"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC 669.24:539.37

BABICH, B. N., BERNSHTEYN, M. L., PORTNOY, K. I., PROKOSHKINA, V. G., and FEL'GINA, S. B., Moscow

"Effect of Cold Rolling and Subsequent Heating on the Structure and Properties of Dispersion-Hardened Nickel"

Moscow, Akademiya Nauk SSSR. Izvestiya, Metally, No 6, Nov-Dec 72, pp 144-148

Abstract: A study is made of the effect of cold rolling with a 60% reduction in area and subsequent heating on the structure, texture, and hardness of dispersion-hardened nickel containing 3 vol. % HfO_2 and obtained under different conditions of hot extrusion. The cold plastic deformation by means of rolling intensifies during reheating recrystallization of dispersion-hardened nickel as opposed to rotation forging. The obtained recrystallized structure with large elongated grains (2-3 mm) is characterized by the presence of annealing twins, developed substructure, and texture that retains mainly the orientations of the structure of deformation. In order to obtain a maximum degree of hardening of dispersion-hardened alloy, it is feasible to utilize a combined deformation during thermomechanical treatment which provides for combining of deformation rolling and rotation forging.

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UDC: 621.384.6.5

ARZUMANOV, A. A., NEMENOV, L. M., ANISIMOV, O. K., BATALIN, S. S., VOLKOV, B. A., GROMOV, D. D., KRAVCHENKO, Ye. T., KRUGLOV, V. G., NIGMATOV, M. Kh., POPOV, Yu. S., PROKOV'YEV, S. I., and RYBIN, S. N.

"Isochronic Cyclotron With Controllable Ion Energy"

Alma-Ata, Izvestiya AN KazSSR--Teriya Fiziko-matematicheskaya, No 4, 1973, pp 6-15

Abstract: A discussion of the isochronic cyclotron with controllable ion energy built around the U-150-2 accelerator installed in the Institute for Nuclear Physics of the Kazakh SSR Academy of Sciences in 1965 is given. Calculations of the fundamental parameters made with an electronic computer are presented, together with the results of a theoretical analysis, a large part of which was based on approximation methods. These results were verified by a numerical method. The description is given of a program developed for investigating and modeling the magnetic field on a mock-up with a scale of 1:3. An outline drawing of the magnetic arrangement is given, along with curves of the magnetic field. The current correction for the magnetic field is explained, with an illustrative photograph of the correction winding. Also discussed are the

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ARZUMANOV, A. A., et al, Izvestiya AN KazSSR--Teriya Fiziko-matematicheskaya, No 4, 1973, pp 6-15

UDC: 631.384.6.5

(8)

high-frequency system and the slit-type ion source, the ions entering the accelerator chamber radially. Curves for the change in beam intensity for accelerated alpha particles are plotted as a function of the accelerator radius. A photograph of the area of installation, showing a beam of protons in air with an energy of 30 Mev, is reproduced together with a photograph of the equipment itself.

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AA0052549

PROKSHIN, S.S.

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 2/70

243795 FLAT GLASS CUTTING EQUIPMENT consists of a table, carrier with cutting tool, and drive mechanism for the tool. The aim of this invention is to increase the working life of the cutter and this is done with the help of a means of support over the working surface of the table. The diagrams show the lateral and plan views of the cutting assembly with the side brackets (1) supporting the guide rail (2) on which the rollers run which hold the cutting head (3). These rollers are both horizontal (4) and vertical (8) and there is adequate provision of springing (7 and 14) to cater for movements and pressures on the cutting tool (12). A second carrier travels along the guide rail on the rollers (18). This incorporates a stop device (21) which abuts against the side of the flat piece of glass during the cutting motion and prevents the glass from moving. The method of setting the cutter and its operation are included.

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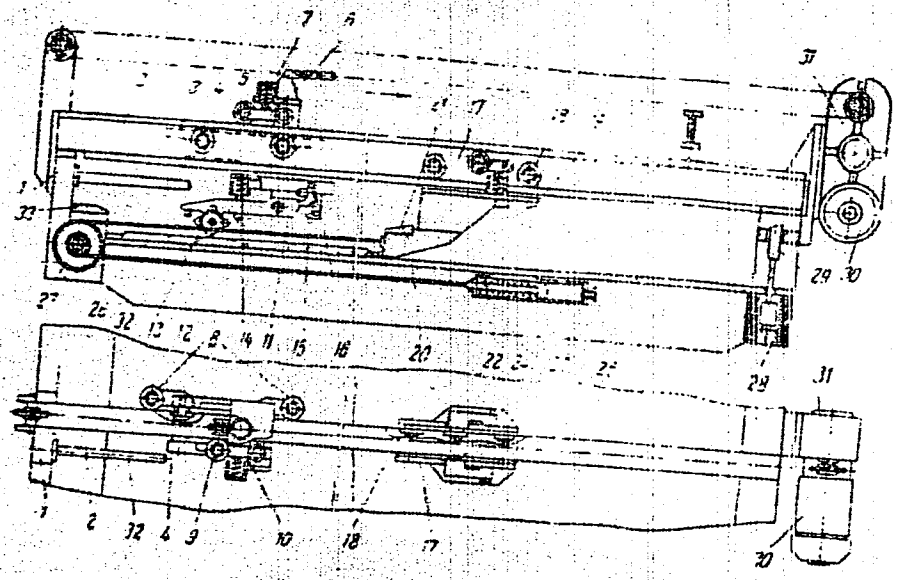
AA0052549



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AA0052549

20.3.67. as 1142046/29-33. PROKSHIN, S.S. et al.
S. Ordzhonikidze Ufim Aviation Inst. (3.10.69)
Bul. 17/14.5.69. Class 32a, Int. Cl. C 03b.

Prokshin, S. S.; Gellerman, V. G.; Danovich, A. V.; Getsonok, A. L.
Ufimskiy Aviatsionnyy Institut im. Sergo Ordzhonikidze

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19821210

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

Public Health, Hygiene and Sanitation

USSR

"With the Standing Commissions of the Supreme Soviet of the Belorussian SSR"

Minsk, Sovetskaya Belorussiya, 3 Apr 70, p 3

Translation: The Standing Commission for Conservation of Nature of the Supreme Soviet of the Belorussian SSR met under the chairmanship of deputy V. A. Dondar'to to discuss the execution by the republic's ministries and departments of the Law of Conservation for Protection of the Atmosphere from Pollution. F. D. Erokudin, Deputy Chairman of the State Committee of the Council of Ministers BSSR for Conservation, gave a report.

The Commission noted that some work has been done to prevent pollution of the atmosphere by industrial emissions. Some plants installed gas purifiers and dust catches and improved technological processes, this reducing the quantities of injurious wastes emitted. More than 1200 industrial and municipal boilers have been concerted to gas.

The executive committees of the oblast and many city Councils

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Minsk, Sovetskaya Belorussiya, 3 Apr 70, p 3

of Workers' Deputies have begun to concern themselves with protection of the atmosphere. Plans have been approved for sanitation measures and for protection of the atmosphere. By-pass roads and beltways were constucted for non-rail transport. A ban was placed on the movement of trucks through the central streets and squares. Trees were planted on streets and vacant lots belonging to industry. All this has helped greatly to decrease pollution by industrial emissions and exhaust gases of automobiles.

However, despite the steps already taken, air pollution in the cities of the republic remains high. Some industrial establishments are rebuilt or enlarged without installing effective devices to trap injurious gases. Individual, scattered measures do not produce the needed results. The content of injurious substances in industrial, municipal, and household emissions is far in excess of maximum permissible concentrations.

Many injurious substances are emitted by a large number of enterprises controlled by the Administration of the Chemical Industry, 2/5

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Minsk, Sovetskaya Belorussiya, 3 Apr 70, p 3

especially the Mogilevskiy and Svetlogorskiy Synthetic Fiber Plants, the Grodno Nitrogen Fertilizer Plant and the Gomel Chemical Plant.

The amount of carbon monoxide and other exhaust gases polluting the streets and squares of the republic's cities is far in excess of maximum permissible concentrations. Many automobiles are still being driven with malfunctioning carburetors and fuel systems.

The Commission recommended that the State Planning Organization of the Belorussian SSR, ministers, departments, and executive committees of oblast and city Councils of Workers' Deputies work out long-range plans to combat atmospheric pollution by industrial wastes and automobile exhaust gases.

There was also a meeting of the Standing Commission for Municipal Services, Town Improvement, and Highway Construction of the Supreme Soviet of the Belorussian SSR. The meeting, chaired by M. F. Zayorotnyy, heard a report by V. N. Rubanik, Deputy Chairman of the

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Minsk, Sovetskaya Belorussiya, 3 Apr 70, p 3

executive committee of the Grodno Oblast Council of Workers' Deputies, on implementation of the Commission's recommendations set forth in its decree of 31 March 1969 "On the Operation and Maintenance of Residential Housing of the Local Councils in Grodno Oblast."

The Commission noted that the executive committees of the local Councils of Workers' Deputies and the housing and municipal services agencies of Grodno Oblast made some efforts in 1969 to improve the operation and maintenance of the existing housing. The plan for capital repair of housing was fulfilled for the oblast as a whole by 102 percent and the plan for current repair by 108 percent. Along with capital repair of existing housing, work is being done to improve public services and amenities. Steps are being taken to strengthen the industrial base of the repair and construction organizations.

Nevertheless, a check has shown that many of the shortcomings in the operation of the housing noted by the Standing Commission in its 1969 study are still uncorrected. Planning estimates are delayed

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Minsk, Sovetskaya Belorussiya, 3 Apr 70, p 3

and of poor quality. The time schedule for opening apartments after capital repairs is systematically violated. In many cases the delays are two to four times those planned for.

Despite the implementation of the capital repair plan for the pblast as a whole, it is not being fulfilled for Voklovysk, Shchuchin, Korelich, Lyubcha, and Sopotskin.

And in many cases the quality of the repair work is unsatisfactory. Not enough attention is paid to overall preventive repair.

The housing and municipal services agents fail to hold the tenants responsible for maintaining their apartments. The community is not brought into the problem the way it should.

The Commission also examined the condition of bath and laundry facilities for the people of cities and city-type settlements and the steps taken to improve them. The Commission issued appropriate recommendations on the matters discussed.

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1/2 029 UNCLASSIFIED

TITLE--INCREASING THE WEAR RESISTANCE OF VULCANIZED RUBBER -U- PROCESSING DATE--13NOV70

AUTHOR-(04)-NOVIKOV, A.S., NUDELMAN, Z.N., SHALYGIN, G.F., PROKUDIN, I.P.

COUNTRY OF INFO--USSR

SOURCE--GER. 1,694,680

DATE PUBLISHED--21MAY70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--WEAR RESISTANCE, CHLOROPRENE, ACRYLONITRILE, BUTADIENE, COPOLYMER, SYNTHETIC RUBBER, ANTIMONY FLUORIDE, FLUORINATION, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1541 STEP NO--GY/0000/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128936

UNCLASSIFIED

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CIRC ACCESSION NO--AA0128936 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE WEAR RESISTANCE OF VULCANIZED ACRYLONITRILE,BUTADIENE COPOLYMERS AND CHLOROPRENE IS IMPROVED BY FLUORINATING THE RUBBER SURFACE WITH ME SUB2 CO SOLNS. OF SBF SUB5 UNDER PRESSURE AT 50-100DEGREES FOR 5-20 MIN. FACILITY: SCIENTIFIC RESEARCH INSTITUTE OF THE RUBBER INDUSTRY.

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USSR UDC: 621.396.677.31

ABRAMOV, V. G., PROKUDIN, V. V.

"Evaluating Amplitude and Phase Inhomogeneities of the Field in the Near Zone of an In-Phase Excited Aperture"

Tr. Kuybyshev. aviats. in-t (Works of the Kuybyshev Aviation Institute), 1970, vyp. 44, pp 35-41 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6B64)

Translation: The authors consider a scalar version of the problem of determining the field in the near zone of an in-phase excited flat aperture of arbitrary shape. Special cases of harmonic and pulse excitation are analyzed. A circular aperture gives the least uniform field in the case of harmonic excitation. A uniform field can be produced with any form of aperture including circular when sufficiently short exciting pulses are used. Two illustrations, bibliography of three titles. N. S.

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USSR

UDC 546.46'21'11'212:54-17

PIROGOV, YU. A., ALAPIN, B. G., and PROKUDIN, V. YU.

"Study of Thermal Conversions of the Crystalline Trihydrate of Bisubstituted Magnesium Phosphate"

Moscow, Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, Vol 8, No 5, 1972, pp 878-880

Abstract: Phase conversions of the crystalline trihydrate of bisubstituted magnesium phosphate are studied in the 20-900 ° C temperature interval. The data from the literature on the formation of magnesium tetrametaphosphate upon heating of $MgHPO_4$ were not confirmed. It was established that the crystalline trihydrate of bisubstituted magnesium phosphate is converted upon heating to pyrophosphate through an amorphous phase. The magnesium pyrophosphate forms microcrystalline aggregate pseudomorphoses from the initial nuberiite crystals.

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1/2 019 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--DIFFUSION OF NEODYMIUM AND IRON IN NEODYMIUM ORTHOFERRITE -U-

AUTHOR-(04)-PAVLYUCHENKO, M.M., FILONOV, B.O., SHIMANOVICH, I.YE., PROKUDINA, S.A.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK BELORUSS. SSR 1970, 14(4), 328-31

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--PHYSICAL DIFFUSION, IRON, NEODYMIUM COMPOUND, THERMAL EFFECT, ISOTOPE, DIFFUSION COEFFICIENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1399 STEP NO--UR/0250/70/014/004/0328/0331

CIRC ACCESSION NO--AT0128798

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

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CIRC ACCESSION NO--AT0128798 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DIFFUSION OF ND AND FE IN ND ORTHOFERRITE WAS INVESTIGATED BY USING ABSORPTION AND SECTIONING METHODS. EXPTS. WERE CARRIED OUT ON PRESSED NDFEO SUB3 SPECIMENS 10.5 MM IN DIAM. AND 3-5 MM HIGH; SUBSEQUENT MULTISTAGE SINTERING AT DIFFERENT TEMPS. WITH FINAL HOMOGENIZATION AT 1430DEGREES FOR 250 HR PRODUCED SPECIMENS WITH D. OF 6.10 G-CM PRIME3 CORRESPONDING TO 87PERCENT SPACE FILLING. DIFFUSION ANNEALING WAS CARRIED OUT IN ELEC. FURNACES AT 1240-1420DEGREES FOR 180 HR; THE TEMP. WAS REGULATED WITH AN ACCURACY OF PLUS OR MINUS 3DEGREES. DIFFUSION MOBILITY OF NDFEO SUB3 CATIONS WAS INVESTIGATED BY USING THE RADIOACTIVE ISOTOPES PRIME59 FE AND PRIME147 ND. THE TEMP. DEPENDENCES OF THE DIFFUSION COEFFS. ARE GIVEN. THE DIFFUSION COEFFS. OBTAINED BY THE ABSORPTION METHOD ARE HIGHER THAN THOSE OBTAINED BY THE SECTIONING METHOD, BECAUSE THE PENETRATION OF THE RADIOACTIVE ISOTOPES FOR THE FORMER TAKES PLACE IN THE BULK AND ALONG THE GRAIN BOUNDARIES, WHILE FOR THE LATTER IT OCCURS IN THE BULK OF THE MATERIAL ONLY. COMPARISON OF THE DIFFUSION COEFFS. INDICATES THAT CATION MOBILITY OF ND IN ND FERRITE IS HIGHER THAN THAT OF THE FE CATIONS. FACILITY: BELORUSS. GOS. UNIV. IM. LENINA, MINSK, USSR.

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1/2 024 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--FUNCTIONAL INHIBITION OF THE ADRENAL GLANDS BY ACYTILATED DERIVATIVE OF THE ADRENOCORTICOTROPHIC HORMONE -U-

AUTHOR--DILMAN, V.M., PROKUDINA, YE.A., BULOVSKAYA, L.N., KONSTANTINOV, V.L., TUGUNOV, S.S.

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN'EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69, NR 3, PP 69-71

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--INHIBITION, ADRENAL GLAND, ACTH, HYDROCORTISONE, GUINEA PIG, RAT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1982/0842 STEP NO--UR/0219/70/069/003/0069/0071

CIRC ACCESSION NO--AP0052276

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

2/2 024 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0052276

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ACETYLATED DERIVATIVE OF ACTH IN WHOM ALL FREE AMINOGROUPS ARE ACETYLATED ARE ENDOWED WITH THE CAPACITY TO FUNCTIONAL INHIBITION OF THE ADRENAL GLANDS REDUCE THE LEVEL OF HYDROCORTISONE IN THE PERIPHERAL BLOOD IN INTACT GUINEA PIGS ON AN AVERAGE BY 37PERCENT FOUR HOURS AFTER INTRODUCTION AND THE LEVEL OF CORTICOSTERONE IN RATS BY 29PERCENT UPON ADMINISTRATION OF THE DERIVATIVE FOR A COURSE OF SEVEN DAYS.

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USSR

UDC 535.215.12+621.382.28

LITOVCHENKO, V. G., SERBA, A. A., GORBAN', D. N., MOSKAL', D. N., IVANOVA, T. P., TKACHIK, V. P, and PROKUROV, A. V.

"Using Optical-Electronic Converters Using MOS Photovaricaps in Dosimetric Equipment"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No. 5, 1971, pp 108-113

Abstract: An investigation is made of the basic characteristics of a new type of semiconductor voltage modulator used as the active element in a surface metal oxide semiconductor photovaricap. This paper is thus a sequel to two earlier articles (Elektronnaya tekhnika, Series 2, 1967, 1, 96, and Radiotekhnika i elektronika, 1967, 12, 1, 76) written by the same authors, which dealt with the theoretical analysis of the physical phenomena determining the operation of MOS varicaps of the optical variety, and the experimental results of research into their characteristics. The experiments described in the present paper were conducted with p-type silicon specimens of various resistivities, from 10^2 to 10^4 ohm·cm, the surfaces of which were cleaned and sputtered with a layer of SiO_2 A block diagram of the measuring equipment is shown and its operation [illegible]

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TOVCHENKO, V. G., et al., Poluprovodnikovaya tekhnika i mikro-elektronika, No. 5, 1971, pp 108-113

be successfully used in equipment for measuring small constant or slowly varying currents and voltages from high-resistance sources. They are associated with the Semiconductor Institute, Ukrainian Academy of Sciences.

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USSR

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UDC 535.215.124-621.382.28

LITOVCHENKO, V. G., SERBA, A. A., GORBAN', D. N., MOSKAL', D. N., IVANOVA, T. P., TKACHIK, V. P., PROKUROV, A. V.

"Use of an Optoelectronic Converter based on a Metal-Dielectric-Semiconductor Photovaricap in a Dosimetric Device"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No 5, 1971, pp 108-113

Abstract: A study was made of the basic characteristics of a new type of semiconductor voltage modulator using a surface metal-dielectric-semiconductor photovaricap as the active element. The theoretical analysis of the physical phenomena determining the operation of the MDS photovaricaps and also some experimental results of studying their characteristics were presented previously [V. G. Litovchenko, et al., Elektronnaya tekhnika, Series 2, No 1, 96, 1967; V. G. Litovchenko, et al., Radiotekhnika i elektronika, Vol 12, No 1, 76, 1967].

An optoelectronic modulator of constant and low-frequency voltages from high-resistance sources was developed on the basis of an MDS photovaricap and a light diode. The modulator is characterized by high-frequency parameters (10^5-10^7 hertz), high input impedance (> 10^{12} ohms), small size and weight. Experimental data were obtained which illustrate the operation of the MDS photovaricap in the optoelectronic modulator, in particular, combined with the

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LITOVCHENKO, V. G., et al., Poluprovodnikovaya tekhnika i mikroelektronika, No 5, 1971, pp 108-113

ionization chamber. The application of these optoelectronic modulators permits an increase in their modulation frequency by several orders (by comparison with mechanical dynamic capacitors) and, therefore, use of ordinary alternating voltage amplifiers instead of electrometric input cascades.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC 621.318.563.2

MEKHANIK, V. P., PROKUSHENKOV, G. I.

"Method of Recording Threshold Frequency"

USSR Author's Certificate No 285104, Filed 6/03/69, Published 7/04/71, (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, 1971, Abstract No 11 A50 P from the Resume).

Trans: In a well-known method the threshold frequency is recorded by conversion of the pulse repetition frequency to a voltage and subsequent comparison of this voltage with a voltage corresponding to the threshold value of frequency. One shortcoming of this method is its inertia, which is particularly manifest with a low threshold frequency. The method suggested allows the time required to record the threshold frequency to be decreased by formation of pulses, the length of which is equal to the period of pulses at the threshold frequency, which merge into a single comparison pulse when the frequency of the initial sequence of pulses becomes greater than the threshold frequency. At the same time, the length of each pulse formed is converted to a voltage. If the frequency of the initial sequence of pulses is less than the threshold frequency, when these pulses arrive at the input of the pulse former, threshold pulses are formed, the length of which is equal to the time interval between two successive pulses of the threshold frequency.

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USSR

UDC 621.318.563.2

MEKHANIK, V. P., PROKUSHENKOV, G. I., USSR Author's Certificate No 285104, Filed 6/03/69, Published 7/04/71.

The pulse convertor transforms the pulse length to a proportional voltage which, however, does not reach the threshold value during the time of a threshold pulse. Increasing the frequency of the initial pulse sequence causes a decrease in the time interval between the threshold pulses formed. When the frequency of the initial pulse sequence reaches the threshold frequency, the threshold pulses merge and a coincidence pulse is formed with a length determined by the time during which the frequency of the initial sequence of pulses is exactly equal to or greater than the threshold frequency. If the control voltage developed by the pulse convertor reaches the threshold voltage, a relay element fires. As soon as the frequency of the initial pulse sequence becomes less than the threshold frequency, formation of coincidence pulses stops. The control voltage becomes equal to zero and the relay element is deactivated. The recording time can be adjusted by changing the threshold voltage at which the relay element fires and also by changing the slope of the control voltage curve. The minimum recording time in the ideal case is equal to the length of a threshold pulse. However, in practice the minimum recording time should be set considering possible fluctuations of the time interval between pulses of the recorded threshold frequency. 2 Figures.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

1/2 019 UNCLASSIFIED

TITLE--NEODYMIUM 144 LEVELS EXCITED DURING THE CAPTURE OF THERMAL NEUTRONS -U-

PROCESSING DATE--23OCT70

AUTHOR-(03)-BERZIN, YA.YA., KRUMINYA, A.YE., PROLOFYEV, P.T.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 449-53

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--NUCLEAR ENERGY LEVEL, CONVERSION ELECTRON SPECTRUM, NEODYMIUM ISOTOPE, THERMAL NEUTRON, NEUTRON ABSORPTION, BETA SPECTROMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0219

STEP NO--UR/0048/70/034/002/0449/0453

CIRC ACCESSION NO--AP0105295

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

2/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105295

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONVERSION SPECTRA WERE MEASURED FOR THE E EMITTED IN THERMAL N CAPTURE BY THE PRIME143 ND NUCLEUS TO OBTAIN MORE ACCURATE MULTIPOLARITIES AND LEVEL ENERGIES. THE MEASUREMENTS MADE WITH A BETA SPECTROMETER HAVING A RESOLN. OF 0.1-0.4PERCENT. THE TARGETS HAVE THICKNESSES OF 1.5 AND 3.3 MG-CM PRIME2 FOR E ENERGIES 150-900 AND 900-1800 DEV, RESP. ALTOGETHER, 47 LINES ARE TABULATED AND INTENSITIES ARE GIVEN WITH ERRORS OF 20-50PERCENT. AN INTERPRETATION OF THE LEVELS AT 696, 1315, 1510, 1560, 1520, 2295, 1792, 2093, 2369, 2866, 3027, AND 3126 KEV IS GIVEN. INTERNAL CONVERSION COEFFS. WERE DETD. FOR THE VARIOUS TRANSITIONS.

FACILTIY: INST. FIZ., RIGA, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC 539.3

EESORG, KH. KH., PROMET, P. KH., VIRKUS, KH. M., KULMET, R. YU.

"Stress Concentration Around a Rectangular Inclusion in a Homogeneous Elastic Medium Under a Plane Stress State"

V sb. Issled. po str-vu. Vyp. 11 (Studies on Construction. No. 11 -- Collection of Works), Tallin, 1970, pp 142-151 (from RZh-Mekhanika, No 9, Sep 71, Abstract No 9V44)

Translation: The stress distribution in a plate with a rectangular inclusion of another material under uniaxial compression was investigated for its application to the tensometric study of concrete structures with the aid of measuring plates applied to the material by the photoelasticity method. The results are compared with data obtained by the authors by an approximate analytical method. The coincidence was satisfactory. N. P. Fleyshman.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC: 621.317.783

PRONENKO, V. I., TURUNTSOV, V. V., SEDOV, V. I., SHISHKINA, M. F.

"Design and Manufacturing Technique for First-Class Master Thermistor Milli-wattmeter Converters"

Tr. metrol. in-tov SSSR (Works of Metrology Institutes of the USSR), 1972, vyp. 116(176), pp 135-139 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 6, Jun 72, Abstract No 6.32.1013)

Translation: The paper describes a new design for power converters (thermistor waveguide heads). The advantage of the proposed design is that the thermistor head is a direct load on the calorimetric unit, and therefore power is measured right at the thermistor head. Channels (for flow of the heat-transfer agent) are located on the surface of the thermistor head. Use of the device increases the speed of the system because of the reduced mass of the thermistor head. Development of a new power meter increases the precision of determining the coefficient of conversion of power pickups with waveguide input over a broad frequency band of 37-214 MHz. They can be used with their maximum attainable precision for certification on the initial calorimetric unit. The use of such converters will make first-class precision power meters available. One table, three illustrations.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

1/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--DIALKYLPHOSPHORUS COMPOUNDS. III. SYNTHESIS AND REACTIONS OF DIALKYLPHOSPHINIC ACID CHLORIDE -U-

AUTHOR-(03)-IVIN, S.Z., SHELAKOVA, I.D., PROMONENKOV, V.K.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(3), 561-2

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC SYNTHESIS, ORGANIC PHOSPHORUS COMPOUND, IMINE, TRIETHYLAMINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0869 STEP NO--UR/0079/70/040/003/0561/0562

CIRC ACCESSION NO--AP0124532

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

2/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0124532

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO 4.3 G ETHYLENIMINE, 10.1 G ET SUB3 N, AND 30 ML C SUB6 H SUB6 WAS ADDED SLOWLY 12.8 G ME SUB2 PSCL IN C SUB6 H SUB6 AT NEGATIVE5DEGREES TO GIVE, AFTER 2 HR AT 40-50DEGREES, 79PERCENT ME SUB2 PSR (R EQUALS AZIRIDINO), B SUB2 74-5DEGREES, D PRIME20 1.0827, N PRIME20 SUBD 1.5330; DI-ET ANALOG, PREPD. SIMILARLY, 70PERCENT, B SUB0.06 71-2DEGREES, 1.0406, 1.4700. ME SUB2 PSCL AND NAN SUB3 IN ME SUB2 CO IN 1 HR AT 60DEGREES GAVE 80PERCENT ME SUB2 P(S)N SUB3, M. 67DEGREES, WHICH (4.05 G) IN C SUB6 H SUB6 TREATED SLOWLY WITH 4.98 G P(OET) SUB3 REACTED WITH HEAT EVOLUTION ANDYIELDED N AT 50DEGREES; AFTER 2 HR IT GAVE 67PERCENT ME SUB2 P(S)N:P(OET) SUB3, B SUB0.008 100DEGREES, D PIME20 1.1100, N PRIME20 SUBD 1.4850; TRI,ISO,PR ANALOG, 75PERCENT, B SUB0.008 99-101DEGREES, 1.0511, 1.4710; ALSO PREPD. WAS ME SUB2 P(S)N:PME(OPR) SUB2, 80PERCENT, B SUB0.008 105DEGREES, 1.0592, 1.4930.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

JPRS 54767
22 Dec 1971

UDC: 617.51-001-07:616.831-092:612.013.7

DISTINCTIONS OF ENERGY METABOLISM IN THE BRAIN RELATED TO CEREBROCRANIAL TRAUMA

[Article by M.Sh. Promyslov, R.A. Tigranyan, Scientific Research Institute of Neurosurgery imeni N.N. Burdenko, USSR Academy of Medical Sciences, Moscow; Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, Russian, No 11, 1971, pp 28-35]

PROMYSLOV, M.Sh.

Molecular pathology implies knowledge about the substrate of a lesion. This could assure adequate and prompt therapy, since we are in a position to alter the molecular substrate and, by means of appropriate intervention, we can restore its normal balance, which in itself is tantamount to successful prevention and treatment of the pathology.

It is precisely from these positions that we undertook an investigation of the distinctions of brain metabolism in the presence of closed cerebrocranial trauma. It was important to find, in the total chain of impaired processes, the link that is specifically related to brain trauma.

We established experimentally that energy metabolism of the brain proper is this link (M.Sh. Promyslov and R.A. Tigranyan, 1964a).

In the presence of cerebrocranial trauma the brain experiences a shortage of energy. At the same time, no doubt supplying the brain with sufficient energy to perform its specific functions plays a vital role under various conditions of existence of the organism. Impaired supply of energy to the brain may be one of the causes of the serious disorders in function both of the central nervous system proper and of various organs and tissues. For this reason it is extremely important to investigate the effect of a neurological trauma on the brain's energy metabolism, to determine the quantitative and qualitative distinctions thereof and, concurrently, the mechanism of disturbances induced by traumatic injury of the brain, in order to establish the pathogenesis of this pathology. The possible regulation of impaired processes for the purpose of restoring physiological brain function is of definite interest to clinical practice.

The present work deals with experimental investigation of the effect of closed cerebrocranial trauma and energy metabolism of the brain and of the

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

1/2 013 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--KINETICS AND MECHANISM OF REACTIONS IN CONCENTRATED STRONG ACIDS. XXII. HYDROLYSIS OF 1,FORMYL,1,2,3,4,TETRAHYDROQUINALDINE IN AQUEOUS

AUTHOR--ZARAKHANI, N.G., PROMYSLOV, V.M., YUDIN, L.G., VINNIK, M.I.

COUNTRY OF INFO--USSR

P

SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 52-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL REACTION KINETICS, HYDROLYSIS, AQUEOUS SOLUTION, SULFURIC ACID, CHEMICAL REACTION MECHANISM, QUININE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1043 STEP NO--UR/0076/70/044/001/0052/0055

CIRC ACCESSION NO--AP0104441

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

2/2 013 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104441

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KINETICS OF HYDROLYSIS OF 1,FORMYL,1,2,3,4,TETRAHYDROQUINALDINE (I) TO 1,2,3,4,TETRAHYDROQUINALDINE WAS MEASURED SPECTROSCOPICALLY (LAMBDA EQUALS 240 NM) IN 0.99 TO 59.60 PERCENT H SUB2 SO SUB4 AT 25.0 PLUS OR MINUS 0.1DEGREE. THE REACTION IS IRREVERSIBLE AND 1ST ORDER IN I. DEPENDENCE OF K SUBEFF ON H SUB2 SO SUB4 CONCN. SHOWS A MAX. AT 24PERCENT IN ACCORD WITH THE DEPENDENCES OF CONCNS. OF H SUB3 O PRIME POSITIVE AND UNIONIZED FORM OF I. PK SUBBH PRIME POSITIVE OF I AT 25DEGREES IS MINUS 2.00 PLUS OR MINUS 0.02. E SUBAKT WAS DETD. FROM KINETIC MEASUREMENTS AT 49.1, 59.0, 68.4, 77.7, AND 87.4DEGREES (E SUBAKT, KCAL-MOL AND H SUB2 SO SUB4 CONCN. PERCENT ARE GIVEN): 18.7 PLUS OR MINUS 1.4, 0.99; 21.7 PLUS OR MINUS 1.5, 54.74; 21.7 PLUS OR MINUS 1.5, 59.60.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC: 621.385:530.145.6:62

SUMINOV, V. M., PROMYSLOV, Ye. V., SKVORCHEVSKIY, A. K., KUZIN, B. G.

"Effect Which Misalignment of the Mirrors in a Laser Cavity Has on the Accuracy of Geometric Parameters of Laser-Drilled Holes"

V sb. Obmen opytom v radioprom-sti (Experience Pooling in the Radio Industry --collection of works), vyp. 1, Moscow, 1971, pp 26-29 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D472)

Translation: The authors describe experimental studies carried out on specimens of Kh18N9T steel in which they determined the effect of cavity misalignment on the diameter and depth of laser-drilled holes and the change in weight of the metal removed during machining. It is shown that when the mirrors are misaligned, there are appreciable changes in the longitudinal and transverse shapes of finished holes. For all possible versions of mirror misalignment there is a change in the weight of the vaporized metal with an increase in the angle of misalignment. The amount of material removed during machining differs for all cases. Maximum hole parameters are observed with a certain displacement of the mirrors relative to the end surfaces of the active medium, rather than with perfect alignment. The most favorable case is that where the cavity mirrors are oriented in the same direction and shifted by the same angle. A. K.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

(2)

UDC 632.95

MANDEL'BAUM, Ya. A., ABRAMOVA, G. L., GOLEVLEVA, L. M., FEDOSEYENKO, L. G., ANDREYEVA, Ye. I., and PRONCHENKO, T. S.

"Fungicides"

USSR Author's Certificate No 254254, Filed 8 Jul 68, Published 13 Mar 72 (from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom (I, L-S), No 1(II), 1973, Abstract No 1N490P by T. A. Belyayeva)

Translation: Compounds of a general formula (RO)R'HNP(S)SR'' (I) (R_1 = C_1 - C_3-alkyl or chloralkyl, R' and R'' = C_1 - C_4-alkyl) are suggested for use as fungicides. They were tested on pure cultures of phytopathogenic fungi and gummosis bacteria. The LD_{50} for rice weevil of these compounds was determined. Compounds I are toxic for fungus mycelium, and compounds (EtO)PrHNP(S)SPr and (PrO)PrHNP(S)SPr (Ia) are effective against Verticillium cotton wilt and their increase the cotton yield 1.5 times.

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USSR

UDC 632.95

ANDREYEVA, YE. I., MEL'NIKOV, N. N., PRONCHENKO, T. S., SKALOZUBOVA, A. V., MATVEYEVA, G. M., OVSISHCHER, M. R., BEZUGLYY, S. F., and USMANOV, M. T.

"Phenothiuram Seed Disinfectant"

V sb. Khim. Sredstva zashchity rast. (Chemical Agents for Plant Protection -- collection of works), vyp 1, Moscow, 1970, pp 135-145 (RZh-Khimiya, No 11, Jun 72, Abstract No 11N429)

Translation: The combination disinfectant phenothiuram (40% tetramethylthiuram disulfide, 10% copper trichlorophenoxide, and 20% γ-hexachlorocyclohexane; heptachlor or some other organochlorine insecticide may be substituted for the last component) has been tested and is recommended for treating cotton seeds (10-12 kg/ton) and the seeds of legume grain crops (3-4 kg/ton). Phenothiuram may also be used to treat seed corn, tree crop seeds, and the planting material for flowers, shrubs and trees. Phenothiuram is moderately toxic and is recommended as a substitute for organomercury disinfectants.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC 632.952:633.11

PERESYPKIN, V. F., PADUN, V. I., and PRONCHENKO, T. S., Ukrainian Scientific Research Institute of Plant Protection and All Union Scientific Research Institute of Chemical Plant Protective Agents

"Activity of Novel Fungicides Against the Stimulant of Wheat Smut"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 11, No 10 (120), 1973, pp 44-45

Abstract: Under field conditions benzoxan and pentoxan were slightly less active than the standard TMTD and granozan as fungicides against wheat smut. There was no difference observed between the standards and test agents as far as seed germination and formation of productive stems was concerned.

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USSR

UDC 632.95

MEL'NIKOV, N. N., ANDREYEVA, YE. I., PRONCHENKO, T. S., SKALOZUBOVA, A. V., SHKURATOVA, G. N., KURGANOVA, L. B., YURKOVA, A. G., OBUKHOVA, V. I., and NOVIKOVA, R. G.

"Concerning Liquid Organomercury Seed Disinfectants"

V sb. Khim. sredstva zashchity rast. (Chemical Agents for Plant Protection -- collection of works), vyp 1, Moscow, 1970, pp 150-155 (From RZh-Khimiya, No 11, Jun 72, Abstract No 11N427)

Translation: From the results of hothouse and small-plot field tests of non-Soviet and experimental Soviet samples of liquid organomercury fungicides, as well as with consideration to non-Soviet research and practical use in such fungicides, the authors conclude that liquid preparations deserve attention as promising forms for use as seed disinfectants in Soviet agriculture.

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USSR UDC 632.95'

GRAPOV, A. F., MEL'NIKOV, N. N., ANDREYEVA, YE. I., RASVODOVSKAYA, L. V., PRONCHENKO, T. S., USMANOV, M. T., MIKHAYLOVA, O. B., SMIRNOVA, K. F., and ZBARSKIY, F. SH.

USSR AUthors' Certificate No 276572, Cl. Aol n 9/36, filed 13 Jan 69, published 11 Feb 72 (from RZh-Khimiya, No 20, 25 Oct 72, Abstract No 20N582 by T. A. Belyayeva)

Translation: In order to widen the assortment of effective fungicides for controlling cotton wilt, it is suggested that use as systemic fungicides be made of asymmetric diamides and amidohydrazides of alkylphosphonic and alkylthiophosphonic acids of the formula $R'R''N(R)P(X)(NH)_nR'''$ (I) (R and R' = alkyl; R'' = H or alkyl; R''' = unsubstituted or substituted phenyl; n = 1 or 2; X = O or S). I is obtained from amines or hydrazides and alkylphosphonic or alkylthiophosphonic acid chlorides. The preparations were tested under field conditions on naturally infected plants. Experimental results showed that, as compared with control, I possesses definite systemic activity, suppressing the development of cotton wilt. Data are presented on tests of I in comparison with phosbutyl.

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USSR UDC 632.95 6

VOLODKOVICH, S. D., ANDREYEVA, YE. I., GOLYSHIN, N. M., MOKOVA, V. I., KAPLAN, G. I., PRONCHENKO, T. S., USMANOV, M. G., ABELENTSEV, V. I., DVOYCHENKOVA, E. A., and SKAZKINA, T. P.

"Bromtan"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Protectants -- collection of works), vyp 1, Moscow, 1970, pp 116-129 (from RZh-Khimiya, No 13, 10 Jul 72, Abstract No 13N501 by T. A. Belyayeva)

Translation: The preparation bromtan ($BrCCl_2CHBrCH_2CH_2CH_2Cl$) (I) is being tested as a soil fungicide and antiseptic for nonmetallic materials. I is as effective as carbathion in the control of melon fusarial wilt. I in a concentration of 0.8 percent is equivalent to DNOC in an 0.6 percent concentration with respect to hibernating forms of the causative agent of apple scab and brown spot. I is active in the control of cotton root rot and wilt at a consumption rate of 100-100 kg/ha.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC 632.95

YUKHTIN, N. N., ANDREYEVA, YE. I., MEL'NIKOV, N. N., SKALOZUBOVA, A. V., PRONCHENKO, T. S., SHKURATOVA, G. N., YURKOVA, A. G., KURGANOV, L. B., NOVIKOVA, R. G., and OBUKHOVA, V. I.

"Phenylmercury and Hexylmercury"

V sb. Khim. sredstva zashchity rast. (CHemical Agents for Plant Protection -- collection of works), vup 1, Moscow 1970, pp 145-150 (from RZh-Khimiya, No 11, Jun 72, Abstract No 11N426)

Translation: Seed disinfectant dusts -- hexylmercury (1% EtHgCl, 18-22% hexachlorobenzene, and up to 20% γ -hexachlorocyclohexane) and phenylmercury (1% EtHgCl and 18-22% hexachlorobenzene) -- are officially authorized in the Soviet Union for use against the same plant diseases as those controlled by granosan. About half the EtHgCl expended when granosan is used is expended when phenylmercury and hexylmercury are used. Phenylmercury can be used against fusarium wilt and helminthosporiosis. The new disinfectants show promise as agents for controlling dwarf wheat infections and wheat kernel smut. The most promising signal dyes for the disinfected grain are Rhodamine C, methylene blue, acid blue-black and direct red 2C.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

ZHIDKOV, V. S., KUKUSH, V. D., PRONENKO, V. I., SAMOYLOVICH, A. I.

UDC 621.372.85

"Precision Liquid Short-Circuiting Plungers"

Radiotekhnika. Resp. mezhved. nauchno-tekhn. sb. (Radio Engineering. Republic Interdepartmental Scientific and Technical Collection), 1970, vyp. 14, pp 110-113 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4B175)

Translation: Results are presented from a study of mercury short-circuiting plungers in the centimeter and decimeter wave bands. There are 3 illustrations and a 2-entry bibliography.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC 621.317.77.3.088

AKHMADOV, A. A.-B., and PRONENKO, V. P.

"Error Analysis of Phase Indicator Devices With Repeated Sequential Conversion of Frequencies"

Khar'kov, Ukr. resp. nauch.-tekhn. konf., posvyashch. 50-letiyu metrol. sluzhby USSR, 1972 (Ukrainian Republic Scientific-Technological Conference, Dedicated to the 50th Anniversary of Metrological Services of the USSR, 1972) 1972, pp 145-146 (from Referativnyy Zhurnal -- Metrologiya i Izmeritel'naya Tekhnika, No 1, 1973, Abstract No 1.32.1200)

Translation: Repeated sequential conversion of frequencies with recovery of the frequency of the input signal makes it possible to construct a wide-range phase-shifter with an error not exceeding the value of the absolute error (using in it a one-frequency reconstructed measure of phase shift) more than that for delta phi = $lambda_1 lambda_2$ radians (where $lambda_1$ and $lambda_2$ are ccefficients of suppression of the second side frequency of the first and second range phase displacement RPD devices). Electronic, dynamoelectric and other wide-range modulaters may be effectively used as an RPD. Technically, it is relatively easy to realize an RPD with lambda equal to or greater than 45 revolutions and correspondingly delta phi approximately

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

AKHMADOV, A. A.-B., and PRONENKO, V. P., Ukr. resp. nauch.-tekhn. konf., posvyashch. 50-letiyu metrol. sluzhby USSR, 1972, pp 145-146

equal to 3.2×10^{-5} radians. On the basis of this range of phase shift the precision phase indicaters, two-phase generators and other phase indicating devices may be constructed. The repeated sequential conversion of frequencies with recovery of generator frequency makes it possible to transfer the phase difference, set in a wide frequency range, to a fixed heterodyne frequency, that is to realize a wide-range frequency converter with retention of the phase relationship of the output signals, the phase error of which, as in the previous case, does not exceed $lambda_1$ $lambda_2$ radians. This frequency converter, in combination with a precision phase indicator, operation on a fixed frequency, makes it possible to perform measurements in a wide range of frequencies with high accuracy and to exclude the heterodyne tuning during this operation.

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UNCLASSIFIED

SECTION III SO: SELECTED RESEARCH FACILITIES

PCS-89

SEPT 71

Name: Institute of Biophysics, Pushchino

Description:

(U) During this quarterly reporting period, 25 new articles were identified from the Institute of Biophysics, Pushchino. On the basis of these articles, it was possible to identify 32 new personalities with the institute. These personalities, the subjects of the articles, and the dates are given below:

All-biophysics/physiology

Aliyeva, S. A.	phosphorylation	1971 (34)
Apikayeva, G. F.	radiation effect	1970 (35)
Aripova, D. F.	radiation effect	1971 (36)
Azhipa, Ya. I.	hypoxia	1969 (37)
Bregadze, I. F.	radiation effect	1970 (38)
Busel, Ye. P.	luminescence	1970 (39)
Dmitriyeva, T. I.	radiation effect	1970 (39)
Dmitriyeva, V. A.	blood plasma	1969 (40)
Domareva, O. P.	radiation effect	1970 (39)
Dubrov, A. P.	biochemical analysis	1971 (41)
Gabelova, N. A.	muscle physiology	1971 (42)
Ganansi, Ye. E.	radiation effect	1970 (35)
Ivkova, M. N.	serum albumin	1971 (43)
Kasatkin, V. S.	phosphorylation	1971 (34)
Khokhlova, G. K.	muscle physiology	1971 (44)
Kislov, A. N.	salivary gland	1970 (45)
Klyagina, V. P.	oligonucleotide	1970 (46)
Korol, B. A.	radiation effect	1971 (44)
Kosheleva, G. N.	biochemical analysis	1971 (41)

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PROKEVICH, L. A.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

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(31)

Kuzmina, S. V.	tissue culture	1970[47]
Markovich, D. S.	lactate dehydrogenase	1971[48]
Medvedeva, I. F.	radiation effect	1971[44]
Peshkova, L. V.	phosphorylation	1971[49]
Pronevich, L. A.	antibiotic	1970[50]
Rodionova, M. A.	mitochondrion	1971[51]
Shchipakin, V. N.	phosphorylation	1971[49]
Skobeyev, Ye. M.	radiation/vibration	1970[52]
[illegible]	radiation effect	1970[35]
Tsvetkov, V. D.	blood plasma	1969[40]
Umrikhina, N. V.	lactate dehydrogenase	1971[48]
Vilenchik, M. M.	radiation effect	1970[53]
Zamyatnin, A. A.	muscle physiology	1971[42]

Dubrov and Kosheleva[41] are associated with the Laboratory of Cell Biophysics at the institute. Reference 52 above is of special interest since it presents an investigation of combined stresses, i.e., radiation and vibration. In addition to the above articles, five of the twenty-five[54-58] were authored by persons already identified with the Institute of Biophysics, Pushchino. Reference 55 associates the authors of the article, L. V. Slozhenikina, V. L. Migushina, and A. M. Kuzin, with the Department of Radiobiology at the institute.

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USSR

PRONEVICH, YU. A. UDC 621.314.212.004.1

"Organization of Maintenance of Transformers in the Moscow Cable Network"

V sb. Tekhn. progress v elektrosnabzh. gorodov (Technical Progress in Municipal Electric Power Supply — Collection of Works), Leningrad, Energiya Press, 1970, pp 46-49 (from RZh-Elektrotekhnika i Energetika, No 3, Mar 71, Abstract No 3Ye147)

Translation: The deficiencies of type TM and TS transformers are analyzed. An economic calculation is presented which demonstrates the expediency of eliminating small failures of the transformers at the installation site as compared to plant repairs. An experiment in centralized storage of transformer stocks is described. The problem of stabilizing oil by means of antioxidizing additives is discussed. It is proposed that norms § 38.3 of the Technical Operation Rules for oil used in transformers up to 630 kilovolt-amperes be changed.

- END -

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USSR

UDC 669.18.046.558

USHAKOV, S. T., CHERNYAKOV, V. A., VOINOV, S. G., KEYS, N. V., and PRONICHKIN, A. A., Chelyabinsk Metallurgical Plant and Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin

"Improving the Properties of Kh18N10T Steel From 100-ton Electric Furnaces by Refining the Steel in the Ladle with Liquid Synthetic Slag"

Moscow, Stal', No 3, Mar 73, pp 230-232

Abstract: Two variants of refining 100-ton melts of Kh18N10T stainless steel with liquid synthetic aluminaceous-lime slag were tested at the Chelyabinsk Metallurgical Plant: 1) Simulateneously with titanium alloying (in the form of 70% ferrotitanium on sponge titanium briquettes), and 2) After alloying, introduction of 30% or 70% ferrotitanium into the furance. The contents of O, N, S, and nonmetallic inclusions in the steel, the degree of Ti-adaption in the alloying process, and some technological properties of the metal were investigated. The experimental metal of the first variant possessed higher anticorrosive and plastic properties, and is characterized by lower S- and O-contents and lower nonmetallic inclusions. The introduction of the first variant into industrial production contributed to an increase of technological plasticity and to an improvement of the surface quality of slabs, tubes, and sheets. Three figures, one table, two bibliographic references.

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USSR

UDC 669.046.5

ROGULEV, B. A., SHMATKO, G. A., PRONICHKIN, A. A., GOLIKOV, Ye. S., NOVOZHILOV, N. G., BARMOTIN, I. P., SMIRNOV, Yu. D., and CHERNOV, G. A.

"Electrical Steel Degassing by Argon Blowing in 100-ton Ladles"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISiS) (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys), Izd-vo "Metallurgiya," No 61, 1970, pp 264-265

Translation of Abstract: Data are presented on the use of porous refractory inserts for argon blowing in 100-ton ladles. The results of an investigation on degassing of ShKh15 steel produced with refining by liquid synthetic slag are presented (hydrogen content at blowing decreases by 23% and that of oxygen by 55-65%). Attention is paid to increasing the refining effect of synthetic slag at argon blowing, resulting in a higher (up to 95%) degree of desulfurization; in a rise of metal-slag distribution coefficient (up to 164) with a reduction in slag consumption and production cost; and lowering of steel contamination. Plastic properties of the degassed metal are significantly higher than those of the nondegassed metal. 1 figure, 2 tables.

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USSR

UDC:669.046.558.7

PEGOV, V. G., ANISIMOV, M. Ye., SHIRER, G. B., ABRAMOVA, A. A., KOMEL'KOV, V. K., MOLCHANOVA, A. A., VOINOV, S. G., SHALIMOV, A. G., and PROMICHKIN, A.A.

"Influence of Deoxidation of Metal With Silicocalcium and Addition of Soda to Synthetic Slag on Contamination of Type ShKh15 Steel With Nonmetallic Inclusions"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of Works], No 75, Metallurgiya Press, 1970, pp 215-226

Translation: When type ShKh15 steel is made in 100-T electric furnaces with treatment by synthetic slag in the ladle, the addition of 2.5-3.0% calcinated soda allows the content of oxygen in the steel to be reduced by 25% and the contamination with sulfides, oxide, and globular inclusions to be significantly reduced. Deoxidation of ShKh15 steel with silicocalcium 2.0-2.5 kg/T with simultaneous processing with synthetic slag decreases the content of sulfides and oxides, but causes an increase in the content of globular inclusions in the steel. 3 tables; 5 biblio. refs.

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USSR

P

UDC 669.187.2

USHAKOV, S. T., TULIN, N. A., PRONICHKIN, A. A., and MEYS, N. V., Chelyabinsk Metallurgical Plant

"Stainless Steel Decarburization During Metling in a 100-Ton Electric Furnace"

Moscow, Stal', No 10, Oct 70, pp 907-909

Translation: In a 100-ton electric furnace the stable and high indicators of decarburization are attained at an oxygen pressure above 9 atm and an ultimate consumption of 30 m^3/hr for 1 t of steel. A further increase in the intensity of oxygen feed leads generally to a higher oxidation of chrome rather than carbon. The rate of chrome oxidation does not depend on the oxygen pressure and increases proportionally to the intensity of oxygen feed, while remaining at the same level over the entire period of blowing. Exhaustion of the regime of oxidation of the molten bath during melting of stainless steel makes it possible to obtain a ready metal with lower and more stable carbon content, to reduce the period of blowing, to reduce chrome oxidation, and to considerably increase the technological effectiveness of the process.

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1/2 030 UNCLASSIFIED

TITLE--H II REGIONS IN NGC 628, NGC 4254 AND NGC 5194 -U- PROCESSING DATE--04DEC70

AUTHOR-(02)-CHUVAEV, K., PRONIK, I.

COUNTRY OF INFO--USSR, SWITZERLAND

SOURCE--THE SPIRAL STRUCTURE OF OUR GALAXY; PROCEEDINGS OF THE SYMPOSIUM, UNIVERSITAT BASEL, BASEL, SWITZERLAND, AUGUST 29-SEPTEMBER 4, 1969,

DATE PUBLISHED--------70

SUBJECT AREAS--ASTRONOMY,ASTROPHYSICS, NAVIGATION

TOPIC TAGS--SPIRAL GALAXY, TELESCOPE, IMAGE CONVERTER

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DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605030/F02 STEP NO--SZ/0000/70/000/033/0083/0086

CIRC ACCESSION NO--AT0141873

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

2/2 030 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0141873

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS OF MULTICOLOR OBSERVATIONS OF GALAXIES BEING CARRIED OUT AT THE PRIME FOCUS OF THE 2.6 M SCHAJN TELESCOPE, USING AN IMAGE CONVERTER AND 6-9 COLOR FILTERS. THE OBSERVATIONS OF THE SC GALAXIES NGC 628, NGC 4254, AND NGC 5194 WERE CARRIED OUT IN 1965-1969. TWO OF THE GALAXIES ARE SINGLE, BUT NGC 5194 IS DOUBLE. THE ENERGY DISTRIBUTIONS FOR THE CENTRAL REGION AND FOR DOZENS OF BRIGHT PATCHES IN EACH GALAXY HAVE BEEN DETERMINED, AND THE RATIOS OF BRIGHTNESSES ARE TABULATED. FACILITY: KRYMSKAIA ASTROFIZICHESKAIA OBSERVATORIIZ, NAUCHNY, UKRAINIAN SSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC 613.644+612.014.45

ANDREYEVA-GALANINA, Ye. Ts., MALYSHEV, E. N., PRONIN, A. P., and SKORODUMOV, G. Ye., Leningrad Sanitary-Hygiene Medical Institute and Leningrad Institute of Railroad Transport Engineers"

"The Effect of Subsonics on the Human Organism"

Moscow, Gigiyena i Sanitariya, No 11, 1970, pp 65-69

Abstract: The noise spectrum was recorded for the simultaneous operation of VP-20V, I-18, and V 10/8 compressors, measured at the work area of one of the Oktyabrskaya Railway compressor stations, for the frequency range 6.3-3,200 Hz. The overall sound pressure measured by the Leningrad Institute's new meter at the work area of the shift foreman was 113 db, but the value measured by the standard III-63 noise meter was only 98 db. The maximum peak to the left of 50 Hz (12.5 Hz) was 111 db, and that to the right of 50 Hz was 96 db (125 Hz). Thus, the greatest sound pressure levels correspond to a frequency of 12.5 Hz. Analysis of the spectrum showed that the principal sources of compressor noise in the subsonic range were the stage I and II compressors (peaks at frequencies of 8, 12.5 and 25, and in the audible frequencies -- harmonics of the fundamental frequencies of 50 and 125 Hz). Compressor station workers questioned

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USSR

ANDREYEVA-GALANINA, Ye. Ts., et al, Gigiyena i Sanitariya, No 11, 1970, pp 65-69

complained of fatigue, headaches, poor sleep habits, and general debility. However, there are no grounds to relate these complaints solely to the subsonic frequency range. The most general physiological effects observed upon exposure of the human organism to subsonics are shifts in respiratory and cardiac rhythms, disturbances of the functioning of the central nervous system, etc.

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USSR

UDC 621.371.332.3:621.391.883.6

VOLKOVA, G. A., YUDITSKIY, A. I., PRONIN, A. S.

"A Multifilter Detection Circuit Using a Phase Autocorrelator"

Tr. Mosk. aviats. in-ta (Works of Moscow Aviation Institute), 1971, vyp. 207, pp 209-216 (from RZh-Radiotekhnika, No 12, Dec 71, Abstract No 12G21)

Translation: The paper gives an analysis of the operation of a phase autocorrelator when the frequency of the received signal does not coincide with that of the filter tuning. A relation is found for the probability of correct detection as a function of the difference between the signal frequency and the central matching frequency of the filter. This relation is used as a basis to show that a multifilter system can be constructed with the use of a phase autocorrelator. Three illustrations, bibliography of four titles. Resumé.

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USSR

UDC 539.4

KUDRYASHOV, V. G., PRONIN, A. T., and VOROB'YEV, N. A., All-Union Institute of Light Alloys

"Comparison of the Ductility of Rupture of Titanium Alloys"

Kiev, Problemy Prochnosti, No 2, Feb 74, pp 96-99

Abstract: The ductility of rupture of titanium alloys was determined on the basis of the results of fatigue testing of specimens. The essence of the method used is that a specimen (cylindrical or flat) is fatigue tested to rupture, then the rupture surface is used to determine the length (for the flat specimen) and the depth (for the cylindrical specimen) of the fatigue crack (size of a fatigue spot). Tests were performed at room temperature and elevated temperatures and load-bearing ability (residual strength when cracks are present) was determined. The dimensions of permissible defects (cracks) are calculated for working stresses amounting to 50-100% of the yield point of the material.

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USSR

UDC 539.4

VOROB'YEV, N. A., and PRONIN, A. T., Moscow, VILS [expansion unavailable, possibly All-Union Institute of Light Alloys]

"Interpretation of the Effect of Structure on the Mechanical Properties of VTZ-1 Alloy"

Kiev, Problemy Prochnosti, No 11, Nov 73, pp 87-90

Abstract: It has been noted earlier by the author that changes of the strength and yield limits of alloys in relation to the structure should be analyzed by means of the Petch [transliterated] equation $\sigma_T = \sigma_0 + k_y (\text{grain size})^{\frac{1}{2}}$, in which the grain size in a laminate structure is the colony size with identical orientation of the plates within the former β-grain, and in a uniaxial structure the size of the α-grains is d. On the basis of the Petch equation an interpretation is given of the relationship of the structure of rolled rods of VTZ-1 titanium alloy with a laminate structure and an equiaxial structure with the mechanical properties of tensile strength, yield, long-term strength, and fatigue. It is shown that the difference in the properties is connected with the different value of parameters σ_0 and k_y in the laminate structure and the equiaxial structure. Four figures, ten references.

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USSR

UDC 539.5

PRONIN, A. T., VOROB'EV, N. A., and MARKOVETS, M. P., Moscow

"Influence of Structure of VT3-1 and VT-18 Alloys on Fatigue Resistance With Asymmetrical Loading Cycle"

Kiev, Problemy Prochnosti, No 4, Apr 72, pp 105-107.

Abstract: Results are presented from fatigue testing of titanium alloys at normal and elevated temperatures with asymmetrical and symmetrical loading. The influence of structure produced by various rolling technologies of bars on cyclical strength of the alloys is determined. This influence differs, depending on the loading conditions. When loading is performed with a pulsating cycle (extension R=0) at room temperature, bars of VT3-1 and VT-18 Alloys with fine-grained equiaxial structure have greater cyclical strength than metals with plate structure. At 450°C with asymmetrical extension with mean stress σ_m=30 kg/mm^2, the fine-grained equiaxial and plate structures are equal: for VT-18 alloy, the plate structure provides a higher resistance to fatigue rupture at 600°C and σ_m=25.0 kg/mm^2.

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USSR Measuring, Testing, Calibrating

KOVALENKO, B. I., KUCHEROV, L. M., and PRONIN, B. N.

"Bench for Comprehensive Testing of Underwater Lifting and Lowering Device for Conducting Oceanographic and Ichthyologic Research"

USSR Authors' Certificate No 356502, Cl. G 01m 1/04, filed 10 Nov 70, published 23 Oct 72 (from Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 32, 1972, p 114)

Abstract: The bench contains a mock-up container with clamps, suspended on the arm of a vertical beam, a cargo winch and a loading winch with barrels and pull ropes. In order to make the bench tests approximate marine tests as much as possible, the barrel of the loading winch is supplied with a constant-torque friction clutch with a motor and is made in the form of a truncated cone, and the mock-up container is made with a center opening, through which is passed the pull rope of the cargo winch, which is connected by a quick-release coupling to the pull rope of the loading winch.

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USSR

PRONIN, B. V. and RYZHIKOV, I. V.

UDC: 621.382.2

"Investigating Tunnel Puncture and Photoelectrical Characteristics in $Al_xGa_{1-x}As$ and $GaAs_{1-x}P_x$ p-n Junctions With Inverse Biasing"

Leningrad, Fizika i tekhnika poluprovodnikov, No 8, 1972, pp 1432-1437

Abstract: This paper sets out to solve the problem of the current and photocurrent in $Al_xGa_{1-x}As$ and $GaAs_{1-x}P_x$ p-n junctions as functions of the inverse voltage, and to determine the nature of electrical puncture. Estimates are also made of the diffusion length and the lifetime of the minority current carriers in the solid solutions investigated. Three types of specimens were used in these experiments: p-n junctions obtained by epitaxial growth of p- and n-layers of $Al_xGa_{1-x}As$; junctions obtained by the diffusion of zinc into n-$Al_xGa_{1-x}As$ epitaxial films; junctions formed by the diffusion of zinc into epitaxial films of n-$GaAs_{1-x}P_x$. A table is given of theoretical and experimental values obtained for α and γ of $Al_xGa_{1-x}As$ and $GaAs_{1-x}P_x$ p-n junctions, and it is noted that the volt-ampere characteristic measurements were conducted by

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USSR

PRONIN, B. V., et al, Fizika i tekhnika poluprovodnikov, No 8, 1972, pp 1432-1437

the ordinary method while the photocurrent characteristics were obtained by the method of an earlier paper (J. L. Moll, et al, Sol. St. Electron., 6, 1963, p 147). The authors offer their thanks to A. S. Zhikhareva for preparing the specimens, N. M. Salomakhina for conducting the diffusion process, S. G. Vlaskina and N. A. Drozdova for the photolithography and mounting the ohmic contacts, and N. V. Shcherbakov for his assistance with the experiments.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC /528.77:528.42/:/535.247:681.3/

SOKOLOV, V. S., PRONIN, B. V., and PRONINA, G. Ye.

"Method of Determining the Estimate of the Correlation Function of a Homogeneous Random Field of Optical Densities"

Moscow, Geodeziya i Kartografiya, No 8, Aug 72, pp 51-59

Abstract: A method developed by the authors of determining the optimum correlation function of the representation of areal topographic objects on aerial photographs is discussed, and a facility is described for automatically obtaining the selection and determination of the estimate of the correlation function. By this method, the photographic representation of objects of arbitrary configuration can be analyzed. Experimental results confirm the effectiveness of the method of random pair selection for obtaining the estimate of the correlation function of a heterogeneous random field of optical densities. Seven illustr., one table, two formulas, six biblio. refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC 621.382.95:535.371

RYZHIKOV, I.V., BUNYAYEV, V.A., FOMENKO, G.P., VORONIN, V.G., KMITA, T.G., PRONIN, B.V., KHOKHLACHEV, K.I., KRUGLOV, I.I., MIKHAYLOV, V.V., TENYAKOV, YE.I

"Voltampere And Lumenampere Characteristics Of Silicon Carbide Light Diodes With High Current Density"

V sb. III Vses. konferentsiya po poluprovodnikov. karbidy kremniya (III All-Union Conference On Semiconductors Of Silicon Carbide), 1968, Moscow, 1970, pp 116-126 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1B301)

Translation: Light diodes were investigated, obtained by diffusion of Al and B into n-SiC (6H) at 2000° C (for 40 minutes) and by diffusion of B alone for 10 minutes. The resistivity of the source material is 0.01--0.3 ohm.cm. The circuit for measurements, the experimental results and their consideration are presented. It is established that the voltampere characteristics with a current density 1-5000 a/cm^2 are described by the expression $I = AV^n$ ($n = 1.6$--1.2), and the lumenampere by $L = I^n$ ($n = 0.55$--0.7). Such dependences are the consequence of a radiative and nonradiative recombination of the carriers in all the regions of the p-n-n$^+$ diode. A deviation is observed from the theory connected with the capture of majority carriers by fine centers of attachment. 7 ill. 10 ref. N.S.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC 621.315.593:535.376

VORONIN, V.G., GLUKHAREV, A.A., PAVLICHENKO, V.I., PRONIN, B.V., RYZHIKOV, I.V., SULEYMANOV, YU.M.

"Effect Of Adhesion Centers On Electroluminescence In α-SiC(6H)"

Elektron. tekhnika. Nauchno-tekhn. sb. Poluprovdn. pribory (Electronic Technology. Scientific-Technical Collection. Semiconductor Devices), 1970, No 3(53), pp 24-30 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12B282)

Translation: The relaxation was investigated of electroluminescence in silicon carbide p-n junctions constructed on silicon carbide (6H) crystals of a modified version of different resistivity. On the basis of the energy levels of the traps obtained (0.06-0.08; 0.13-0.14;0.18-0.20;0.22-0.25 e.v.) it is assumed that three levels of nitrogen emerge as adhesion centers in silicon carbide α-SiC(6H), and also one level of unknown donor, which under stable conditions in material of high resistivity is not filled by electrons. 6 ill. 26 ref. Summary.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR UDC 619.611.9-022.6+636.1+636.2+636.4+636.52/.58

ONUFRIYEV, V. P.; DUDNIKOV, A. I.; MURAVYEV, V. K.; SHVETSOV, Yu. F.; CHUNAYEV, Yu. V.; KRAVCHENKO, V. M.; ZAKHAROV, V. M.; PRONIN, I. A.; NIKITIN, A. Y.

"Diatelic Immunization of Cows with Foot-and-Mouth Disease and Prospects for Obtaining Immune Milk"

Vladimir, V sb. Yashchur. T. 1 (Foot-and-Mouth Disease, Vol 1 -- Collection of Works), 1970, pp 160-172 (from RZh-58. Zhivotnovodstvo i Veterinariya, No 4, Apr 71, Abstract No 4.58.573)

Translation: Diatelic immunization of cows with foot-and-mouth disease antibodies provides lactoserum and immunolactone with a high concentration of foot-and-mouth disease antibodies. The foot-and-mouth disease immunolactone has pronounced preventive properties in research with baby mice, guinea pigs, bull calves, and suckling pigs. Polyvalent foot-and-mouth disease immunolactone has a more pronounced virus-neutralizing activity with respect to heterologous strains of foot-and-mouth disease virus

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

ONUFRIYEV, V. P., et al, V sb, Yashchur. T. 1, 1970, pp 160-172

than the monovalent one. The high specific activity of the foot-and-mouth disease lactone, obtained under biological production conditions by immunization of cows with inactivated foot-and-mouth disease virus, indicates a promising use of the diatelic immunization method under industrial conditions.

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USSR

UDC 546.791'621'275-145.03

VASHMAN, A. A., VEREESHCHAGINA, T. Ya., and PRONIN, I. S.

"Nuclear Magnetic Relaxation of ^{31}P and Ligand Exchange in Organophosphorus Compound Solutions of Uranyl Nitrate"

Moscow, Zhurnal Neorganicheskoy Khimii, Vol 17, No 2, Feb 72, pp 471-476

Abstract: By applying the spin echo method, the temperature relations of the time of nuclear magnetic spin-spin relaxation of ^{31}P were determined for solutions of uranyl nitrate in tributyl phosphate (I), tributyl phosphinate [sic] (II), and tributylphosphine oxide (III). On the basis of the data obtained, the lifetime of ligands in the solvate shells of the complexes that formed, the solvate shifts, and the parameters of activation in the solutions were calculated. With decreasing electronegativity of substituents at P in the order I, II, III in the organophosphorus compounds, the entropy of activation of the complex formed with uranyl increased from -28.2 to -23.8 cal/mole. degree, the activation energy of molecular motion in the solvent increased from 5.8 to 7.0 kcal/mole, and the extraction capacity of the latter rose. H_2O and HNO_3 affected the stability of the uranyl organophosphorus complex by reacting with the organophosphorus ligands in exchange reactions.

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1/2 020 UNCLASSIFIED

TITLE--A RARE CASE OF POST TRAUMATIC LACRIMATION -U- PROCESSING DATE--30OCT70

AUTHOR--PRONIN, M.P.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK OFTAL'MOLOGII, 1970, NR 3, PP 86-87

DATE PUBLISHED--------70

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CIRC ACCESSION NO--AP0129367

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CIRC ACCESSION NO--AP0129367 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A CASE OF LACRIMATION AFTER AN INJURY SECNCNDARY TO AMPUTATION OF THE LACRIMAL SAC BY A BIG GLASS FOREIGN BODY, WHICH, HAVING PIERCED THE LACRIMAL BONE, PENETRATED THE ADJOINING PORTION OF THE ETHMOID BONE, IS REPORTED. THE DIFFICULTY OF ROENTGENOLOGICAL DIAGNOSIS OF THE GLASS BECAUSE OF ITS LOW CONTRASTNEGO AND SUPERPOSITION OF SHADOWS FROM THE SURROUNDING BONES IS POINTED OUT. IN THE CASE UNDER DISCUSSION THE CONTOURS OF THE GLASS FRAGMENTS WERE MISTAKEN FOR A TRAUMATIC DESTRUCTION OF THE FRONTAL PROCESS IN MAXILLA. THE GLASS FRAGMENT WAS DETECTED FORTUITOUSLY AND REMOVED BY WAY OF CANALICULORHI NOSTOMY. FACILITY: GLAZNOYE OTDELENIYE OBLASTNOY KLINICHESKOY BOL'NITSY NR 1, KEMEROVA.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

Pathology

USSR

UDC 616.28-001.34-091

PRONIN, L. S., MUDRETSOV, N. I., YAKIMETS, I. M., MOROZOV, V. N., Candidates of Medical Sciences, BUGROV, V. V., and NEVEROVA, G. M., Candidates of Technical Sciences

"Pathomorphology of Trauma of the Auditory Analysor After Single Exposure to Pulsed Noise"

Moscow, Vestnik Otorinolaringologii, No 1, Jan/Feb 72, pp 37-43

Abstract: After a single 1-second exposure to high intensity (155-173 db) sound impulses of a sinusoidal form and a frequency of 10-2000 hz, guinea pigs suffer partial or complete loss of hearing due to mechanical destruction or necrosis of the organ of Corti. Pathological processes terminate within 3 days. Twelve days after exposure to the less traumatic low-frequency waves, the organ of Corti recovers, with vacuolization. Medium frequency sounds cause some damage to the spiral ganglion, and high frequency sounds induce severe, irreversible destruction of the organ of Corti. Middle ear injury is insignificant, and cortical centers of hearing remain intact.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

AP9053088

UR 0289

PRIMARY SOURCE: Izvestiya Sibirskogo Otdeleniya, AN SSSR, Seriya Khimicheskikh Nauk, Nr 12(162), Nr 5, pp 148-151

V. G. Torgov, V. N. Andrievsky, E. N. Gil'bert, I. L. Kotlyarevsky, V. A. Mikhailov, A. V. Nikolaev, V. A. Pronin, D. D. Trozenko

THE EXTRACTION OF Pd AND Pt(IV) FROM NITRIC, HYDROCHLORIC AND SULPHURIC ACID SOLUTIONS BY ORGANIC SULFIDES

The extraction of tracer amounts of Pd and Pt(IV) from nitric, hydrochloric and sulphuric acid solutions by 0,5 M solution of organic sulfides (R_2S where $R=C_4H_9$---C_8H_{17}, C_4H_8 and thiophane) in benzene has been studied. The dialkylsulfide extraction can be used in separation Pd from Pt (IV) from nitric and hydrochloric acid solutions and for simultaneous extraction Pd and Pt from sulphuric acid solutions.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

KUBAREV, A. V., PRONIN, V. R. UDC: 621.375.82

"Basic Trends of Laser Emission Dosimetry and Requirements for Meters"

Metrologiya, 1973, No 3, pp 45-47 (from RZh-Fizika, No 8, Aug 73, abstract No 8D1175 by S. F. Sh.)

Translation: The authors discuss the characteristics of laser emission which determine the danger of its effect on the human organism as a function of the properties of exposed biological tissues and the conditions of exposure. Possible methods of measuring these characteristics are indicated. Bibliography of 9 titles.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC 621.378.325:658.382.3

PRONIN, V. R., VYSOKOSOV, Ye. P., NESTERENKO, M. T., LAZAREV, Yu. I.

"Recommendations for Setting up Temporary Sanitary Rules for Working With Lasers"

Moscow, Kvantovaya Elektronika, No 2, 1971, pp 87-91

Abstract: The authors consider recommendations for setting up sanitary rules in working with lasers. The recommendations are based on analyzing current Soviet and non-Soviet data in the literature on problems of evaluating the biological effect, levels of threshold action and safe levels of laser emission from studies with consideration to the optical and physiological properties of the eye. Requirements for production areas where quantum electronic devices are located are also considered. One table, bibliography of 25 titles.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR UDC: 531.55:521.1

BAUZE, V.-R. E., VITYUTSKIKH, V. T., ZAVADSKIY, V. M., NIKULIN, A. M., PRONIN, Yu. S.

"On the Problem of Optimum Control of Angular Motions of a Rotating System of the Dumbbell Type"

Tr. 4-kh chteniy, posvyashch. razrabotke nauchn. nasledi'ya i razvitiyu idey K. E. Tsiolkovskogo, 1969, Sekts. "Mekh. kosmich. poleta" (Works of the Fourth Lecture Series Dedicated to Elaboration of the Scientific Heritage and Development of the Ideas of K. E. Tsiolkovskiy, 1969, Section on the Mechanics of Space Flight), Moscow, 1970, pp 99-113 (from RZh--Mekhanika, No 4, Apr 71, Abstract No 4A112)

Translation: The authors consider the motion of a rotating dumbell-shaped space station subjected to small controlling moments whose time dependence is predetermined. As a result of integrating the system of equations of motion, which is possible after a considerable number of approximating simplifications, the problem of variation in the plane of rotation is solved. S. Ya. Stepanov.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC /528.77:528.42/:/535.247:681.3/

SOKOLOV, V. S., PRONIN, B. V., and PRONINA, G. Ye.

"Method of Determining the Estimate of the Correlation Function of a Homogeneous Random Field of Optical Densities"

Moscow, Geodeziya i Kartografiya, No 8, Aug 72, pp 51-59

Abstract: A method developed by the authors of determining the optimum correlation function of the representation of areal topographic objects on aerial photographs is discussed, and a facility is described for automatically obtaining the selection and determination of the estimate of the correlation function. By this method, the photographic representation of objects of arbitrary configuration can be analyzed. Experimental results confirm the effectiveness of the method of random pair selection for obtaining the estimate of the correlation function of a heterogeneous random field of optical densities. Seven illustr., one table, two formulas, six biblio. refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC 669.296.5.293.018.5.537.312.62.669.98

RABIN'KIN, A. G., KLISHANOVA, L. A., PRONINA, L. N.

"The Influence of High-Pressure Working on Phase Composition and Superconducting Properties of Zirconium-Niobium Alloys"

Probl. Sverkhprovodyashch. Materialov [Problems of Superconducting Materials -- Collection of Works], Moscow, Nauka Press, 1970, pp. 141-147. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 I792 by the authors).

Translation: Results are presented from a study of the transition temperatures T_c, critical fields and phase composition of alloys of Zr with 2-40 at.% Nb after treatment by high hydrostatic pressure (35-65 kbar). As is the case for pure Zr, the application of high pressure results in the formation of an ω phase in alloys with 2-30 at.% Nb whereas during hardening the ω phase is fixed only in alloys with 7-10 at.%.Nb. The high-pressure ω phase is retained after removal of the pressure in the specimens, its quantity increasing significantly in alloys with 7-10 at.% Nb. Alloying of Zr with niobium decreases the pressure at which the ω phase is developed. In all cases the formation of the high-pressure ω phase in the alloys or an increase in its quantity causes a reduction in T_c, an expansion of the temperature interval over which the transition occurs, and a decrease in the value of H_{c2}. 1 fig; 1 table; 9 biblio refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

UDC: 537.312.62

RABIN'KIN, A. G., KLISHANOVA, L. A., PRONINA, L. N.

"Concerning the Effect of High-Pressure Treatment on the Phase Composition and Superconducting Properties of Zirconium-Niobium Alloys"

V sb. Probl. sverkhprovodyashch. materialov (Problems of Superconducting Materials--collection of works), Moscow, "Nauka", 1970, pp 141-147 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D551)

Translation: The paper presents the results of a study of the temperatures of transition to the superconducting state, critical fields and phase composition of alloys of zirconium with 2-40 atomic percent niobium after they have been subjected to high hydrostatic pressure treatment (35-65 kbar). It is found that just as in the case of pure zirconium, the application of high pressure leads to the formation of an ω-phase in alloys with 2-30 atomic percent niobium although the ω-phase is fixed by quenching only in alloys with 7-10 atomic percent niobium. The resultant high-pressure ω-phase is retained in the specimens after pressure relief, the quantity of ω-phase increasing considerably in alloys with 7-10 atomic percent niobium. Alloying of zirconium with niobium reduces the pressure at which the ω-phase arises as compared with pure niobium. In all cases, the formation of high-pressure ω-phase in the alloys or a reduction in its quantity lowers the T_k, widens the temperature range in which a transition to the superconducting state taken place, and reduces H_{k2}. One illustration, one table, bibliography of nine titles. Authors' abstract.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR

RABIN'KIN, A. G., KLISHANOVA, L. A., and PRONINA, L. N.

UDC 537.312.62(539.893)

"Influence of High Pressure Treatment on Phase Composition and Superconducting Properties of Zirconium-Niobium Alloys"

Problemy Sverkhprovodyashchikh Materialov [Problems of Superconducting Materials — Collection of Works], Moscow, Nauka Press, 1970, pp 141-147

Translation: Results are presented from a study of the transition temperature, critical fields, and phase composition of alloys of zirconium with 2-40 at.% Nb after they are subjected to high hydrostatic pressure (35-65 kbar).

It is demonstrated, that, as for pure Zr, the application of high pressure results in formation of an ω phase in the alloys with 2-30 at.% Nb, whereas annealing fixes the ω phase only in alloys with 7-10 at.% Nb. The high pressure ω phase formed is retained in the specimens after pressure removal, its quantity being significantly increased in alloys with 7-10 at.% Nb. Alloying of Zr with niobium decreases the pressure at which the ω phase develops in comparison to pure Zr. In all cases, the formation of the high pressure ω phase or the increase in its quantity causes a reduction in T_c, an expansion of the temperature interval over which the transition to the superconducting state occurs, and a decrease in the value of H_{c2}.

1 figure; 1 table; 9 biblio. refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

UNCLASSIFIED

TITLE--EXPERIMENTAL AND THEORETICAL STUDY OF THE ABSOLUTE INTENSITIES OF BANDS IN THE TETRAHYDROFURAN INFRARED SPECTRUM -U-

PROCESSING DATE--23OCT70

AUTHOR-(04)-YEVSEYEVA, L.A., FINKEL, A.G., SVERDLOV, L.M., PRONINA, L.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(2), 301-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--IR SPECTRUM, FURAN, CALCULATION, CHEMICAL PURITY, VIBRATION FREQUENCY, DEUTERIUM COMPOUND, ELECTROOPTIC EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1244

CIRC ACCESSION NO--AP0116706

STEP NO--UR/0368/70/012/002/0301/0305

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

2/2 036 UNCLASSIFIED

CIRC ACCESSION NO--AP0116706 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ABS. INTENSITIES OF BANDS IN THE IR SPECTRUM OF TETRAHYDROFURAN (I) WERE CALCD. THEORETICALLY AND MEASURED EXPTL. THE PURITY OF I WAS SIMILAR TO 99PERCENT. BY USING THE DATA, A SYSTEM OF ELECTROOPTICAL PARAMETERS OF I AS WELL AS VIBRATION COORDINATES ARE PRESENTED. EXPTL. AND CALCD. FREQUENCIES AND CALCD. INTENSITIES FOR DEUTERATED I ARE ALSO GIVEN.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

1/2 011 UNCLASSIFIED

TITLE--EXPERIMENTAL AND THEORETICAL STUDY OF THE ABSOLUTE INTENSITIES OF INFRARED BANDS FOR CYCLOPENTADIENE -U-

PROCESSING DATE--11SEP70

AUTHOR--YEVSEYEVA, L.A., FINKEL, A.G., SVERDLOV, L.M., PRONINA, L.V.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., FIZ. 1970, 13(1), 42-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ABSORPTION BAND SPECTRUM, CYCLIC GROUP, DIENE, CONJUGATE BOND SYSTEM, BUTADIENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0173

STEP NO--UR/0139/70/013/001/0042/0046

CIRC ACCESSION NO--AT0105249

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

UNCLASSIFIED PROCESSING DATE--11SEP70

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CIRC ACCESSION NO--AT0105249

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE VALUES OF INTEGRATED INTENSITIES OF THE IR ABSORPTION BANDS IN THE SPECTRA OF CYCLOPENTADIENE (I) WERE CALCD. BY MEANS OF ELECTROOPTICAL PARAMETERS; A GOOD AGREEMENT WITH EXPTL. VALUES WAS OBTAINED. POLAR PROPERTIES OF THE CH BONDS, NEIGHBORING THE C:C BOND, CHANGE LITTLE DURING THE TRANSITION FROM SIMPLE OLEFIN MOLS. TO THOSE POSSESSING CONJUGATE C:C BONDS EITHER OF THE 1,3,BUTADIENE OR I AND C SUB6 H SUB6 TYPES. OWING TO THE EFFECT OF HETEROATOM, THE DMUCH-DQCH VALUES CHANGE CONSIDERABLY AND THE STRETCHING BAND INTENSITIES DECREASE WHILE THE DIPOLE MOMENT OF THE CH BONDS AND BAND INTENSITIES OF THE OUT OF PLANE VIBRATIONS CHANGE LITTLE IN THE SERIES I, THIOPHENE, AND FURAN. THE CH BOND PROPERTIES OF THE CH SUB2 GROUPS IN I DIFFER SOMEWHAT FROM THOSE OF BOTH THE CH SUB2 AND :CH SUB2 GROUPS IN SATD. AND UNSATD. COMPDS., RESP.; IT IS ATTRIBUTED TO THE EFFECT OF THE C:C BONDS. QUASI AROMATIC CHARACTER OF THE RING CAUSES INTENSITY DECREASE OF THE I V(C:C) BOND, IN COMPARISON WITH 1,3, BUTADIENE.

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USSR

MURAVYEV, V. K., et al, V sb. Yashchur, 1970, pp 74-75

administration of the vaccine with a saponin dose of 5 and 10 mg to 1-month and 3-month-old calves led to a more significant increase in the VNA titer than in 12-month-old bull calves and adult animals. The local reaction to the introduction of saponin-containing aluminum hydroxide vaccine was less pronounced in calves than in adult animals.

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USSR UDC 619:616.9-022+636.1+636.2+636.4+636.52/53

MURAVYEV, V. K.; KHUKHOROV, V. M.; SHORSHNEV, V. I.; PRONINA, N. A.; SMIRNOV, V. I.; ONUFRIYEV, V. P.

"Immunological Reactivity of Cattle Treated With Saponin Foot-and-Mouth Disease Vaccine at Different Ages"

Vladimir, V sb. Yashchur (Foot-and-Mouth Disease -- Collection of Works), 1970, pp 74-75 (from RZh-58. Zhivotnovodstvo i Veterinariya, No 4, Apr 71, Abstract No 4.58.574, by E. Sorvachev)

Translation: The dynamics of formation of virus-neutralizing antibodies (VNA) was studied in cattle aged 1-, 3-, 6-, and 12-months and older, 7, 14, 21, 30, 60, and 90 days after vaccination with aluminum hydroxide vaccine -- a formol vaccine from lapinized A_{22} virus of foot-and-mouth disease with various doses of saponin. Animals of each age group were vaccinated with 10 DV_{50} in doses of 4-3 ml (the immunizing dose was determined on guinea pigs), containing saponin in amounts of 2.5, 5, and 10 mg. The VNA titers in the sera of animals were determined on baby mice given 10^3 LD_{50} of the virus. It was found that

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Acc. Nr: AP0050806 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: 4R 0339

102071c Visible and actual pH and pOH of juice-sirup in a concentrate. Pronina, V. A.; Ivanov, S. Z. (Voronezh. Tekhnol. Inst., Voronezh, USSR). *Sakh. Prom.* 1970, 44(1), 23-5 (Russ). Samples were drawn from all stages of evaporators in two factories. Reducing sugars, amino N, and color were detd., as were pH at 20 and at 95°. pH at the operating temp. was calcd. The lower pH at the higher temp. caused a considerable increase in amt. of reducing sugars. Olaf Thomsen

REEL/FRAME
19810808

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530007-0

USSR UDC 547.821.792'759.32:542.97

YAKHONTOV, L. N., SUVOROV, N. N., KANTEROV, V. YA., PODKHALYUZINA, N. YA., PRONINA, YE. V., STAROSTENKO, N. YE., and SHKIL'KOVA, V. N., All-Union Research Institute of Chemical Pharmaceutics imeni S. Ordzhonikidze, and the Moscow Institute of Chemical Engineering imeni D. I. Mendeleyev

"The Heterogenous Fischer Catalytic Reaction. IV. Catalytic Synthesis of 7-Azaindole and 2-Methyl-7-azaindole in the Presence of γ-Al_2O_3"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 5, 1972, pp 656-658

Abstract: This is the first report of the synthesis of 7-azaindole (I) and 2-methyl-7-azaindole (II) by cyclization, respectively, of acetaldehyde pyridyl-2-hydrazone (III) or acetone pyridyl-2-hydrazone (IV) over γ-Al_2O_3 or γ-Al_2O_3 (2.6% F) at high temperatures. Both reactions, in addition to I or II, also yielded 2-amidopyridine and 3-methyl-s-triazole[3,4-a]-pyridine. Prior to the experiments the catalysts were activated by exposure to a flow of dry air for 6 hr. at 600°C for γ-Al_2O_3 and at 500°C for γ-Al_2O_3(2.6% F); III and IV were purified by recrystallization from hexane. For the reaction, 7% benzene solutions of III or IV were passed over one or the other of the catalysts at temperatures ranging from 250° to 500°C. The products of the reaction were separated

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USSR

YAKHONTOV, L. N., Khimiya Geterotsiklicheskikh Soyedineniy, No 5, 1972, pp 656-658

either by partition chromatography on an aluminum oxide column or, in the case of I, by gas-liquid chromatography. Evaluation of the results showed that the fluorinated catalyst functioned more efficiently; with this catalyst the maximum yield of I was obtained at 420°C and amounted to 15%, while that of II approached 50% at 315°C.

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1/4 008 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--FISCHER CYCLIZATION OF 5 SUBSTITUTED 2,2,PYRIDYL,HYDRAZONES OF CYCLOHEXANONE -U-

AUTHOR-(03)-VAKHONTOV, L.N., PRONINA, YE.V., RUBTSOV, M.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (2), 186-90

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HYDRAZONE, CYCLOHEXANONE, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0380 STEP NO--UR/0409/70/000/002/0186/0190

CIRC ACCESSION NO--AP0121068

UNCLASSIFIED

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2/4 008 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121068

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INFLUENCE OF ME, CL, AND NO SUB2 GROUPS IN POSITION 5 OF 2,(2,PYRIDYL)HYDRAZONES OF CYCLOHEXANONES ON FISCHER CYCLIZATION UNDER CYTALYSIS BY LEWIS ACIDS, ARENESULFONIC ACIDS AND STRONG INORG. ACIDS WAS INVESTIGATED. FOR THE PREPN. OF (5,METHYL,2,PYRIDYL) HYDRAZONE (I) OF CYCLOHEXANONE, M. 56-7DEGREES (PETROLEUM ETHER), B SUB2 150DEGREES, (5,METHYLPYRID,2,YL) HYDRAZINE, M. 67-8DEGREES, WAS OBTAINED BY REFLUXING 2,BROMO,5,METHYLPYRIDINE WITH N SUB2 H SUB4.H SUB2 O 6 HR. (5,CHLOROPYRID,2,YL) HYDRAZINE, M. 123-5DEGREES (BENZENE), FOR THE PREPN. OF (5,CHLOROPYRID,2,YL) HYDRAZINE (II) OF CYCLOHEXANONE, M. 54-5DEGREES, B SUB3 160DEGREES (IN QUANT. YIELD) WAS OBTAINED FROM 2,5,DICHLOROPYRIDINE AND N SUB2 H SUB4. H SUB2 O. IN CONTRAST TO I AND II, WHICH WERE PREPD. WITHOUT SOLVENT, THE PREPN. OF (5,NITROPYRID,2,YL) HYDRAZONE (III) OF CYCLOHEXANONE, M. 127DEGREES (HEXANE), WAS CARRIED OUT IN ETOH IN QUANT. YIELD. I GAVE WITH P,MEC SUB6 H SUB4 SO SUB3 H A NORMAL FISCHER CYCLIZATION PRODUCT: 5,METHYL,9,10,11,12,TETRAHYDRO,ALPHA, CARBOLINE (IV), M. 211DEGREES (ETOAC) IN 98PERCENT YIELD; HCL SALT M. 259DEGREES (ETOH-ME SUB2 CO). WITH POLYPHOSPHORIC ACID, THE YIELD OF IV WAS 67.3; CATALYSIS BY CU SUB2 CL SUB2 30 MIN AT 230DEGREES GAVE 43.5PERCENT IV; SULFOSALICYLIC ACID AT 170DEGREES YIELDED 60.1PERCENT IV; AND ZNCL SUB2 IN 30 MIN AT 230DEGREES GAVE 42.2PERCENT IV. BY DEHYDROGENATION WITH PD AT 270DEGREES IV GAVE 5,METHYL,ALPHA,CARBOLINE, M. 269-70DEGREES (ETOAC); HCL SALT M. 258-60DEGREES.

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3/4 008 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121068

ABSTRACT/EXTRACT--I AND BF SUB3.ET SUB2 O HEATED 6 HR AT 200DEGREES GAVE 63PERCENT 3,5,DIMETHYL,S,TRIAZOLO (4,3,A) PYRIDINE (V), M. 141DEGREES (C SUB6 H SUB6), AND 21.8PERCENT IV. V WAS ALSO PREPD. FROM (5,METHYL,2,PYRIDYL) HYDRAZINE AND HOAC BY REFLUXING 9 HR. I REFLUXED WITH HCL FOR 4 HR GAVE 26.6PERCENT 1,CYCLOHEXYL,12,METHYL, 7,8,9,10,TETRAHYDRO,1H,BENZ (E)PYRIDO (2,1,C), AS,TRIAZINE, M. 98-9DEGREES (HEPTANE). HEATING A MIXT. OF II AND P,MEC SUB6 H SUB4 SO SUB3 H AT 180-210DEGREES GAVE 81PERCENT 5,CHLORO,9,10,11,12,TETRAHYDRO,ALPHA,CARBOLINE (VI), M. 215-16DEGREES (ETOAC). BY USE OF POLYPHOSPHORIC ACID AT 210DEGREES THE YIELD OF VI WAS 81.7PERCENT; WITH SULFOSALICYLIC ACID THE YIELD WAS 69PERCENT; WITH P,MEC SUB6 H SUB4 SO SUB3 H THE YIELD WAS 81PERCENT; WITH ZNCL SUB2 29PERCENT. THE REACTION OF II WITH CU SUB2 CL SUB2 20 MIN AT 250DEGREES GAVE ONLY 2,AMINO,5,CHLOROPYRIDINE, M. 133-5DEGREES (37PERCENT). ONLY 5PERCENT 2,AMINO, 5,NITROPYRIDINE WAS ISOLATED FROM REACTION OF III WITH P,MEC SUB6 H SUB4, SO SUB2 CL AT 180DEGREES. ALSO, AN IRREGULAR COURSE WAS OBSERVED WHEN THE REACTION OF II WAS CARRIED OUT IN HCL IN REFLUX 5 HR; 1,CYCLOHEXYL, 12,CHLORO,7,8,9,10,TETRAHYDRO,1H,BENZO(E) PYRIDO (2,1,C),AS, TRIAZINE (45.5PERCENT, M. 112.5-13.5DEGREES) AND 29PERCENT VI WERE OBTAINED. FROM II, AND BF SUB3.ET SUB2 O, AND HOAC IN A SEALED TUBE 6 HR AT 200DEGREES. 57.3PERCENT 3,METHYL,5,CHLORO,S,TRIAZOLO (4,3,A) PYRIDINE (VII), M. 131-2DEGFEES (C SUB6 H SUB6) AND 18.9PERCENT VI WERE OBTAINED. VII WAS IDENTICAL WITH THE PRODUCT OF REFLUXING (5,CHLOROPYRID,2,YL) HYDRAZINE WITH HOAC 9 HR.

FACILITY: VES. NAUCH.-ISSLED. KHIM. FARM. INST. IM.

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4/4 008 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121068

ABSTRACT/EXTRACT--ORDZHONIKIDZE, MOSCOW, USSR.

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1/2 031 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--OPERATING CHARACTERISTICS OF SEMICONDUCTOR DETECTORS -U-

AUTHOR--PRONKIN, N.S.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, PRIBORY I TEKHNIKA EKSPERIMENTA (EXPERIMENTAL DEVICES AND TECHNOLOGY), NO 1, JAN-FEB 1970, PP 75-78

DATE PUBLISHED--------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--SEMICONDUCTOR DETECTOR, IONIZING RADIATION, SILICON SEMICONDUCTOR, ELECTRONIC CIRCUIT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0020 STEP NO--UR/0120/70/000/001/0075/0078

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2/2 031 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0108409

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OPERATION OF A DETECTOR OF IONIZING RADIATION USED IN A MODE OF INTEGRAL CALCULATION IS GOVERNED BY THE OPERATING CHARACTERISTIC: I.E., THE DEPENDENCE OF THE AVERAGE SPEED OF CALCULATION AT THE OUTPUT OF AN INTEGRAL DISCRIMINATOR ON THE BIAS VOLTAGE AT THE DETECTOR OR ON THE REDUCED DISCRIMINATING THRESHOLD. IT IS IMPORTANT FOR THE OPERATING CHARACTERISTIC TO HAVE A SECTION WITH MINIMUM SLOPE (PLATEAU). IF THE OPERATING POINT IS SELECTED AT THE PLATEAU, THEN LESS RIGOROUS REQUIREMENTS ARE IMPOSED ON THE STABILITY OF THE PARAMETERS OF THE ELECTRONIC CIRCUIT AND THE DETECTOR. THE PRESENT PAPER CONSIDERS THE MECHANISM FOR FORMATION OF A PLATEAU IN THE OPERATING CHARACTERISTICS OF DIFFUSION, DRIFT SILICON SEMICONDUCTOR DETECTORS WITH AN I, LAYER (P-I-N SI(LI)). IT IS SHOWN THAT THEY HAVE A MINIMUM SLOPE PLATEAU WITH A CORRECT CHOICE OF THE PARAMETERS OF THE ELECTRONIC CIRCUIT AND THE OPERATING CONDITIONS OF THE SEMICONDUCTOR DETECTOR. RECOMMENDATIONS ARE MADE.

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UDC 539.1.074.5

USSR

PRONKIN, N. S.

"Operating Characteristics of Semiconductor Detectors"

Moscow, Pribory i Tekhnika Eksperimenta (Experimental Devices and Technology), No 1, Jan--Feb 1970, pp 75-78

Abstract: Operation of a detector of ionizing radiation used in a mode of integral calculation is governed by the operating characteristic: i.e., the dependence of the average speed of calculation at the output of an integral discriminator on the bias voltage at the detector or on the reduced discriminating threshold. It is important for the operating characteristic to have a section with minimum slope (plateau). If the operating point is selected at the plateau, then less rigorous requirements are imposed on the stability of the parameters of the electronic circuit and the detector. The present paper considers the mechanism for formation of a plateau in the operating characteristics of diffusion--drift silicon semiconductor detectors with an i-layer [p-i-n Si(Li)]. It is shown that they have a minimum slope plateau with a correct choice of the parameters of the electronic circuit and the operating conditions of the semiconductor detector. Recommendations are made. 4 fig. 2 ref. Received 25 Dec 68.

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1/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--INCREASE IN THE SENSITIVITY OF EXTRACTION AND FLUORIMETRIC ANALYSIS BY SUBSTITUTION OF THE ORGANIC REAGENT. 2. DETERMINATION OF TANTALUM

AUTHOR-(03)-BLYUM, I.A., PRONKINA, T.G., SHUMOVA, T.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. ANAL. KHIM. 1970, 25(3), 511-14

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--TANTALUM, METAL CHEMICAL ANALYSIS, DYE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0467 STEP NO--UR/0075/70/025/003/0511/0514

CIRC ACCESSION NO--AP0126219

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2/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126219

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HIGHLY SENSITIVE EXTN. ABSORPTIOMETRIC AND EXTN FLUORIMETRIC METHODS FOR TA DETN. WITH BASIC DYES COULD NOT BE UTILIZED IN THE ANAL. OF NATURAL SAMPLES DUE TO THE CONTAMINATION OF THE ANALYZED SOLN. WITH B, WHICH IS PRESENT IN REAGENTS AND GLASSWARE. THE EXTN. OF THE FLUOROBORATE OF THE DYE CREATES AN ANAL. BACKGROUND, WHICH IS USUALLY EQUIV. TO GREATER THAN OR EQUAL TO 1-2 MUG TA SUB2 O SUB5. THE SUBSTITUTION OF BUTYLRHODAMINE S FOR THE CATION OF THE EXTC. BRILLIAN GREEN FLUOROTANTALATE ELIMINATES PRACTICALLY THE INTERFERENCE OF B OWING TO THE HIGH SEPN. FACTOR FOR TA AND B DURING THIS PROCEDURE. THE METHOD INCLUDES THE EXTN. CONCN. OF TA AS BRILLIAN GREEN FLUOROTANTALATE, THE REPLACEMENT OF THE ASSOC. CATION BY BUTYLRHODAMINE S AND MEASURING THE FLUORESCENCE OF THE EXT. AT 560 NM. THE SENSITIVITY OF THE DETN. IS (1-2) TIMES 10 PRIME NEGATIVE5PERCENT TA IN ROCKS AND (1-2) TIMES 10 PRIME NEGATIVE4PERCENT TA IN TI, ZR, AND MINERALS. FACILITY: INST. MINERAL., GEOCHEM. CRYSTALLOCHEM. RARE ELEM., MOSCOW, USSR.

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USSR

UDC 629.7.036.3-55(088.8)

ZEGER, K. Ye., MURZICH, Ye. V., ZELENOV, L. S., PRON'KO, L. A., All-Union Scientific Research Institute of Heat Engineering imeni F. E. Dzerzhinskiy

"A Method of Controlling the 'Fuel-Oxidizer' Ratio"

Author Certificate USSR, Class F 23n 1/02, No 295945, claimed 23.12.68, published 6.04.71 (from Referativnyy Zhurnal, Aviatsionnyye i Raketnyye Dvigateli, No 11, Nov 71, Abstract No 11.34.70 P)

Translation: There is patented a method for regulating the "fuel-oxidizer" ratio in the combustion chamber according to a command signal characterizing a monitored parameter that is linked to the combustion. The method is distinguished by the fact that with the aim of increasing the precision, reliability, and response speed of regulation, use is made, as the command signal, of the temperature of one or several (according to the number of injectors) solid unshielded bodies with a high thermal conductivity, for example, metal bodies, which are placed at the base of the jet in the shear plane of the injector output nozzles. The method is distinguished by the fact that as a solid thermally conductive body, use is made of design elements of the combustion chamber, for example, the injector output nozzle. 1 figure.

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UDC 543.272.6

TUSTANOVSKIY, V. T., ANDRYUSHCHENKO, V. I., VOL'GEMUT, A. A., PRONMAN, I. M., State Scientific Research and Planning Institute of the ~~Rare-Metal~~ Industry, Moscow

"The Neutron-Activation Method of Rapid Determination of the Carbon Content"

Moscow, Doklady Akademii Nauk SSR, Vol 196, No 3, 1971, pp 570-572

Abstract: The activation determination of carbon on the basis of a millisecond isotope permits hundreds of parallel cycles of radiation and measurement to be obtained in a short interval or time ;this compensates for the insignificant value of the activation-process cross section. At the same time the background should not increase with the passage of time. The recording system described in the article, the design features of the radiation sensor, and the use of an amplitude discriminator tuned to the anomalously high radiation energy of the isotope B^{12} permits this requirement to be satisfied. This method permits rapid and sufficiently precise determination of the carbon content in steels, hard alloys, and other materials without destruction of the specimens. This methods is most widely applicable in ferrous metallurgy, as well as in the control of finished products made of hard alloys, high-speed and tool steels. Two figures, 3 bibliographic entries.

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