"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 012 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132216

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEPOLYMN. OF THE TITLE POLYESTER (H. G. POLYANSKII ET AL., 1966) OVER NAOH, KOH, OR BA(OH) SUB2 AT SIMILAR TC 180DEGREES GAVE GREATER THAN OR EQUAL TO 69PERCENT TRANS-TRANS-ISCMER OF MECH:CHCH:CHCO SUB2 H (I). THE REACTION MIXT. ALSO CONTAINED ACOH, PIPERYLENE, ACETONE, CROTONALDEHYDE, AND CO SUB2. AL SUB2 O SUB3, NA SUB2 SO SUB4, OR K SUB3 (FE(CN) SUB6) WERE NOT ACTIVE AS THE CATALYSTS.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 022 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--EFFECT OF PREVIOUS ULTRASONIC IRRADIATION ON THE HIGH TEMPERATURE CREEP AND MICROHARDNESS OF COPPER -U-

AUTHOR-(04)-BAZELYUK, G.YA., KOZRSKY, G.YA., POLOTSKY, I.G., PETRUNIN, G.A.

COUNTRY OF INFO--USSR

SOURCE--FIZIKA METALLOV I METALLOVEDENIE, MAR. 1970, 29(3), 508-511

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--COPPER, HIGH TEMPERATURE EFFECT, ULTRASONIC IRRADIATION, METAL MICROHARDNESS, METAL CREEP

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0206 STEP NO--UR/0126/70/029/003/0508/0511

CIRC ACCESSION NO--AP0129462

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 022 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0129462

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF ULTRASONIC IRRADIATION ON THE CREEP AND MICROHARDNESS OF CU AT ELEVATED TEMP. (500DEGREESC) WAS STUDIED. PRELIMINARY ULTRASONIC IRRADIATION GREATLY INCREASED THE RESISTANCE TO HIGH TEMP. CREEP; THE LIFE OF CU SAMPLES IRRADIATED TO AN OPTIMUM EXTENT INCREASED BY A FACTOR OF 3 AND THE STEADY CREEP RATE WAS 8 TIMES SLOWER THAN IN SAMPLES NOT SUBJECTED TO IRRADIATION. THE MICROHARDNESS OF SOME SAMPLES BEFORE IRRADIATION WAS 40 KG-MM PRIME2; AFTER IRRADIATION FOR 10 MIN THIS VALUE DOUBLED. THE GEOMETRICAL DIMENSIONS OF THE IRRADIATED PARTS WERE UNAFFECTED BY THIS TREATMENT.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--PREPARATION AND STUDY OF COMPLEXES OF OSMIUM, II, WITH MOLECULAR NITROGEN -U-

AUTHOR-(03)-BORODKO, YU.G., KOZUB, G.I., MYAGKOV, YU.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(5), 1153-7

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--OSMIUM COMPOUND, COMPLEX COMPOUND, NITROGEN, IR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0886 STEP NO--UR/0076/70/044/005/1153/1157

CIRC ACCESSION NO--AP0137914

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0137914

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AMMINE COMPLEXES OF OS(II) CONTG. MOL. N IN THE INNER COORDINATION SPHERE OF OS ARE FORMED UPON THE REACTION OF HYDRAZINE HYDRATE WITH K SUB2 OSCL SUB6, OSCL SUB4, OSOHCL SUB3, AND OTHER COMPDS. OF OS IN AQ. SOLN. THE IR SPECTRA INDICATE THAT THE CATION (OSN SUB2(NH SUB3) SUB5) PRIME2 POSITIVE BELONGS TO THE C SUB4V SYMMETRY GROUP, AND THE N SUB2 MOL. IS LOCATED IN A LINEAR POSITION COMPARED TO THE OS. THE SPECTRAL FREQUENCIES OF ISOTROPIC SUBSTITUTED COMPDS., (OS PRIME15 N SUB2(PRIME15 NH SUB3) SUB5)X SUB2 AND (OSN SUB2(ND SUB3) SUB5) X SUB2, ARE GIVEN. THE VALENCE VIBRATION OF THE N:N BOND IS CHARACTERIZED BY ABSORPTION IN THE 2012-34 CM PRIME NEGATIVE1 RANGE AND THE OS,N SUB2 BOND IN THE 500-18 CM PRIME NEGATIVE1 RANGE. SPLITTING OF THE 2012 CM PRIME NEGATIVE1 BAND INTO A SERIES OF COMPONENTS IS EXPLAINED BY RESONANCE INTERACTION OF THE (OSN SUB2(NH SUB3) SUB5)X SUB2 MOL. IN THE ELEMENTARY UNIT CELL OF THE CRYSTAL.

FACILITY: FILIAL INST. KHIM. FIZ., CHERNOGOLOVKA, USSR.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR UDC: None

GAL'PERIN, Yu. M. and KOZUB, V. I.

"Absorption of Ultrasonics in Superconducting Alloys"

Leningrad, Fizika tverdogo tela, No 11, 1973, pp 3354-3358

Abstract: Starting from the basic principles, the authors solve the problem of sound absorption in a superconductive alloy without limitations on the alloy's purity or the frequency of the sound waves. In their computations they use the isotropic model of the superconductor since, for sufficiently large impurity concentrations, the solution for the equation of self-congruence is isotropic. It is shown that the conclusion arrived at by an earlier writer (T. Tsuneto, Phys. Rev., 121, 1961, p 402) that the only parameter describing the effect of impurities on the sonic absorption by the superconductor is ql (q is the wave vector of the sound, l is the mean free path of the electrons) is valid for both high and low sonic frequencies. The authors thank V. L. Gurevich for his useful comments on the work.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

Coatings

USSR UDC 539.4.014.1

KOZUB, YU. I., Kiev

"Estimation of the Effect of the Stressed State of a Coating on the Strength and Deformability of a Composition Material"

Kiev, Problemy Prochnosti, No 7, 1971, pp 42-46

Abstract: Some results of studying the short-term strength and creep of molybdenum with different diffusion coatings are presented. The stressed state of the coatings is analyzed. An effort was made to explain the mechanism of the effect of the coating on the properties of the base during tests in a vacuum and an oxidizing medium. It is established that the characteristic of the limiting state in the case of prolonged tests is the critical deformation which depends on the composition of the applied coating and the operating temperature. A procedure is presented for estimating the supporting capacity of the structural elements made of materials with critical strain protective coatings. By joint application of the results of the theoretical and experimental studies of such indexes as the composition reliability, it is possible to establish the fitness criteria first at the construction material level and then at the construction element level considering the shape and size of the product and other factors. Graphs are presented showing the temperature

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

KOZUB, YU. I., Problemy Prochnosti, No 7, 1971, pp 42-46

dependencies of the ultimate strength of the initial molybdenum and molybdenum with test coatings Nos 1 and 2 based on silicon in a vacuum and in an oxidizing medium, the temperature dependencies of the deformability of the initial molybdenum in a vacuum, molybdenum with coatings Nos 1 and 2 based on silicon in a vacuum and in an oxidizing medium, and the temperature dependence of the critical deformation when testing molybdenum with a coating based on silicon for creep in an oxidizing medium.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 067 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--MATERIALS WITH PROTECTIVE COATINGS AND EVALUATION OF THEIR PERFORMANCE -U-

AUTHOR--KOZUB, YU.I.

K

COUNTRY OF INFO--USSR

SOURCE--PROBLEMY PROCHNOSTI, VOL. 2, MAY 1970, P. 43-48

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--SILICON, BORON, CHROMIUM, PROTECTIVE COATING, COMPOSITE MATERIAL, MECHANICAL PROPERTY, MOLYBDENUM, HIGH TEMPERATURE MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1445 STEP NO--UR/3663/70/002/000/0043/0048

CIRC ACCESSION NO--AP0135116

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 067 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135116

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF THE CHARACTERISTICS OF VARIOUS METALS WITH LOW TEMPERATURE (CHROMIUM AND BORON BASED) COATINGS AND HIGH TEMPERATURE (SILICON BASED) COATINGS, AND OF THE TEMPERATURE DEPENDENCE OF MATERIALS WITH PROTECTIVE COATINGS. PARTICULAR ATTENTION IS GIVEN TO THE MECHANICAL CHARACTERISTICS OF MOLYBDENUM WITH VARIOUS DIFFUSIVE COATINGS AND TO THE PROTECTIVE PROPERTIES OF THE COATINGS. A METHOD OF PREDICTING THE SERVICE LIFE OF COATED MATERIALS REQUIRED TO OPERATE AT HIGH-TEMPERATURES IN OXIDIZING MEDIA IS PROPOSED, TOGETHER WITH AN ENGINEERING METHOD OF CALCULATING STRUCTURAL ELEMENTS MADE FROM COMPOSITE MATERIALS. FACILITY: AKADEMIIA NAUK UKRAINSKOI SSR, INSTITUT PROBLEM PROCHNOSTI, KIEV, UKRAINIAN SSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

UDC 539.4

KOZUB, Yu. I., VOYTENKO, A. F., Kiev

"Influence of Thermal Diffusion Coatings on the Physical and Mechanical Properties of Refractory Metals"

Kiev, Problemy Prochnosti, No 11, Nov 1972, pp 62-64.

Abstract: There is great practical interest in the study of the influence of coatings of various types on the physical and mechanical properties of a protected metal base at room temperature. With this in mind, the static strength, ductility and elasticity modulus of molybdenum was studied with thermal diffusion coatings based on silicon and boron, thickness 30-100 μ, cross section of coatings 3-5% of total cross section of specimen. Heat treatment of the material caused a slight increase in elasticity modulus (averaging 1%), apparently a result of a decrease in dislocation density. Application of coatings causes some change in elasticity modulus, the boron coating increasing and the silicide coating decreasing the modulus. The application of protective coatings was thus found to have a significant influence on the behavior of the material at room temperature and low temperatures.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

UDC: 621.372.542.2

KOZUBOV, V. N.

"A Transistorized Smoothing Filter"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 7, Mar 72, Author's Certificate No 329640, Division H, filed 15 Jul 70, published 9 Feb 72, p 218

Translation: This Author's Certificate introduces a transistorized smoothing filter which contains a regulating transistor. Connected in series in the emitter circuit of this transistor are a preliminary and final stabilitron. The filter also contains a differential amplifier and a resistive input divider. As a distinguishing feature of the patent, in order to reduce the coefficient of pulsation when the load impedance changes, the base of one of the transistors in the differential amplifier is connected to the tiepoint between the stabilitrons, and the base of the other transistor is connected to the tiepoint between the divider resistors. The collector of the first transistor is connected to the base of the regulating transistor, and the collector of the second transistor is connected to the emitter of this same transistor. The common emitter resistor of the amplifier is connected together with the final stabilitron to the output terminal of the stabilitron.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 016 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--TEMPERATURE INDUCED CHANGES IN THE RAMAN SPECTRUM OF ANTIMONY TRICHLORIDE -U-

AUTHOR-(02)-KOZULIN, A.T., BARANOV, G.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., FIZ. 1970 13(1) 85-8

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--RAMAN SPECTRUM, ANTIMONY CHLORIDE, THERMAL EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0995 STEP NO--UR/0139/70/013/001/0085/0088

CIRC ACCESSION NO--AT0102929

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 016 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AT0102929

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RAMAN SPECTRA OF SBCL SUB3 WERE MEASURED AT MINUS 150, MINUS 25, AND 20DEGREES. BY USING THE VALUES OF NUCLEAR QUADRUPOLE RESONANCE, THE LOW FREQUENCIES WERE ASSIGNED. THE NU SUB3, NU SUB4, AND NU SUB5 FREQUENCIES OF 49, 63, AND 66 CM PRIME NEGATIVE1 (MEASURED AT 20DEGREES), RESP., BELONG TO THE ROTATIONAL OSCILLATIONS OF THE SBCL SUB3 MOL. WITH REGARD TO THE X AND Y AXES, WITH THE MOMENTS OF INERTIA I SUBX AND I SUBY OF 494.52 TIMES 10 PRIME NEGATIVE40 AND 506.55 TIMES 10 PRIME NEGATIVE40 G-CM PRIME2, RESP. THE NU SUB1 AND NU SUB2 FREQUENCIES OF 33 AND 37 CM PRIME NEGATIVE1, RESP., WERE ATTRIBUTED TO THE ROTATIONAL OSCILLATIONS WITH REGARD TO THE Z AXIS, WITH A MOMENT OF INERTIA I SUBZ EQUALS 718.9 TIMES 10 PRIME NEGATIVE40 G-CM PRIME2. THE NU SUB6 FREQUENCY OF 92 CM PRIME NEGATIVE1 WAS ASSIGNED TO THE TRANSLATION VIBRATIONS. THIS ASSIGNMENT IS CONFIRMED BY THE MEAN VALUE OF QUASI GROUP FORCES (4.8 TIMES 10 PRIME NEGATIVE12). THE CHANGES OF THE ASYMMETRY PARAMETER, CAUSED BY A TEMP. DISTORTION OF THE SBCL SUB3 PYRAMID IN THE CRYSTAL LATTICE, CAN BE EVALUATED ON THE BASIS OF A CORRELATION OF THE LIFTING DEGREE OF STRETCHING VIBRATION DEGENERACIES WITH THE ASYMMETRY PARAMETER; THE ASYMMETRY PARAMETER CHANGE, CALCD. FROM EXPTL. RESULTS OBTAINED AT A TEMP. CHANGE FROM MINUS 150 TO PLUS 20DEGREES IS 1.8PERCENT.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 015 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--SENSITIVITY OF THE NORMAL VIBRATIONS FOR AN ANTIMONY TRIHALIDE TO ITS STRUCTURAL PARAMETERS -U-

AUTHOR-(02)-KOZULIN, A.T., BIRYULINA, L.V.

COUNTRY OF INFO--USSR

SOURCE--OPT. SPEKTROSK. 1970, 28(2), 248-50

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL BONDING, MOLECULAR STRUCTURE, ANTIMONY CHLORIDE, BROMIDE, VIBRATION FREQUENCY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0086 STEP NO--UR/0051/70/028/002/0248/0250

CIRC ACCESSION NO--AP0054883

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 015 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054883

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A LINEAR DEPENDENCE OF THE FREQUENCIES OF NORMAL VIBRATIONS OF SBCL SUB3 AND SBBR SUB3 ON THE CHANGE OF FORCE COEFFS. WAS FOUND. VALENCY VIBRATIONS SHOW NO SENSITIVITY TO THE CHANGE OF THE K SUBIJ AND L PRIMENI SUBIJ FORCE COEFFS., WHEREAS THE DEFORMATION VIBRATIONS ARE NOT SENSITIVE TO THE CHANGE OF THE K SUBI AND H PRIMEJ SUBI FORCE COEFFS. THE DEPENDENCE OF NORMAL VIBRATIONS ON THE CHANGE OF BOND ANGLE AND BOND DISTANCE IS DISCUSSED.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

UDC 621.791.756:621.747.58

YAKOVLEV, V. F., KOVALKIN, P. I., YEVDOKIMOV, N. I., KOZULIN, M. G., and SUSHCHUK-SLYUSARENKO, I. I.

"Electroslag Welding of Steel Casting Defects"

Kiev, Avtomaticheskaya Svarka, No 2, Feb 70, p 72

Abstract: A description is given of a technique of electroslag welding and building-up of steel casting defects. Using a water-cooled copper nonconsumable electrode, a slag bath is drawn which is then heated for a period of 15-60 min. During this time, the edges to be welded are heated to 800-1200°C, and under the effect of the heated slag the surface of the aperture is chemically cleaned. For welding the defect, the nonconsumable electrode is replaced by a spatial one which is consumable along the shape of the profile of the welded aperture. The direction of the fed welding wires plays an important role in the initial stage of fusion of the deposited metal.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

K UDC 621.372.853.32

KOZULIN, V. T., POLYAKOVA, Yu. S.

"Propagation of Asymmetric Waves in a Plasma-Filled Helix"

Elektron. tekhnika. Nauchno-tekhn. sb. Gazorazryadn. pribory (Electronics Technology. Scientific and Technical Collection. Gas-Discharge Devices), 1970, vyp. 1 (17), pp 3-8 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No [illegible])

Translation: The authors give the results of a theoretical investigation of a "plasma-helix" system for the case of propagation of asymmetric waves. It is shown that the dispersion characteristics of asymmetric waves in such systems are somewhat shifted with respect to the dispersion characteristics of symmetric waves, one branch being shifted toward a reduction in the wave propagation constant (analogously to asymmetric waves in a helical delay line without plasma), while the other branches are shifted toward an increase in the propagation constant. One illustration, bibliography of six titles. Resumé.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR UDC 576.858.23.083.35:576.8.095.383.098.396

KHESIN, Ya. Ye., AMCHENKOVA, A. M., and KOZ'YAKOV, S. Ya., Laboratory of Cytopathology, Division of Virology, Institute of Epidemiology and Microbiology imeni N. F. Gamaleya, Academy of Medical Sciences USSR, Moscow

"The Content of Basic Proteins in Reticular Cells of Transplantable Lines Sensitive and Resistant to Enteroviruses"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 72, No 11, Nov 71, pp 116-118

Abstract: The content of basic proteins in cultures of M. rhesus reticular cells sensitive and specifically resistant to polio virus (MIO and MIO-45, respectively) was subjected to comparative study by histochemical and cytophotometric methods. It was established that the content of basic proteins in the cytoplasm and to a still greater extent in the nuclei was higher for the resistant MIO-45 than the sensitive MIO cells. It had been shown earlier that immunity of resistant reticular cells to a virus is associated with cellular inhibition of the synthesis of definite substances required for the adsorption and deproteinization of the virus. This change in the metabolism of the cells, which results in what may be called metabolic immunity, is presumably due to the action of basic proteins of the histone type.
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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--RATE OF SUCROSE CRYSTALLIZATION FROM GREEN SIRUP AND PRODUCTS OF ITS PURIFICATION BY ELECTRODIALYSIS -U-

AUTHOR-(03)-KUZYAVKIN, A.P., DOBROVNIK, L.D., ZHUHA, K.D.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., PISHCH. TEKHNOL. 1970, (2), 171-4

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--FOOD TECHNOLOGY, SUCROSE, CRYSTALLIZATION, CHEMICAL PURIFICATION, ELECTRODIALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0793 STEP NO--UR/0322/70/004/002/0171/0174

CIRC ACCESSION NO--AT0131357

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0131387

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF ORG. AND INORG. IMPURITIES OF GREEN MOLASSES WERE STUDIED IN LAB. EXPTS. SPECIMENS OF GREEN MOLASSES WERE SUBJECTED TO ELECTRODIALYSIS WITH IONIC AND CATIONIC MEMBRANES AND ALL THE SEPN. FRACTIONS WERE USED FOR THE EXPTS. THREE GROUPS OF EXPTL. SOLNS. WERE PREPD. THE 1ST GROUP WAS PREPD. FROM GREEN MOLASSES OF CONCNS. 82.0, 85.7, 88.7, AND 92.0PERCENT. THE 2ND GROUP WAS PREPD. FROM DIALYZED MOLASSES FRACTIONS OF CONCN. 85.6, 88.8, 92.2PERCENT AND DECOLORIZED SOLN. OF CONCN. 92.8PERCENT. THE 3RD GROUP WAS PREPD. FROM THE CONCD. SOLN. FROM THE DIALYZER AND REPRESENTED IMPURITIES RECOVERED FROM MOLASSES. THESE SOLNS. WERE FORTIFIED WITH SUCROSE SIRUP TO OBTAIN CONCNS. OF 85.7, 88.7, AND 92.0PERCENT. THE CRYSTN. OF ALL THE SOLNS. WAS CONDUCTED AT 78DEGREES FOR 2 HR. THE CRYSTALS FORMED WERE RECOVERED FROM THE MOTHER LIQUORS BY FILTERING THROUGH A SCREEN AND BY CENTRIFUGING. THE CRYSTALS RECOVERED WERE WASHED WITH A SATD. SUCROSE MEOH SOLN., A HOAC SOLN., AND ETOH SATD. WITH SUCROSE. EXPTL. DATA INDICATED THAT THE CRYSTN. RATE OF THE 2ND GROUP INCREASED WITH INCREASING DEGREE OF PURIFICATION. PROCESSING OF THE DIALYZED SOLN. INCREASED THE CRYSTN. RATE TO A HIGH DEGREE. THE CRYSTN. RATE OF THE 3RD GROUP WAS MUCH LOWER THAN THAT OF GREEN MOLASSES, PROBABLY DUE TO THE EFFECT OF ORG. SUBSTANCES.

FACILITY: KIEV. TEKHNOL. INST. PISHCH. PROM., KIEV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 019 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--DYNAMIC ERRORS OF ELECTRIC MEASUREMENT DEVICES DURING VIBRATION OF THE FOUNDATION -U-

AUTHOR-(02)-KOZYNCHENKO, I.V., LESTEV, A.M.

K

COUNTRY OF INFO--USSR

SOURCE--IZVVUZ PRIBOROSTROENIE, VOL. 13, NO 2, 1970, P. 16-20

DATE PUBLISHED--------70

SUBJECT AREAS--METHODS AND EQUIPMENT, PHYSICS

TOPIC TAGS--ELECTRIC MEASURING INSTRUMENT, VIBRATION ANALYSIS, EIFFERENTAIL EQUATION, VIBRATION TEST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/0141 STEP NO--UR/0146/70/013/002/0016/0020

CIRC ACCESSION NO--AP0110107

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 019 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0110107

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF THE THREE DIMENSIONAL VIBRATIONS OF THE FRAME OF AN ELECTRIC MEASUREMENT DEVICE ELASTICALLY SUSPENDED BY TENSION. ATTENTION IS GIVEN TO DYNAMIC DISPLACEMENTS OF THE FRAME FROM THE POSITION OF STATIC EQUILIBRIUM DURING THREE COMPONENT POLYHARMONIC VIBRATIONS OF THE FOUNDATION. DIFFERENTIAL EQUATIONS ARE DERIVED, DESCRIBING THE VIBRATION OF THE FRAME ABOUT THE POSITION OF STATIC EQUILIBRIUM. IT IS SHOWN THAT THE VIBRATIONS CAN LEAD TO SERIOUS ANGULAR DISPLACEMENTS, RESULTING IN CONSIDERABLE MEASUREMENT ERRORS. FACILITY: LENINGRADSKII INSTITUT AVIATSIONNOHO PRIBOROSTROENIIA, LENINGRAD, USSR.

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USSR

UDC: 621.396.6-181.48

BRYUNIN, V. N., DENISYUK, V. A., KOZYR', I. Ya.

"Physicotechnical Methods of Quality Control of Integrated Circuits"

Elektron. prom-st'. Nauch.-tekhn. sb. (The Electronics Industry. Scientific and Technical Collection), 1972, No 1, pp 22-25 (from RZh-Radiotekhnika, No 8, Aug 72, Abstract No 8V266)

Translation: The paper deals with the particulars of physicotechnical methods of checking microcircuits by using an X-ray TV microscope and a raster electron microscope. Resumé.

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(1)

JPRS 60634
27 NOVEMBER 1973

PROBLEM OF EFFECTIVE INVESTIGATION OF MIXED BOUNDARY PROBLEMS OF VARIABLE-CROSS SECTION MAGNETOHYDRODYNAMIC CHANNEL THEORY

[Abstract of a Paper by V. Ye. Kozyrenko Given at a Magnetohydrodynamic Conference, pp 101-103]

The control system

$$\frac{1}{b(x)}\frac{\partial h}{\partial x}=\frac{\partial \Phi}{\partial y},\quad \frac{1}{b(x)}\frac{\partial h}{\partial y}=-\frac{\partial \Phi}{\partial x},\quad h=\frac{h_3}{R_m}-\int_{-\infty}^{x}\frac{H_3(x)}{b(x)}dx \quad (1)$$

is presented which was obtained on the basis of the method discussed in [1] and in the quasitwo-dimensional approximation for $R_m \ll 1$ describes the distribution of the electric current in the rectangular cross section magnetohydrodynamic channel with shaped insulator walls given by equation $c = \pm b$. Here H_3 and h_3 are the third covariant components of the implied and induced magnetic fields H_3 and h_3 respectively. The remaining notation is generally accepted.

In order to develop the effective methods of investigating the various boundary problems formulated for system (1) in the theory of magnetohydrodynamic channels, two methods of implementing the well-known idea [2, 3] of establishing a relation between the solutions of the general elliptic equations and the Laplace equations — direct and inverse — were discussed. The first method extends the results of [4, 5] to the case of elliptic systems with variable coefficients, and it reduces to the construction of an effective, as a rule, approximate method of investigating the discontinuous boundary problems for the system (1) with an arbitrary function $b(x)$. The second method uses the relations established in aerodynamics [6] between the general solution of system (1) and the harmonic function for the special classes of functions $b(x)$.

The most characteristic features of the first method reduced to the following. Exclusion of Φ and introduction of the new variable $U = \sqrt{b}h$ reduces system (1) to the equation

$$\partial^2 U/\partial x^2+\partial^2 U/\partial y^2-\delta^2 N(x)U=0,\quad \delta^2 N(x)=(2b^2-3b'^2)/4b^2 \quad (2)$$

KOZYRENKO, V. Ye.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR UDC 621.762:541.121.124

MEYERSON, G. A., BABICH, B. N., and KOZYREV, A. S., Moscow Institute of Steel and Alloys, Chair of Rare and Radioactive Metals and Powder Metallurgy

"Investigation of the Reduction Process of Chromium Oxide by Hydrogen in the Presence of Powdered Nickel"

Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 5, 1972, pp 83-88

Abstract: The analysis of thermodynamic and kinetic reduction conditions of finely dispersed chromium oxide by hydrogen in the presence of powdered nickel shows that in the region of γ-solid solutions the logarithm of the equilibrium constant drops linearly with increasing logarithm of chromium concentration. A precipitated mix of oxides which additionally contained 2.5% ThO_2 was used in studying the reduction kinetics in the 1100-1250°C temperature interval. Almost complete elimination of oxygen takes place after 7 and 4 hours at 1200 and 1250°C, respectively. In the initial reduction stage, the kinetics of the process are limited by the rate of chromium oxide interaction with hydrogen. With developing reaction and increasing chromium concentration in the resulting solid solution, the process of diffusion dissolution of chromium in nickel becomes limiting. The

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MEYERSON, G. A., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 5, 1972, pp 83-88

activation energies of chemical interaction and heterodiffusion are 32 and 74 kcal/mol, respectively. The method for hydrogen reduction of chromium oxide is unsuitable for powders of dispersion hardened Ni-Cr alloys, owing to enlargement of hardening inclusions at temperatures required for complete reduction. Four figures, one table, eighteen bibliographic references.

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UDC 533.411+541.1

OVCHINNIKOV, I. V., GAYNULIN, I. F., GARIF'YANOV, N. S., Corresponding Member of the Academy of Sciences USSR and KOZYREV, B. M., Kazan Physico Technical Institute, Kazan, Academy of Sciences USSR

"The Nature of Superfine Interaction with P^{31} in Dithiophosphenes Cu (II), VO(II), CrO(III), MoO(III) and WO(III)"

Moscow, Doklady Academy Nauk SSSR, Vol 191, No 2, 11 Mar 70, pp 395-398

Abstract: One of the significant characteristics of electron paramagnetic resonance is the possibility of observing the spectra supplementary superfine structures (SSFS) in which there is interaction of an unpaired electron with nuclear magnetic moments of atoms, situated considerable distance from the paramagnetic "ion". The mechanism of such a distant dislocation of the unparied electron in many cases is still not clear and investigation of it is necessary both for taking from SSFS information about the nature of chemical bonds in complex compounds, and also for deeper understanding of the nature of superfine interaction itself.

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USSR

OVCHINNIKOV, I. V., et al., Doklady Academy Nauk SSSR, Vol 191, No 2, 11 Mar 70, pp 395-398

In the article the authors review experimental results obtained by others in the investigation of EPR of dithiophosphene complexes of Cu(II), VO(II), CrO(III), MoO(III), and WO, as well as give the following results of their investigation of the nature of SSFS of P^{31} on the compounds Cu(II) and VO(II): (a) the appearance of SSFS of P^{31} especially in the complex VO(II), of extremely large intensity; (b) significant distinction in the magnitude of the superfine interaction isotropic constant AP in Cu compounds in comparison with analogous V compounds; (c) little anisotropy of superfine interaction; (d) the constant AP increases during substitution of less electronegativr radicals for greater electronegative ones. Data on the other investigated compounds is also given.

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1/2 015 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--NATURE OF PHOSPHORUS,31 HYPERFINE INTERACTION IN DITHIOPHOSPHINE COMPLEXES OF CU PRIME2 POSITIVE, VO PRIME2 POSITIVE, CRO PRIME3

AUTHOR-(04)-OVCHINNIKOV, I.V., GAYNULIN, I.F., GARIFYANOV, N.S., KOZYREV, B.M.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(2), 395-8

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SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--PHOSPHORUS ISOTOPE, PHOSPHORUS SULFIDE, COPPER COMPLEX, CHROMIUM COMPLEX, MOLYBDENUM COMPLEX, TUNGSTEN COMPOUND, VANADIUM COMPLEX, HYPERFINE STRUCTURE, MOLECULAR ORBITAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/1508 STEP NO--UR/0020/70/191/002/0395/0398

CIRC ACCESSION NO--AT0138508

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2/2 015

CIRC ACCESSION NO--AT0138508 UNCLASSIFIED PROCESSING DATE--[illegible]

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A TABULATION OF PRIME31 P FINE STRUCTURE LINES IS GIVEN FOR THE COMPLEXES OF CO PRIME3 POSITIVE, CRO PRIME3 POSITIVE, MOO PRIME3 POSITIVE, WO PRIME3 POSITIVE, AND VO PRIME3 POSITIVE WITH R SUB2 PS SUB2 PRIME NEGATIVE ION IN WHICH R IS A PR, PRO ET, OR ETO GROUP. IN THE VANADYL COMPD. A GREAT DEAL OF FINE STRUCTURE ARISES FROM PRIME31 P. THE FINE STRUCTURE IS EXPLAINED IN TERMS OF [illegible] THEORY.

FACILITY: KAZAN. FIZ. TEKH. INST., KAZAN. USSR.

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USSR

KOZYREV, B. P. and BAZHENOV, V. A.

UDC: 621.396.677.1

"An Effective Method for Obtaining Infrared Radiation in a Specified Direction Diagram"

Leningrad, Priborostroyeniye, No 2, 1972, pp 104-107

Abstract: Attempts to form directional diagrams of infrared radiation within the limits of the Lambert distribution law without varying the structure of the radiator, by diaphragms for example, usually reduce the radiation efficiency. In this article, the authors investigate the problem of improving the radiator efficiency with the radiation concentrated into a narrow solid angle, which can be solved by placing an absolutely black body at the focus of a spherical or parabolic mirror. They consider the design of a radiator projecting a directional diagram in the form of a wide, plane beam in which the angles of the radiation spread differ by a ratio of 90:1 in the orthogonal planes. This can be done either by scanning a 1° beam over a 90° sector, or by using a radiator compounded of 90 one-degree infrared projectors. Both methods are discussed. Some information is given of a radiator with this type of directional diagram developed by the V. I. Lenin Electrical Engineering Institute, with which the authors are associated. A diagram of this radiator is given.

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Acc. Nr.: AP0044037

KOZYREV B.P.

Ref. Code: UR0362

JPRS 50052

Spectral Absorption of IR Radiation by Ozone

(Abstract: "Computing the Spectral Absorption of Infrared Radiation by Ozone in the 9.6μ Band," by B. P. Kozyrev and V. A. Bazhenov, Leningrad Electrotechnical Institute; Moscow, Izvestiya Akademii Nauk SSSR, Fizika Atmosfery i Okeana, Vol. VI, No. 1, 1970, pp. 98-101)

The study of the O_3 band 9.6μ has been emphasized in the past because this is the strongest absorption band of ozone, situated at the center of the atmospheric window of transparency. However, few studies have examined the spectral absorption of radiation in this band. Moreover, the analytical expressions proposed in the past are unwieldy and inconvenient for practical computations. It has also been unclear as to what additional errors are caused by approximate allowance for atmospheric inhomogeneity. The objective of this study was to fill these gaps to some degree. A convenient form for representing the absorption of IR radiation was found by I. N. Howard, et al. (J. Opt. Soc. America, 46, No. 5, 1956). On this basis, the authors test the possibility of such a representation of radiation absorption specifically for the O_3 9.6μ band. It is shown that error in computing spectral transmission of ozone can be reduced to zero provided atmospheric inhomogeneity is determined precisely

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rather than approximately. It is acknowledged that this considerably complicates the computations. For practical purposes, an error of about 5 percent will still be present, but this compares with an error of 10-20 percent when only an approximate allowance for atmospheric inhomogeneity is made.

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USSR

UDC 681.11.033.1

GRANKIN, V. K., MAKAROV, YU. S., RONZHIN, O. V., KOZYREV, L. S., and YEGOROV, A. YE.

"An Information Display Device"

USSR Author's Certificate No 372566 kl G 06 k 15/18, filed 17 Sep 70, published 27 Apr 73 (from RZh Avtomatika Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 73, abstract No 11 A406P)

Translation: An apparatus is proposed for information display, containing indicators and current conductors. To inprove the reliability and visibility of the apparatus, its indicators are in the form of lighted edges located along the outline of geometric figures, with the current conductors at the vertices. One illustration.

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KOZYREV N.A.

Acc. Nr.: AP0042573 Ref. Code: UR0033

JPRS 50162

Red Spot Observed Within Aristarchus Crater

(Abstract: "Red Spot Within the Lunar Crater Aristarchus on 1 April 1969," by N. A. Kozyrev, Main Astronomical Observatory; Moscow, Astronomicheskiy Zhurnal, Vol 47, No 1, 1970, pp 179-181)

A series of spectrograms of Aristarchus Crater was obtained on a plate on the evening of 1 April 1969 using the 50" refractor of the Crimean Astrophysical Observatory and employing a low-dispersion (500 A near H_β) spectrograph at a scale of 34"/mm. One of these spectrograms revealed the spectrum of a detail present on the internal western slope of the crater with an enhanced brightness in red light. The measurements revealed that this spectrum for the most part consists of broad emission bands which can be identified well with the red system of CN molecules. The spectrogram also revealed narrow emission formations corresponding to the edges of the bands of the first positive group of N_2 nitrogen molecules. It is possible that during the escape of gases from the lunar interior the parent molecules under the influence of hard solar radiation dissociated into very simple molecules whose luminescence was excited by the same photodissociation event.

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USSR UDC 621.372.832.8

KOZYREV, N. D., KHRAMOV, A. V.

"Filter-Circulator for a Radio Relay Communications Line"

Moscow, Radiotekhnika, Vol 26, No 10, 1971, pp 94-95

Abstract: The results of an experimental investigation of the parameters of a filter-circulator executed from rectangular wave guides 25 × 58 mm^2 in cross section are presented. The basic element of the investigated device is a 5-leg circulator. Its basic electric characteristics and the frequency-amplitude characteristics of the filter-circuitor are presented. The results obtained show the theoretical possibility of creating band separation filters on the basis of multilegged circulators. They can be used in radio relay communications systems with some improvement of the basic electrical parameters.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR UDC 621:669.018.25.620.178.16 2

KHRUSHCHOV, M. M., BABICHEV, M. A., BERKOVICH, YE. G., KOZYREV, S. P., KRAPOSHINA, L. B., PRUZHANSKIY, L. YU.

Iznosostoykost' i struktura tverdykh naplavok (Wear Resistance and Structure of Hard Surfacing), Moscow, Mashinostroyeniye Press, 1971, 95 pp

Translation of Foreward: Application of hard wear-resistant surfacing to face the working surfaces of machine parts is one of the very efficient methods of increasing the service life of the parts. The problems of expedient selection of the surfacing materials as a function of the operating conditions of the parts, just as the problems of the technological methods of surfacing, have not been sufficiently clarified. Many surfacing alloys are known, and it is of practical interest to compare their properties under identical test conditions, in particular when testing for abrasive wear.

The book contains discussions of the results of laboratory testing of surfacing materials for abrasive wear, impact bending strength, hardness, and microhardness of the structural components. The results of a study of the microstructure are also presented. These studies were performed by the authors of the book at the Wear Resistance Laboratory of the State Scientific Research Institute of Mechanical Engineering.

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USSR

KHRUSHCHOV, M. M., et al., Iznosostoykost' i struktura tverdykh naplavok, Moscow, Mashinostroyeniye Press, 1971, 95 pp

The last chapter contains a discussion of the research data of a number of Soviet authors on the operational and laboratory comparative tests for abrasive wear of different surfacing materials applied to parts with different operating conditions.

The book is a reference manual for the properties of various surfacing materials during abrasive wear.

The abrasive wear tests on the Kh4-B machine were performed by M. A. Babichev, on the NK machine by Ye. S. Berkovich, for hydroabrasive wear by S. P. Kozyrev, and for impact toughness by L. Yu. Pruzhanskiy. A microstructural study and a microhardness test were performed by L. N. Kruposhina. The work was coordinated by M. M. Khrushchov.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

KHRUSHCHOV, M. M., et al., Iznosostoykost' i struktura tvyerdykh naplavok, Moscow, Mashinostroyeniye Press, 1971, 95 pp

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USSR

KHRUSHCHOV, M. M., et al., Iznosostoykost' i struktura tvyerdykh naplavok, Moscow, Mashinostroyeniye Press, 1971, 95 pp

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USSR UDC 621.373.521.1

KOZYREV, [illegible], MAKHINA, T. V.

"Load Characteristics of a Single-Cycle Keying Oscillator"

Tr. Mosk. elektrotekhn. in-ta svyazi (Works of the Moscow Institute of Electrical Communications Engineering), 1970, vyp., pp 84-89 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10D380)

[No abstract]

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

Lasers & Masers

USSR UDC 621.365.82

KOZYREV, V. G., and RUDELEV, S. A.

"The Effect of Adding Neon on Ionic Laser Oscillation in Krypton"

Tr. Ryazan. Radiotekhn. in-ta (Proceedings of the Ryazan' Radiotechnical Institute), No 37, 1972, pp 77-79 RZh-Fizika, No 9, Sep 73, Abstract No 9D746

Translation: The effect of adding Ne on the output power of an ionic Kr laser at two Kr lines was studied experimentally. The addition of Ne caused an increase in the oscillation power at the 647.1 nanometer line of about 50% in the region far from the threshold and a reduction of the optimal Kr pressure from 0.29 to 0.23 millimeters of mercury. The addition of Ne did not increase the power of the oscillation at 568.1 nanometers but reduced the optimal pressure of Kr from 0.15 to 0.05 millimeters of mercury. Competition in the transitions $^4P_{3/2} - {}^4P_{3/2}$ (520.8 nanometers) and $^4P_{5/2} - {}^4P_{3/2}$ (530.8 nanometers) was studied; these transitions have a common lower level. The increase in the intensity of the 520.8 nanometer line and the suppression of the 520.8 nanometer line when neon is added favor the assumption that energy is transferred in collisions between the metastable Ne atom and the Kr ion in the ground state, and the ions excitation to the $^4P_{5/2}$ level. One bibliographic citation.

V.I.R.

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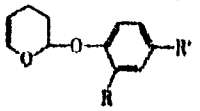
"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

Acc. Nr: AP100329 Abstracting Service: CHEMICAL ABST. 5/20 Ref. Code: UR0409

111217g Aryloxydihydropyrans. VII. Condensation of acrolein with vinyl ethers of fluoro-, chloro-, and bromophenols. Skvortsova, G. G.; Kovunova, N. G. (Irkutsk. Inst. Org. Khim., Irkutsk, USSR). *Khim. Geterotsikl. Soedin.* 1970, (1), 17-20 (Russ). A stream of N was passed through a mixt. of 27.6 g CH_2:$CHOC_6H_4F$-*p* and 11.2 g CH_2:CHCHO, heated 8 hr in an autoclave at 190° to give 92% 2-(*o*-fluorophenoxy)-3,4-dihydropyran (I), b_{10} 136°, d^{20} 1.1751, n_D^{20} 1.5179. Similarly prepd. were Ia as follows (R, R', % yield, b.p., d^{20}, and n_D^{20} given): Cl, H (II), 85, 138°/9, 1.2100, 1.5452; H, Cl (*m*-isomer) (III), 71, 112°/2, 1.2129, 1.5475; H, Cl (IV), 80, 95.5°/1, 1.2100, 1.5471; Br, H (V), 74, 155°/7, 1.4240, 1.5629; H, Br (VI), 71, 160°/13, 1.4270, 1.5640; Cl, Cl (VII), 67, 111°/0.5, 1.3400, 1.5529; Br, Br (VIII), 14, —, —, —. No adduct could be isolated by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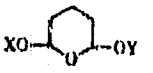
(X, X = Y = C₆H₄Br-p)
(XI, X = Y = Et)
(XII, X = C₆H₄Br-p, Y = Et)

heating acrolein with the trichloro deriv. at 190-200°. IV (2.5 g) was hydrogenated in 15 g EtOH over 0.5 g Raney Ni to give 2.4 g 2-(*p*-chlorophenoxy)tetrahydropyran (IX), b_4 140°, d^{20} 1.1821, n_D^{20} 1.5325. With catalytic amts. of HCl, VI reacted with EtOH forming 2 sym. and 1 mixed acetal: X (m. 101°), XI (known), and XII (b_1 161°, d^{20} 1.3695, n_D^{20} 1.5103).

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With propargyl alc., *p*-cresol, and *p*-chlorophenol, VI gave only the resp. mixed acetals: 2-(*p*-bromophenoxy)-6-propynyloxytetrahydropyran, yield 28%, b_1 182°, d^{20} 1.4121, n_D^{20} 1.5662; 2-(*p*-bromophenoxy)-6-(*p*-cresyloxy)tetrahydropyran, yield 77%, m. 93.5°; and 2-(*p*-bromophenoxy)-6-(*p*-chlorophenoxy)-tetrahydropyran, yield 90%, m. 85.5°. I (5 g) was stirred 12 hr with 0.075 g $SnCl_4.2H_2O$ to give a polymer. The % yield, m.p., [η], and mol. wt. of the polymers obtained from the corresponding monomer are indicated in parentheses: I (73, 107°, 0.295, 2100); III (70, 115°, 0.319, 2270); IV (78, 120°, 0.340, 2400); V (88, 142°, 0.481, 3200); VI (81, 146°, 0.493, 3350).

S. K. Banerjee

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

MARKOVA, Ye. V., KOZYREV, V. P.

"Combinatorial Systems and Graph Theory"

Vopr. Kibernetiki. Nekotor. Vopr. Planir. Eksperimenta [Problems of Cybernetics. Some Problems of Experimental Planning -- Collection of Works], Moscow, 1972, pp 3-12 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V353, by I. Sigal).

Translation: Problems of experimental planning are studied from the standpoint of combinatorial analysis. Experiments can be ordered according to various factors on the basis of combinatorial systems. The class of combinatorial systems used in this case is indicated. It is noted that the external factors may have a simple and hierarchical structure. A definition of planning of experiments using the concepts of block diagrams is presented, and the properties of the block diagrams are studied. Examples are given of decision making concerning the selection of an experimental plan as a function of an external factor.

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USSR

KOZYREV, V. P., MATYUSHINA, I. I.

"Combinatorial Study of Expert Evaluations for Separation of Significant Factors Influencing the Wear of Steel Subjected to Impacts with Rock."

Vopr. Kibernetiki. Nekotor. Vopr. Planir. Eksperimenta [Problems of Cybernetics. Some Problems of Experimental Planning -- Collection of Works], Moscow, 1972, pp 55-61 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V354, by I. Sigal).

Translation: A set of factors is studied influencing the degree of damage to rock working tools. The list of factors and their ranking are based on a questionnaire distributed to experts, listing 21 factors. The factors are ranked according to the increasing sum of ranks assigned by the experts. A factor is considered more significant, the less the corresponding sum of ranks. It is demonstrated that with this type of ranking of factors, the first 6 are the most significant. This results from the fact that the concordation factor for the number of factors over 6 (with the ordering of factors used) is practically constant.

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USSR

KOZYREV, V. P.

"Graph Theory"

Teoriya Veroyatnostey. Mat. Statistika. Teor. Kibernetika, T. 10 [The Theory of Probability Mathematic Statistics. Theory of Cybernetics, Vol 10, (Results of Science and Technology, All-Union Institute for Scientific and Technical Information, Academy of Sciences, USSR), Moscow, 1972, pp 25-74 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V370 by K. Zaretskiy).

Translation: The most important result of the theory of graphs and some of its applications are presented. Works published from 1963 through 1971 are studied. The material is divided into the following sections: 1) study of individual characteristics of graphs; 2) construction of graphs with fixed properties; 3) study of oriented graphs; 4) bypasses of graphs; 5) study of connectedness of graphs; 6) coloring of graphs; 7) topological problems in graph theory; 8) representations of graphs. As the author notes, the following sections are not presented in the review: study of matrices connected with graphs; operations on graphs; algebraic problems of graph theory; the study of random graphs; problems of calculation and conversion of graphs and subgraphs. 285 Biblio. Refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR UDC: 621.372.837

BURYAK, V. S. and KOZYREV, Ye. N.

"Antenna Switch in a Circular Waveguide with an H_{01} Wave"

Kiev, Izvestiya VUZ-Radioelektronika, Vol 14, No 1, 1971, pp 56-60

Abstract: A broad-band gas-discharge antenna switch whose operation under receiving conditions is based on the characteristics of a directional coupler with complete coupling is examined in this paper. The switch is in a circular waveguide using an H_{01} wave. Two concentric metal tubes make up the waveguide system with the smaller in diameter of the two as the basic channel for the switch. This waveguide has a circular aperture which accommodates a discharger. A diagram of the system showing the connections of the receiver and transmitter into the waveguides is shown. Design equations for the device are derived. The calculations indicate that the frequency bandwidth during reception, for a loss level of 0.3 dB, may exceed 15% of the middle frequency. Although this method for computing the antenna switch does not take into account the losses in the dielectric envelope of the discharger, these losses can be neglected if the wall accomodating the discharger is thin and if its length is small.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

Acc. Nr. AP0048487 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code: UR0070

104740u Synthesis and polymorphism of crystals of double lithium tungstates of rare-earth elements and yttrium. Klevtsov, P. V.; Kozeeva, L. P. (Inst. Neorg. Khim., Novosibirsk, USSR). Kristallografiya 1970, 15(1), 57-61 (Russ). A no. of $LiLn(WO_4)_2$ were synthesized by the method of spontaneous crystn. from soln. in Li tungstate melts upon programmed decrease of the temp. Li compds. of the rare-earth element series from La to Gd (except for Ce) crystd. in the tetragonal system of the scheelite type. For elements from Er to Lu and Y, crystals of monoclinic structure were obtained, while synthesis products contg. Ho, Dy, and Tb crystd. in both modifications. As a result of heating, the monoclinic modification transformed to the tetragonal structure, whereas the opposite process, developed by cooling, was achieved with great difficulty, and the scheelite structure of the compds. remained stable at room temp. Its stability increased with decreasing at. no. of the rare-earth elements, accordingly to the temp. drop of polymorphic transformation. J. Pubis-Machej

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USSR UDC 576.851.25.2.095.4:615.779.9

KOZYREVA, L. F., and PLAKUNOV, V. K., Biology and Soil Faculty and Chair of Microbiology, Moscow State University

"Reasons for the 'Residual' Growth of Staphylococcus aureus 209 in the Presence of 'Bacteriostatic' Concentrations of Antibiotics Which Inhibit Protein Synthesis"

Moscow, Mikrobiologiya, No 2, 1971, p 311-316

Abstract: The growth rate of Staphylococcus aureus 209, a strain normally sensitive to antibiotics, is 5 to 15% of the control in the presence of erythromycin, chlortetracycline, or levomycetin at concentrations (50 to 100 μg/ml) well above those normally regarded as "bacteriostatic." The "residual" growth is accompanied by an increase in the total number of living cells, biomass, and protein synthesis. Resistant mutants do not arise during growth nor are there any population shifts toward microbial cells less sensitive to antibiotics. Microbial populations are known to be heterogeneous and incubation with an antibiotic may stimulate the multiplication of slow-growing cells, in which the process of protein synthesis remains resistant to the antibiotic.

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1/2 038 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ELECTRICAL AND OPTICAL PROPERTIES OF STRONTIUM TITANATE SEMICONDUCTOR SINGLE CRYSTALS -U-

AUTHOR-(05)-ROZHDESTVENSKAYA, M.V., SHEFTEL, I.T., STOGOVA, V.A., KOZYREVA, M.S., KRAYUKHINA, E.K.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(3), 873-8

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SEMICONDUCTOR SINGLE CRYSTAL, STRONTIUM COMPOUND, TITANATE, SEMICONDUCTOR CONDUCTIVITY, TEMPERATURE DEPENDENCE, ELECTRON MOBILITY, PHASE TRANSITION, HALL EFFECT, IMPURITY LEVEL, CERIUM, NIOBIUM, PEROVSKITE, ABSORPTION SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1994 STEP NO--UR/0181/70/012/003/0873/0878

CIRC ACCESSION NO--AP0105068

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 038 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105068

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS ARE GIVEN OF THE MEASUREMENTS OF THE TEMP. DEPENDENCE OF ELEC. COND. (SIGMA) AT 300-78DEGREESK FOR SRTIO SUB3 CRYSTALS DOPED WITH VARIOUS AMTS. OF CE AND NB AND ALSO REDUCED IN H. FOR CRYSTALS DOPED WITH CE, THE TEMP. DEPENDENCE OF MOBILITY IS GIVEN. DECREASE IN SIGMA WITH INCREASING TEMP. IS A RESULT OF DECREASED MOBILITY OF CHARGE CARRIERS. THE PRESENCE OF BREAKS IN THE TEMP. DEPENDENCE OF SIGMA IS RELATED TO THE DISTORTION OF THE LATTICE OF SRTIO SUB3 ON COOLING AND TO THE PHASE TRANSITION AT 110DEGREESK. MEASUREMENTS OF THE HALL EFFECT AT ROOM TEMP. SHOWED THAT THE HALL CONCN. OF CHARGE CARRIERS IN CRYSTALS WITH VARIOUS CONTENTS OF CE AND NB PRACTICALLY COINCIDES WITH THE IMPURITY CONCN. DETD. BY SPECTRAL ANAL. IT IS ASSUMED THAT CE PRIME3POSITIVE REPLACES SR PRIME2POSITIVE AND NB PRIME5POSITIVE REPLACES TI PRIME4POSITIVE IN THEPEROVSKITE LATTICE, THUS CREATING 1 FREE ELECTRON. FOR THIS SERIES OF CRYSTALS, ABSORPTION SPECTRA WERE INVESTIGATED. IN THE CASE OF DOPING WITH CE, THE ABSORPTION COEFF. DEPENDS ON THE CONTENT OF THE DOPING IMPURITY. AT THE ABSORPTION MAX. AT WAVELENGTHS OF 0.5 AND 1.2 MU, THE ABSORPTION COEFF. DEPENDS LINEARLY ON THE CONCN.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--SYNTHESIS AND STUDY OF AROMATIC POLYAMIDES --U-

AUTHOR-(04)-KOZYREVA, N.M., FEDOTOVA, O.YA., KERBER, M.L., KOLESNIKOV, G.S.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(3), 230-4

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--ORGANIC SYNTHESIS, POLYAMIDE RESIN, INTERFACIAL POLYCONDENSATION, CHLORINATED ORGANIC COMPOUND, PHTHALIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0685 STEP NO--UR/0460/70/012/003/0230/0234

CIRC ACCESSION NO--AP0124357

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124357

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SEVERAL AROMATIC POLYAMIDES (I) WERE PREPD. FROM 4,4 PRIME DIAMINODIPHENYLMETHANE, 4,4 PRIME DIAMINO 3,3 PRIME DIMETHYLDIPHENYLMETHANE, 2,2 BIS(4 AMINOPHENYL)PROPANE AND ISOPTHALOYL AND TEREPHTHALOYL CHLORIDES BY INTERFACIAL POLYCONDENSATION AND (OR LOW TEMP. POLYCONDENSATION IN ACNME SUB2. THE LATTER METHOD GAVE I HAVING A SP. VISCOSITY 10 TIMES AS GREAT AS THAT OF POLYMERS OBTAINED BY THE INERFACIAL POLYCONDENSATION (AT THE SAME MONOMER CONCNS.). THE SOFTENING POINT OF I RANGED FROM 200 TO 300DEGREES.

FACILITY: MOSK. KHIM. TEKHNOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

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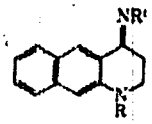
Acc. Nr: AP0049781 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: 21R0409

100463h Synthesis of benzo[g]quinoline derivatives. V. 1-Acyl-1,2,3,4-tetrahydro-4-alkyl(aryl)aminobenzo[g]quinolines. Bekhli, A. E.; Kozyreva, N. Ya.; Kostyuchenko, N. P. (Inst. Med. Prazitol. Trop. Med. im. Martsinovskogo, Moscow, USSR). *Khim. Geterotsikl. Soedin.* 1970, (1), 71-3 (Russ). Condensation of 1-acyl-1,2,3,4-tetrahydro-4-oxobenzo[g]quinolines (I) with primary amines gave the title compds. (II). The N-



(II)

tosyl deriv., m. 133-4 °(heptane), was prepd. in 52.8% yield by condensing 1,2,3,4-tetrahydro-4-oxobenzo[g]quinoline with *p*-toluenesulfonyl chloride in pyridine. A mixt. of 0.01 mole I, 0.02 mole amine, and 15 ml anhyd. isoamyl alc. was boiled 3 hr with azeotropic distn. of H_2O to give II (R, R', m.p., and % yield given): Ac, Bu, 116-17° (heptane), 66; Ac, C_6H_4OEt-*p*, 154-5° (alc.), 75; Bz, C_6H_4OMe-*p*, 196-7° (heptane), 69; $COC_6H_3Cl_2$-2,4, C_6H_4OMe-*p*, 195-6° (alc.), 93; $COC_6H_3Cl_2$-2,4, C_6H_4OEt-*p*, 148-9° (alc.) 61; $SO_2C_6H_4Me$-*p*, C_6H_4OMe-*p*, 199-200° (Me_2CO) 57. II are easily hydrolyzed in acid forming either 1,2,3,4-tetrahydro-4-oxobenzo[g]quinoline or I, or a mixt. of both. S. K. Banerjee

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KOZYREVA, O. S.

SO:JPRS 55204
16 Feb 72

UDC: 616.43/45-082(-21)

EXPERIENCE IN ORGANIZING SPECIALIZED ENDOCRINOLOGICAL CARE IN A LARGE INDUSTRIAL CITY

All (pusie lenta)

[Article by V.N. Guzhevskiy, A.G. Kozakova, O.S. Kozyreva, Krivoy Rog Municipal Health Department; Moscow, Sovetskoye Zdravookhranenive, Russian, No 1, 1972, submitted 22 June 1971, pp 16-21]

Organization and improvement of medical care for individuals with pathology of the endocrine system is an urgent problem which requires the constant attention of public health agencies. Its importance is determined by the considerable increase in registered cases of endocrine pathology and especially of diabetes mellitus in the last decade, their duration and frequent exacerbations, and the possibility of serious complications.

The recorded incidence of diabetes mellitus in the adult population of Krivoy Rog over a ten-year period is shown on Table 1.

We see on Table 1 that there was a more than five-fold increase in number of registered cases of diabetes mellitus in 1970, as compared to 1961, and a 4.5-fold increase in new cases. In this same period the overall incidence of thyroid pathology rose by 13 percent.

Organization of medical care for individuals with endocrine pathology is not covered enough in the literature; no distinct positions have been taken with regard to dispensary care for such patients.

N.V. El'shteyn and R.S. Mirashnichenko* (1970) write that they could not [illegible] summary investigations pertaining to organization of specialized [illegible] care in cities. Yu.N. Gordon et al.** (1970) observe that [illegible] endocrinological service is relatively new, that it still does not have a [illegible] structure or definitively established forms and methods of operation.

In the last few years a few articles have been published on organization of endocrinological care in cities, organizational forms have been proposed which, in our opinion, present many interesting elements but are not without

* Sovetskoye Zdravookhranenive, No 3, 1970, p 27.
** [illegible]

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--FINISHING OF WOOD WITH POWDERED POLYMER MATERIALS BY FUSING -U-

AUTHOR-(03)-BELOKON, M.E., TODORCHIK, V.S., KOZYRINA, A.P.

COUNTRY OF INFO--USSR

SOURCE--DEREVOOBRAB. PROM. 1970, 19(3), 5-7

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--WOOD, POLYVINYL ACETAL RESIN, PLASTIC COATING, COMPRESSIVE STRENGTH, BENDING STRENGTH, PROTECTIVE COATING, THERMAL EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0978 STEP NO--UR/0489/70/019/003/0005/0007

CIRC ACCESSION NO--AP0124637

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124637

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POWDERED POLY(VINYL BUTYRAL) (I) WAS APPLIED AS A PROTECTIVE AND (OR) DECORATIVE COATING TO WOOD BY FUSION, AND THE EFFECTS OF THE TEMP. AND TIME OF EXPOSURE DURING THE APPLICATION OF THE COATING ON THE PHSY. AND MECH. PROPERTIES OF WOOD WERE STUDIED. EXPTS. WERE CONDUCTED ON SAMPLES OF BEECH, OAK, AND SPRUCEWOODS. THE SAMPLES WITH OR WITHOUT A COATING OF POWDERED I WERE HEATED AT LESS THAN OR EQUAL TO 210DEGREES FOR VARYING TIMES, AND THE RATE OF THE TEMP. INCREASE WITHIN THE WOOD, THE COMPRESSION AND BENDING STRENGTH, AND THE IMPACT RESISTANCE WERE DETD. ALL THE TESTED PROPERTIES WERE LOWERED BY EXPOSURE TO THE REQUIRED FUSION TEMP. 180-210DEGREES AND FUSION TIME 18-20 MIN. TO PREVENT THIS DETERIORATION, POLYMERS M. 170-180DEGREES SHOULD BE USED. WHEN A HIGHER TEMP. IS NEEDED, THE FUSION TIME SHOULD BE 8-10 MIN.

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USSR UDC 546.257'6+620.181

TRAVKIN, N. N., GRIBOV, B. G., RUMYANTSEVA, V. P., KOZYREIN, B. I., and SALAMATIN, B. A.

"A Thermographic Study of Organometallic Compounds. I. Thermal Dissociation of Bis-Arene Compounds of Chromium"

Leningrad, Zhurnal Obshchey Khimii, Vol XL, No 12, Dec 70, pp 2677-2679

Abstract: Bis-Arene π-complexes of chromium are a prominent and increasingly important source of pure chromium, low-resistance film-type resistors, and other products; but the decomposition of these compounds has not been thoroughly studied, and this impedes their effective utilization.

Heat resistance of several of these compounds was determined experimentally; they can be arranged in the following order of increasing resistance: $(C_6H_6)_2Cr < (CH_3C_6H_5)_2Cr < (C_2H_5C_6H_5)Cr < [(CH_3)_3C_6H_3]_2Cr$. It was shown in addition that decomposition of bis-Arene chromium compounds proceeds according to the general formula $(Ar)_2Cr \rightarrow 2Ar + Cr$.

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Thin Films

UDC 547.1'13 + 621.793.1

USSR

GRIBOV, B. G., RUMYANTSEVA, V. P., TRAVKIN, N. N., PASHKIN, A. S., KOZYRKIN, B. I., and SALAMATIN, B. A.

"Study of Metallic Films Obtained by Pyrolysis of Chromium and Molybdenum π-Complexes in the Gas Phase"

Moscow, Doklady Akademii Nauk SSSR, Vol 194, No 3, 1970, pp 580-582

Abstract: The article describes results of a study of the properties of metallic chromium and molybdenum films obtained by the pyrolysis of organic chromium and molybdenum compounds. The organometallics used were bis-benzene-, bis-toluene-, bis-ethylbenzene-, bis-xylene-, bis-mesitylene-, bis-diphenylchromium, their iodides, aniline-, dimethylaniline- and mesitylenechromium tricarbonyl, mesitylenemolybdenum tricarbonyl and bis-ethyl-benzenemolybdenum. The resultant metallic films possess considerable mechanical strength and hardness, elevated corrosion and acid resistance, and high adhesion. In order to study the properties of the pyrolytic chromium and molybdenum films, electro-

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GRIBOV, B. G., et al., Doklady Akademii Nauk SSSR, Vol 194, No 3, 1970, pp 580-582

physical parameters were measured and the structure and properties of the films determined by the electron diffraction method and electron microscopy. The results indicate that a number of peculiarities in metallic films obtained by the pyrolysis of organometallics are explained by the character of their formation during thermal decomposition, and their composition and properties depend on the conditions under which the thermal decomposition is carried out, as well as on the initial organometallics.

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USSR

KOZYRSKAYA, E. G.

"The Structure of the Set of Extreme Points of One Problem of Unification"

Issled. po mat. Ekon. i Smezh. Vopr. [Studies in Mathematical Economics and Related Problems -- Collection of Works], Moscow University Press, 1971, pp 139-156, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract No 3 V428, unsigned)

Translation: The number of type n mechanisms required to provide performance of a plan of two stages of work with minimum expenditures (in the production of mechanisms and their operation) is sought. An algorithm is presented for determination of points "hinting" the extreme; these points are indicated for n = 3.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

UDC 534.539.376

KOZYRSKIY, G. YA., KONONENKO, V. A., KUDMOVA, O. M., LEVITIN, V. V., MOROZOV, N. S., and ORZHITSKAYA, L. K., Institute of Metal Physics, Academy of Sciences Ukrainian SSR, and Ukrainian Scientific Research Institute of Special Steel

"Durability and Substructure of a Heat-Resistant, Precipitation-Hardened Alloy Subjected to Ultrasonic Treatment"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 35, No 4, 1973, pp 867-870

Abstract: The effect of ultrasonic irradiation on the structure and durability of KhN77TYuR industrial alloy was studied on samples quenched after eight hours at 1080°C, which were subjected to irradiation at 700°C with ultrasonic oscillation amplitude varied between 10 and 17 millicontombs. After irradiation the samples were aged at 700°C for one or two hours and then creep tested at 700°C under a load of 46 kG/mm². It was determined that ultrasonic treatment of this alloy promotes a more uniform distribution of the carbide phase, increases ductility owing to removal of carbide from the grain boundaries, blocks dislocation sources, and intensifies aging in weak areas. The result is increased durability and decreased creep rate. 2 figures, 1 table, 4 bibliographic references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR UDC 669.71:539.375

BAZELYUK, G. YA., KOZYRSKIY, G. YA., PETRUNIN, G. A., and POLOTSKIY, I. G.,
Institute of Metal Physics, Academy of Sciences Ukrainian SSR

"Effect of Preliminary Ultrasonic Irradiation and Thermomechanical Treatment on Creep Strength of Aluminum"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 32, No 1, Jul-Aug 71, pp 145-151

Abstract: In metals with a low stacking fault energy the weakening of these metals is due to recrystallization while metals with a high stacking fault energy are weakened primarily be means of polygonization. In conjunction with this there was much interest in studying the effect of preliminary ultrasonic irradiation and thermomechanical treatment on the creep strength of metals with a high stacking fault energy so that the authors selected 99.99% pure aluminum which has a stacking fault energy five times greater 200 erg.cm^{-2} than copper. Samples measuring 5 mm in diameter and 50 mm long were vacuum annealed at 500°C for one hour, after which part of the samples were creep tested while the others were either irradiated by ultrasound for 0.5 to 6.5 minutes or subjected to plastic deformation at the rate of 0.4% min for a range of from 0.5 to 11%. Prior to testing for creep the samples

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USSR

BAZELYUK, G. YA., et al., Fizika Metallov i Metallovedeniye, Vol 32, No 1, Jul-Aug 71, pp 145-151

were annealed for one hour at the test temperature. It was found that by ultrasonic irradiation and preliminary plastic deformation followed by annealing at the test temperature, the rate of high-temperatures creep for aluminum is substantially lowered. The observed strengthening in the region of large degrees of preliminary deformation and irradiation for 30 seconds can be a basis for developing a technological treatment for increasing creep strength of aluminum for conditions of long-time high-temperature loads. Six figures, 17 bibliographic references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

Heat Treatment

USSR UDC 539.4.015.1

KOZYRSKIY, G. YA., KONONENKO, V. A., and PETRUNIN, G. A., Institute of Metal Physics Academy of Sciences UkrSSR

"Forecasting the Possibility of Increasing the Heat Resistance of Metals by Mechanical Heat Treatment"

Kiev, Metallofizika, No 31, 1970, 152-157

Translation: Mechanical heat treatment as a method of increasing the heat resistance of materials does not always lead to a positive effect. Often a great deal of time, money, and effort are spent on a search for the optimum conditions of mechanical heat treatment to obtain new materials. In connection with this the following question arose: Is it possible, without resorting to expensive tests, to forecast the possibility of increasing the heat resistance of new materials by means of mechanical heat treatment according to the characteristics of structural changes which distinguish hardened from nonhardened materials during their service under operating conditions? Using as an example pure nickel and nickel alloyed with aluminum, it is shown that specific disorientation can be such an indicator for pure metals and solid solutions. Mechanical heat treatment led to a positive result only when, during a creep test, at its initial period the specific disorientation

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USSR

KOZYRSKIY, G. YA., et al., Metallofizika, No 31, 1970, pp 152-157

can serve as an indicator as to whether the material has a safety factor and whether it makes sense to subject it to mechanical heat treatment. A Study of the kinetics of the change in specific disorientation makes it possible to greatly refine the forecasts of the mechanical behavior of a material, which, in turn, leads to a significant reduction in the volume of tests when new materials are studied.

Bibliography, 10 entries. Illustrations 5.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

UDC 539.4.015.1

KOZYRSKIY, G. YA., OKRAINETS, P. N., and PISHCHAK, V. K., Institute of Metal Physics, Academy of Sciences UkrSSR

"A Change in the Disorientation of the Substructure of Nickel and Copper Under Conditions of Slow Loading at High Temperatures"

Kiev, Metallofizika, No 31, 1970, pp 148-152

Translation: The effect of plastic deformation and temperature on the substructure's disorientation was studied on high-purity polycrystalline nickel and copper specimens. Mechanical tests were conducted in vacuum at a loading rate v = 0.05 kg/mm^2 per hour at temperatures 0.448, 0.564, and 0.68 from the melting point. It is shown that under appropriate testing conditions the specific disorientation (the relationship of the disorientation angle to the value of deformation) of the substructure of copper is several times greater than that of nickel. It is concluded that such a difference in the values of specific disorientation of the substructure of copper and nickel is connected with the difference in the values of packing defects in these metals. Bibliography: 10 entries, 3 illustrations, 1 table.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

Steels

USSR UDC 539.4.015.1

KOZYRSKIY, G. YA., KONONENKO, V. A., OKRAINETS, P. N., and PETRUNIN, G. A., Institute of Metal Physics, Academy of Sciences UkrSSR

"The Dependence of Heat Resistance of Kh18N9T Steel on the Value of Preliminary Deformation"

Kiev, Metallofizika, No 31, 1970, pp 143-148

Translation: This work investigated the effect of preliminary cold deformation on the durability and rate of the established creep of 1Kh18N9T age-hardenable steel. It was established that there are two regions of preliminary deformation in which a considerable increase (of 5 times in the time prior to fracture) in the steel's creep resistance is observed. At a temperature of 750°C and a stress of 12 kg/mm^2 one region is observed near 1.5% and the second, with a deformation of 5-10%. This study discusses the characteristics of the mechanisms of stabilization of the substructure created by small and large degree of preliminary deformation.
Bibliography: 19 entries, 3 illustrations.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

UDC 539.4.015.1

KOZYRSKIY, G. YA., OKSAINETS, P. N., and PISHCHAK, V. K., Institute of Metal Physics, Academy of Sciences UkrSSR

"The Effect of the Loading Rate on the Characteristics of the Creep and Substructure of Nickel"

Kiev, Metallofizika, Ni 31, 1970, pp 139-143

Translation: The characteristics of the creep and the substructure of nickel at a temperature of 500°C and a load of 5 kg/mm^2 were studied. The time of application of the load changed from 1 to 5.10^5 seconds. It is shown that the characteristics of nickel creep depend greatly on the time and application of the load. The smaller the rate of the load's application, the greater the rate of the specimen's creep. The mechanical characteristics of the creep are compared with x-ray structural studies. A correlation is made between the specific disorientation of the substructure and the resistance of nickel creep. Bibliography: 2 entries, 2 illustrations and 2 tables.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 036 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--INCREASE IN HIGH TEMPERATURE CREEP RESISTANCE USING ULTRASONIC IRRADIATION -U-

AUTHOR-(04)-DEMCHENKO, L.V., KUZYRSKIY, G.YA., KONONENKO, Y.A., MORDYUK, N.S.

COUNTRY OF INFO--USSR

SOURCE--FIZ. METAL METALLOVED. 1970, 29(3), 657-9

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--CREEP RESISTANCE, METAL CREEP, NICKEL ALLOY, ALUMINUM CONTAINING ALLOY, GRAIN SIZE, THERMOMECHANICAL TREATMENT, DEFORMATION RATE, ULTRASONIC IRRADIATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0340 STEP NO--UR/0126/70/029/003/0657/0659

CIRC ACCESSION NO--AP0126096

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 038 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126096

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE STUDY WAS CARRIED OUT WITHTHE ALLOY NI,AL 1.18PERCENT HAVING GRAIN SIZE 0.4-1.5 MM, WHICH WAS IRRADIATED WITH AN INTENSITY OF 50-90 W-CM PRIME2, USING THE METHOD DESCRIBED BY G. YA. K. AND V. A. K. (1966). THE RATE OF CREEP WAS DETD. AT 100-300 HR. SPECIMENS SUBJECTED TO THERMOMECH. TREATMENT AT 800DEGREES WERE USED AS CONTROLS, AND THESE SHOWED SEVERAL TIMES HIGHER DEFORMATION RATES THAN THOSE IRRADIATED WITH ULTRASOUND. THE INTENSITY OF THE ULTRASONIC IRRADN. HAD PRACTICALLY NO EFFECT ON THE DEGREE OF CREEP RATE DECREASE OF IRRADIATED SPECIMENS; HOWEVER, THE DURATION OF IRRADN. HAD AN EFFECT, AT 5-7 MIN THE STRENGTHENING OF THE ALLOY REACHED A MAX. THE OBSD. EFFECTS ARE EXPLAINED BY THE FORMATION OF A DIFFERENT SUBSTRUCTURE IN IRRADIATED SPECIMENS THAN IN DEFORMED AND ANNEALED SPECIMENS. FACILITY: INST. METALLOFIZ., KIEV, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR UDC 539.54

KOZYRSKIY, O. I., OKRAINETS, P. N., Kiev

"Specifics of Hardening of Nickel During Thermal Cycling"

Kiev, Problemy Prochnosti, No 5, May, 1971, pp 90-93.

Abstract: The influence of thermal hardening on structural changes in large-grain nickel and on its behavior during creep is studied. The possibility is demonstrated of significant improvement of heat resistance properties of nickel by thermal cycling of prepared specimens. The thermal cycling acts primarily on the surface layer of the specimen, changing its strength characteristics. Tests have indicated increases in strength by an order of magnitude by this method.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

Thin Films

USSR

UDC 669.27.293.28:548.73

KOZYRSKIY, O. I., and TIKHONOV, L. V., Institute of Metal Physics, Academy of Sciences UkrSSR

"Crystal Structure Changes in Workhardened Surface Films of Tungsten, Niobium, and Molybdenum in Thermocyclic Treatment"

Kiev, Metallofizika, No 31, 1970, pp 117-121

Translation: The changes occurring in thermocyclic treatment under various temperature conditions in thin (on the order of 5 microns) surface films of tungsten, niobium, and molybdenum workhardened by grinding were studied by x-rays. The results were compared with the data previously obtained for metals with the face-centered cubic lattice. Bibliography: 10 entries, 4 illustrations.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

UDC:621.315.66

KOZYUK, M. F., Engineer, and SOROKER, V. I., Doctor of Technical Sciences, Professor

"Results of Examination of Centrifuged Reinforced Concrete High Voltage Power Line Supports"

Moscow, Beton i Zhelezobeton, No. 1, Jan 71, pp. 21-22

Abstract: The Kuybyshev affiliate of Orgenergostroy has studied the condition of reinforced concrete power line supports for a number of years. The following parameters have been determined: strength of concrete; protective layer thickness; depth of carbonization; crack resistance; presence and type of technological defects in manufacture and their influence on strength of concrete. This article describes the conduct and results of these tests for power line towers made of portland cement in type 400 and 500 concrete. During the course of the study, it was determined that 43% of the towers had surface cracks, many of which continued to propagate progressively with the passage of time, due to the application of direction-changing wind loads.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

Miscellaneous

USSR

UDC 669.15.018.44

KOZYSKIY, G. YA., KONONENKO, V. A., OKRAINETS, P. N., and PETRUNIN, G. A.

"Effect of Preliminary Strain on Heat Resistance of 1Kh18N9T Steel"

Metallofizika. Resp. mezhved. sb. (The Physics of Metals. Republic Interdepartmental Collection of Works), 1970, vyp. 31, pp 143-148 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 3I618 by authors)

Translation: A study was made of the effect of preliminary cold strain (CS) on the surability and steady-state creep rate of 1Kh18N9T steel. It was found that there are two regions of preliminary CS displaying a significant (five fold in time to rupture increased in the creep resistance of the steel. At 750° and a stress of 12 kg/mm^2 on region is observed in the vicinity of 1.5%, the second in the case of 5-10% strain. There is a discussion of peculiarities of the mechanisms of stabilization of the substructure created by low and high degrees of preliminary CS. Three illustrations. Bibliography with 19 titles.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

Acc. Nr: AT0049880 Abstracting Service: CHEMICAL ABST. 5-70 K Ref. Code: UR0020

100802t Transformations of compounds having the Si-N-C-X-bonding system. New process for preparing organic and organosilicon isocyanates. Mironov, V. F.; Shchukovskii, V. D.; Kozyukov, V. P. (USSR). *Dokl. Akad. Nauk SSSR* 1970, 190(1), 110-13 [Chem] (Russ). Reaction of 96.6 g allylamine with 79.4 g Me_2SiHCl in Et_2O with cooling gave 81% $HSiMe_2NHCH_2CH:CH_2$ (I), b. 99-100°, d^{20} 0.7704, $n^{20}D$ 1.4162, and 31 g residual $(HSiMe_2)NCH_2CH:CH_2$, b_{14} 45-6°, 0.8277, 1.4344. I and H_2PtCl_6 catalyst in iso-PrOH heated 10-15 hr up to 215° gave a polymer, which in MePh was phosgenated at −20°, then at room temp., to yield 62.2% $ClSiMe_2(CH_2)_3NCO$, b_4 75-6°, 1.0444, 1.4528, which with H_2O gave 79% $O[SiMe_2(CH_2)_3NCO]_2$, $b_{1.5}$ 131-2°, 0.9980, 1.4489. Reaction of liq. $COCl_2$ similarly with 1,3-bis(γ-trimethylsilylamino)propyldimethylsilylpropane gave 73% 1,3-bis(γ-isocyanopropyldimethylsilyl)propane, $b_{1.5}$ 175-8°, —, 1.4708, while $Et_2MeSi(CH_2)_3NHSiMe_3$ and $COCl_2$ similarly gave 66.5% γ-diethylmethylsilylpropyl isocyanate, b_7 57-8°, 0.8963, 1.4478, which with aq. NH_3 gave $Et_2MeSi(CH_2)_3NHCONH_2$, m. 106-7°. Similarly were run reactions of $COCl_2$ with $MeNHSiEt_3$, $MeN(SiMe_3)_2$, $MeNHSiMe_2NMeSiMe_2NHMe$, $CH_2:CHCH_2NHSiMe_3$, and $RNHSiMe_3$ where R was iso-Bu or Ph. These were best run with 5-10% excess $COCl_2$.

C. M. Konolapoff

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 010 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--SYNTHESIS OF DISILYLUREAS -U-

AUTHOR-(04)-SHCHEKINA, T.V., KOZYUKOV, V.P., GOLDIN, G.S., TSIONO, S.N.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 821-3

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--UREA SYNTHESIS, AMMONIA, ORGANOSILICON COMPOUND, ETHER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1065 STEP NO--UR/0079/70/040/004/0821/0823

CIRC ACCESSION NO--AP0128492

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 010 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0128492

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PASSING DRY NH SUB3 INTO (UCNCH SUB2 CH SUB2 CH SUB2 SINE SUB2) SUB2 O IN ET SUB2 O GAVE 95PERCENT (R PRIME1 R PRIME2 NCONH(CH SUB2) SUB3 SINE SUB2) SUB2 Z (I) (Z EQUALS O, R PRIME1 EQUALS R PRIME2 EQUALS H), M. 127DEGREES. BUNH SUB2 SIMILARLY GAVE 85PERCENT I (Z EQUALS O, R PRIME1 EQUALS H, R PRIME2 EQUALS BU), M. 58-9DEGREES. SIMILARLY WERE PREPD. THE FOLLOWING I (70-92PERCENT) (Z, R PRIME1, AND R PRIME2 GIVEN): O, H, C SUB6 H SUB13, M. +2-4DEGREES; O, ET, ET, RESIN; C, BU, BU, RESIN; CH SUB2, ET, ET, M. 203-10DEGREES; CH SUB2, BU, BU, M. 187-8DEGREES; (CH SUB2) SUB3, H, BU, M. 38-9DEGREES; (CH SUB2) SUB3, H, C SUB6 H SUB13, RESIN; (CH SUB2) SUB3, ET, ET, RESIN; AND (CH SUB2) SUB3, BU, BU, RESIN.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 011 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--SYNTHESIS OF POLYSILYLUREAS AND POLYSILYLUREYLENES -U-

AUTHOR-(04)-GOLDIN, G.S., TSIOMO, S.N., SHCHEKINA, T.V., KOZYUKOV, V.P.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(4), 307-9

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--MOLECULAR STRUCTURE, SPECTROSCOPIC ANALYSIS, ISOCYANATE, UREA, SOLUBILITY, ORGANIC SOLVENT, ORGANOSILICON COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1240 STEP NO--UR/0460/70/012/004/0307/0309

CIRC ACCESSION NO--AP0134914

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 011 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134914

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OLIGOMERIC POLY(SILYLUREAS) (I, R EQUALS O, CH SUB2, (CH SUB2) SUB2, OR (CH SUB2) SUB3) WERE PREPD. BY A REACTION OF BIS((GAMMA ISOCYANATOPROPYL)DIMETHYLSILYL)ALKANES (II) OR 1,3,BIS(GAMMA ISOCYANATOPROPYL),1,1,3,3,TETRAMETHYLDISILOXANE (III) WITH MENH(CH SUB2) SUB2 NHME. REACTION OF N SUB2 H SUB4 OR PHNHNH SUB2 WITH II OR III GAVE POLY(SILYLUREYLENES) (IV, R EQUALS O OR (CH SUB2) SUB3), ALMOST INSOL. IN ORG. SOLVENTS. THE STRUCTURE OF THE POLYMERS WAS DETD. BY IR SPECTROSCOPY AND ELEMENTAL ANAL.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

UDC: 681.333

KUZNETSOV, Yu. P., KOZYULIN, E. S., Moscow "Order of Lenin" Power Engineering Institute, and the All-Union State Design and Planning Scientific Research Institute "Energoset'proyekt"

"A Device for Modeling Electric Systems"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 5, Feb 73, Author's Certificate No 364949, Division G, filed 31 May 71, published 28 Dec 72, p 143

Translation: This Author's Certificate introduces a device for modeling electric systems which contains a single-phase model of an AC network, a filter for the fundamental harmonic and tracking current source-amplifier, a converter which changes single-phase voltage to symmetric three-phase voltage, whose outputs are connected to a three-phase model of a rectifier (inverter) transformer and, through a controlled diode model, to a model of a DC line. As a distinguishing feature of the patent, the class of problems which can be solved is extended and experimental accuracy is improved by connecting the model of the rectifier (inverter) transformer to the input of the filter for the fundamental harmonic, whose output is connected to the

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USSR

KUZNETSOV, Yu. P., KOZYULIN, E. S., USSR Author's Certificate No 364949

input of the tracking current source-amplifier, which is connected by its output to the single-phase model of an AC network and to the converter which changes single-phase voltage to symmetric three-phase voltage.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

UDC 621.373.2

ANDRIANOV, A. M., ALEKSEYEV, Yu. A., BAZILEVSKAYA, G. A., BARYSHEV, V. L., and KRABKOV, V. A.

"High-Voltage Pulse Oscillator"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obrazstsy, tovarnyye znaki, No. 33, 1971, p 184

Abstract: The oscillator contains a nonuniform forming line with distributed parameters, a firing block, and a load. The line is made of two plane circular electrodes with a common axis of symmetry. Between them is a dielectric, with azimuthally symmetrical dischargers around the line's outer periphery; the load is connected through a ring insulator to the central region of the line. The dielectric constant is a function of the electric field intensity. High power and short rise time of the pulses are the features of the device. A sketch of the device is given.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

UDC 621.382.002 (088.8)

KOCHKAREV, G.V., KRACHKOVSKIY, G.I., LEYBOVICH, A.SH., CHARNYY, YU.S., PETRAKOVSKIY, YA.SH., SIDORENKO, L.D., LEVAKOV, V.P., GLADCHENKO, V.P., RATNEK, YU.A.

"Classifier Of Semiconductor Devices"

USSR Author's Certificate No 296180, filed 14 July 1969, published 18 May 1971 (from RZh--Elektronika i yeye primeneniye, No 3, March 1972, Abstract No 3B357)

Translation: The classifier of semiconductor devices (principally transistors) contains a unit [uzel] for connection of a device to the measuring equipment, the measuring equipment, logical equipment, mechanism for marking the polarity, and a unit for allocation of the measured devices into a container; it has a rotating tube connected with an electric motor. With the object of increasing the speed of operation and the efficiency of the classifier, the unit for connection, made in the form of a revolving reversible disk, supporting two blocks [kolodka] for the devices, diametrically located and connected by a flexible braid [zhgut] with the measuring device, and two withdrawing devices, mounted on the axis of the blocks, is partially arranged inside a guiding hopper, connected with the rotating tube of the unit for allocation, and under the disk of the unit for connection, in a groove of the lateral surface of the hopper, the mechanism for marking the polarity is located.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

1/2 018 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ELECTROPHYSIOLOGICAL ANALYSIS OF INTRACENTRAL MORPHO FUNCTIONAL RELATIONS OF THE HYPOTHALAMUS WITH THE STRUCTURES OF THE PIRIFORM LOBE

AUTHOR--KRACHUN, G.P.

COUNTRY OF INFO--USSR

K

SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 1, PP 130-138

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ELECTROPHYSIOLOGY, WHITE RAT, BRAIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0344 STEP NO--UR/0247/70/020/001/0130/0138

CIRC ACCESSION NO--AP0132581

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

2/2 018 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0132581

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN ACUTE EXPERIMENTS ON WHITE RATS UNDER NEMBUTAL CHLORALOSE ANAESTHESIA, A STUDY WAS MADE OF THE NATURE OF EVOKED POTENTIALS AND OF THEIR DISTRIBUTION IN THE MEDIAL AND LATERAL GROUP OF THE AMYGDALAR NUCLEI, AS WELL AS IN THE PERIAMYGDALAR CORTEX OF THE PALEOCORTEX IN RESPONSE TO A STIMULATION OF THE NUCLEI OF THE ANTERIOR HYPOTHALAMUS (MEDIAL PREOPTIC REGION, ANTERIOR NUCLEUS), OF THE VENTROMEDIAL NUCLEUS AND THE LATERAL REGION OF THE HYPOTHALAMUS. IN THE SURFACE LAYERS OF THE PERIAMYGDALAR CORTEX, TRUE NEGATIVE POSITIVE RESPONSES WITH A 4 TO 7 MSEC LATENCY WERE RECORDED ONLY UPON STIMULATION OF THE ANTERIOR HYPOTHALAMUS. IN THE MEDIAL GROUP OF THE AMYGDALA NUCLEI SUCH A STIMULATION RESULTED IN NEGATIVE POSITIVE, AND IN THE LATERAL GROUP, POSITIVE NEGATIVE RESPONSES WITH A 4 TO 8 MSEC LATENCY. STIMULATION OF THE VENTROMEDIAL NUCLEUS AND THE LATERAL REGION OF THE HYPOTHALAMUS EVOKED NEGATIVE POSITIVE RESPONSES WITH 4 TO 10 MSEC LATENCIES BOTH IN THE MEDIAL AND THE LATERAL GROUPS OF THE AMYGDALA NUCLEI. IT IS ASSUMED THAT THE IMPULSES PASS FROM THE HYPOTHALAMUS TO THE STRUCTURES OF THE PIRIFORM LOBE ALONG DIRECT PATHWAYS. THE QUESTION OF HYPOTHALAMO AMYGDALIC RELATIONSHIPS IS DISCUSSED. FACILITY: LABORATORY OF COMPARATIVE PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM, SECHENOV INSTITUTE OF EVOLUTIONARY PHYSIOLOGY AND BIOCHEMISTRY, USSR ACADEMY OF SCIENCES, LENINGRAD.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201530007-1

USSR

UDC [537.226+537.311.33]:[537+535]

KRADINOVA, L. V., PROCHUKHAN, V. D., RADUL, V. A.

"On the Effect of Deviations From Stoichiometry on the Properties of the $ZnSnP_2$ Semiconductor"

V sb. Nekotor vopr. khimii i fiz. poluprovodnikov slozhn. sostava (Certain Problems of the Chemistry and Physics of Semiconductors of Complex Composition -- Collection of Works), Uzhgorod, 1970, pp 114-117 (from RZh Fizika, No 12, Dec 71, Abstract No 12Ye1317)

Translation: The effect of an excess of one or another elements forming the crystalline lattice of $ZnSnP_2$ on charge carrier concentration and mobility is investigated. An excess of Zn or P can be produced both in the process of growing the crystals and in annealing the latter in vapors of volatile components. The results of the study are given in a table. It is shown that displacement processes and vacancy formation in the crystal lattice, which must be taken into account in the alloying of this compound, have a considerable effect on the semiconducting properties of $ZnSnP_2$. A. Ye. G.

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(54) "A Medicinal Preparation"

Moscow, Otkrytiye Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 32, 1973, p 32

Translation: Application of 1,2,3,4-tetraoxotetrahydronaphthaline (Oxoline) as an antiviral preparation.

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1/2 023 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--3,5,3 PRIME,5 PRIME,TETRABROMO,2,4,2 PRIME,4 PRIME,TETRAHYDROXYBIPHENYL COMPOSITIONS FOR TREATING VIRAL EYE DISEASES

AUTHOR-(04)-NIKOLAEVA, I.S., KRAFT, M.YA., PERSHIN, G.N., BOGDANOVA, N.S.

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CIRC ACCESSION NO--AA0131626 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COMPD. (TEBROPHEN) AS SUCH OR IN 0.1, 0.25, AND 1PERCENT OINTMENTS IN VASELINE (VASELINE 80, VASELINE OIL 20PERCENT) IS EFFECTIVE IN VIRAL EYE INFECTIONS, INCLUDING VARIOUS FORMS OF HERPETIFORM KERATITIS. HUMAN TESTS SHOWED RELIEF IN 3-5 DAYS AND CURE IN 10-14 DAYS. TEBROPHEN IS ALSO EFFECTIVE IN OTHER VIRAL INFECTIONS. FACILITY: CROZIPONIKIDZE, S., ALL UNION SCIENTIFIC RESEARCH CHEMICAL PHARMACEUTICAL INSTITUTE.

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KRAFT, V.V.

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TECHNICAL TRANSLATION

FSTC-HT-23-2075-72

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

FOREIGN TITLE: PROBLEMY PEREDACHI INFORMATSII LAZERNYM IZLUCHENIEM

AUTHOR: I. A. DERYUGIN, ET AL.

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

Translated for FSTC by ACSI

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Title Page -

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ELECTRICAL ENGINEERING

Materials

USSR

UDC 621.371.019.[illegible]

KRAFTMAKHER, G. A., MERIAKRI, V. V.

"Investigation of the Properties of Ferrites on Submillimeter Waves"

Moscow, Radiotekhnika i Elektronika, vol 16, No 11, Nov 71, pp 2221-2222

Abstract: The complex parameters ε and $\tilde{\mu}$ of a number of ferrites are studied in the long-wave part of the submillimeter band. The results show that some grades of ferrites can be used as the basis for nonmutual devices with small losses (of the order of 1-2 dB). One figure, bibliography of four titles.

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UDC: 53.07/.08+53.001.5

KRAFTMAKHER, Ya. A., NEZHENTSEV, V. P.

"A Method of Measuring the Coefficient of Thermal Expansion"

V sb. Fiz. tverd. tela i termodinamika (Solid State Physics and Thermodynamics--collection of works), Novosibirsk, "Nauka", 1971, pp 233-237 (from RZh-Fizika, No 4, Apr 72, Abstract No 4A149)

Translation: The paper describes an installation designed for measuring the coefficient of expansion of metal specimens in the form of rods by the method of periodic heating by a current. The specimen is heated by an alternating current, and a modulating voltage is applied to the central part of the specimen. Temperature fluctuations are registered by a thermocouple. Fluctuations in the length of the specimen are automatically compensated by means of a telephone used as an electrochemical converter. Attached to the diaphragm of the telephone is a small flag which partially covers the beam in the light slit in front of a photomultiplier. After amplification, the output voltage from the photomultiplier is fed to the electromechanical converter. The current fluctuations in the converter are proportional to the fluctuations in the length of the specimen. The

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KRAFTMAKHER, Ya. A., NEZHENTSEV, V. P., Fiz. tverd. tela i termodinamika, Novosibirsk, "Nauka", 1971, pp 233-237

sensitivity of the circuit is 10^{-5} mm. (It is recommended that the expansion of a current-heated wire also be used for compensating for expansion of the specimen). Standard specimens must be used for calibrating the system. As illustration of the use of the system, data are presented on the expansion of nickel over a temperature range of 400-1200°C (length of specimen 200 mm, modulation period 10 s, amplitude of temperature fluctuations approximately five degrees; a tungsten wire was used for compensation). L. P. Filippov.

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KALNIN', M. M., KARLIVAN, V. P., METRA, A. YA., SOBOLEVSKIY, CH. A., MALERS, L. YA., DZENIS, M. YA., KRAGIS, I. ZH., and REYKHMANIS, P. K.

"Metalloplastics Based on Modified Polyethylene"

Moscow, Plasticheskiye Massy, No 10, 1972, pp 31-33

Abstract: The technological process of the production of metalloplastics is based on thermal contact [plating] between a pretreated metal base and a film of modified polyethylene. Optimal ranges of the important parameters influencing the properties of metalloplastics are as follows: temperature of thermal contact -- 200-250°C; duration of the contact -- 30-60 sec; filler content -- 8-10 vol-%. The surface of the metal base is cleaned, preheated and passed through a set of rollers where the initial contact with modified polyethylene is made. Final bonding occurs in an induction heating chamber. The material obtained -- the unilateral of bilateral metalloplastic -- shows high anticorrosive properties. It can be processed by several methods such as bending, folding, or die stamping. Surfaces can be joined together by welding or folding and other methods. This material is ideally suited for production of equipment resistant to chemical agents, such as storage or sedimentation tanks. It could be used for production of special pipe lines, ventilation systems, etc. Due to

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KALNIN', M. M., et al., Plasticheskiye Massy, No 10, 1972, pp 31-33

the ability of producing colored surface coatings, it could also be used in automobile, airplane or ship building industry as well as for construction of furniture or specialized equipment.

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