"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

AGEKYAN, V. T., et al, Fizika i tekhnika poluprovodnikov, No 10, 1972, pp 1924-1930

UDC: 621.315.592

experiment -- a plot of the positions of absorption maxima in the SnO_2 spectrum as a function of the magnetic field intensity.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC 547.495.1

ZALIKIN, A. A., KOLESOVA, V. A., STREPIKHEYEV, YU. A.

"N-Phosphorylated Esters of N-Substituted Carbamic Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol XLII (CIV), No 1, 1972, pp 96-98

Abstract: By interaction of the acid chlorides of phosphoric, phosphonic and phosphonous acids with sodium urethanes in a solvent (ether or benzene), a series of N-phosphorylated esters of N-substituted carbamic acids -- N-phosphorylated urethanes and derivatives of phosphoric, phosphonic and phosphonous acids -- were obtained with quite different substitutions on the nitrogen and phosphorus atoms

$$R'R''P(O)Cl + NaN(R''')COOR \longrightarrow R'R''P(O)N(R''')COOR + NaCl.$$

The products of the reaction are tabulated with some of their physical characteristics, yields and formulas. The structure of the compounds was checked by infrared and paramagnetic resonance spectra. The physiological activity of the compounds demonstrated that many of them have broad-spectrum pesticidal properties. Herbicidal, fungicidal and raticidal activity was detected for some of the compounds.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

UNCLASSIFIED

TITLE--REACTION KINETICS OF TERTIARY AMINES WITH PHOSGENE -U-

PROCESSING DATE--23OCT70

AUTHOR-(02)-STREPIKHEYEV, YU.A., PERLOVA, T.G.

COUNTRY OF INFO--USSR

SOURCE--TR. MOSK KHIM.-TEKHNOL. INST. 1969, NO. 61, 128-32

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--TERTIARY AMINE, PHOSGENE, REACTION KINETICS, ABSORPTION SPECTRUM, COMPLEX COMPOUND, LOW TEMPERATURE EFFECT, ACTIVATION ENERGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1141

STEP NO--UR/0000/69/000/061/0128/0132

CIRC ACCESSION NO--AT0119995

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AT0119995

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FROM KINETIC CURVES OF THE TITLE REACTION RUN IN (CH SUB2 CL) SUB2 WITH PR SUB3 N AND COCL SUB2 AND THE ABSORPTION SPECTRUM CHANGES IN THE SYSTEM DURING THE REACTION AS COMPARED WITH SIMILAR DATA OF THE REACTION INVOLVING PHCH SUB2 NET SUB2 WITH COCL SUB2 AND PHNET SUB2 WITH COCL SUB2, IT WAS CONCLUDED THAT THE AMINES REACT BY FORMING INITIALLY AN UNSTABLE ADDUCT OR COMPLEX STABLE ONLY AT TEMPS. BELOW MINUS 20DEGREES; THE MOST STABLE ONE WAS THAT WITH ET SUB3 N, WHILE OTHERS COULD BE ISOLATED OR DETECTED ONLY BELOW MINUS 50DEGREES. THE RATE OF COMPLEX FORMATION WAS MUCH GREATER THAN THAT OF ITS DECOMPN. AND THE LATTER IS THE RATE DETG. STEP. RATES OF REACTION WERE TABULATED FOR ET SUB3 N, PR SUB3 N, PHCH SUB2 NET SUB2, AND PHNET SUB2 FOR TEMPS. FROM 6DEGREES UP TO 40DEGREES. THE ACTIVATION ENERGIES FOR THE REACTIONS OF THE ABOVE AMINES WERE CALCD. TO BE, RESP., 17.2, 10.5, 6.35, AND 25 KCAL PER MOLE. THE REACTIVITY OF THE AMINES COULD BE DIRECTLY CORRELATED WITH THEIR NUCLEOPHILICITIES.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

1/2 014 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--KINETICS OF THE DISSOCIATION OF BLOCKED ISOCYANATES -U-

AUTHOR-(03)-TARTAKOVSKAYA, A.M., BLAGONRAVOVA, A.A., STREPIKHEYEV, YU.A.

COUNTRY OF INFO--USSR

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SOURCE--VYSOKOLMOL. SOEDIN., SER. B 1970, 12(1), 84-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--DISSOCIATION, ORGANIC ISOCYANATE, BENZENE DERIVATIVE, SPECTROPHOTOMETER, THERMAL DECOMPOSITION, CARBAMATE/(U)IKS14 SPECTROMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1198 STEP NO--UR/0460/70/012/001/0084/0088

CIRC ACCESSION NO--AP0104564

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 014 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0104564

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DISSOCN. KINETICS OF BLOCKED ISOCYANATES (I) E.G., PHNHCO SUB2 PH, 4-METHYLPHENYL N-PHENYLCARBAMATE, 2-METHYLPHENYL N-PHENYLCARBAMATE, 4-CHLOROPHENYL N-PHENYLCARBAMATE, 2-CHLOROPHENYL N-PHENYLCARBAMATE, 2-BROMOPHENYL N-PHENYLCARBAMATE, 4-NITROPHENYL N-PHENYLCARBAMATE, AND 2-NITROPHENYL N-PHENYLCARBAMATE WAS STUDIED WITH AN IKS-14 SPECTROPHOTOMETER IN MINERAL OIL AT 85-180DEGREES. THE POSITION OF THE SUBSTITUENT AND ITS NATURE AFFECTED THE DISSOCN. RATE. ELECTRON WITHDRAWING SUBSTITUENTS INCREASED THE RATE; THE EFFECT OF PARA SUBSTITUENTS OBEYED THE HAMMETT EQUATION (SIMILAR TO P EQUALS PLUS 2.00). ADDN. OF 3.38 TIMES 10 PRIME NEGATIVE5 MOLE-L. BU SUB2 SN(O SUB2 CC SUB11 H SUB23) SUB2 (II) TO THE I SOLN. LOWERED THE DECOMPN. TEMP., ESP. AT THE HIGHER TEMP. RANGE. THE CATALYZED DISSOCN. RATE MARKEDLY INCREASED IN THE PRESENCE OF THE ORTHO ELECTRON WITHDRAWING SUBSTITUENTS IN THE RING OF THE BLOCKING PHENOL.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC 547.555+547.297

SVIRSKAYA, P. I., STRESBULAYEVA, A. I., NEGREBETSKIY, V. V., TIBANOV, P. V., VASIL'YEV, A. F., and BASKAKOV, Yu. A., All-Union Scientific Research Institute of Chemical Agents for Plant Protection

"Hydroxylamine Derivatives With Herbicidal Activity. 42. Reactions of Derivatives of N-Carbamoyl-N-arylhydroxylamines with Halides of Haloalkylcarboxylic Acids"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 9, No 6, Jun 73, pp 1163-1171

Abstract: N-Carbamoyl-N-arylhydroxylamine derivatives, on reacting with halides of alpha- and beta-halopropionic acids, formed N-substituted O-alpha- or O-beta-halopropionyl derivatives of carbamoyl-N-arylhydroxylamines. Under the action of bases, O-beta-chloropropionylhydroxylamines were hydrolyzed to the initial hydroxylamines. Depending on the conditions of the reaction and the nature of the substituents, the N-substituted O-alpha-halopropionyl derivatives of carbamoyl-N-arylhydroxylamines, on being subjected to the action of bases, either split off hydrogen halide with the formation of O-acryloyl derivatives or underwent cyclization with the formation of 2-aryl-4-(alkyl)aryl-5-methyl-1,2,4-

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

SVIRSKAYA, P. I., et al., Zhurnal Organicheskoy Khimii, Vol 9, No 6, Jun 73, pp 1163-1171

oxadiazine-3,6-diones. At high temperatures the O-alpha-halopropionyl and O-acryloyl derivatives readily underwent rearrangement into the corresponding derivatives of o-aminophenol. In the presence of triethylamine the O-alpha-halopropionyl-N-alkylcarbamoyl-o-aminophenols were converted as a result of recyclization into N-alpha-halopropionyl-N-alkylcarbamoyl-o-aminophenols. The compounds that have been synthesized and their physical properties are listed in tables.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

UNCLASSIFIED

TITLE--POLYPHOSPHATE LEVEL IN SOME SPECIES OF YEASTS GROWN IN VARIOUS CARBON SOURCES -U-

PROCESSING DATE--23OCT70

AUTHOR-(03)-STRESHINSKAYA, G.M., NAUMOVA, I.B., GOLOLOBOV, A.D.

COUNTRY OF INFO--USSR

SOURCE--KOKL. AKAD. NAUK SSSR 1970, 190(1), 227-30

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--YEAST, CARBON, PHOSPHATE, NUCLEIC ACID, CULTURE MEDIUM, HYDROCARBON, GLUCOSE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1097

STEP NO--UR/0020/70/190/001/0227/0230

CIRC ACCESSION NO--AT0119956

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 018

UNCLASSIFIED

CIRC ACCESSION NO--AT0119956 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FRACTIONS OF P (ACID AOL., ACID INSOL., TOTAL ORTHOPHOSPHATE, AND NUCLEIC ACID P) WERE TABULATED FOR MATERIAL OBTAINED FROM C(ANDIDA) INTERMEDIA AND T(ORULOPSIS) FAMATA SPECIES AFTER INCUBATION FOR UP TO 3 DAYS IN CULTURE CONTG. ADDED PARAFFIN OR GLUCOSE. POLYPHOSPHATE CONTENT WAS ALSO TABULATED FOR C. LIPOLYTICA, C. TROPICALIS, C. PELLICULOSA, AND C. GUILLIERMONDII. ADDN. OF HYDROCARBONS TO THEMEDIUM INCREASED THE SYNTHESIS OF POLYPHOSPHATES 2 FOLD THAN IN MEDIA CONTG. EASILY ASSIMILATED GLUCOSE.

MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC 621.372.852.1

VOROB'YEVA, V. G., RUBASHKINA, R. G., STRETENSKAYA, N. G., KHABI, V. S.

"A Filter for Suppressing Spurious Emissions of High-Power Amplifier Klystrons"

Elektron. tekhnika. Nauch.-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific and Technical Collection. SHF Electronics), 1971, vyp. 3, pp 136-137 (from RZh-Radiotekhnika, No 7, Jul 71, Abstract No 7B154)

Translation: The paper describes a waveguide filter for suppressing spurious emissions from high-power amplifier klystrons with a passband of two percent. Attenuation of the power of spurious emissions is 30 dB or more throughout the entire range of operation of the waveguide. Klystron power losses in the filter on the average frequency of the working band come to one percent. Four illustrations, bibliography of one title. Resumé.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

UNCLASSIFIED

ELECTRODE IN THE WELDING OF MULTI LAYERED WELDS -U-

AUTHOR--GOTALSKY, YU.N., STRETOVICH, A.D.

PROCESSING DATE--11SEP70

COUNTRY OF INFO--USSR

SOURCE--AVTOMAT. SVARKA JAN. 1970, 23(1) 75

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--AUTOMATIC CONTROL SYSTEM, WELDING EQUIPMENT, WELDING ELECTRODE, COUPLING CIRCUIT, VIBRATION EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1212

STEP NO--UR/0125/70/023/001/0075/0075

CIRC ACCESSION NO--AP0107688

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 026 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107688

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN AUTOMATIC DEVICE FOR CONTROLLING THE POSITIONING AND TRAVEL OF THE ELECTRODE IN THE PRODUCTION OF MULTI LAYERED WELDS IS DESCRIBED. WITH THE ADDITION OF EACH NEW LAYER IN THE MULTI LAYERED SYSTEM, THE AMPLITUDE OF THE ELECTRODE VIBRATIONS AND ITS DEGREE OF LIFT MUST BE ALTERED. THE PROPOSED DEVICE ENABLES THIS PROCESS TO BE CARRIED OUT AUTOMATICALLY BY MEANS OF A SIMPLE MECHANICAL COUPLING. UNLIKE EXISTING DEVICES DESIGNED FOR THE SAME PURPOSE, IT CAN BE USED FOR WELDING UNDER FLUX.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

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UDC 681.626.44

SKLYANNOY, A. L., FEDOROV, A. D., STRETOVICH, M. D.

"A Tape Perforator With Electromagnetic Drive"

Moscow, Otkrytiya, Izobreteniya, Promychlennyye Obraztsy, Tovarnyye Znaki, No 12, 1970, Author's Certificate No 267190, filed 20 Nov 67, p 119

Abstract: This Author's Certificate introduces a tape perforator with electro-magnetic drive. The device contains a punch and die, code electromagnets and armatures, a drive electromagnet with armature, and a tape transport drum connected to a ratchet wheel and pawl. As a distinguishing feature of the patent, the reliability of the perforator is improved by fastening levers to the armature of the electromagnetic drive; connecting these levers by axles to the armatures of the code electromagnets and adding a frame on which the ends of these levers rest, a pusher which is common for all punches, and also a connecting link which interacts with a roller to transmit motion through the pawl and ratchet wheel to the tape transport drum.

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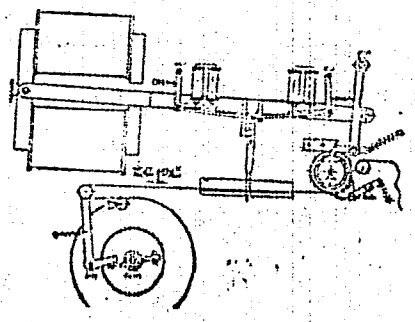
"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

SKLYANNOY, A. L., et al., Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 12, 1970, Author's Certificate No 267190, filed 20 Nov 67, p 119



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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

1/2 022

UNCLASSIFIED

TITLE--INFLUENCE OF THE OAT POLYPHENOLS ON THE FAT METABOLISM -U-

PROCESSING DATE--18SEP70

AUTHOR-(02)-SHAMRAY, YE.F., STREYEVAYA, L.N.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY PITANIYA, 1970, NR 2, PP 51-54

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LIPID METABOLISM, FAT, BLOOD SERUM, CHOLESTEROL, LIPOPROTEIN, CEREAL CROP

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/1639

STEP NO--UR/0244/70/000/002/0051/0054

CIRC ACCESSION NO--AP0101694

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 022

CIRC ACCESSION NO--AP0101694 UNCLASSIFIED PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BIOLOGICAL ACTION OF O PREPARATION MADE UP OF POLYPHENOLS SEPARATED FROM THE OAT STRAW WAS ANALYZED. THE DRUG UNDER STUDY DISPLAYS A MARKED LIPOTROPIC EFFECT, PREVENTS DEPOSITION OF FAT IN THE ORGANS AND TISSUES OF EXPERIMENTAL ANIMALS. IT ALSO LOWERS THE BLOOD SERUM CHOLESTEROL AND BETA LIPOPROTEIDS LEVEL, BOTH IN ORDINARY CONDITIONS AND AGAINST THE BACKGROUND OF EXPERIMENTAL HYPERCHOLESTERENEMIA.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

ZHITOVA, Ye. I., IPPOLITOVA, L. A., MINEYEV, A. N., SMOLINA, N. N., and STREZH, N. P., Gor'kiy Medical Institute, Gor'kiy Oblast Sanitary Epidemiological Station, and Gor'kiy City Sanitary Epidemiological Station, Gor'kiy

"Diagnostic Significance of Lot Titers of the Complement Fixation Reaction With Some Antigens"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 48, No 2, Feb 71, pp 72-75

Abstract: Sera of patients and healthy persons giving a positive reaction in the complement fixation test with ornithosis antigen also contained antibodies to R. prowazekii antigen in approximately 50% of cases. The relative frequency of ornithosis-R. prowazekii cross reactions increased with increasing titers of the R. prowazekii antigen at which a positive complement fixation reaction was obtained. To exclude diagnostic errors, repeated tests with both antigens should be carried out. Sera

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

ZHITOVA, Ye. I., et al, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 48, No 2, Feb 71, pp 72-75

that show positive complement fixation reactions with antigens of ornithosis, R. prowazekii, and Q-fever gave positive reactions with toxoplasmosis antigen (1:10 - 1:5) in more than 2/3 of cases.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC: 533.9...16

STREZH, P. Ye.

"On Calculating the Tensor of Permittivity of a Nonhomogeneous Magnetoactive Plasma by the T-Matrix Method"

Tr. Un-ta druzhby narodov im. Patrisa Lumumby (Works of the Patrice Lumumba Friendship University), 1972, 62, pp 77-83 (from RZh-Fizika, No 6, Jun 73, abstract No 6G295 by A. V. Bartov)

Translation: A method for computing the permittivity tensor in terms of predetermined physical parameters of a plasma, based on construction of a T-matrix, is proposed. The components of the permittivity tensor are expressed in terms of the components of the T-matrix, using relations previously derived by the author (RZhFiz, 1968, 6Zh158). For the given case the permittivity tensor coincides in form with that of a homogeneous plasma, but the parameters in terms of which the permittivity tensor of the nonhomogeneous plasma is expressed are arbitrarily assigned functions of coordinates.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC: 621.371.1

STREZH, P. Ye., KHANNA, M. A.

"On the Reflection of Electromagnetic Waves in a Quasilaminar Isotropic Medium"

V sb. Radiofiz. i rasprostr. elektromagnitn. voln (Radio Physics and Propagation of Electromagnetic Waves--collection of works), Moscow, 1970, pp 101-107 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A231)

Translation: The paper deals with reflection which is not localized at the interface of two media, but rather extends throughout a nonhomogeneous medium. The medium is isotropic, and the permittivity is a continuously differentiable function of the coordinates. The incident plane monochromatic wave is horizontally polarized. Bibliography of seven titles. N. S.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

DUGANOV, G. V., CHISTYAKOV, V. L., STREZHEKUROV, E. Ye. UDC: 536.2.082

"New TPM-1 Heat-Physical Instrument"

Priborostroyeniye. Resp. Mezhved. Nauch.-Tekhn. Sb. [Instrument Building. Republic Interdepartmental Scientific and Technical Collection], 1972, No 13, pp 17-21 (Translated from Referativnyy Zhurnal Metrologiya i Izmeritel'naya Tekhnika, No 3, 1973, Abstract No 3.32.847), by V. S. K.

Translation: A report is presented on the TPM device, developed at the Sevastopol' Instrument Building Institute, designed for determination of a combination of heat-physical characteristics of materials, including metals, by an express method under production conditions. The sensor of the device is made of Teflon with a low coefficient of linear expansion and a low heat conductivity coefficient. The indicator of the measurement circuit is a type ViV 250 μa microammeter. The device is supplied by a "Krona" battery with a total voltage of 9 v; the heater of the thermal sensor is supplied by an individual battery of 5.6 v. The TPM-1 device, properly calibrated, can detect the presence of certain inclusions or cavities in metals during rolling of titanium and alloy plates, and also during assembly or installation of metal structures. 1 figure, 2 biblio. refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

UDC 535.853.31

KUYINDZHI, V. V., STREZHNEV, S. A.

"Production of Moire Interference Bands in a System of Three Reflecting Diffraction Gratings"

Optiko-mekhanicheskaya Promyshlennost', No 10, 1971, pp 11-13.

ABSTRACT: Results are presented from testing of a device for measurement of linear displacements on the basis of Moire bands, containing three reflecting diffraction grids. Using this device, Moire bands are produced with a value of 0.208 μ with a transmission of the system of 5% and a modulation depth of 80%. Observation of the bands was performed in white light in zero order. The plan of the device allows the inconstancy and difference of steps of the gratings used to be compensated and thereby increases the modulation depth of the light flux at the output of the system.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

UNCLASSIFIED

TITLE--COMPARISON OF THE CHEMICAL COMPOSITION OF LUNAR SURFACE MATERIAL DETERMINED BY RADIOASTRONOMICAL OBSERVATIONS WITH THE RESULTS OF

PROCESSING DATE--23OCT70

AUTHOR-(03)-BONDAR, L.N., ZELINSKAIA, M.R., STREZHNEVA, K.M.

COUNTRY OF INFO--USSR, UNITED STATES

SOURCE--GOR'KOVSKII GOSUDARSTVENNYI UNIVERSITET, GORKI, USSR, INTERNATIONAL UNION OF RADIO SCIENCE, SYMPOSIUM ON PLANETARY ATMOSPHERES

DATE PUBLISHED----FEB70

SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS, SPACE TECHNOLOGY, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--LUNAR SURFACE, CHEMICAL COMPOSITION, RADIO ASTRONOMY, ARTIFICIAL EARTH SATELLITE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2190

STEP NO--FR/0000/70/005/000/0247/0251

CIRC ACCESSION NO--AP0125770

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

STRIGACHEVA, E. I.

JPRS 56019
17 MAY 72

UDC: 612+616]:614

INTERACTION BETWEEN BIOLOGICAL AND SOCIAL FACTORS IN HUMAN DEVELOPMENT AND PATHOLOGY

[Article by E. I. Strigachova (Moscow); Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, Russian, No 3, 1972, pp 22-27]

The 24th Congress of the CPSU not only defined the concrete objectives with regard to development of our country but also provided the overall guidelines over a long period of history. The future course of all activities of the CPSU is set toward growth of national wealth, increasing the role of man, who is the main productive force of society, comprehensive development thereof, improving the welfare of the people, etc. One of the directions to follow to achieve all this is to strengthen the health and to prolong the period of useful life.

Socialism has already achieved much in the control of morbidity, and it has done away with the age-old social inequality of people with respect to illness. But one of the heritages of their animal origin and primitive social development, the biological inequality of people, as manifested by a substantial difference in efficiency of vital activity of the organism, in resistance to pathogenic factors, and disharmonious physical and mental development of man.

Social development will take place much faster with expansion of the scientific bases for control of the necessary social processes. Scientists anticipate a "century of biology" for future science. It is reasonable to expect that there will be an immeasurable increase in control of different types of processes concerning actual human development. As social progress and rational use of science continue, there will be more control of biological properties both of individuals and different human societies for the purpose of eradicating a "genetic burden," eliminating congenital and acquired lesions in the organism, improving the productive force of man, and for disclosure of new facets in the wealth of his creative forces. A communist society implies truly comprehensive development of man, overcoming all of the imperfections of the historical past.

2/2 029 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0125770

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPARISON OF THE RESULTS OF THE CHEMICAL ANALYSIS OF LUNAR SURFACE MATERIALS WITH THAT BASED ON THE DATA OF RADIO ASTRONOMICAL INVESTIGATIONS OF THE ELECTROMAGNETIC PROPERTIES OF THE LUNAR MATERIAL. A NEW METHOD OF DETERMINING THE CHEMICAL COMPOSITION OF LUNAR ROCKS BY COMPARING THE VALUE OF THE MATERIAL LOSS ANGLE AT THE CENTIMETER WAVELENGTH WITH THAT FOUND FOR TERRESTRIAL ROCKS IS PROPOSED. INTRODUCING THE SPECIFIC TANGENT OF THE LOSS ANGLE AS AN INVARIANT FOR THE COMPARISON. THE APPLICATION OF THIS METHOD IS DESCRIBED, AND THE RESULTS ARE PLOTTED GRAPHICALLY AND DISCUSSED. IT IS SHOWN THAT THE DEPENDENCE OF THE SPECIFIC TANGENT OF THE LOSS ANGLE ON SIO2 IS QUITE SUFFICIENT TO FIND THE MEAN CHEMICAL COMPOSITION FROM THE VARIATIONAL DIAGRAM AFTER THE DETERMINATION OF THE SIO2 CONCENTRATION, THAT THE DIFFERENCE IN THE ANALYSIS USING THE DIAGRAMS FOR THE INTRUSIVE AND EFFUSIVE ROCKS IS INSIGNIFICANT, AND THAT THE METHOD PROPOSED MAKES IT POSSIBLE TO DETERMINE MORE PRECISELY THE CONCENTRATION OF SIO2 AND AL2O3, AS WELL AS K2O, NA2O, AND FE2O3.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

1/2 045 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--NONIMPACT SHOCK WAVES IN A MAGNETIZED PLASMA -U-

AUTHOR-(04)-ZAGORODNIKOV, S.P., SMOLKIN, G.YE., STRIGANOVA, YE.A., SHOLIN, G.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. TEKH. FIZ. 1970, 40(4), 717-27

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PLASMA SHOCK WAVE, SHOCK WAVE STRUCTURE, SHOCK WAVE FRONT, TEMPERATURE GRADIENT, IRREVERSIBLE PROCESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1177 STEP NO--UR/0057/70/040/004/0717/0727

CIRC ACCESSION NO--AP0124831

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 045 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124831

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE AND THE NATURE OF THE PROPAGATED COLLISIONLESS SHOCK WAVES, IN A PLASMA, WAS DETD., BY SPECTROSCOPIC MEASUREMENTS OF THE JUMPS OF TEMP., ON THE FRONT OF THE WAVES. WITH INCREASE OF THE ALFVEN MACH NO., SPECIFIC IRREVERSIBLE PROCESSES ARE OBSD. EVIDENTLY RELATED TO THE INCREASE IN THE EFFICIENCIES OF NONCOLLISIONAL DISSIPATIVE PROCESSES AND TO THE CHANGE IN THE CHARACTER OF THE INTERACTION OF THE ALTERNATING MAGNETIC FIELD WITH INCREASE OF ITS AMPLITUDE.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

UNCLASSIFIED PROCESSING DATE--20NOV70

1/2 021

TITLE--THE FORMATION OF A COMPLEX OF GONADOTROPHIN WITH GAMMA GLOBULIN SERUM FRACTION OF PLACENTAL BLOOD -U-

AUTHOR-(03)-SPERANSKIY, V.V., TERNOVOY, A.P., STRIGIN, V.A.

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COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 49, NR 6, PP 43-45

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--GAMMA GLOBULIN, BLOOD SERUM, PLACENTA, CHEMICAL SEPARATION, CHROMATOGRAPHY, GONADOTROPIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0695 STEP NO--UR/0219/70/049/006/0043/0045

CIRC ACCESSION NO--AP0131294

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 021 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0131294

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. GAMMA GLOBULIN, ISOLATED FROM THE SERUM OF PLACENTAL BLOOD BY MEANS OF THE COLD ALCOHOL TECHNIQUE, ION EXCHANGE AND DISTRIBUTION CHROMATOGRAPHY ON COLUMNS, POSSESSED IN ASHEIM ZONDEK TEST ON IMMATURE MALE RATS GONADOTROPIC (FOLLICULOSTIMULATING) ACTIVITY. THE MOST ACTIVE PROVED TO BE GAMMA GLOBULIN OBTAINED ON A DEAE CELLULOSE COLUMN AND WITH THE AID OF COLD ALCOHOL METHOD, THEN FOLLOWED THAT OBTAINED BY MEANS OF COLUMN GEL FILTRATION WITH SEPHADEX G,100 AND, FINALLY, WITH DEAE SEPHADEX A 50. COMMERCIAL GAMMA GLOBULIN IN VITRO FORMED A COMPLEX WITH CHORIOGONIN, WHICH COULD NOT BE ISOLATED IN REPEATED COLUMN CHROMATOGRAPHY WITH GEL SEPHADEX G 200.

FACILITY: I. I. MECHNIKOV INSTITUTE OF VACCINES AND SERA, UFA.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR UDC 621.397:535.67

AKSENTOV, Yu. V., NAZARETSKIY, A. I., STRIGIN, V. A.

"Possibility of Applying a Comb Filter for Separating the Brightness Signal from the Complete SECAM Signal"

Materialy nauchno-tekhn. konferentsii. Leningr. elektrotekhn. in-t svyazi. Vyp. 3 (Materials of the Scientific and Technical Conference. Leningrad Electrotechnical Communications Institute Vyp. 3), Leningrad. 1970, pp 24-28 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8G113)

Translation: This article contains a study of the possibility of separating brightness and color signals in the SECAM system on the basis of the spectral difference of these signals. Some requirements imposed on the signal separation device are determined. The results of experimental testing of this device are presented.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC 621.38:61

STRIGINA, L. P.

"A Study of the Reaction of the Red Parts of Blood During Treatment of Children by Laser Radiation"

V sb. Ispol'z. optich. kvant. generatorov v sovrem. tekhn. i med. Ch 2-3 (Use of Lasers in Contemporary Technology and Medicine. Parts 2-3 Collection of Works), Leningrad, 1971, p 107 (from RZh Elektronika i yeye primeniye, No 2, Feb 72, Abstract No 2A507)

Translation: The KPl-2 apparatus with broad wave band (6300-6400 Å) and a gas helium-neon Type LG-75 laser with a wavelength of 6328 Å were used for treatment of children with innate encephalopathy. Treatment of children was performed by the action of red radiation on the reflexogenic zone and the acupuncture points. The results of studies obtained during examination of 90 children are presented.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC: 621.382.2

STRIKHA, V. I., Kiev State University

"On Determining the Complete System of Physical Parameters of Schottky--Barrier Diodes"

Kiev, Poluprovodnikovaya Tekhnika i Mikroelektronika, Resp. Mezhved. Sb., No 7, 1972, pp 93-102

Abstract: General theoretical experssions are derived and analyzed for the current-voltage characteristic, impedance, and height of the potential barrier of the space-charge region of a Schottky-barrier diode with regard to the gap and the local surface level in the metal-semiconductor contact. It is shown that the general system of physical parameters which characterizes a real Schottky-barrier diode and defines its radio engineering properties for the case of a single local level can be reduced to seven quantities: the concentration and energy position of the surface level, cross sections for surface-level capture of semiconductor and metal charge carriers, thickness and coefficient of transparence of the gap, and the height of the potential barrier of the space charge (contact potential difference), plus an eigth significant parameter -- the ratio of the voltage

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

STRIKHA, V. I., Poluprovodn. Tekh. i Mikroelektron. Resp. Mezhved. Sb., No 7, 1972, pp 93-102

in the gap to that in the semiconductor, which characterizes the working mode of the diode. A general method is analyzed for finding a complete system of physical parameters of Schottky-barrier diodes based on measuring the current-voltage characteristic and impedance, and simplified formulas are proposed. Existing methods of determining certain physical parameters of Schottky-barrier diodes are analyzed, and it is shown that using these methods may be incorrect without the proper experimental basis.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC 621.382.2

STRIKHA, V. I., Kiev State University imeni T. G. Shevchenko

"On Filling the Local Level in a Metal-Semiconductor Contact"

Tomsk, Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, No 12, 1971, pp 35-42

Abstract: The filling of a local level in a metal-semiconductor contact as a function of the voltage applied to the contact and its position is analyzed theoretically. It is assumed that there exists a dielectric gap between the metal and the semiconductor and that the i-th local level is located at any point in the gap. It is further assumed that the hypotheses of either the diode or diffusion theory are satisfied for charge carriers passing through the region of the space charge of the semiconductor. It is shown that the ordinary Fermi distribution is obtained upon the application of a voltage to the contact only in the case of preferential level exchange with the metal or with the semiconductor. In the general case the relationship between filling the level and its position upon the application of a voltage to the contact is a fairly complex function of the energy. This complex nature of the dependence of filling the level on the voltage applied to the contact includes the

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USSR

STRIKHA, V. I., Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, No 12, 1971, pp 35-42

possibility of extremal points. It is noted that these relationships should be taken into account in analyzing the overfilling of a local level in a metal-semiconductor contact.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

1/2 038 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--PROPERTIES OF THE OLIGOESTER ACRYLATE MGF-9 HARDENED WITHOUT HEATING -U-

AUTHOR-(03)-PETRILENKOVA, YE.B., ORLOVA, L.V., STRIKOVSKAYA, G.G.

COUNTRY OF INFO--USSR

SOURCE--PLAST. MASSY 1970, (2), 48-9

DATE PUBLISHED-------70

SUBJECT AREAS--AERONAUTICS

TOPIC TAGS--PHYSICAL CHEMISTRY PROPERTY, GLASS FIBER, REINFORCED PLASTIC, FOAM PLASTIC, P LASIC CONCRETE, CHEMICAL REACTION RATE, POLYMERIZATION, PEROXIDE, CATALYST, ESTER, POLYMER BINDER/(U)MGF9 BINDER FIBER GLASS PLASTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1700 STEP NO--UR/0191/70/000/002/0048/0049

CIRC ACCESSION NO--AP0112694

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 038 UNCLASSIFIED

CIRC ACCESSION NO--AP0112694 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSRACT. OLIGOESTER ACRYLATE MGF-9 (I) WAS HARDENED AT ROOM TEMP. IN THE PRESENCE OF 2-5 PARTS CUMENE HYDROPEROXIDE (II) AND ACCELERATOR K FOR 2-28 DAYS. II AFFECTED THE HARDENING RATE ONLY DURING THE INITIAL 5 HR, THEREAFT ER HE POLYMN. OCCURRED AT A CONST. RATE AND WAS COMPLETED AFTER 5-7 DAYS. THE HARDENED I EXHIBITED SUPERIOR PHYSICOMECH. PROPERTIES AND WAS USED AS A BINDER FOR GLASS FIBER REINFORCED PLASTICS, FOAMS, AND PLASTIC CONCRETES. T

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

STRIZHACHENKO, N. M., et al., Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 72, No 11, Nov 71, pp 80-82

blood vessels in the tumors was preserved up to the 50-60th passage of the tumor and then disappeared, whereupon the tumors changed to the undifferentiated sarcoma type. The BATH cells underwent more than 60 passages in hamsters. These cells and the tumors produced by them appear to be good models for the study of problems pertaining to virus-induced cancer formation.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR UDC 621.357.8.035.4:669.14(088.8)

SHTAN'KO, V. M., LIPKIN, Ya. N., NOVIKOV, V. G., VOLKOV, Yu. M., STRIZHAK, G. K., RABINOVICH, O. Ya., ZIMOVETS, V. G., DANILOV, A. M., MATVEYEV, Yu. M., MEDNIKOV, Yu. A.

"Electrolyte for Electrochemical Polishing of Products"

USSR Author's Certificate No 306186, Filed 28/10/69, Published 21/07/71, (Translated from Referativnyy Zhurnal, Khimiya, No 3, 1972, Abstract No 3 L283 P from the Resume).

Translation: An electrolyte for electrochemical polishing of products, for example of stainless steel, differing in that in order to improve the quality of polishing and intensify the process, a foam suppressor is introduced to the electrolyte with the following relationship of components (in wt.%): orthophosphoric acid 30-70, H_2SO_4 10-40, H_2O 10-30 and above 100%. Surfactants based on peptide and polypeptide salts, 1-10 g/l, foam suppressor 0.001-1 g/l. Polymethylsiloxane liquid is used as the foam suppressor.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

Instrumentation and Equipment

USSR UDC 620.194.8:620.178.322.3

STEPURENKO, V. T., and STRIZHAK, P. N., Odessa Polytechnic Institute

"Apparatus for Testing Metals for Fatigue in Atmospheric Air With Different Compositions and Moisture Content"

Kiev, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 8, No 2, 1972, pp 93-94

Abstract: An apparatus for the fatigue testing of metals is described. Testing conditions can be varied rapidly and over a wide range. The apparatus can be inspected and at the same time a set condition and moisture content of the air in the chamber can be maintained. A large number of samples can be run simultaneously. Water is fed into a float chamber with a heating device. The temperature is controlled thermostatically. The water vapor is drawn into a diffusor and fed into the air stream. Water drops are filtered off from the stream of moist air by means of a series of filters. Valves at three different points are used to drain off the water. The moist air is collected in a pressurized collector and uniformly fed into the chamber by deflector plate. The way in which the samples are mounted makes it possible to rotate them continuously. An additional bath with pressurizing chamber and valves makes it possible to feed in moist air using various salt solutions.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

1/2 016 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--DIRECT PROCESSES IN THE (N,2N) REACTION ON HEAVY NUCLEI -U-

AUTHOR-(04)-YEZHOV, S.N., OLKHOVSKIY, V.S., PROKOPETS, G.A., STRIZHAK, V.I.

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(1), 122-30

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--NEUTRON SCATTERING, HEAVY NUCLEAUS, DIFFERENTIAL CROSS SECTION, BISMUTH, LEAD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1976/0429 STEP NO--UR/0367/70/011/001/0122/0130

CIRC ACCESSION NO--AP0042465

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 016 UNCLASSIFIED

CIRC ACCESSION NO--AP0042465 PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION (N,2N), AT E SUBN EQUALS 14 MEV, ON HEAVY NUCLEI IS REGARDED AS A DIRECT SCATTERING PROCESS, WITH KNOCK OUT, BY USING THE DISTORTED WAVE METHOD, IN THE BORN APPROXN., AND BY TAKING INTO ACCOUNT THE IDENTITY OF THE N. GENERAL FORMULAS ARE DERIVED, THEREFROM, FOR THE REACTION AMPLITUDE T SUBFI. THE FORMULA IS PHYS. IN ACCORDANCE WITH THE DIRECT KNOCK OUT OF THE N FROM THE NUCLEUS TARGET BY THE IMPINGING N, IN THE DISTORTED EFFECTIVE FIELD OF ALL THE OTHER N, BY TAKING INTO ACCOUNT PAULI'S PRINCIPLE. THE DOUBLE DIFFERENTIAL CROSS SECTION FPR TJE MIC;EO RO,E209 BI AND PRIME208 PB IS CALCD. AND COMPARED TO EXPTL. VALUES. THERE IS A GOOD CORRELATION BETWEEN THEORETICAL AND EXPTL. RESULTS. FACILITY: KIEV. GOS. UNIVL, KIEV, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

1/2 015 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--IMPLANTATION TYPE TRITIUM TARGERS MADE FORM SCANDIUM, YTTRIUM, PRASEODYMIUM, NEODYMIUM, AND ERBIUM -U-

AUTHOR-(04)-STRIZHAK, V.I., PRIMENKO, G.I., KATSAUROV, L.N., PRONMAN, I.M.

COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. 1970, 28(3), 249-51

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ION IMPLANTATION, TRITIUM, SCANDIUM, YTTRIUM, PRASEODYMIUM, NEODYMIUM, ERBIUM, PARTICLE ACCELERATOR TARGET

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1038 STEP NO--UR/0089/70/028/003/0249/0251

CIRC ACCESSION NO--AP0124696

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 015 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0124696

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE IMPLANTATION OF T INTO ER, SC, ND, Y, AND PR TARGETS, BY USING AN ACCELERATION VOLTAGE OF 120 KV AND A T CURRENT OF 100 MUA, SATN. OF THE TARGETS WITH T OCCURS AFTER 35-50 MIN OF BOMBARDMENT; THE YIELD OF N FROM THE T(D,N) REACTION ON THE ABOVE TARGERS IS 2.1 TIMES 10 PRIME7, 1.8 TIMES 10 PRIME7, 1.5 TIMES 10 PRIME7, 1.5 TIMES 10 PRIME7, AND 1.8 TIMES 10 PRIME7 N-MUCI, RESP., AS COMPARED WITH 1.8 TIMES 10 PRIME7 N-MUCI FROM A TI TARGET WITH ABSORBED T. HEATING OF IMPLANTATION TYPE RARE EARTH TARGETS REDUCES THE N YIELD FROM THE T(D,N) REACTION, E.G., BY SIMILIAR TO 30PERCENT AFTER HEATING TO 400DEGREES, BUT THE N YIELDS FROM SUCH HEATED TARGETS ARE MUCH HIGHER THAN THE YIELDS FROM HEATED ZR-T TARGETS (WHERE THE YIELD DECREASES BY A FACTOR OF R).

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

1/2 029 UNCLASSIFIED

TITLE--DESORPTION OF TRITIUM AFTER PENETRATION INTO METALS -U- PROCESSING DATE--11SEP70

AUTHOR--STRIZHAK, V.J., PRIMENKO, G.I.

COUNTRY OF INFO--USSR

SOURCE--UKRAIN. FIZ. ZHUR., JAN. 1970, 15, (1), 169-171

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--DESORPTION, TRITIUM, COPPER, ION BOMBARDMENT, NEWTRON REACTION, THERMAL DIFFUSION, TEMPERATURE DEPENDENCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1179 STEP NO--UR/0185/70/015/001/0169/0171

CIRC ACCESSION NO--AP0107655

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 029 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107655

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DESORPTION OF THE TRITIUM (T) FROM CU AND OTHER METAL TARGETS, INITIALLY IRRADIATED WITH 120-KEV T IONS, WAS STUDIED BY HEATING THE TARGETS AND RECORDING THE NEUTRONS ARISING FROM THE T(D,N) REACTION. THE NEUTRON YIELD FROM TARGETS HEARED TO 500DEGREESC WAS LESS THAN HALF THAT OBTAINED FROM TARGETS AT 50DEGREESC, INDICATING A SHARP FALL IN T CONTENT. THIS FALL IS ATTRIBUTED TO A RISE IN THE RATE OF DIFFUSION TO THE SURFACE WITH SUBSEQUENT EVAPORATION INTO SPACE.

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USSR UDC 538.4

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BAKANOV, Yu. A., DRONNIK, L. M., LEVIN, M. N., MAKAREVICH, V. K., RESHET'KO, L. M., STRIZHAK, V. Ye., TOLMACH, I. M., TROITSKIY, S. R., YANTOVSKIY, Ye. I.

"Experimental Study of Liquid-Metal Induction Machine in Pump Mode"

7-ye Soveshch. po Magnit. Gidrodinamike. T. 1 [Seventh Conference on Magnetic Hydrodynamics, Vol 1], Riga, Zinatnye Press, 1972, pp 20-23, (Translated from Referativnyy Zhurnal, Mekhanika, No 11, 1972, Abstract No 11 B43 by V. V. Blagov).

Translation: The operation of a liquid-metal induction machine in the pump mode was studied in a potassium circuit with a working pressure of up to 60 kg/cm^2. The working characteristics of the machine are presented for a temperature of 500°.

The experimental results allowed the relationship of the dimensionless criterion $\Pi = \Delta P V_s l/\sigma U^2$ to the velocity ratio $V/V_s = 1 - S$ to be established (where V_s is the synchronous speed of the rotating field, V is the velocity of the metal, ΔP is the pressure drop developed, S is the slipping, σ is the conductivity, U is the applied voltage). As the temperature changes from

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC 538.4

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BAKANOV, Yu. A., DRONNIK, L. M., LEVIN, M. N., MAKAREVICH, V. K., RESHET'KO, L. M., STRIZHAK, V. Ye., TOLMACH, I. M., TROITSKIY, S. R., YANTOVSKIY, Ye. I., 7-ye Soveshch. po Magnit. Gidrodinamike. T. 1, Riga, Zinatnye Press, 1972, pp 20-23.

280 to 500° and the voltage varies from 80 to 150 v, the dependence of Π on V/V_s is universal. The maximum head is produced at small flow rates, depends on the applied voltage and where T = 500° and ΔU = 150 v is about 37 kg/cm^2; the efficiency of the machine is about 24% under these conditions. Where T = 300°, these figures are 42 and 30% respectively. The total operating time of the machine was 120 hours.

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(8)

JPRS 66634
27 NOVEMBER 1975

EXPERIMENTAL STUDY OF AN AC LIQUID-METAL CONDUCTION MACHINE

[Abstract of a Paper by Yu. A. Bakanov, L. G. Vlasenko, S. Ye. Dvorchik, Ya. Ye. Zandart, V. K. Mskarovich, V. Ye. Strizhak, I. M. Tolmach, S. B. Troitskiy Given at the Magnetohydrodynamic Conference. pp 140-142]

A study was made of a high-temperature single-phase machine with a C-type magnetic excitation system, four pair-wise connected channels bifilar arranged in the gap and also a III-type step-up transformer (Figure 1). The channels were executed from ChS80IOT steel 0.5 mm thick; they have a constant cross section with outside dimensions of 16.6 × 6.4 mm^2 and an active length of 250 mm. They are electrically connected to each other and to the sectional primary turn of the transformer (soldering the lateral faces). The flow of metal in each pair of channels is opposite. The machine has electrical insulation with thermal stability to 600°C, measuring turns for determining the magnetic fluxes and several thermocouples.

Depending on the operating mode in the experiment, various switchings of the windings were realized:

1) In the pump mode the excitation winding and the output winding of the transformer were fed from a constant energy source;

2) In the generator mode independently of the excitation, the excitation winding was fed from an outside source, and the transformer winding was connected to the useful load.

3) In the generator mode with self-excitation of the winding, the capacitance and the useful load were included according to the scheme in Figure 1.

The studies were made on a sodium loop with a sodium temperature of 300-500 °C.

The characteristic features of the conduction machines of this type and, in particular, the characteristic features of the parallel hydraulic coupling of pairs of channels leading to spurious currents through the bypass loops of circuit from the sign-variable magnetic field were noted.

STRIZHAK, V. Ye.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

Power

USSR

UDC [621.362:538.41-16:669-404.001.4

ALAD'YEV, I. T., MUKHIN, V. A., STRIZHAK, V. Ye., TEPLOV, S. V., TOLMACH, I. M.

"Experimental Study of a DC MHD Machine With Sectionalized Electrodes"

Magnitn. gidrodinamika (Magnetohydrodynamics), 1971, No 1, pp 64-72 (from RZh-Elektrotekhnika i Energetika, No 9, Sep 71, Abstract No 9A98)

Translation: A working model of a DC MHD machine with sectionalized electrodes is made and experimentally studied on a potassium loop to check the theory and procedure of calculating MHD devices of this type. The study was done for pump and generator operating modes. The following characteristics were obtained in one of the pumping modes: molten potassium temperature 160°C, voltage applied across the channel 1.1 V, developed head 4.05 atmospheres, flow rate 0.15 kg/s, efficiency 7%. The following characteristics were obtained in one of the generator modes: potassium temperature 255°C, voltage across the load 0.4 V, load current 50 A, flow rate 0.356 kg/s, pressure drop 7.2 atmospheres, efficiency 6.2%. The method of calculation is outlined. An advantage

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

ALAD'YEV, I. T. et al., Magnitn. gidrodinamika, 1971, No 1, pp 64-72

of the proposed scheme is the possibility of an appreciable increase in working voltage and reduction in current as compared with traditional circuits. For instance in the anticipated intense pumping mode of the working model, the following indices may be achieved: voltage across the terminals 5 V, developed pressure drop 25 atmospheres, potassium flow rate 0.75 kg/s, efficiency 11%. The proposed scheme with sectionalized electrodes is used for high-pressure pumps with relatively low flow rates. Eight illustrations, bibliography of four titles.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

1/2 027 UNCLASSIFIED

TITLE--ANHYDRIDES OF LABILE ROSIN ACIDS -U- PROCESSING DATE--23OCT70

AUTHOR-(02)-BARDYSHEV, I.I., STRIZHAKOV, O.D.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK BELORUSS. SSR 1970, 14(2), 148-9

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ANHYDRIDE, CHEMICAL SYNTHESIS, OPTIC ACTIVITY, IR SPECTRUM, ROSIN, ORGANIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1136 STEP NO--UR/0250/70/014/002/0148/0149

CIRC ACCESSION NO--AT0119990

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 027 UNCLASSIFIED

CIRC ACCESSION NO--AT0119990 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANHYDRIDES (I, II, III, RESP.) OF LEVOPIMARIC, PALUSTRIC, AND NEOABIETIC ACIDS WERE SYNTHESIZED AND THEIR PROPERTIES (M.P., OPTICAL ROTATION, AND UV AND IR ABSORPTION) DETD. THE FIRST 2 ANHYDRIDES HAVE NOT BEEN REPORTED UNTIL NOW. I WAS SYNTHESIZED IN 31.8PERCENT YIELD BY REACTING THE ACID WITH N, N PRIME DICYCLOHEXYLCARBODIIMIDE BY THE PREVIOUSLY DESCRIBED TECHNIQUE (B. AND S., 1968). II WAS SYNTHESIZED IN 56.7PERCENT YIELD BY HEATING 2 HR AT 120DEGREES A SOLN. OF 0.30 G ACID IN 0.5 ML FRESHLY DISD. PYRIDINE TO WHICH 5 ML AC SUB2 O WAS ADDED. III WAS OBTAINED BY THE LATTER PROCEDURE IN 37.4PERCENT YIELD. I-III WERE OPTICALLY INACTIVE; IR SPECTRA ARE REPORTED. FACILITY: INST. FIZ.-ORG. KHIM., MINSK, USSR.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR UDC: 620.178.38

STRIZHALO, V. A., ZINCHENKO, A. I., MOROZOV, B. S., IL'IN, A. A., Kiev, ~~Kaliningrad~~

"Study of Low-Cycle Fatigue of Titanium-Based Alloys at -196° C"

Kiev, Problemy Prochnosti, No 7, Jul 73, pp 49-53.

Abstract: The regularities of deformation and rupture of light alloys based on titanium with repeated low-cycle loading are studied under conditions of room temperature (20° C) and low temperatures (-196° C). The change in resistance of the alloys to cyclical loading upon transition to the low temperature is studied in the range of durabilities corresponding to quasi-static and fatigue rupture. The VT1-0, VT5-1 and VT6S alloys were used in the study.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC 539.4

STRIZHALO, V. A., IL'IN, A. A., KUZEMA, Yu. A.

"Study of Low-Cycle Fatigue of Light Alloy Welded Joints"

Kiev, Problemy Prochnosti, No 11, Nov 72, pp 31-33.

Abstract: Results are presented from a study of the low-cycle fatigue strength of joints in the aluminum alloys AMg6 and D20-1 and the titanium alloy VT3-1 at room temperature with axial application of a pulsating load. The frequency of application was approximately two cycles per minute, with holding times of approximately ten seconds at the maximum stress. The factors causing a drop in strength and durability of welded joints are analyzed and methods to increase their static and fatigue strength are discussed. These methods include making welded joints for all these alloys symmetrical, as well as mechanical working of seams for those alloys for which the material of the welded joints is as strong as the base metal.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR UDC 621.178.3

TROSHCHENKO, V. T., STRIZHALO, V. A., SINYAVSKIY, D. F., Kiev. Institute of Strength Problems, Ukrainian SSR

"Rules Governing the Destruction and Modification of High-Melting Alloys in a Highly Plastic State With Low-Cycle Fatigue"

Kiev, Problemy Prochnosti, No 6, 1971, pp 32-37

Abstract: In the repeated static loading of high-melting metals under conditions of high temperatures in excess of 0.5 of the melting point, the mechanism of their modification differed essentially from the modification mechanism of heat-resistant and structural alloys, and this is apparently explained by the high plasticity of high-melting metals at these temperatures. For metals having such high plasticity, a new approach is required for evaluating their work capacity as structural metals under conditions of alternating low-cycle loading. Results of an investigation of the kinetics of the deformation and modification of highly plastic metals undergoing low-cycle loading permits the conclusion to be drawn that there exists a unique mechanism of deformation, based upon the cyclical transfer of material from certain deformed zones into others, and that this mechanism determines the

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

TROSHCHENKO, V. T., et al., Problemy Prochnosti, No 6, 1971, pp 32-37

onset of destruction in the material under alternating repeated static deformation only after complete realization of its plasticity. The strength of such materials can be evaluated only with account taken of the kinetics of their modification, and is determined only upon complete exhaustion of plasticity in the dangerous cross sections. 8 figures, 1 table, 4 references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

1/2 036 UNCLASSIFIED

TITLE--APPARATUS FOR STUDYING THE THERMAL FATIGUE OF REFRACTORY METALS AND ALLOYS IN VACUUM -U-

PROCESSING DATE--13NOV70

AUTHOR-(02)-SINYAVSKY, D.P., STRIZHALO, V.A.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB., 1970, 36, (1), 93-95

DATE PUBLISHED-------70

SUBJECT AREAS--METHODS AND EQUIPMENT, MATERIALS

TOPIC TAGS--REFRACTORY MATERIAL, FATIGUE TEST, PHYSICS LABORATORY APPARATUS, STRAIN GAGE, REFRACTORY METAL, VACUUM TECHNIQUE, THERMAL FATIGUE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0249

STEP NO--UR/0032/70/036/001/0093/0095

CIRC ACCESSION NO--AP0124011

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 036 UNCLASSIFIED

CIRC ACCESSION NO--AP0124011 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PROBLEMS ARISING IN THE THERMAL FATIGUE TESTING OF REFRACTORY METALS AND ALLOYS UNDER VACUUM ARE DISCUSSED AND AN IMPROVED FORM OF APPARATUS FACILITATING THE CARRYING OUT OF SUCH TESTS IN A CONSISTENT MANNER UNDER CONTROLLED CONDITIONS IS DESCRIBED. THE APPARATUS INCLUDES SPECIAL ARRANGEMENTS FOR THE RELIABLE CLAMPING OF THE SAMPLE MATERIAL, A SYSTEM OF STRAIN GAUGES, A SPECIALIZED VACUUM PLANT, AND AN ELECTRONIC CIRCUIT FOR TEMP. CONTROL. THIS APPARATUS ENABLES REFRACTORY METAL PARTS TO BE TESTED UNDER A WIDE RANGE OF SERVICE CONDITIONS.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC 620.178.37

STRIZHALO, V. A., ZINCHENKO, A. I., (Kiev)

"Installation for Study of Low-Cycle Fatigue of Alloys at Cryogenic Temperatures"

Kiev, Problemy Prochnosti, No 8, 1972, pp 101-104.

Abstract: An installation is described for studies of the strengths of materials under low cycle repeated-static extension in the temperature range between +20 and -269°C. The installation consists of a test machine (type UME, ±10 t), plus a low temperature attachment including a specimen clamping and loading system, system for measurements and recording deformations and forces and a helium cooling system.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

Ion Exchange

UDC 641.183.12

LEGENCHENKO, I. A., and STRIZHENYUK, S. L.

"Equilibrium Adsorption of Lanthanum and Erbium by the Sodium Form of the KB-4-2P Ion Exchange Resin"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 46, Vyp 4, 1972, pp 1027-1028

Abstract: The equilibrium involving the exchange of the rare earth elements (REE) La^{+3} and Er^{+3} in solution for Na^{+} bound to the ion exchange resin (IER) was studied at 25, 35, and 45°C. Experiments carried out in dilute NaCl solutions indicated that the Na^{+} changed the adsorption of La^{+3} by less than 10%. The temperature was not a significant variable for the range studied but the pH had a strong influence on the adsorption on the adsorption due to the reaction

$$(REE)\text{-}(IER)_3 + 3HOH \qquad (REE)^{+3} + 3H\text{-}(IER) + 3OH$$

On theoretical grounds, starting from the equilibrium constant, the following equation derived for the La^{+3} adsorption:

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

LEGENCHENKO, I. A., and STRIZHENYUK, S. L., Zhurnal Fizicheskoy Khimii, Vol 46, Vyp 4, 1972, pp 1027-1028

$$\bar{c}_2 = f[(V/g)^{\frac{1}{2}}(\bar{c}_2/c_2)^{1/6}]$$

where $\bar{c}_2$ and c_2 are the concentrations of La on IER and the solution respectively, V is the volume of solution, and g is the weight of the IER. Calculated values were in good agreement with the experimental.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC: 546.32/34-31'882-31:537.228.1

CHKALOVA, V. V., BONDARENKO, V. S., STEMBER, N. G., STRIZHEVSKAYA, F. N., FOKINA, G. O.

"Solid Solutions Based on Alkali Metal Niobates"

Moscow, Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, No 6, Jun 73, pp 987-991.

Abstract: The study of solid solutions based on alkali metal niobates is of interest, since these materials have high piezoelectric properties plus high sound propagation rates, an important factor for practical applications. In this article, primary attention is concentrated on the investigation of trinary soiid solutions $(NaLiK)NbO_3$ and binary solid solutions $(NaLi)NbO_3$. The solid solutions based on alkali metals were produced using the carbonate salts Na_2CO_3, K_2CO_3, Li_2CO_3 and niobium pentoxide. Some of the dielectric, piezoelectric and elastic properties of the binary and trinary solid solutions were studied. The studies showed that in the system $(NaLi)NbO_3$, solutions with two and three mol. % $LiNbO_3$ have the maximum piezoelectric and elastic properties. The compositions with the highest sound propagation velocities, lowest dielectric

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

Chkalova, V. V., Bondarenko, V. S., Stember, N. G., Strizhevskaya, F. N., Fokina, G. O., Moscow, Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, No 6, Jun 73, pp 987.991.

constants and highest piezoelectric properties are determined. These materials are most promising for use in high frequency ultra-acoustics. The solid solutions studied have good temperature stability and a broad range of working temperatures.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR UDC 669.293.5.294.018.8.669.018.2

DONTSOV, S. N., MOISEYEVA, I. S., MEL'NIKOVA, L. V., GLUKHOVA, A. I., ANDREYEVA, V. V., ALESHINA, L. V., STRIZHEVSKAYA, L. G.

"Influence of Technological Factors on Corrosion Resistance and Mechanical Properties of Niobium-Tantalum Alloys"

Nauchn. Tr. N-i. i Proyektn. In-t Redkomet. Prom-sti [Scientific Works of Scientific Research and Planning Institute for the Rare Metals Industry], 1971, Vol. 32, pp. 152-160. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 I736 by the authors).

Translation: Influence of technological factors on the corrosion resistance of Nb-Ta alloys is studied. 4 figs; 5 biblio refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

UNCLASSIFIED

TITLE--PURIFICATION OF PYROLYZED ACETYLENE BY SULFURIC ACID -U-

PROCESSING DATE--23OCT70

AUTHOR-(03)-KOSTYUK, V.P., MUSHIY, R.YA., STRIZHEVSKIY, I.I.

COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. MOSCOW 1970, 46(2), 95-7

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PYROLYSIS, SULFURIC ACID, ACETYLENE, CHEMICAL PURIFICATION, BUTADIENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0736

STEP NO--UR/0064/70/046/002/0095/0097

CIRC ACCESSION NO--AP0119643

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 010 UNCLASSIFIED

CIRC ACCESSION NO--AP0119643 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONCNS. OF PROPADIENE, MEC TRIPLE BOND CH, DIVINYL, ETC TRIPLE BOND CH, VINYLACETYLENE, AND HC TRIPLE BOND CC TRIPLE BOND CH IN ACETONE AND MOISTURE FREE PYROLYTIC ACETYLENE (I) WERE REDUCED FROM 0.2-0.5, 0.2-0.4, 0.01-0.02, 0.001-0.002, 0.02-0.03, AND 0.005-0.007 VOL. PERCENT, RESP., TO 0.01, 0.001, 0.001, 0.001, 0.0013, AND 0.0046 VOL. PERCENT RESP. BY BUBBLING I THROUGH 95PERCENT H SUB2 SO SUB4 AT 25DEGREES AT FLOW RATE 500-100 VOL.-HR. INCREASING THE TEMP. TO 55-75DEGREES CAUSED NEGLIGIBLE INCREASE IN THE DEG. OF PURIFICATION BUT INCREASED CONSIDERABLY THE RESINIFICATION OF THE ACID AND LOSS OF I; THE DEGREE OF PURIFIVATION DECREASED WHEN THE ACID CONCN. WAS REDUCED TO 90-85PERCENT. THE AMT. OF ACID NEEDED TO PURIFY 1 TON OF I WAS SIMILAR TO 50 KG.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

1/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--ABSORPTION OF AMMONIA FROM UREA PRODUCTION WASTE GASES -U-

AUTHOR-(05)-STRIZHEVSKIY, I.I., ZAKAZNOV, V.F., LEBEDEV, V.V., SIDORINA, I.YU., MELNIKOV, B.P.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 262,102

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

DATE PUBLISHED--26JAN70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AMMONIA, UREA PRODUCTION, GAS ABSORPTION, FLAME EXTINCTION, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1743 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0136984

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0136984

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NH SUB3 IS ADSORBED FROM WASTE GASES CONTG. A COMBUSTIBLE H-O MIXT. BY WASHING OFF NH SUB3 UNDER PRESSURE IN AN ABSORBER WITH SIMULTANEOUS NEUTRALIZATION OF THE REMAINING DANGEROUSLY EXPLOSIVE MIXT. NEUTRALIZATION IS CARRIED OUT BY FILLING THE ENTIRE VOL. OF THE ABSORBER WITH A GRANULATED FILLING WITH DIMENSIONS OF FLAME EXTINGUISHING CANALS THAT SIGNIFICANTLY INCREASE THE CRIT. DIAMS. OF FLAME EXTINGUISHING IN CONCRETE CONDITIONS. A RASCHIG RING WITH DIAM. SMALLER THAN OR EQUAL TO 10 MM UNDER INITIAL ATM. PRESSURE IN THE ABSORBER OR A CORUNDUM FRACTION OF 1-2 MM UNDER AN INITIAL PRESSURE OF SMALLER THAN OR EQUAL TO 18 ATM IN THE ABSORBER IS USED AS THE GRANULATED FILLING. FACILITY: STATE SCIENTIFIC RESEARCH AND DESIGN INSTITUTE OF THE NITROGEN INDUSTRY.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

UDC 621.35.082.75

GAL'PERIN, T. B., DMITRIYEV, V. I., and STRIZHEVSKIY, I. V., Academy of Communal Farming imeni K. D. Pamfilov, Moscow

"Theory of Rectification in the Electrolytic Cell with a Diffusion Barrier"

Moscow, Electrokhimiya, Vol 9, No 1, Jan 73, pp 26-29

Abstract: In the previous paper the phenomenon of valve effect [rectification] has been shown to occur in a dielectrode electrolytic cell after introduction of a diffusion barrier between the electrodes. A diffusion barrier is considered to be a border hampering the diffusion process but exhibiting no selective properties. In this paper mathematical treatment of the theory of this phenomenon is undertaken.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

1/2 033 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--MIXING OF DEGENERATE CONFIGURATIONS AND THE FERMI RESONANCE IN MOLECULAR CRYSTALS -U-

AUTHOR-(02)-PANARIN, A.M., STRIZHEVSKIY, V.L.

COUNTRY OF INFO--USSR

SOURCE--UKR. FIZ. ZH. RUSS. ED. 1970, 15(2), 297-302

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--MOLECULAR CRYSTAL, ENERGY SPECTRUM, WAVE FUNCTION, EXCITON, DIPOLE INTERACTION, EXCITED STATE, CARBON TETRACHLORIDE, ABSORPTION BAND SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1169 STEP NO--UR/0185/70/015/002/0297/0302

CIRC ACCESSION NO--AP0124824

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

2/2 033

CIRC ACCESSION NO--AP0124824 UNCLASSIFIED PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY USING THE CUBIC MOL. CRYSTAL AS AN EXAMPLE, THE PROBLEM OF THE MIXING OF THE 3 FOLD DEGENERATE DIPOLE ACTIVE MOL. STATES IS SOLVED. THE ENERGY LEVELS AND THE WAVEFUNCTIONS OF THE CRYSTAL EXCITED STATES ARE FOUND WITH A SMALL K. THE ENERGY SPECTRUM COMPRISES THE 2 LONGITUDINAL AND THE 2 TRANSVERSE EXCITON ZONES; EACH ZONE IS THE LATTER REMAINS 2 FOLD DEGENERATE. THE RATIOS OF THE INTEGRAL INTENSITIES OF THE ABSORPTION BANDS CORRESPONDING TO THE TRANSVERSE ZONES IN THE OPTICAL SPECTRA WERE ALSO STUDIED. A THEORY IS DEVELOPED EMPLOYING THE APPROXM. OF MOL. DIPOLE LONG RANGE INTERACTION. ON THE BASIS OF A GENERAL THEORY, FERMI RESONANCE IS STUDIED IN CCL SUB4 CRYSTALS. THE CALCN. GAVE VERY GOOD AGREEMENT WITH EXPT. AN EXAMPLE SHOWS THAT THE INTENSITY RELATION OF THE ABSORPTION BANDS IS MORE SENSITIVE TO THE RESONANCE INTERACTION THAN THE POSITION OF THESE BANDS IN THE SPECTRUM.

FACILITY: KIEV. GUSUNIV. IM. SHEVCHENKO, KIEV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

Acc. Nr: AP0043699 Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1970, Vol 58, Nr 3, pp 929-936

THEORY OF NONLINEAR LIGHT SCATTERING IN CRYSTALS

Strizhevskiy, V. L.; Obukhovskiy, V. V.

A microtheory of nonlinear scattering (NS) of light by crystal vibrations is developed. In the general case of dipole active transverse vibrations the NS intensity is determined, firstly, by the nature of the mechanical phonon, secondly, by the interaction between the phonons and transverse electromagnetic field as a result of which the phonons change into polaritons and thirdly, by nonresonance processes of crystal polarization by the exciting field. Accordingly the scattered light flux can be represented as the product of three factors, of the phonon, polariton and nonresonance which reflect the physical causes mentioned above responsible for the nature of the scattering. NS by longitudinal phonons is also considered. A close relation between the NS

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intensities by transverse and longitudinal phonons and also by polaritons is established. It is shown that for relatively small scattering angles, for which NS by mechanical phonons goes over to NS by polaritons, a very pronounced angular dependence of the scattering intensity arises. A relation between the scattering cross section and respective optical detection tensor, ratio of scattering intensities at large angles by transverse and longitudinal phonons and the dispersion characteristics of the crystal is derived. The general theory is illustrated in the case of GaP, ZnSe and ZnO crystals.

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STRIZHEVSKIY, V. L.

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TECHNICAL TRANSLATION

(100) FSTC-HT-23-2015-72

29 Oct 72

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

FOREIGN TITLE: PROBLEMY PEREDACHI INFORMATSII LAZERNYM IZLUCHENIYEM

AUTHOR: I. A. DERYUGIN, ET AL.

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

Translated for FSTC by ACSI

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The contents of this publication have been translated as presented in the original text. No attempt has been made to verify the accuracy of any statement contained herein. This translation is published with a minimum of copy editing and graphics preparation in order to expedite the dissemination of information.

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- Title Page -

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USSR

STRIZHEVSKIY, V. S.

UDC 8.74

"Sequential Method of Recognition"

V sb. Avtomat. upr. i vychisl. tekhn. (Automatic Control and Computer Technology -- Collection of Works), No. 10, Moscow, "Mashinostroyeniye", 1972, pp 190-205 (from RZh-Matematika, No 9, Sep 72, Abstract No 9V673)

Translation: Problems of constructing a recognition system, optimizing the complexity of the recognition system, and selecting an effective system of indicators are discussed. A nonparametric method is proposed for constructing the recognition system that does not require any preliminary information and assumptions concerning the form of the boundary between classes. An advantage of the proposed recognition algorithm is the possibility of a considerable increase in the recognition quality for a slight increase in the equipment necessary to achieve this algorithm. In principle the algorithm makes it possible to obtain an optimal (Bayes) decision rule. Especially attractive is the possibility of solving various stages in the recognition problem from single positions and with uniform methods. Authors abstract.

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USSR

STRIZHEVSKIY, V. S.

UDC 8.74

"Successive Recognition Method"

V sb. Avtomat. upr. i vychisl. tekhn. (Automatic Control and Computer Engineering — collection of works), Vyp. 10, Moscow, Mashinostroyeniya Press, 1972, pp 190-205 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V673)

Translation: A study was made of the problems of constructing a recognition system, optimization of the complexity of the recognition system and selecting an effective system of attributes.

The nonparametric method of constructing recognition systems is proposed which does not require any preliminary information or assumptions regarding the form of the boundary between the classes.

The advantage of the proposed recognition algorithm is the possibility of a significant increase in the recognition quality with an insignificant increase in the equipment required for executing this algorithm. Theoretically, the algorithm permits us to obtain an optimal (Bayes) decision rule.

The possibility of solving the various steps of the recognition problem from single points of view and by united methods is especially attractive.

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Oscillators and Modulators

USSR

UDC 621.373.43

PUZANENKO, V. I., STRIZHINYUK, V. P.

"A Slave Time-Interval Oscillator"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 8, Mar 71, Author's Certificate No 296240, division H, filed 25 Apr 69, published 12 Feb 71, p 186

Translation: This Author's Certificate introduces a slave time-interval oscillator which consists of n delay circuits and switching elements. As a distinguishing feature of the patent, the reliability of memorizing time intervals is increased by including two series-connected delay cells in each delay circuit. The outputs of the cells in each circuit being connected through OR and AND logic circuits to the corresponding input of a flip-flop whose outputs are connected to the inputs of the delay circuits.

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USSR

STRIZHKOV, A. V.

UDC: 681.3

"Certain Problems of Analog-Digital Conversion in the System of Residual Classes"

Elektron. tekhnika. Nauch.-tekhn. sb. Mikroelektronika (Electronic Technology. Scientific and Technical Collection. Microelectronics), 1971, vyp. 4(30), pp 113-117 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V911)

Translation: The author considers the problem of exact conversion of continuous quantities to discrete quantities represented in a nonpositional system of notation -- the system of residual classes. The following theorem is proved. Let there be pairwise mutually prime numbers $P_1, P_2, \ldots, P_n$ which comprise a system of bases. The error of analog-digital conversion with respect to each base is no greater than the value of the least significant digit (quantum). To ensure that the analog quantity A is correctly determined, with respect to all bases of the system, it is necessary and sufficient that the sum of the integral quotient from division of A by the base P_i with the remainder a_i be even or odd for all bases. V. Mikheyev.

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USSR

STRIZHKOV, A. V.

UDC 681.325.65

"Rational Selection of Bases in a System of Residual Classes When Constructing Analog-Code Converters"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on Problems of Microelectronics. Moscow Institute of Electronic Technology), 1972, vyp. 9 (Physics and Mathematics Series), pp 273-278 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 72, abstract No 11B300)

Translation: The author considers aspects of the rational selection of bases in a system of residual classes in the construction of analog-code converters. The system of bases is selected with regard to: 1) the possibility of representing the input quantity in the system of residual classes with the required accuracy (when selecting the system of bases p_i $(i = 1, 2, \ldots, n)$ the volume of the numbers to be represented in the working range P' must satisfy the inequality $N \leqslant P'$, where

$$N = \frac{A_{max} - A_{min}}{\Delta A} + 1.(A_{max} - A_{min})$$

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STRIZHKOV, A. V., Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn., 1972, vyp. 9, pp 273-278

is the range of variation in the input analog quantity, ΔA is resolution); 2) the condition of minimum length of the bases (the requirement of mutual primeness of the bases used in the system of residual classes amounts to requiring that all bases except the first be indivisible by two, and, therefore, to record a number in the system of residual classes takes a greater number of digital places than when the same number is represented in binary notation); 3) the requirement for maximum speed and reliability (under conditions of determination of binary digits by position, when they represent remainders, the duration for the coding process depends on the number of binary places characterizing the value of the base; the reliability of the converter is increased when check bases are used); 4) identical length of both working and check bases. In addition to these requirements, account must be taken of matched operation with the computer, which utilizes some previously known system of bases, although the requirements on selecting bases in the computer and in the converters coincide in the main. One table, bibliography of two titles. Yu. S.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

STRIZHKOV, A. V.

UDC 681.325.65

"Analog-Digital Converters in a System of Residual Classes Using Methods of Comparison and Subtraction"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on Problems of Microelectronics. Moscow Institute of Electronic Technology), 1972, vyp. 9 (Physics and Mathematics Series), pp 265-272 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 72, abstract No 11B299)

Translation: Analog-digital converters in a system of residual classes are considered by way of an example of converters with feedback using the method of weighting. The converter described actually includes two converters. The first, in the preparatory stage, operates with "weights" of the master voltages which are proportional to the value of the base and are set up in accordance with a definite law. The value of the ν-th master voltage can be found from the relation $V_{\nu j} = \Delta V \cdot 2\nu \cdot p_j$, where ΔV is the size of the level quantization step, p_j is the base, j is the channel number (j = 1, 2,..., n),

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STRIZHKOV, A. V., Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn., 1972, vyp. 9, pp 265-272

$\nu = 0, 1, 2, \ldots, m_{j-1}$. The number of master voltages (m) is selected in such a way that the difference between the maximum voltage to be converted and the sum of the master voltages of the first converter is no greater than the value of the base. The second converter, which operates in the informational stage, has a set of master voltages according to the binary law $\Delta V_{ij_{ma}} = \Delta V \cdot 2^i$, where $i = 0, 1, 2, \ldots, l_{j-1}$. The number of binary digits l_j is selected from the relation $2^{l-1} < p_j \leqslant 2^{l-2}$. When the bases are properly chosen, the number m and the number l are identical in all channels. As a result of a certain number of comparisons (m) the ratio between the input voltage and the master voltages is determined; then a compensating voltage, which differs from the input voltage by a quantity no greater than the value of the base, is found. The speed of the voltage-to-code converter in the system of residual classes corresponds to the maximum duration of the process of coding one of the channels. One illustration, bibliography of one title. Yu. S.

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STRIZHKOV, A. V., YEVSTITNEYEV, V. G. UDC 681.325.65

"General Principle of Constructing Analog-Code Converters in a System of Residual Classes"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on Problems of Microelectronics. Moscow Institute of Electronic Technology), 1972, vyp. 9 (Physics and Mathematics Series), pp 180-185 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 72, abstract No 11B298)

Translation: The process of conversion comprises automatic measurement of an input quantity to find its numerical equivalent in a certain number system. The system of residual classes can also be used to represent a numerical equivalent. It can be seen from the presentation of numbers in this system that the figure is formed in each digital place independently of the other digital places. This means that the converter must be made up of several equally significant channels with conversion of the input signal taking place simultaneously and independently in each of them. The number of channels corresponds to the number of bases used for the given range of

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STRIZHKOV, A. V., YEVSTITNEYEV, V. G., Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn., 1972, vyp. 9, pp 180-185

variations in the input signal. Determination of the signal with respect to each base consists in finding the code value of the positive remainder by dividing the analog quantity by the value of the base p_i ($i = 1, 2, \ldots, n$ is the number of bases). The operation of division in each channel looks like continuous comparison of the input analog quantity with a set of master quantities selected in accordance with a definite law, these masters being proportional to the value of the base for the channel. The value of the base has the dimensionality of the input signal with regard to the assumed scale. The entire range of variation in the input quantity is divided into a number of intervals of the value in the base by means of a single set of discrete master values. By using another set of masters, this interval is divided into subintervals equal in magnitude to the quantization step. The number of subintervals in a single interval is equal to the number p_i. The process of coding in converters using the system of residual classes may be broken down into two stages -- preparatory and informational. In the preparatory stage, the interval in which the input quantity is located is found by comparing the input quantity with the first set of masters. In the informa-

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STRIZHKOV, A. V., YEVSTITNEYEV, V. G., Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn., 1972, vyp. 9, pp 180-185

tional stage, the number of subintervals contained in the analog input quantity is determined in the interval where it has been found. This number defines the remainder for the base and goes into the code combination which characterizes the input quantity. A block diagram is given for an analog--code converter which uses the system of residual classes. Two illustrations, three bibliographic entries. Yu. S.

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UDC 546.641'161+546.664'161+645.665'161+546.666'161+546.668'161

STRIZHKOV, B. V., RUCHKIN, YE. D., KRIKOROV, V. S., PCHELKIN, V. A., NIKITENKO, L. S., and KHROMOV, A. D.

"Production of Anhydrous Fluorides of the Yttrium Subgroup of Rare-Earth Elements"

Moscow, Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, No 8, 1972, pp 1428-1433

Abstract: The anhydrous REM fluorides are a promising material for the manufacture of thin-film condensors by vacuum sputtering. One method of manufacturing anhydrous REM fluorides is by thermal decomposition of the hydrated fluorides of these elements. One shortcoming of this method is that dehydration upon heating may be accompanied by pyrohydrolysis. The method has not been fully studied. The present work studies the process of production of anhydrous fluorides of Y, Dy, Ho, Er, and Yb by thermal decomposition of their hydrates in air, in a current of a dry inert gas and in a vacuum. The methods of thermal, crystallooptical, x-ray structural, and chemical analyses plus IR spectroscopy were used to study the specimens. The dehydration of the fluorides was found to be a multistage process. Complete removal of the water of crystallization requires heating to 500-600°C (somewhat lower in a vacuum), apparently a result of the deep penetration of water molecules into the defective crystalline lattice of the fluorides. Initial

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USSR

Strizhkov, B. V., Ruchkin, Ye. D., Krikorov, V. S., Pchelkin, V. A., Nikitenko, L. S., Khromov, A. D., Moscow, Neorganicheskiye Materialy, No 8, 1972, pp 1428-1433.

dehydration removes all but approximately 0.5 mol of the water rather easily, after which dehydration is more difficult and apparently is accompanied by ordering of the crystalline structure of the substance. The temperature of complete dehydration can be reached only in a vacuum or in a current of a dry inert gas; otherwise, the process of pyrohydrolysis begins before the dehydration reaction is completed.

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UNCLASSIFIED PROCESSING DATE--18OCT70

1/2 011

TITLE--PREPARATION AND EXAMINATION OF HIGH PURITY SILICA GEL FOR GAS CHROMATOGRAPHY -U-

AUTHOR-(05)-AKSHINSKAYA, N.V., ZAYTSEVA, G.YE., KISELEV, A.V., NIKITIN, YU.S., STRIZHKOV, B.V.

COUNTRY OF INFO--USSR

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DATE PUBLISHED--------70

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

PURITY SILICA GEL PREPARED BY HYDROLYSIS OF TETRAETHOXYSILANE HAS BEEN CARRIED OUT UNDER VARYING HYDROTHERMAL TREATMENT CONDITIONS. IT HAS BEEN SHOWN POSSIBLE TO PREPARE SAMPLES WITH SURFACE AREA FROM 415 TO 2 M PRIME2-G AND MEAN PORE SIZE FROM 90 TO 12500 ANGSTRUM. THE RETENTION TIMES OF SPECIFICALLY ADSORBED AROMATIC HYDROCARBONS AND POLAR ORGANIC COMPOUNDS ON HIGH PURITY MACROPOROUS SILICA GEL ARE LESS AND THE CHROMATOGRAPHIC PEAKS OF THESE SUBSTANCES MORE SYMMETRICAL THAN FOR COMMERCIAL MACROPOROUS SILICA GEL OF SIMILAR GEOMETRIC STRUCTURE CONTAINING SESQUIOXIDES AS IMPURITIES.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

GORCHAROV, V.K., MIN'KO, L.YA., MIKHNOV, S.A., STRIZHNEV, V.S.

UDC 621.378.325

"Peculiarities Of The Effect Of Emission Of Rhodamine Laser On Absorbing Materials"

Kvantovaya elektronika, Moscow, No 5, May 71, pp 112-116

Abstract: A study is conducted of the damaging action on absorbent materials of emission generated by a laser based on a standard solution of Rhodamine-6 Zh. Generation excitation was accomplished by two series-connected IFP-2000 lamps located in a magnesium oxide cylindrical illuminator. A battery of IM-50-3 capacitors with a capacitance of 36 microfarad at a voltage of ~ 10 kv was used for energy storage. The duration of the pumping pulse was 120 microsec (at a 0.1 level). An energy output of 12 joule with a generation duration of ~ 55 microsec was assured. The maximum flux density of the emission amounted to $3 \cdot 10^6$ watt/cm^2. As a result of the action a quasistationary ultrasonic plasma jet is formed with a relatively large angle of emergence. In it a stationary shock wave is formed, the configuration of which is determined by the geometry of the jet's emergence and has a dome-shaped form. With the aid of high-speed spectral filming it is established that excitation of the spectrum primarily takes place in the stationary shock wave. A discontinuous

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR

GORCHAROV, V. K., et al., Kvantovaya elektronika, Moscow, No 5, May 71, pp 112-116

structure of the plasma jets is displayed, probably resulting from the explosion-formed (volumetric) character of vaporization. The recurrence frequency of the individual microbunches during laser action on lead (or tin-lead solder) amounts to $\sim$ 1 MHz (the flux density of the emission is $\sim 3 \cdot 10^{8}$ watt/cm^2). The exhaust velocity of the plasma jet was measured. Pressure in the zone of action is evaluated. Some peculiarities of the action on the absorbing material are studied. Received by editors, 20 Apr 71. 2 fig. 18 ref.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

USSR UDC 632.95

GOLUBEVA, Z. Z., FOMINA, N. I., and STRIZHOIKOVA, M. A.

"Insecticidal Properties and Effectiveness of Methylnitrophos"

V sb. Khim sredstva zashchity rast. (Chemical Agents for Plant Protection -- collection of works), vyp 1, Moscow, 1970, pp 17-25 (from RZh-Khimiya, No 11, Jun 72, Abstract No 11N395)

Translation: A survey of the published results of tests of methylnitrophos (I) done in the Soviet Union. As a contact insecticide, I is effective against many insects living in the open which are harmful to agricultural crops. The rate of use of a 30% concentrate of emulsions of I is equal to 2-3 kg per hectare, depending on the crop. Residues of I have comparatively low persistence on plant leaves. Compound I is authorized for use in the Soviet Union. The last deadline for spraying fruit, vineyards, and vegetable, field and commerical crops is twenty days or more before harvest.

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USSR UDC 547.241:547.724.1

KOLESNIKOV, G. I., BURTSEV, V. A., and STRIZHOV, N. K., Krasnodarsk Polytechnical Institute

"Some Rules for the Condensation of 0,0-Dialkyl Cyclopentadienylalkylphosphonates With Furfurol"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 2, Feb 71, pp 305-309

Abstract: Condensation of 0,0-dialkyl cyclopentadienylalkylphosphonates with furfurol at temperatures below 25° yields mainly bis(hydroxy-2-furfuryl) derivatives. The yield of mono-(hydroxy-2-furfuryl) derivatives is either very small or nonexistent. It was determined that a 10% ethanol solution of KOH or metal alkoxides is the optimum concentration of the catalyst, while the ratio of the phosphonate to furfurol should be around 1:3. Relative yields of individual compounds formed would indicate that the dehydration rates of hydroxyfurfuryl derivatives are lower than the rate of aldol condensation and that the dehydration rate drops with addition of more furfurol. The condensation follows first kinetics in the temperature range studied.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210010-0

Water Treatment

UDC 628.34

USSR

STRIZHOV, S. G.

"Attempts to Purify Radioactive Sewage by Evaporation"

Leningrad, Radiokhimiya, Vol 12, No 6, 1970, pp 879-882

Abstract: The study was aimed at prevention of foam formation and lowering of the salt carry over from the evaporator by the secondary vapor. The formation of foam was stopped completely by the application of the film method to the VV type evaporator, which resulted in a higher effectiveness of the sewage purification. To lower the carry over of salt, compressed air was blown into the separator unit of the evaporator; in this fashion the carry over was decreased by 50%. It was determined that the purification of radioactive sewage is more effective in basic than in acidic medium. To purify the secondary vapor rectifying columns were used successfully. The proposed scheme of purification consisting of evaporation and purification of the secondary vapor gives following degree of the removal of isotopes (in %): ^{14}C: 74.11-84.60; ^{22}Na: 99.78-99.98; ^{35}S: 97.26-98.00; ^{45}Ca: 99.88-99.9 ^{54}Mn: 99.99+; ^{60}Co: 99.97-99.99; ^{65}Zn: 98.48-99.93; ^{90}Sr: 99.96-99.98; ^{133}Ba: 99.99; ^{134}Cs: 99.82-99.93; ^{137}Cs: 99.91-99.94.

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UDC 537.374

USSR

KOSACHEVS'SKIY, L. YA. STROCHKOV, I. O.

"Movement of an Ideally Plastic Material in a Conical Matrix"

Dopovidi AN URSR (Reports of the Ukrainian SSR Academy of Sciences), 1969, A, No 9, pp 816-818 (from RZh-Mekhanika, No 3, March 1970, Abstract No 3V358)

Translation: The flow of an ideally plastic material in a conical matrix is examined. The forms of the slip surfaces and the distribution of velocities are obtained from a solution of the variational problem. Bibliography: 4 entries. Resume

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USSR

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

ABOLIN'SH, YA. YA., and STROD, V. V.

"Pyroelectric Activity of Sodium Nitrite Single Crystals"

Elektron. tekhnika. Nauch.-tekhn. sb. Materialy (Electronic Engineering: Collection of Scientific and Technical Works on Materials), 1971, vyp 2, pp 52-54 (from RZh-Fizika, No 10, 10 Oct 71, Abstract No 10YE618 from summary)

Translation: The authors investigated the pyroelectric activity of sodium nitrite single crystals by the Chaynoves method. The experimental temperature dependence of pyroelectric current amplitude obtained is compared with data on the temperature dependence of spontaneous polarization and heat capacity.

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USSR

BAYBORODIN, Yu. V., BLOKHIN, L. N., STROGALEV, M. A.

"Synthesis of Optimal Structure of a System for Semiautomatic Stabilization of an Aircraft in a Glide"

Vtoraya Chetayevsk. Konf. po Analit. Mekh., Ustoychivosti Dvizheniya i Optimal'n. Upr., 1973. Annotatsii Dokl. [Second Chetayev Conference on Analytic Mechanics, Stability of Motion and Optimal Control, 1973. Abstracts of Reports -- Collection of Works], Kazan', 1972, p 55 (Translated from Referativnyy Zhurnal Mekhanika, No 5, 1973, Abstract No 5A293).

Translation: The problem of semiautomatic stabilization of an aircraft in its glide in the longitudinal plane is analyzed from the standpoint of the linear theory of optimal filters. As an example, the synthesis of the optimal structure for a device for conversion of the control signal with semiautomatic landing approach using a visualization system is studied. The optimal transfer function is produced for a correcting device, as well as an expression for dispersion of the error of an optimal system.

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AUTHOR--STROGALSHCHIKOV, B.S.

COUNTRY OF INFO--USSR

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