF THE SENSITIVE STRAIN WAS APPROX. 1.5 TIMES LOWER THAN THAT OF WILD TYPE. IN EXPTS. WITH UV, THESE STRAINS SHOWED A 25-28 FOLD DIFFERENCE IN SURVIVAL RATE. IT IS CONCLUDED THAT THE UN MUTATION AFFECTS REPAIR ONLY OF UV DAMAGE, I.E., PHOTOPRODUCTS OF THE DNA PYRIMIDINE DIMER TYPE. DARK REPAIR OF LETHAL DAMAGE CAUSED BY OTHER AGENTS (GAMMA RAYS, I) OCCUR NORMALLY, WITH THE EXCEPTION OF A SMALL PART OF THE DAMAGE INDUCED BY NITROUS ACID. NO DIFFERENCE IN THE FREQUENCY OF RECOMBINANTS INDUCED BY NITROUS ACID WAS SLIGHTLY HIGHER THAN THAT OF WILD TYPE. IT IS CONCLUDED THAT THERE IS A CORRELATION BETWEEN SESITIVITY TO THE LETHAL EFFECT AND FREQUENCY OF INDUCED RECOMBINANTS, IN AGREEMENT WITH THE PREMISE THAT RECOMBINATION IS A RESULT OF DAN DAMAGE. THE FREQUENCY OF RECOMBINATION IN WILD TYPE CELLS WAS HIGHEST WHEN INDUCED BY GAMMA RAYS, SLIGHTLY LOWER WITH UV AND NITROUS ACID, AND LOWEST WITH I. FACILITY: I. V. KURCHATOV INST. AT. ENERGY, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

6

Therapy

UDC 615.281.8.035.4:616.988.75-053.4-036.8

USSR

AKSENOV, V. A., SELIDOVSKIN, D. A., GLADKIKH, G. N., KUBLIKOV, V. S., KUZNETSOVA, O. V., MOLODTSOVA, L. D., BERSENEVA, R. A., AKSENOV, L. A., BOGDANOVA, N. S., and PERSHIN, G. N., All Union Chemico-Pharmaceutical Institute imeni S. Ordzhonikidze, Ministry of Health USSR

"Study of the Prophylactic Value of the New Soviet Antiviral Preparation Oxolin in Preschool Children during the 1969 Influenza Epidemic"

Moscow, Pediatriya, No 5, 1970, pp 18-22

Abstract: The viricidal agent oxolin (tetraoxotetrahydronaphthalene (dihydrate) is effective in the treatment of adenovirus kerato-conjunctivitis, herpetic keratitis, dermatitides of virus etiology, and some acute respiratory diseases. In a double-blind trial, oxolin was administered to 4,170 children one to seven years of age in an unidentified Soviet city during the 1969 influenza epidemic. (It was applied to the nasal mucosa in the form of a 0.25% ointment on a vaseline base twice daily for 40-49 days). Oxolin reduced the incidence of influenza 1.7 times (43%) compared with control children. Severe forms of the disease and complications were 1.1-1.4 times more frequent in the latter than in those who received the preparation, and the course of the disease was 1.2 days longer on the average. The use of oxolin produced side effects in only 0.6% of the cases.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 026 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--STRUCTURE FORMATION OF POLYCRYSTALLINE SILICON CARBIDE -U-

AUTHOR-(04)-GNESIN, G.G., PILYANKEVICH, A.N., KUZNETSOVA, O.V., OLEYNIK, G.S.

COUNTRY OF INFO--USSR

SOURCE--POROSHKOVAYA MET., APR. 1970, (4), 49-53

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--SILICON CARBIDE, CARBIDE ABRASIVE, REFRACTORY MATERIAL, SINTERING FURNACE, PHASE COMPOSITION, GRAIN STRUCTURE, SINTER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0637 STEP NO--UR/0226/70/000/004/0049/0053

CIRC ACCESSION NO--AP0134399

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 026 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134399

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE OF POLYCRYSTALLINE SIC MADE BY A REACTIVE SINTERING METHOD WAS STUDIED AND CORRELATED WITH THE ABRASIVE PROPERTIES OF THIS MATERIAL AS EXPLOITED IN THE GRINDING OF METALS AND ALSO WITH ITS HEAT RESISTANCE WHEN USED FOR THE LININGS OF FURNACES. ELECTROLYTIC ETCHING REVEALED THE PRESENCE OF A SECONDARY PHASE FORMED IN THE COURSE OF SINTERING; THE SECONDARY PHASE AROSE FROM THE MOVEMENT OF C ATOMS THROUGH THE MOLTEN SI AND APPRECIABLY MODIFIED THE MECHANICAL CHARACTERISTICS OF THE MATERIAL AS A WHOLE.

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USSR UDC 632.95

VASHKOV, V. I., SIDOROVA, M. V., KUZNETSOVA, R. A.

"Insecticide Activity of Dicresyl for Certain Types of Domestic Insects and Mosquitoes"

Sb. nauch. tr. Mosk. NII vaktsin i syvorotok (Collection of Scientific Works of Moscow Scientific Research Institute of Vaccines and Serums), No 22, 1972, pp 155-159 (from RZh-Khimiya, No 15, Aug 73, Abstract No 15N508)

Translation: Dicresyl (I) and chlorophos are approximately equivalent with respect to toxicity for bedbugs and roaches. The I is more effective in dust form than in emulsion form. The minimum dosage of I in powdered form causing 100% death of bedbugs is 0.01 and for roaches it is 0.5g/m^2. In emulsion form the I is effective against bedbugs in a dosage of 0.1 g/m^2 on nonsorbing surfaces and 1-2 grams/m^2 on sorbing surfaces. In laboratory tests the larvae and eggs of the housefly died after spraying a substrate with 0.2-0.3% emulsions of I (1 liter/m^2). The winged flies were resistant to I. The larvae of mosquitoes ages 1-2 and 3-4 died after 24 hours in bodies of water sprayed with emulsions of I in doses of 0.5-1 and 1-2 kg/hectare respectively. According to laboratory tests with winged mosquitoes Aedes spp., I is equivalent to baygon with respect to toxicity, 8 times more toxic than carbophos and twice as toxic as DDT.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC 539.2:539.376+620.172.251.2

PINES, B. YA., KUZNETSOVA, R. I., and GORBENKO, V. N., Khar'kov State University imeni A. M. For'kiy

"High-Temperature Deformation of Copper and Nickel Films One Crystal in Thickness During Creep"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 31, No 3, Mar 71, pp 620-625

Abstract: Measurements of various types of deformation developing in copper and nickel films one crystal thick during high-temperature creep in the low stress area were performed. It was established that under theseconditions, slipping deformations along grain boundaries are very significant, reaching 60-80% of the total deformation. The non-monotonic dependence of grain-boundary deformation on stress is compared to the presence of a linear creep limit and the change in the mechanism of internal grain deformation of the metals in this stress area.

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USSR

UDC: 669.298'296'822

BADAYEVA, T. A. and KUZNETSOVA, R. I., Moscow

"Solidus and Liquidus Surfaces of the Thorium-Zirconium-Uranium System"

Moscow, Izvestiya Akademii nauk SSSR, Metally, No 1, Jan-Feb 72, pp 196-200

Abstract: The experimental materials for the study of solidus and liquidus surfaces were: thorium (99.5%), uranium (99.79%) and zirconium iodide (99.72%). The alloys of these elements were produced by direct fusion in an arc furnace with a tungsten electrode and a copper crucible in a chemically pure argon atmosphere. The study was conducted by thermal analysis methods with recording the differential heating curves of specimens as annealed followed by microstructural examinations. The results of temperature determinations of both solidus and liquidus in the Th-Zr-U-ternary system are shown in the form of isotherms of liquidus and solidus surfaces. The liquidus and solidus curves are specifically defined in Th-U and Th-Zr binary systems within concentration ranges of 20 to 70 at.% U and Zr, respectively. Compositions and thermal analytical data on Th-U, Th-Zr and Th-Zr-U alloys are cited in the table. (3 illustrations, 1 table, 4 bibliographic references).

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC 539.2:539.376+620.172.251.2

PINES, B. YA., KUZNETSOVA, R. I., and GORBENKO, V. N., Khar'kov State University imeni A. M. Gor'kiy

"High-Temperature Deformation of Copper and Nickel Films One Crystal in Thickness During Creep"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 31, No 3, Mar 71, pp 620-625

Abstract: Measurements of various types of deformation developing in copper and nickel films one crystal thick during high-temperature creep in the low stress area were performed. It was established that under theseconditions, slipping deformations along grain boundaries are very significant, reaching 60-80% of the total deformation. The non-monotonic dependence of grain-boundary deformation on stress is compared to the presence of a linear creep limit and the change in the mechanism of internal grain deformation of the metals in this stress area.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UNCLASSIFIED PROCESSING DATE--27NOV70

1/2 008

TITLE--RESULTS OF TESTING AN EXCHANGE CAPACITY GAGE FOR FIRST STAGE ANION EXCHANGE FILTERS -U-

AUTHOR-(02)-KUZNETSOVA, S.A., LYUTSKO, V.V.

K

COUNTRY OF INFO--USSR

SOURCE--TEPLOENERGETIKA 1970, 17(5), 57-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ANION EXCHANGE RESIN, FILTRATION, CHLORIDE, SODIUM COMPOUND/(U)AN2F ANION EXCHANGE RESIN, (U)AN31 ANION EXCHANGE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1250 STEP NO--UR/0096/70/017/005/0057/0059

CIRC ACCESSION NO--AP0134924

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 008 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134924

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN INSTRUMENTAL METHOD OF DETG. THE EXCHANGE CAPACITY OF ANION EXCHANGE FILTERS (TYPES AN2F, AN31) AND THEIR REGENERATION WITH NA PRIME POSITIVE IS DESCRIBED. FILTER EXCHANGE CAPACITY MEASUREMENT IS BASED ON THE DETN. OF CL PRIME NEGATIVE ION (0.2-4.5 MG PER L.) CONCN. IN THE FILTRATE BY MONITORING ITS ELEC. COND. THE REGENERATION OF AN AN31 FILTER SHOWING A FILTRATE CL PRIME NEGATIVE CONCN. OF 3.5 MG PER L. AND A NA PRIME POSITIVE CONCN. OF 6 MG PER L. IS DISCUSSED. FACILITY: VSES. TEPLOTEKH. INST., USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC: 537.312.62

VOROB'YEVA, N. S., KUNAKOV, Ya. N., ROMANI, G. N., KUZNETSOVA, G. M.

"Investigation of the Conditions of Formation of Superconducting Compound V_3Ga Made by the Diffusion Method"

Nauchn. tr. N.-i. i proyektn. in-t redkomet. prom-sti (Scientific Works of the Scientific Research and Design Institute of the Rare Metals Industry), 1971, 32, pp 115-123 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5B531)

Translation: A heat-treatment cycle is recommended for making V_3Ga superconductor. Three illustrations, two tables, bibliography of fourteen titles.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC: 536.7

YEVDOKIMOVA, A. D., KUZNETSOVA, S. M., RONAMI, G. N., SOKOLOVSKAYA, YE. M., Department of General Chemistry, Moscow State University imeni M. V. Lomonosov, Moscow, Ministry of Higher and Secondary Specialized Education RSFSR

"Investigation of the Zirconium-Niobium-Nickel System by Local X-ray Spectral Analysis"

Moscow, Vestnik Moskovskogo Universiteta, Seriya II, Khimiya, Vol 11, No 1, Jan/Feb 70, pp 62-66

Abstract: Data are given from local X-ray spectral analysis of the ternary zirconium-niobium-nickel system using the MS-46 microanalyzer made by the French "Cameca" Company. Alloys of zirconium with niobium and nickel heat treated at 800°C for 700 hrs and at 500°C for 2,000 hrs were used. The error in determination of the element being analyzed was 1-2%. The resultant data are tabulated, and a diagram of the phase equilibria in the system at 800°C is given. The compounds $ZrNi_5$, Zr_2Ni_7 and Zr_2Ni_5 form quasi-binary cross sections with $NbNi_3$. The region of homogeneity of the intermetallic compound $NbNi_3$ is considerably expanded by alloying with zirconium. An analogous picture is observed in the case of Zr_7Ni_{10}. The phase diagram plotted from the experimental data agrees with those obtained by other methods of physical and chemical analysis.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 029 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--LOCAL X RAY SPECTRAL STUDY OF A ZIRCONIUM,NIOBIUM,NICKEL SYSTEM -U-

AUTHOR-(04)-YEVDOKIMOVA, A.D., KUZNETSOVA, S.M., ROMANI, G.N.,
SOKOLOVSKAYA, E.M.
COUNTRY OF INFO--USSR

SOURCE--VESTN. MOSK. UNIV. KHIM. 1970, 11(1), 62-6

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--X RAY ANALYSIS, SPECTROSCOPIC ANALYSIS, ZIRCONIUM ALLOY, NIOBIUM ALLOY, NICKEL ALLOY, METAL HEAT TREATMENT, PHASE DIAGRAM, PHYSICAL CHEMISTRY PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0614 STEP NO--UR/0189/70/011/001/0062/0066

CIRC ACCESSION NO--AP0107211

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 029 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107211

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TERNARY SYSTEM WAS STUDIED USING ZR-NB-NI ALLOYS WHICH HAD BEEN HEAT TREATED FOR 700 HR AT 800DEGREES AND 2000 HR AT 500DEGREES. THE RESULTS ARE TABULATED AND THE PHASE EQUIL. DIAGRAM IS GIVEN. NO ESSENTIAL CHANGE WAS OBSERVED IN THE CHARACTER OF THE INTERACTIONS FROM THOSE DETD. BY PHYS. CHEM. METHODS. THE COMPDS. ZRNI SUB5, ZR SUB2 NI SUB7, AND ZR SUB2 NI SUB5 FORM QUASIBINARY SECTIONS WITH NBNI SUB3. THE REGION OF HOMOGENEITY FOR NBNI SUB3 IS WIDENED GREATLY BY ALLOYING WITH ZR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 035 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--DIURNAL RHYTHM OF MOUSE RADIOSENSITIVITY -U-

AUTHOR-(02)-KUZNETSOVA, S.S., BOBROVNIKOV, I.O.

COUNTRY OF INFO--USSR

SOURCE--RADIOBIOLOGIYA 1970, 10(1), 152

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--GAMMA RADIATION, RADIATION BIOLOGIC EFFECT, MOUSE, RADIATION DOSAGE, RADIATION SENSITIVITY, COBALT ISOTOPE, DIURNAL VARIATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0455 STEP NO--UR/0205/70/010/001/0152/0152

CIRC ACCESSION NO--AP0121129

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UNCLASSIFIED PROCESSING DATE--30OCT70

2/2 035

CIRC ACCESSION NO--AP0121129

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESEXED MALE MICE OF 21-3 G WT., WERE KEPT UNDER ARTIFICIAL ILLUMINATION DURING THE DAY, AND IN ARTIFICIAL DUSK (1-3 LUX) DURING THE NIGHT. DIFFERENT GROUPS OF ANIMALS WERE IRRADIATED DURING3 DAYS AT 3 HR INTERVALS IN A UNIFORM GAMMA FIELD (PRIME60 CO) WITH 580 R. THE AV. DAILY DEATH RATE WAS 47PERCENT. WITH IRRADN. TIMES AT NOON AND MIDNIGHT, THE DEATH RATE WAS HIGHER THAN WITH IRRADN. IN THE MORNING, AND AFTERNOON. THIS PERIODIC VARIATION OF MOUSE RADIOSENSITIVITY WAS A SINUSOIDAL FUNCTION, WITH A PERIOD OF 12 HR. THE DEATH AMPLITUDE VARIABILITY WAS 36PERCENT. MAX. MOUSE RADIOSENSITIVITY WAS AT 11 A.M. AND 11 P.M. FACILITY: INST. BIOFIZ., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Luminescence

USSR

UDC: 547.639

AGRACHEVA, YE. B., KUZNETSOVA, T. A., and YERSHOV, YU. A., Moscow Textile Institute, Moscow, Ministry of Higher and Secondary Specialized Education RSFSR

"Relationship Between Structure and Luminescence of Azomethines, Derivatives of 4,4-Diaminostilbene and 4,4-Diaminobibenzyl"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 2, Feb 70, pp 379-382

Abstract: For purposes of elucidating the effect of conjugation on the luminescence of azomethines, the authors synthesized and studied two series of azomethines, viz. derivatives of 4,4'-diaminostilbene and 4,4'-diaminobibenzyl (including 10 azomethines obtained for the first time). It was found that the principal factor causing luminescence in the stilbene series is conjugation, while in the bibenzyl series the luminescence is due to the presence of a quasiquinoid structure. The introduction of halogens into the aldehyde component makes the difference in the luminescence intensity of the corresponding representatives of the two series less sharp, since there is a decrease in the strength of the quasiquinoid structure in these cases, and the system conjugation has a greater effect on luminescence.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 014 UNCLASSIFIED PROCESSING DATE--[illegible]70

TITLE--RELATION BETWEEN THE STRUCTURE AND LUMINESCENCE OF AZOMETHINES. DERIVATIVES OF 4,4 PRIME,DIAMINOSTILBENE AND 4,4 PRIME, DIAMINO BIPHENYL

AUTHOR-(03)-AGRACHEVA, YE.U., KUZNETSOVA, T.A., YERSHOV, YU.A.

K

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(2) 379-82

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--LUMINESCENCE SPECTRUM, AZO COMPOUND, CONJUGATE BOND SYSTEM, STILBENE, AMINE DERIVATIVE, BENZENE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1569 STEP NO--UR/0079/70/040/002/0379/0382

CIRC ACCESSION NO--AP0112563

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 014 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112563

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. MIXING OF 2 MOLES OF APPROPRIATE ALDEHYDE WITH 1 MOLE AMINE IN HOT ETOH GAVE THE CORRESPONDING AZOMETHINES WHOLE LUMINESCENCE SPECTRA WERE REPORTED. THE MAIN FACTOR DETG. THE LUMINESCENCE IN THIS GROUP OF COMPDS. IS THE EXISTENCE OF QUASIQUINOID STRUCTURE. INCREASING THE DEGREE OF POSSIBLE CHAIN CONJUGATION IN MOST CASES DECREASES THE INTENSITY OF LUMINESCENCE. THE FOLLOWING P-ARCH:NC SUB6 H SUB4-CH:CHC SUB6 H SUB4 NICHAR-P WERE REPORTED (AR SHOWN):P-ME SUB2 NC SUB6 H SUB4, M. 316DEGREES; O-HOC SUB6 H SUB4, M. 252DEGREES; 5,2-CL(HO)C SUB6 H SUB3, M. 290-90.5DEGREES; 5,2-BR(HO)C SUB6 H SUB3, M. 350DEGREES; 3,5,2-BR SUB2 (HO)C SUB6 H SUB2, M. 350DEGREES; AND 2,HYDROXY,1,NAPHTHYL, M. 304DEGREES; ALSO THE FOLLOWING (P-AR-CH:NC SUB6 H SUB4 CH SUB2) SUB2; P-ME SUB2 NC SUB6 H SUB4, M. 245DEGREES; O-HOC SUB6 H SUB4, M. 221.5DEGREES; 5,2-CL(HO)C SUB6 H SUB3, M. 252DEGREES; 5,2-(HO)BRC SUB6 H SUB3, M. 265-6DEGREES; 3,5,2-BR SUB2 (HO)C SUB6 H SUB2, M. 235DEGREES; AND 2,HYDROXY,1,NAPHTHYL, M. 273DEGREES.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

UDC 538.4:621.362

KUZNETSOVA, T. D., LEVITAN, Yu. S., MURAV'YEV, Ye. V., PANEVIN, I. G.

"Laminar Magnetohydrodynamic Boundary Layer on a Current-Conducting Surface in the Presence of Lateral Velocity Components and Bulk Retardation Forces"

Magnitnaya Gidrodinamika (Magnetohydrodynamics), No 4, 1971, pp 36-42

Abstract: A study is made of stationary laminar flow of an incompressible liquid with constant electroconductivity and viscosity in a cylindrical coaxial channel with solid electrodes located in an external magnetic field that has both tangential and longitudinal components. The Hall constant and the magnetic Reynolds number are small. Due to axial symmetry, the electric field vector has only longitudinal and transverse components. Using Ohm's law and continuity, impulse, and Maxwell's equations for the external electrical and magnetic fields, the authors show that in a given axial plane the flow is dependent on the varying lateral velocity component, inasmuch as the radial pressure gradient varies along the length of the channel. Also, the longitu-

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

KUZNETSOVA, T. D. et al, Magnitnaya Gidrodinamika, No 4, 1971, pp 36-42

dinal gradient varies across the channel radius. Under given conditions a meridian vortex develops with a zone of reverse flow near the central electrode. Radial variations in the tangential magnetic field and radial current flux also affect the flow.

The development of a boundary layer in the coaxial channel with rotating flow is simplified to the consideration of a flow in a plane slit-type channel with a lateral velocity component. Assuming a short channel and a large Reynolds number, the authors reduce the problem to a boundary layer approximation, which permits calculation of the flow parameters in the center and in the boundary layer. Fluid injection through the walls is assumed to be weak, and only lateral velocity interaction with the longitudinal magnetic field is treated. The assumptions and simplifications yield simple equations for the laminar boundary layer that describe the skewed flow of the electroconductive liquid on a current-carrying plate.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

KUZNETSOVA, T. D. et al, Magnitnaya Gidrodinamika, No 4, 1971, pp 36-42

Self-similar transformations and automodeling techniques fail to hold for fluid injection through the wall, and consequently the Runge-Kutta method is used, with numerical calculation carried out on a BESM-2M digital computer. Results are shown in graphic form by families of curves for the lateral velocity profile. The similarity to flows with retardation is noted. The difference is that when the transverse velocity gradient reaches zero, the main flow separates from the wall and reverse flow is observed, but the longitudinal velocity profile is not affected. Flow retardation and separation from the wall are found to be functions of transpiration rate.

The authors thank A. V. Gubarev for valuable discussions. Orig. art. has 8 figs. and 8 refs.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC 541.182.02

KOMAROV, V. S., KUZNETSOVA, T. E., and DUBNITSKAYA, I. B., Institute of General and Inorganic Chemistry Academy of Sciences Belorussian SSR

"The Influence of Organic Cation-active Agents on the Structure of Absorbants Produced"

Minsk, Izvestiya Akademii Nauk BSSR Seriya Khimicheskikh Nauk, No 2, 1972, pp 63-67

Abstract: A study was made of the effect of twelve to eighteen carbon long amine salts, which are cation-active organic substances, on the structure of zerogels of aluminum hydroxide formed in their presence. These experiments were part of a larger study of the formation of gels in the presence of various surface-active substances. The maximum sorption volume, specific surface area, and mean effective pore radius were determined in the presence of four different amine salts, each at 0.01 and 0.05 weight%. The absorption isotherms and curves for the distribution of pore volume versus radius were plotted for each salt and concentration. An uninterrupted rise in sorption capacity and effective pore volume were observed with increasing molecular weight and concentration of the amine, while the specific surface correspondingly decreased. The surface ionization is discussed and it is proposed that the absorption of the

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

KOMAROV, V. S., et al., Izvestiya Akademii Nauk USSR Seriya Khimicheskikh Nauk, No 2, 1972, pp 63-67

organic cations of the surface of the hydrophilic particles renders them hydrophobic and leads to a screening effect, and a lowering of the electrokinetic potential. This hydrophibic film results in a lowered stability of the aggregation, and to a lessened capacity for immediate contact between particles. A thinner hydrophobic layer is said to lead to the formation of small pore absorbants, and a thicker layer to large pore. A further increase in the concentration of the surface active absorbants again renders the particle hydrophilic due to the double layer formation illustrated. These particles form a friable aggregate. The fact that the adsorption of long chain organic cations of the surface of gel particles facilitates the formation of dispersed structures, with relatively high free energy, is indicated.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UDC: 621.375.82

USSR

ZUBOV, V. A. and KUZNETSOVA, T. I.

"Depth Holography of Nonstationary Light Fields"

Moscow, V sb. Kvant. elektronika (Quantum Electronics--collection of works) "Sov. radio," No 1(13), 1973, pp 135-137 (from RZh--Fizika, No 7, 1973, Abstract No 7D1097)

Translation: It is shown that in the action of an optical signal and special nonmonochromatic reference wave on a light-sensitive material, information is recorded concerning the space and time characteristics of the signal. Upon illumination of the hologram obtained the three-dimensional image of the original object is reproduced, depending on the time. The volume of information that can be recorded in such a system is computed. Authors' abstract

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Lasers & Masers

UDC 621.375.82

USSR

KORSHUNOV, V. A., KUZNETSOVA, T. I., MALYUTIN, A. A.

"On the Time Characteristics of a Ring Laser With a Clearing Filter"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No. 3, Moscow, "Sov. radio", 1972, pp 69-72 (from RZh-Fizika, No 1, Jan 73, Abstract No 1D878)

Translation: A theory of the development of self-synchronization of modes in a ring laser is presented. Formulas were obtained describing the establishment of a relationship between the right and left wave in the clearing process of a nonlinear filter. An experimental comparison of the time characteristics of the right and left wave of a ring laser is made with the aid of an electron-optical chamber. It is shown that with a high concentration of the clearing absorber there is a strong correlation between the time characteristics of the right and left wave which weakens with a decrease in the concentration of the absorber. Authors abstract.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UDC 621.378.5

USSR

KUZNETSOVA, T.I. [Physics Institute imeni P.N. Lebedev, AS, USSR]

"Concerning Measurements Of Time Radiation Characteristics Based On Multiphoton Processes In Opposite Light Beams"

Izv.VUZ:Radiofizika, Vol XV, No 2, Feb 1972, pp 227-232

Abstract: An evaluation is made of the precision of measurements of the time characteristics of laser emission during use of n-photon luminescence in opposite beams. Schemes are also considered with two cells which make it possible with the aid of the luminescent method to obtain more reliable information concerning the emission. It is emphasized that in the ordinary luminescence method, transition from two-photon luminescence to multiphoton does not give significant advantages. The advantages of the use of multiphoton effects must be shown during operation in accordance with the scheme with two cells. In such a variant of the luminescent method the required precision of measurement is substantially decreased with transition to multiphoton effects. 1 fig. 10 ref. Received by editors, 29 March 1971.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC 621.378.3

KUZNETSOVA, T. I., Physics Institute imeni P. N. Lebedev of the USSR Academy of Sciences

"Measuring the Time Radiation Characteristics Based on Multiphoton Processes in Opposing Light Beams"

Gor'kiy, Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, Vol XV, No 2, 1972, pp 227-232

Abstract: A study was made of the relation of the time characteristics of laser radiation to the characteristics of a track of multiphoton luminescence in the presence of errors in the track measurements. Estimates were obtained for the measurement accuracy of the time characteristics for recording supershort pulses when using n-photon luminescence in opposing beams. A study was made of the advantages of a system with two cells [J. R. Klauder, et al., Appl. Phys. Lett., Vol 13, No 5, 174, 1968; T. I. Kuznetsova Kratkiye soobshcheniya po fizike, FIAN, No 7, 31, 1970] permitting more reliable information about the radiation to be obtained by the luminescent procedure. These advantages are more significant the higher the photon factor.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 009 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--DETERMINATION OF THE MONETHYL ADIPIC ACID CHLORIDE -U-

AUTHOR-(04)-SOLUNINA, I.A., PARFENOVA, V.V., DEVYATNIN, V.A., KUZNETSOVA, T.N.

COUNTRY OF INFO--USSR

K

SOURCE--KHIM. FARM ZH. 1970, 4(2), 46-8

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--CHEMICAL ANALYSIS, ADIPIC ACID, CARBOXYLIC ACID CHLORIDE, HYDROLYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/0538 STEP NO--UR/0450/70/004/002/0046/0048

CIRC ACCESSION NO--AP0113429

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UNCLASSIFIED PROCESSING DATE--09OCT70

2/2 009

CIRC ACCESSION NO--AP0113429

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A PROCEDURE WAS DEVELOPED FOR DETG. THE TITLE COMPD. (I) IN THE PRESENCE OF MONO ET ADIPATE (II) AND HCL. THE PROCEDURE WAS BASED ON ETHANOLYSIS OF I WITH ABS. ETOH TO FORM DI ET ADIPATE AND HCL, AND ON HYDROLYSIS OF I TO FORM II AND HCL. A TITRIMETRIC DETN. OF THE ACIDS FORMED BOTH REACTIONS PERMITS THE I CONTENT TO BE ASSESSED FROM THE DIFFERENCE. THE HCL CONTENT WAS DETD. BY THE VOLHARD METHOD. THE PROCEDURE IS AS FOLLOWS: DISSOLVE A SAMPEL (SIMILAR TO 0.15 G) IN 5 ML ABS. ETOH, ADD SEVERAL DROPS OF BROMOTHYMOL BLUE AND TITRATE WITH 0.1 N NAOH. THEN ADD 10 ML 16PERCENT HNO SUB3, 20 ML 0.1 N AGNO SUB3, AND BACK TITRATE THE AGNO SUB3 WITH 0.1 N NH SUB4 SCN IN THE PRESENCE OF NH SUB4 FE(SO SUB4) SUB2. DISSOLVE ANOTHER SAMPLE IN 5 ML DIOXANE, ADD 20 ML H SUB2 O, AND TITRATE WITH 0.1 N NAOH USING THE SAME INDICATOR AS IN THE 1ST TITRN. CALC. THE CONTENT OF I,II, AND HCL FROM THE GIVEN FORMULAS. THE RELATIVE ERRORS OF THE DETN. OF I, II, AND HCL BY THIS PROCEDURE WERE 5.5, 1.1, AND 15.0PERCENT, RESP. FACILITY: VSES. NAUCH. ISSLED. VITAMIN. INST., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--MANIFESTATION OF A DONOR ACCEPTOR INTERACTION IN P NITROPHENOLATE SPECTRA -U-

AUTHOR-(02)-LOPATIN, B.V., KUZNETSOVA, T.YE.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 713-15

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IR SPECTRUM, ORGANIC NITRO COMPOUND, BENZENE DERIVATIVE, PHENOL, ORGANOMERCURY COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0640 STEP NO--UR/0062/70/000/003/0713/0715

CIRC ACCESSION NO--AP0119552

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UNCLASSIFIED PROCESSING DATE--30OCT70

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CIRC ACCESSION NO--AP0119552

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IR SPECTRAL DATA WERE TABULATED FOR P XC SUB6 H SUB4 NO SUB2 WHERE X EQUALS ME, CLHG, CLHGCH SUB2, BRHGCH SUB2, IHGCH SUB2, ME SUB2 N, HO, MEO, OR LI, NA OR K, IN SALTS OF RELATED NITROPHENOLS P-XOC SUB6 H SUB4 NH SUB2. IN FORMATION OF THE METAL SALTS THE BAND FROM THE NO SUB2 GROUP INCREASES ITS INTENSITY GREATLY AND ITS FREQUENCY DECLINES THUS SUPPORTING THE CONTENTION THAT ANOMALIES EXIST IN IR SPECTRA OF COMPDS. CONTG. AN O BRIDGE THAT CAN AID IN CHARGE CHANGES AT THE NO SUB2 GROUP IN AROMATIC COMPDS.

FACILITY: INST. ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

UDC 539.56

BELOUS, O. A., DANILOVTSEVA, O. G., KUZNETSOVA, V. A., MAL'TSEV, M. V., MINAKOV, V. N., TREFILOV, V. I., KHACHATUROV, A. A., SHCHUKIN, A. A., Moscow, Kiev. VNIITS (All-Union Scientific Research Institute of Hard Alloys); Institute of Metallophysics. Academy of Sciences, Ukrainian SSR

"An Investigation of the Influence of Admixtures of Carbon and Zirconium Carbide on the Cold Brittleness of Cast Molybdenum"

Kiev, Problemy Prochnosti, No. 6, 1971, pp 97-101

Abstract: An investigation is made of the influence of carbon and zirconium carbide upon the structure of cast molybdenum alloys, and of the relationship of the structure to the temperature of transition to a brittle state. It is found that even for alloys which have a complex structural state, the rules governing the change of the cold-brittleness temperature may be explained if account is taken of the composition of the solid solution, its structural state, and the nature of the formation of excess phases on the grain boundaries. 5 figures, 1 table, 11 references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UNCLASSIFIED PROCESSING DATE--04DEC70

1/2 013

TITLE--INCREASE IN THE ADHESIVE PROPERTIES OF BRAND V BLACK POROUS SOLE RUBBERS -U-

AUTHOR-(05)-GUDIMENKO, V.I., PUSHKOVA, V.V., SANDLER, G.A., KUZNETSOVA, V.A., MARKICHEVA, N.V.

COUNTRY OF INFO--USSR

SOURCE--KOZH.-OBUV. PROM. 1970, 12(5), 47-51

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, MILITARY SCIENCES

TOPIC TAGS--RUBBER, VULCANIZATION, ADHESION, FOOTGEAR/(U)101K RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/006 STEP NO--UR/0498/70/012/005/0047/0051

CIRC ACCESSION NO--AP0140292

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UNCLASSIFIED PROCESSING DATE--04DEC70

2/2 013

CIRC ACCESSION NO--AP0140292

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT CONST. RUBBER COMPN. THE ADHESION OF POROUS SOLE RUBBER TO CLOTH INCREASED WITH ITS D. THE D. WAS VARIED BY CHANGING THE RELATIVE VULCANIZATION TIMES AT LOW AND HIGH PRESSURES WHILE MAINTAINING THE TOTAL VULCANIZATION TIME CONST. ALTERNATIVELY, THE D. WAS VARIED BY CHANGING THE AMT. OF THE BLOWING AGENT (DINITROSOPENTAMETHYLENETETRAMINE). THE ADDNS. OF RESIN 101%, RESOTROPIN, OR RESORCINOL TO THE STD. RUBBER MIXES INCREASED THEIR ADHESION TO CLOTH 20-60PERCENT WITHOUT IMPAIRING OTHER PROPERTIES.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Acc. Nr: AP0037234 Ref. Code: UR 0301

PRIMARY SOURCE: Voprosy Meditsinskoy Khimii, 1970, Vol 16, Nr 1, pp 23-27

SEPARATION OF SUBSTRATE AND KININOGENASE ACTIVITIES OF HORSE BLOOD PLASMA

Kauricheva, N. I.; Kuznetsova, V. M.; Bogomolets-Enrikes, O. M.

N. F. Gamaleya Institute of Microbiology and Epidemiology USSR Academy of Medical Sciences, Moscow

Horse plasma kininogens and kallikrein were separated by precipitation with polyethylene glycol with mol. wt. 6000 at 67% of saturation. 60% of kininogen which releases kinin when incubated with plasma kallikrein and venom enzyme was obtained in the supernatant. Kallikrein was concentrated in the precipitate.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

K

UDC: 620.197.620.193

USSR

GERASIMOV, V. V., PAVLOVA, F. S., KUZNETSOVA, V. N., and BRATCHIKOV, V. N.

"Effect of Protective Metallic Coatings on the Corrosion Cracking of Stainless Steel"

Moscow, Zashchita Metallov, Vol. 6, no. 4, Jul-Aug 70, pp 420-424

Abstract: In a steam-air medium at about 100°C, OKh18N10T steel may become subject to corrosion cracking. The objective of this study was to determine an optimum coating providing long-term protection of OKh18N10T steel against corrosion cracking at high temperatures in steam and steam-air media containing chlorides. The coatings tested were aluminum, nichrome, and alumel. Specimens spray-coated with aluminum exhibited the highest electrochemical protection of the steel. Annealing the aluminum coating at 510, 700, and 870°C increases corrosion cracking resistance at least twofold. However, a heavy (over 3 microns) and brittle layer of intermetallic compounds which is formed in the process of heat treating the aluminum coating at temperatures above the melting point of aluminum appears to fail even at minor deformations. The cracks which result in the aluminum layer impair the protective properties of the coating against those provided by a 510°C annealing.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Extraction and Refining

USSR

UDC 669.71'721.018.9.4

LUKASHENKO, E. YE., POGODAYEV, A. M., KOPACH, I. I., KUZNETSOVA, V. P.

"Study of the Processes of Refining Aluminum and Magnesium Alloys by Vacuum Distillation"

Metalloved. splavov legkikh met. -- V sb. (Physical Metallurgy of Alloys of Light Metals -- collection of works), Moscow, Nauka Press, 1970, pp 91-98 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G205)

Translation: The kinetics and mechanism of vacuum distillation of aluminum and magnesium alloys (synthetic and industrial) and electrolytic magnesium are studied. The effect of temperature, distillation time, composition, and height of the layer of distilled alloy, the residual pressure, the tap and vapor condensation conditions and kinetic factors on the mechanism, rate, and completeness of refining the alloys is investigated in a broad range of values. There are 4 illustrations, 4 tables, and a 20-entry bibliography.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Extraction and Refining

USSR

UDC 669.716,721:621.745.55:66.067

LUKASHENKO, E. Ye., POGODAYEV, A. M., KOPACH, I. I., and KUZNETSOVA, V. P.

"Investigation of Refining Processes of Aluminum and Magnesium Alloys by Vacuum Distillation"

Metallovedeniye Splavov Legkikh Metallov-Sbornik, Moscow, "Nauka", 1970, pp 91-98, resume

Translation: The kinetics and mechanism of vacuum distillation of aluminum and magnesium alloys (synthetic and industrial) and electrolytic magnesium are investigated. Analyzed are, in a broad interval of values, the effects of temperature, duration of distillation, composition and layer depth of the distilled alloy, residual pressure, conditions of elimination and condensation of vapor, and kinetic factors on the mechanism and the rate and completeness of refining alloys. Four figures, four tables, twenty bibliographic references.

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4

UDC: 539.163.546.663

USSR

VYLOV, Ts., GROMOV, K. Ya., GROMOVA, I. I., ISKHAKOV, G. I., KUZNETSOV, V. V., KUZNETSOVA, M. Ya., POTEMPA, A. V., FOMINYKH, M. I.

"Investigation of the Decay of ^{148}Tb and ^{150}Tb. Part II. γγ-Coincidence. Decay Schemes of ^{148}Tb and ^{150}Tb"

Moscow, Izvestiya Akademii Nauk SSSR: Seriya Fizicheskaya, Vol 37, No 1, Jan 73, pp 48-52

Abstract: The paper presents studies of γγ-coincidence spectra of terbium isotopes ^{148}Tb and ^{150}Tb with their decay schemes and a comparison of the analogous excited states of ^{148}Gd and ^{150}Gd nuclei and the neighboring

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UDC: 539.163.546.663

USSR

VYLOV, Ts., GROMOV, K. Ya., GROMOVA, I. I., ISKHAKOV, G. I., KUZNETSOV, V. V., KUZNETSOVA, M. Ya., POTEMPA, A. V., FOMINYKH, M. I.

"Investigation of the Decay of ^{148}Tb and ^{150}Tb. Part II. γγ-Coincidence. Decay Schemes of ^{148}Tb and ^{150}Tb"

Moscow, Izvestiya Akademii Nauk SSSR: Seriya Fizicheskaya, Vol 37, No 1, Jan 73, pp 48-52

Abstract: The paper presents studies of γγ-coincidence spectra of terbium isotopes ^{148}Tb and ^{150}Tb with their decay schemes and a comparison of the analogous excited states of ^{148}Gd and ^{150}Gd nuclei and the neighboring

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nuclei of samarium and neodymium. [illegible] is assumed that the odd 65-th proton and 83-d (85-th) neutron in the nuclei of ^{148}Tb and ^{150}Tb are in shells $d_{3/2}$ and $f_{7/2}$ respectively, then according to the shell model the ground state of ^{150}Tb has the configuration $\{p(d_{3/2})^1 n(f_{7/2})^3\}$, while that of ^{148}Tb is $\{p(d_{3/2})^1 n(f_{7/2})^1\}$. These configurations allow values of the I^π-ground states of these isotopes of 5^-, 4^-, 3^-, and 2^-. From the decay schemes of these nuclei and the values of log ft, it may be concluded that the spin and parity of the ground states of these isotopes must be 2^-.

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Glass and Ceramics

USSR UDC 666.1:535.37

PUKO, R. A., PINAYEVA, M. M., KUZNETSOVA, V. V., KOZHAN, T. M., DEMIDOVICH, B. K., and KHOMENKO, V. S., Institute of Physics, Academy of Sciences, Belorussian SSR

"Luminescence of Terbium-Activated Glass"

Moscow, Neorganicheskiye Materialy, Vol 9, No 10, Oct 73, pp 1805-1808

Abstract: Results are presented from a study of the adsorption spectra and luminescence as well as the kinetics of luminescence of sodium-silicate glass with additions of Al_2O_3, CaO and MgO and activated with Tb^{+3} ions. Glass compositions were selected close to industrial glasses used in the technology of structural materials. The spectra in kinetics of silicate glass luminescence containing 15 wt % Na_2O and varying concentrations of Al_2O_3, CaO, and MgO with Tb^{+3} ions revealed differences associated with glass composition. The spectra of glasses containing Al_2O_3 have additional lines at 526 and 535 microns which are absent in the other glass spectra. There was observed a tendency of diminished luminescence damping time from the 5_{D_4} level according to the degree of increased CaO and MgO content.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

PUKO, R. A., et al., Neorganicheskiye Materialy, Vol 9, No 10, Oct 73, pp 1805-1808

The relaxation times were determined for luminescence levels $5D_3$ and $5D_4$ of the Tb^{+3} ion in the glasses and it was shown that the kinetics of $5D_4$ level colonization in the case of nonresonant excitation determines the transitions from the $5D_3$ level. Two figures, two tables, seven bibliographic references.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC: 535.373.2

SEVCHENKO, A. N., KUZNETSOVA, V. V., PUKO, R. A., KHOMENKO, V. S., RASVINA, T. A., and KOZHAN, T. M.

"Intramolecular and Intermolecular Transfer of Excitation Energy in Complex Compounds of Rare-Earth Metals"

Moscow, Izvestiya AN SSSR -- Seriya Fizicheskaya, vol 36, No 5, 1972, pp 1013-1017

Abstract: This paper gives the results of experiments for determining, through the kinetic method, the probability of intramolecular and intermolecular transfers of excitation energy in crystals of rare-earth element (REE) complexes. With excitation by short light pulses, the kinetics of the luminescence reflects the trend of the population and the deactivation of the luminescence level and yields direct information concerning the probability of these processes. A pulsed laser with molecular nitrogen was used as the excitation source, with a pulse duration of $2 \cdot 10^{-8}$ sec and a wavelength of 337.1 nm in the long-wave band of ligand absorption. The authors are connected with the Physics Institute of the USSR Academy of Sciences.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC 632.954:635.132

SIVTSEV, M. V., and KUZNETSOVA, Ye. A., Simferopol University

"The Condition of Plastid Pigments in Carrot Leaves in Connection With the Application of the Herbicide Solan"

Moscow, Agrokhimiya, No 2, 1973, pp 134-137

Abstract: Field experiments were conducted in the Crimean piedmont in 1970-1971 with 70% soil moisture. Solan (3-chloro-2-methyl-p-valerotoluidide) was sprayed on sprouts in dosages of 3.0 and 6.0 kg./ha. Pigment content were determined spectrophotometrically, chlorophyllase activity by the method of Sud'ina, and the photochemical activity of the chloroplast homogenates by the difference in reconstituted chlorophyll in light and in darkness in a period of 5 minutes. The tests were repeated four times over 2 years. Results indicated that solan led to reduction of green pigmentation in the carrot leaves and reduction of carotinoid in the leaves and also an increase of carotinoid in the root crop. One reason for the reduction of green pigmentation may be an increase in the hydrolytic current of chlorophyllase. The greater the dosage of herbicide the lesser was the photochemical activity of chloroplasts.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--ON THE HYSTERO ORGANIC COORDINATIONS -U-

AUTHOR-(03)-SVIRSKAYA, Z.V., KUZNETSOVA, YE.A., KHRAPUNOVICH, YE.A.

COUNTRY OF INFO--USSR

SOURCE--ZDRAVOOKHRANENIYE BELORUSSII, 1970, NR 2, PP 48-50

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DIAGNOSTIC METHODS, REPRODUCTIVE SYSTEM, NERVOUS SYSTEM DISEASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1515 STEP NO--UR/0417/70/000/002/0048/0050

CIRC ACCESSION NO--AP0106271

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0106271

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DIAGNOSIS OF HYSTERO ORGANIC COORDINATIONS IS OFTEN RATHER EMBARRASSING. A WRONG INTERPRETATION OF THE COORDINATED SYMPTOMS LEADS TO A LATE DETECTION OF THE NATURE OF THE DISEASE, TO A TARDY BEGINNING OF THE PATHOGENETICALLY INDUCED TREATMENT. THE ARTICLE GIVES AN ANALYSIS OF 19 CLINICAL OBSERVATIONS OVER VARIOUS HYSTERO ORGANIC COORDINATIONS. THE THERAPY IN ALL CASES MUST BE COMBINED, STRICTLY DIFFERENTIATED.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR UDC 620.193.01

KUZNETSOVA, YE. G., SOKOLOV, A. A., NOVAKOVSKIY, V. M., KOLOTYRKIN, YE. M.,
Scientific-Research Physico-Chemical Institute imeni L. Ya. Karpov

"The Influence of Oxidation-Reduction System on the Rate of Dissolution of Passive Titanium"

Moscow, Zashchita Metallov, No 4, 1972, pp 409-414.

Abstract: Data are presented and discussed on changes in the dissolution rate of passive titanium, potentiostatically polarized in dilute sulfuric acid upon introduction of the Fe^{2+}/Fe^{3+} redox system to the acid, and also upon introduction of Ti^{3+} ions. The radiometric method is used to show that when titanium is maintained in the anode-passive state, the introduction of Fe^{3+} ions causes only an increase in the external anode current, while the introduction of Ti^{3+} ions causes a simultaneous inhibition of dissolution of the titanium, explained by the anode deposition of TiO_2 from the solution.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--RELATION OF SEPARATION AND ENRICHMENT FACTORS DURING ISOTOPE DISTRIBUTION BETWEEN SEVERAL FRACTIONS -U-

AUTHOR-(02)-KUZNETSOVAYE, YE.M., SEMIOKHIN, I.A.

COUNTRY OF INFO--USSR

SOURCE--VESTN. MOSK. UNIV., KHIM. 1970, 11(1), 3-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--ISOTOPE SEPARATION, CARBON DIOXIDE, FRACTIONATION, PARTICLE DISTRIBUTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1899 STEP NO--UR/0189/70/011/001/0003/0009

CIRC ACCESSION NO--AP0108229

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0108229

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RELATION IS OBTAINED BETWEEN THE COEFFS. OF SINGLE PASS SEPN., ALPHA, AND ENRICHMENT, BETA SUB1, DEPENDING ON THE NO. OF FRACTIONS AND THE DISTRIBUTION OF THE TOTAL AMT. OF MATERIAL AMONG THE FRACTIONS. THE RELATION IS USED TO CALC. ALPHA FOR A COMPLEX PROCESS IN WHICH SEVERAL FRACTIONS ARE FORMED BY SUING THE VALUE OF BETA SUB1 IN THE STARTING MATERIAL AND ITS PERCENTAGE CONVERSION DURING THE REACTION FOR THE DISSOCN. OF CO SUB2.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 021 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0127804

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PN JUNCTIONS IN SIC SINGLE CRYSTALS WITH N CONCN. OF 6 TIMES 10 PRIME17 TO 10 PRIME19-CM PRIME3 WERE PREPD. BY: (I) AL DIFFUSION AT 1900-2300DEGREES DURING SEVERAL MIN, (II) B DIFFUSION AT 1920-2000DEGREES DURING SEVERAL MIN, OR (III) EPITAXIAL GROWTH WITH THE P REGION DOPED WITH AL. THE STATISTICAL CHARACTERISTICS AND THE DIFFERENTIAL RESISTANCE, AS WELL AS THEIR TEMP. DEPENDENCES, WERE MEASURED. THE CAPACITANCE VOLTAGE RELATIONS WERE PLOTTED AND THE SPACE CHARGE LAYER THICKNESS (10 PRIME NEGATIVE6-10 PRIME NEGATIVE5 CM) WAS EVALUATED. THE V. AMP. CHARACTERISTICS ARE NTO STEEP ENOUGH, SO THAT THE VOLTAGE AT C.D. EQUALS 1-5 MA-CM PRIME2 WAS ARBITRARIYLY CHOSEN AS THE BREAKDOWN VOLTAGE, WHICH VATIED FROM 10 TO 40 V, CORRESPONDING TO A FIELD OF 5 TIMES 10 PRIME6 V-CM. THE IMPURITY DISTRIBUTION IN THE DIODES IN CLOSE TO THE ABRUPT OR TO THE LINEAR PN JUNCTION. THE LATTER ARE RESPONSIBLE FOR THE TUNNEL MECHANISM OF ELEC. BREAKDOWN. THE TEMP. COEFF. OF BREAKDOWN (BETA) AT 60-120DEGREES IS NEG. AND IS LARGER THAN EXPECTED FROM THERMAL EXPANSION CONSIDERATIONS. THE TEMP. INDEPENDENCE OF BETA IMPLIES A CONSIDERABLE CONTRIBUTION OF EXPANSION TO THE TEMP. DEPENDENCE OF THE TUNNEL EFFECT. THE TUNNEL TRANSITIONS ARE CONSIDERED AS INDIRECT AND AS OCCURRING BY A PHONON MECHANISM. THE FIELD (E) DEPENDENCE OF THE BREAKDOWN CURRENT (I) WAS STUDIED, AND A RELATION LOG I SIMILAR TO ROOT BAR E WAS DERIVED. IT WAS VALID IN A WIDE RANGE OF I. THE PREDOMINANT TYPE OF BREAKDOWN IS THAT BASED ON THE TUNNEL EFFECT. A CONSISTENT THEORETICAL MODEL IS PROPOSED.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UDC 621.382.2

USSR

ALADINSKIY, V.K., KUZNETSOVA, Ye.N., PAVLICHENKO, V.I., and RYBKIKOV, I.V.

"Tunnel Breakdown in SiC p-n Junctions"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 4, No 4, 1970, pp 708-714

Abstract: This paper describes experiments, which investigate the breakdown mechanism in SiC p-n junctions obtained by various technical means. Such electrical breakdowns are accompanied by electroluminescence, and research in the latter is valuable for investigating one of the new directions in semiconductor engineering, the creation and development of light diodes, i.e., instruments in which electrical energy is transformed to light energy. The p-n junctions under test were prepared by the diffusion of aluminum at temperatures of 1900-2300° C for several hours, or the diffusion of boron for several minutes at a temperature of 1920-2000° C and separate diffusion of Al followed by boron. Some of the junctions were obtained by epitaxial growth; then, the p region was doped with Al. The authors conclude by suggesting that an analysis of the spectral characteristics of recombination radiation in the breakdown of diodes of this type would be worthwhile conducting.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Rare Metals

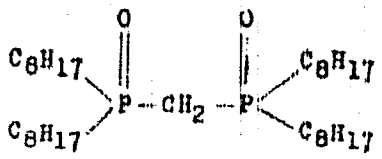
USSR UDC 669.85/86.3

SUVOROVSKAYA, N. A., and KUZNETSOVA, YU. S., Moscow

"Extraction of Rare-Earth Metals by Tetraoctylmethylenediphosphine Dioxide"

Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 1, Jan-Feb 1970, pp 88-90

Abstract: This article presents investigations of the nature of distribution of some rare-earth metals during their extraction by solutions of tetraoctylmethylene-di-phosphine dioxide (DTOMDF) of the following structure:



and synthetized from $(C_8H_{17})_2P(O)CH_2Cl$ and $(C_8H_{17})_2POC_2H_5$. A study is made of the extraction of rare-earth metals from diluted solutions depending on the concentration of nitric acid, ammonium nitrate, and rare-earth metals using DTOMDF solutions in kerosene. DTOMDF is more effective in relation to rare-earth metals than trioctylphosphineoxide solutions. It was established that DTOMDF is a very

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USSR

SUVOROVSKAYA, N. A., et al, Izvestiya Akademii Nauk SSSR, Metally, No 1, Jan-Feb 1970, pp 88-90

effective extracting agent for rare-earth metals which can be used for their recovery from weak solutions with high extraction indicators and simultaneous concentration of metal, a fact which is particularly significant during processing of ore with a small content of rare-earth metals.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UDC 546.791'161

USSR

OPALOVSKIY, A. A., KUZNETSOVA, Z. M., NESTERENKO, M. N., and SHINGAREV, V. G.

"The System $HF-UF_6-NH_4F$"

Leningrad, Radiokhimiya, Vol 15, No 4, 1973, pp 615-618

Abstract: Study of the isothermal solubility in the systems $HF-MoF_6-NH_4F$ and $HF-UF_6-NH_4F$ leads to several observations. One of the universal characteristics of this system is the formation of ammonium heptafluoromolybdates and uranates with the formula NH_4MeF_7, representing a new synthetic route for such materials. In this system uranium hexafluoride is more soluble than molybdenum hexafluoride with increasing concentration of ammonium fluoride in the solution, probably because of the formation of NH_4UF_7. The reaction mechanism in this system consists of dissociation of the NH_4F followed by formation of $[NeF_7]^-$ and finally of the reaction product NH_4MeF_7.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Medical Surgery

KUZNETSOVA, Z. P.

J-9605

USSR 616.017.3:615.5

Dozent V. I. Tolyshev, doctorate of Medical Sciences Z. P. Kuznetsova, and P. V. Sychev: Thrombosis of the common iliac artery.

The patient S., a 37-year-old woman, was admitted to the clinic on August 15, 1955, complaining of a dull pain in the right lumbar area and a swelling in the right side of the abdomen. She had been sickly since 1951. The diagnosis was established as follows: right-sided tuberculous pyelonephritis. On September 1, 1955, a right nephroureterectomy was performed. On the third day after the operation, the patient developed pain in the right leg, with cyanosis of the skin and operation crimson spots, as well as a sharp drop in topical temperature and absence of pulse in the peripheral vessels. The new diagnosis was thrombosis of the common iliac artery.

On September 3, under anesthesia consisting of nitrous oxide and oxygen, combined with relaxants, the peritoneal wound from the first operation was reopened. After additional separation of the peritoneal sac, the right common iliac artery was bared as far as the bifurcation of the aorta.

On examination, it developed that, starting with this bifurcation of the aorta, on the right side of the iliac artery, there could be palpated a soft, elastic thrombus 10 cm. long, and filling the entire lumen of the vessel.

Both above and below the thrombus, rubber tubes were then attached to the vessel and the lumen of the common iliac artery was rinsed up. With the aid of a clamp and, partially, by squeezing, the thrombus was extracted from the artery and the center where it had been bared was rinsed with sheets, and then with heparin. The opening in the wall of the artery was closed with cotton thread, with the use of atraumatic needles. After the tubes were removed, a lively pulse developed in the peripheral arteries. Five minutes later, however, pulsation in the common iliac artery stopped and palpation easily determined the presence of a new thrombus in the same spot as the old.

The rubber tubes were reimposed upon the vessel, the sutures removed from the vascular wall, and a second thrombus of the same size as before was removed from the lumen of the artery. The artery was then rinsed with a solution of heparin and 2-aminoacetic acid, and the flow of blood was restored. To prevent bleeding through the wall of the artery, the areas of the vascular wall were reinforced with cotton thread. There was no bleeding. The wound was closed, layer by layer. During the operation, fibrinolysin (60 units) was introduced, a blood transfusion was administered and a 5-percent solution of glucose was injected. Fifteen minutes after the end of the operation, the arterial pulse in the left leg vanished, but it remained well pronounced in the right leg.

In view of the poor general condition of the patient, it was decided to remove the new thrombus with the aid of a rubber catheter. The left femoral artery was not pulsating. After cotton clamps were placed on the artery walls, its lumen was opened up. With the aid of a catheter connected to an electric pump, a long and porous thrombus was extracted from the femoral and the left common iliac artery. The free circulation of blood through these vessels was thereby restored. Heparin (25,000 units)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

VELIKANOV, V. M., ROZENBERG, G. I., KUZNETSOV-FETISOV, L. I.

"Study of the Mechanism of Adsorption of Nitrogen Dioxide on Silica Gel by IR Spectroscopy. Report I. Method and Preliminary Results"

Tr. Kazan. Khim.-tekhnol. In-ta [Works of Kazan Institute of Chemical Technology], No 46, 1971, pp 174-180, (Translated from Referativnyy Zhurnal, Khimiya, No 2, 1972, Abstract No 2 B1387 from the Resume).

Translation: An installation is created, suitable for measurement of IR spectra of corrosive gases adsorbed on solid adsorbents. A method is developed for production of thin films of silica gel, suitable for the study of processes of adsorption by IR spectroscopy. An absorption band is observed at 1,710 cm^{-1}, belonging to the product of adsorption of NO_2 and N_2O_4 on silica gel, and an attempt is made to attribute it.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

LOGAK, L. G., ROZENBERG, T. I., KUZNETSOV-FETISOV, I. I.

"Study of the Mechanism of Adsorption of Nitrogen Dioxide on Silica Gel by IR Spectroscopy. Report II. Kinetics of Adsorption of Nitrogen Dioxide on Synthetic Mordenite at Low Adsorbate Pressures"

Tr. Kazan. Khim.-tekhnol. In-ta [Works of Kazan Institute of Chemical Technology], No 46, 1971, pp 131-135 (Translated from Referativnyy Zhurnal, Khimiya, No 2, 1972, Abstract No 2 B1388 from the Resume).

Translation: The effective diffusion coefficients D of nitrogen dioxide during its adsorption by H-mordenites are determined at low adsorbate pressures. It is established that D increases with increasing adsorption. It is demonstrated that diffusion is activated, and that high values of activation energy indicate high bond strength of the first portions of adsorbate with the surface of the adsorbent.

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Transportation and Conveying

USSR

UDC 629.113-592:629.113.004.5

KUZNETZOV, YE. S., Dr of Techn. Sciences; GAL'BURT, A.YE. (Scientific Research ~~Institute of Autom~~obile Transport)

"Investigation of Reliability and Conditions of Technical Servicing of the MAZ-500 Automobile Brake Mechanisms"

Moscow, Avtomobil'naya Promyshlennost' No 6, June 71, pp 9-11

Abstract: Long term investigations on wear resistance and on preventive maintenance of the MAZ-500 automobile brakes, have been carried out on four MAZ-500 and three MAZ-502B automobiles, with two axes trailers of 14.225 kg and 13.950 kg total weight, respectively. Total distances covered by two groups are 223.000 and 251.000 km respectively. The preparation of mechanisms and measuring techniques for lining and drum wear are described. Data are presented on lining and drum wear rate along their length and width. It was observed that lining wear varies with year seasons, with minimum in winter and maximum in spring and fall. Braking tests have been conducted on a dry dynamometric road of the Central Scientific Research Institute of Automobiles and Automobile Engines, with braking run measured by Paysler instrument and the deceleration by decelerograph of the 3-9/E3 type. Optimal periods for brake adjustment for front and rear wheels were established on the basis of data on variation of gap between linings and drums, with distance covered. It is stated that despite

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USSR

KUZNETZOV, YE.S., et al, Avtomobil'naya Promyshlennost' No 6, June 71, pp 9-11

a certain increase in weight of the MAZ-500 vehicles and reduction in total lining surface the reliability of braking mechanisms in operation increased, due to construction changes.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

1/2 012 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--PORTABLE APPARATUS FOR RELAY PROTECTION, AUTOMATIC OPERATION AND MEASUREMENT -U-

AUTHOR--KUZNIK, YU.S.

COUNTRY OF INFO--USSR

SOURCE--ENERGETIK (USSR), NO. 2, P.30 (1970)

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--ELECTRIC RELAY, PROTECTIVE EQUIPMENT, AUTOMATIC CONTROL, ELECTRIC EQUIPMENT MAINTENANCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/1389 STEP NO--UR/0091/70/000/002/0030/0030

CIRC ACCESSION NO--AP0138399

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

2/2 012 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0136399

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESCRIPTION OF CONSTRUCTION, OPERATION AND PERFORMANCE OF A PORTABLE INSTRUMENT COMBINING THE NECESSARY FUNCTIONS OF PROTECTION, CONTROL, SIGNALLING, MEASUREMENT, ETC., FOR MAINTENACE USE OF THE MAIN PROTECTION CIRCUITS COMMON TO TWO PARALLEL TRANSMISSION LINES WITHOUT INTERRUPTION OF THE CONTINUITY OF THE SUPPLY. THE INSTRUMENT HAS BEEN DESIGNED FOR TEMPORARY CONNECTIONS TO SECONDARY WINDINGS OF INSTRUMENT TRANSFORMERS 36 KV OR LESS AND CAN ALSO BE USED ON VARIOUS ELECTRIC MOTORS.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UDC 612.825:615.789.3

USSR

KUZOR, V. M., Chair of Normal Physiology, Kishinev Medical Institute

"Afferent Impulsation Originating From Skeletal Muscles of Warmblooded Animals and Bioelectric Activity in the Sensorimotor Region of the Cerebral Cortex Under the Influence of Relaxants"

Kishinev, Zdravookhraneniye, No 6, Nov/Dec 71, pp 53-56

Abstract: A study was made on 24 dogs of the receptor reaction to myorelaxin and d-tubocurarine by the electrophysiological method, specifically by registering afferent impulsation, taking into consideration spontaneous and induced discharges and the condition of nerve centers according to bioelectric activity in the sensorimotor region of the cerebral cortex. The results showed that d-tubocurarine suppresses normal receptor activity for about 20 minutes following administration. This is manifested by changes in generation of spontaneous and induced afferent impulses. Intravenous injection of myorelaxin causes a dual change in these impulses: an initial increase in afferent impulsation followed by suppression. A study of the bioelectric activity in the sensorimotor region ofthe cerebral cortex revealed that both agents cause desynchronization of spontaneous potentials, i.e., their basic rhythm is changed.

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Oscillators and Modulators

USSR UDC: 621.372.45

KUZOVKIN, V. A.

"On Controlling the Phase of a Parametric Oscillator"

Moscow, Radiotekhnika i Elektronika, Vol 16, No 1, Jan 71, pp 191-194

Abstract: The use of parametrons in computing devices and in systems for detecting and measuring weak signals with radio impulse data recording makes it necessary to evaluate the effect which various parameters of the input signal have on the validity of the perceived data. The effect of the amplitude and phase of the external signal have been thoroughly studied. In this paper, the author studies the effect of the time of action of the signal, and attempts to determine the phase of steady-state oscillations of a parametron as a function of the amplitude, phase and time of action of the external signal. The effect of noises is not taken into consideration.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

UDC 666.321:622.765

USSR

KUZOVLEV, A. K., Candidate of Technical Sciences, IGNATENKOVA, N. I., Engineer, MAL'TSEVA, I. I., Engineer, and BOGDANOVA, Ye. D., Engineer, Central Asian Scientific Research Institute of Geology and Mineral Raw Material

"Experience in Centrifugal Floating Classification of Angrensk Kaolins in Hydraulic Turbocyclone"

Moscow, Steklo i Keramika, No 2, 1973, pp 25-26

Abstract: Experiments of flotation of kaolins were conducted on TTs-1D (TVN-75) turbocyclone and GTN-200 laboratory hydraulic turbocyclone by the Khimgeolnerud expedition at the Angrensk Research Station, in order to investigate a possible increase of the effectiveness of flotation of secondary kaolins. The centrifugal floating classification on the GTN-200 turbocyclone revealed that a high-quality kaolin concentrate with up to 32-34 % alumina content can be produced. This kaolin does not get worse with increasing density of the processed pulp and it is practically not inferior that the kaolin concentrated on NOGSh-325 scroll centrifuge. Three tables, one bibliographic reference.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Acc. Nr: AP0034075 Abstracting Service: CHEMICAL ABST. 4-7 Ref. Code: UR0078

K

71183j Determination of the solubility of potassium, rubidium, and cesium perchlorates in aqueous solutions of nitric acid. Biktimirov, R. S.; Kupovkina, L. A. (USSR). Zh. Neorg. Khim. 1970, 15(1), 240-3 (Russ). The soly. of $MClO_4$ (M = K, Rb, or Cs) in aq. solns. of HNO_3 was detd. at 10, 25, 37, 50, 75, and 100°. At 10–50°, the soly. of $MClO_4$ (M = Rb or Cs) increased with increasing HNO_3 concn. in the solns. An opposite effect was observed at ≥75° for $RbClO_4$ and at 100° for $CsClO_4$. For $KClO_4$, the analogous change in soly. trend occurred at 37°. HHJR

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REEL/FRAME

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

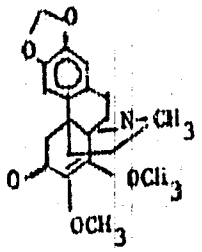
UDC 547.944/945

FADEYEVA, I. I., IL'INSKAYA, T. N., PEREL'SON, M. Ye., KIZOVKOV, A. D., All-Union Scientific Research Institute of Medicinal Plants

"Structure of Delavaine, an Alkaloid from Stephania Delavayi"

Tashkent, Khimiya Prirodnykh Soyedineniy, No 6, 1971, pp 784-790

Abstract: Nuclear magnetic resonance spectra data are presented for delavaine and its derivatives. These spectra and the data of far spin-spin interaction in delavaine confirm the following structure for delavaine:



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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

USSR

FADEYEVA, I. I., et al., Khimiya Prirodnykh Soyedineniy, No 6, 1971, pp 784-790

A conversion diagram, experimental procedures, yields and some physical and chemical characteristics are presented for delavaine, D-delavaine, delavaine methiodide, the des-base of delavaine, acetoxymethylenedioxyphenanthrene, dimethoxymethylenedioxyphenanthrene, dimethylenedelavaine, and diacetyl-demethylenedelavaine.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Acc. Nr.: AP0029333 Ref. Code: UR 0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 1, pp 14-18

ISOLATION AND IDENTIFICATION OF ANTIBIOTIC 6604-4

Lokshin, G.B.; Tavg, M.M.; Kuzovkov, G.D.; Solov'yeva, N.K.
National Institute for Antibiotics, Moscow

An actinomycetous culture 6604-4 isolated from Rumanian soils is decribed. It is classified as Act. roseoliacinus sp. nov. An antibiotic isolated from the culture fluid of the actinomycete was identified with actiliazic acid by its chemical, spectral and mass-spectrometric analyses.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201710016-1

Alkaloids

USSR UDC 547.94:582.675.4

FADEYEVA, I. I., PEREL'SON, M. YE., IL'INSKAYA, T. N., KUZOVKOV, A. D., All-Union Scientific Research Institute of Medicinal Plants, Moskovskaya Oblast

"Alkaloids of Stefania Hernandofolia. Structure of Hernandolin"

Abstract: In a previous paper (Khimiya prirodnykh soyedineniy, 1967, No 2 p 106) the authors reported on the isolation of hernandolin $C_{20}H_{25}O_5N$ from Stephania hernandifolia Walp. Treatment of this alkaloid with CH_3I gives the corresponding iodomethylate. The desbase obtained from the iodomethylate is converted by acetolysis to diacetoxy-dimethoxy-phenanthran which is hydrolyzed with subsequent methylation to form tetramethoxyphenanthrene. The melting point of the picrate of this compound is close to those of the picrates of 3,4,6,8- and 3,4,7,8-tetramethoxyphenanthrene. From the results of these conversions and infra red and nuclear magnetic resonance spectroscopic studies, the following structure is proposed for hernandolin:

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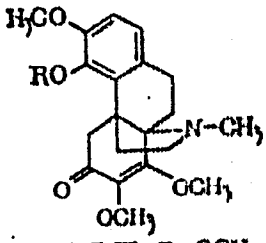
FADEYEVA, I. I., et al., Moscow, Farmatsiya, Vol 19, No 2, Mar/Apr 70, pp 28-32



I: R=H; II, III: R=OCH3

The alkaloid is a derivative of chasubanan.

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TITLE--STRUCTURE OF THE ALKALOID DELAVAINE -U-

AUTHOR-(04)-FADEYEVA, I.I., ILINSKAYA, T.N., PERELSON, M.YE., KUZOVKOV, A.D.

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DELAVAINE, M. 149-50DEGREES (ETOH), (ALPHA) SUBD MINUS 240DEGREES, HCL SALT M. 203-3.0DEGREES (ETOH), METHIODIDE M. 190-2DEGREES, WAS ISOLATED FROM GRASS OF STEPHANIA DELAVAYI. TWO POSSIBLE STRUCTURES, I ((R PRIME1 R PRIME2 EQUALS) CH SUB2, R PRIME3 EQUALS ME) AND I (R PRIME1 EQUALS ME, (R PRIME2 R PRIME3 EQUALS)CH SUB2) WERE USGGESTED ON THE BASIS OF NMR SPECTROSCOPY, FUNCTIONAL GROUPS ANAL., AND HOFMANN DEGRADATION. FACILITY: VSES. NAUCH.-ISSLED. INST. LEK. RAST., BITTSA, USSR.

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[illegible] 74

VOYENNO-MEDITSINSKIY ZHURNAL, NO. [illegible], 1970, pp. [illegible]

CHANGES IN THE ELECTROLYTE COMPOSITION OF THE CEREBROSPINAL FLUID AND BLOOD IN ACCELERATIONS

A.G. Kuzovkov, [illegible]

A large number of works was devoted to questions of functional disturbances which in the organism develop under the effect of accelerations (V.S. Mirolyubov, D. Ye. Rozenblyum et al., 1958; S.A. Gozulov, 1956; P.K. Isakov, 1957; M.F. [illegible], 1958; D. M. [illegible], 1966, et al.). However, the [illegible] of these disturbances remains insufficiently examined, which curbs the development of measures for the prevention of the unfavorable sequelae of accelerations. In particular, the question about the pathogenesis of functional disturbances of the central nervous system (CNS) is under discussion. Some authors (D. Ye. Rozenblyum, 1955; H. Diringshofen, 1953) connect the functional disturbances of the CNS in the period of aftereffects of accelerations with the development of hypoxia which comes as a result of the disorders of cerebral blood circulation, while other investigators (A.A. Bronshteyn, V.P. Zagryadskiy, 1958; G.L. Kamendantov, 1956; B.M. Savin, 1966 et al.) put to the foreground the appearance of changes in afferent impulsation. In their turn, many authors (Ya.A. Rosin, 1961; G.N. Kassil, 1963, et al.) established a correlation between the functional status of the CNS, and the electrolyte content in the spinal fluid.

In the light of these findings, it is advisable to study the electrolyte composition of the spinal fluid and of the blood in the next period after the action of acceleration which also permits to evaluate the role of the hemato-encephalic barrier (HEB) in the mechanism of observed changes.

The examinations were made on rabbits. The Group I of animals (12 rabbits) were taken for control. The animal group II (9 rabbits) was subjected to a single action of a series of accelerations of 5 g size in the head-pelvis direction. The series consisted of five actions each for 30 sec. The interval between the actions was 1.5 min. On the animals of the group III (7 rabbits) the effect of repeated accelerations was examined. For this purpose for 5 to 7 days each animal was exposed 5 times to the action of accelerations of the same character as the Group II animals. In the total complexity, animals of the groups III were exposed to 25 actions. The acceleration was created on a 4 m centrifuge. The animals were fastened to the stand with the aid of contour containers which assured an even spread of the acceleration to the animal's whole body.

Immediately after the action of acceleration, the cerebrospinal fluid (CSF) was examined. It was taken from the cerebral cisterna magna. The plasma for examination was taken from the arterial blood of the femoral artery, and from the venous blood of the cerebral sinus. The samples of blood and CSF were examined for content of Na and K ions by the method of flame photometry with the PF-UNIIZ apparatus. Parallel with this, the pH of the CSF, of the venous and arterial blood was determined. For evaluation of the function of HEB, the permeability of cerebral barrier for K and Na, and the coefficient of their redistribution between CSF and blood was determined.

KUZOVKOV, A.G.

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TITLE--ELECTROLYTE COMPOSITION OF CEREBROSPINAL FLUID AND CEREBRAL BLOOD IN RABBITS AFTER EXPOSURE TO ACCELERATIONS -U-

AUTHOR--KUZOVKOV, A.G., KUDRIN, I.D.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, KOSMICHESKAYA BIOLOGIYA I MEDITSINA, RUSSIAN, VOL 4, NO 1, JANUARY FEBRUARY 1970, PP 82-84

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON THE BASIS OF THE STUDIES BY G. N. KASSIL' AND YA. A. ROSIN IT CAN BE POSTULATED THAT THIS IS DUE TO THE MAINTENANCE OF AN INCREASED LEVEL OF THE EXCITATION PROCESS OF CEREBRAL NERVE ELEMENTS, WHICH IN TURN IS REFLECTED IN THE ADAPTATION MECHANISM. THESE DATA MAKE IT POSSIBLE TO DRAW THE CONCLUSION THAT IMPAIRMENT IN THE FUNCTIONING OF THE CENTRAL NERVOUS SYSTEM AS A RESULT OF EXPOSURE TO ACCELERATIONS IS ASSOCIATED NOT ONLY WITH AFFERENT INFLUENCES, HOMOOYNAMIC SHIFTS AND CEREBRAL HYPOXIA, BUT ALSO WITH CHANGES IN FUNCTIONING OF THE HEMATO ENCEPHALIC BARRIER.

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SAVIN, B. M., KUZOVKOV, A. G., and IVANOV, B. M., Chair of Normal Physiology, Military Medical Academy imeni S. M. Kirov

"Acid-Base Balance and Gas Tension in the Cerebrospinal Fluid and Blood After Accelerations in Different Directions"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 1, 1970, pp 34-39

Abstract: Exposure of rabbits to a series of accelerations (5 G) in the head-pelvis direction lowered the sodium bicarbonate level and pCO_2 of arterial blood. Acceleration increased the pCO_2, but had no effect on the bicarbonate level in venous blood. Acceleration increased the pCO_2, bicarbonate level, and buffer bases in the cerebrospinal fluid. However, these effects did not significantly alter the pH of these fluids. Repeated exposure of the animals to the same accelerations (5 series over 5-7 days) had the same effect on the arterial blood and cerebrospinal fluid pH as did exposure to a single series, but the pH of venous blood flowing from the brain was reduced while the pCO_2 was reduced. Acceleration in the pelvis-head direction 1/2

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