"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

CHICHENIN, P. I., ADILOV, D. A., YUSUPOV, K. Yu., SHARIPOV, M. K., PULATOV, Ya. G., LI GVAN KHVA, V. T., AGZHANOV, N. A., and DZHURAYEV, Kh. D., Uzbek Scientific Research Institute of Epidemiology, Microbiology, and Infectious Diseases

"Epidemiological Characteristics of Anthrax in Uzbekistan During Recent Years"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 1, Jan 73, pp 15-19

Abstract: In 1949-60 the incidence of anthrax affecting human beings decreased by a factor of three in the Uzbek SSR from that in 1925-48, mainly as a result of immunization of occupationally exposed persons. In recent years the over-all incidence of anthrax among both humans and animals in the Uzbek SSR was reduced by effective prophylactic measures. However, there is no room for complacency, in view of the fact that there was in 1949-60 and especially in 1961-70 an increase in the relative weight of group infections connected with the uncontrolled utilization of meat and of other animal products after obligatory slaughter of diseased farm animals, particularly in the private sector. During the period under consideration, the frequency of anthrax in the Uzbek SSR exceeded that in the USSR by a factor of 3-4, with the number of cases in the Uzbek SSR comprising 10-16% of that in the entire USSR. On the basis of data covering the

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CHICHENIN, P. I., Meditsinskiy Zhurnal Uzbekistana, No 1, Jan 73, pp 15-19

incidence of anthrax in the past 20 yrs, one can differentiate between three zones in the Uzbek SSR: I) A zone of stable incidence among humans and animals (Tashkentskaya, Surkhandar'inskaya, and Samarkandskaya Oblasts); II) A zone with periodic outbreaks (Andizhanskaya, Khorzemskaya, and Kashkadar'inskaya Oblasts and the KKASSR); III) The zone with the most satisfactory conditions (Bukharskaya, Syrdar'inskaya, Namanganskaya, and Ferganskaya Oblasts). The ratio of cases of human anthrax to those in the entire Uzbek SSR was 62.33, 35.25, and 2.42% in zone I, II, and III, respectively, and that of anthrax of animals 67.13, 32.02, and 0.85% in zone I, II, and III, respectively. In view of the fact that the infection remains in the soil, prophylactic measures in locations at which anthrax has occured must be carried out constantly regardless of the time that has elapsed since the last outbreak and these measures reinforced at times at which digging into the ground takes place, e.g., in connection with agricultural irrigation.

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USSR

UDC 547.944/1

RAKHIMOV, D. A., SHARIPOV, M. R., ARIPOV, Kh. N., MALIKOV, V. M., SHAKIROV, T. T., and YUNUSOV, S. Yu., "Order of the Red Banner of Labor" Institute of the Chemistry of Plant Materials, Academy of Sciences, Uzbek SSR

"Polybuffer Separation of Vinca Erecta Alkaloids"

Tashkent, Khimiya Prirodnykh Soyedineniy, No 6, 1970, pp 713-717

Abstract: The complex alkaloid mixture from vinca erecta was separated by alkalinity on a special polybuffer separating unit. The mixture of alkaloids in an organic solvent was passed in sequence through a number of phosphate buffer solutions with different pH values arranged in order of increasing pH. The use of this method results in distribution of the alkaloids into fractions containing 3-6 bases apiece. The following bases were isolated in addition to previously identified alkaloids: ervincidine, apovincamine, (+)-quebrachamine, dl-eburnamine, (-)-1,2-dehydroaspidospermidine and copsanone. This is the first time that these bases have been derived from this plant. Ten or twelve other unidentified alkaloids were also detected by thin-layer chromatography. The region of passage of some alkaloids into the buffer solutions is established.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC: None

KOPVILLEM, U. Kh., SMOLYAKOV, B. P., and SHARIPOV, R. Z.

"Electron Spin Echo for Cr^{3+} in the Ruby Laser"

Leningrad, Fizika Tverdogo Tela, vol 14, No 5, 1972, pp 1444-1446

Abstract: In this paper, the authors set themselves the problem of finding, in the wavelength range of 3 cm, a quantum transition other than that found earlier and with better conditions for observing electron spin echo in ruby. Theory shows that for these conditions to be realized, the transition should be $3 \leftrightarrow 4$ in a field of 5430 gauss, at an angle of $\pi/2$. This theoretical conclusion was confirmed by experiment. Using a crystal of Al_2O_3: Cr^{3+} with a chromium ion concentration of the order of $3 \cdot 10^{-4}$, the experimenters detected an electronic echo from the Cr^{3+}. Curves are plotted for the echo amplitude as a function of the interval between oscillating pulses, and for the form of the echo signal as a function of the magnetic field intensity.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 534-8

MAKHKAMOV, S., SHARIPOV, Sh., IVANOV, A. A., DAVIDOVICH, L. A., KHALIULIN, M. G., KHABIBULLAYEV, P. K.

"Concerning the Acoustical Relaxation Mechanism in Certain Pure Fluids and Their Solutions"

Uch. zap. Tashkent. gos. ped. in-t (Scientific Notes of Tashkent State Pedagogical Institute), 1970, Vol. 90, pp 35-45 (from RZh-Fizika, No 10, Oct 72, Abstract No 10Zh609)

Translation: The acoustical properties of the following low-viscous liquids were investigated: carbon sulfide, carbon tetrachloride, chloroform, methylene chloride, methylene boride, benzene, pyridine, thiophene, cyclohexane, acetic acid and its solutions in pyridine. The amplitude coefficient of the absorption was measured at frequencies from 285 kHz to 5 MHz by the substitution method with an accuracy of 7-10% and in the range from 5 MHz to 3 GHz by the pulse method with an accuracy of 3-5% at low frequencies and 7-10% at high frequencies. The speed of sound was measured by the phase method with an accuracy up to 0.1%. The results are discussed from the aspect of vibrational and structural relaxation and their mutual effect. V. Ye. Gordeyev.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

1/2 032 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--CHANGE IN THE STRUCTURE OF LEAD DURING MELTING -U-

AUTHOR-(02)-KHRUSHCHEV, B.I., SHARIPOVA, L.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. STRUKT. KHIM. 1970, 11(1), 134-6

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--LEAD, CRYSTALLOGRAPHY, METAL MELTING, NEUTRON DIFFRACTION, MONOCHROMATOR, SCATTERING CROSS SECTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0919 STEP NO--UR/0192/70/011/001/0134/0136

CIRC ACCESSION NO--AP0116429

UNCLASSIFIED

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

2/2 032 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0116429

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A NEUTRON DIFFRACTOMETER WITH A TRAVELING MONOCHROMATOR WAS USED IN MEASURING THE TOTAL SCATTERING CROSS SECTIONS, SIGMA(LAMBDA), OF CRYST. PB (AT ROOM TEMP. AND AT 320DEGREES) AND LIQ. PB (AT 330DEGREES) IN THE WAVELENGTH INTERVAL 3.2-7.5 ANGSTRUM. IT WAS ASSUMED THAT ELASTIC SCATTERING WAS DETD. AND THAT LIQ. PB IS MONAT. AND THERE IS SHORT RANGE ORDER IN 2 DIFFERENT STRUCTURES (FCC. AND BCC.); ON THIS BASIS A QUASICRYST. MODEL WAS ESTABLISHED, AND THE POSITIONS OF THE MAX., SIGMA(LAMBDA), WERE CALCD. FOR VARIOUS CRYSTALLOGRAPHIC LATTICES HAVING DIFFERENT PARAMETERS. THE CALCN. WAS MADE FOR A MIXED LIQ. STRUCTURE: 50PERCENT BCC. AND 50PERCENT FCC. THE AGREEMENT BETWEEN THE EXPTL. AND THEORETICAL CURVES SUGGESTS THAT THE 2 CRYST. STRUCTURES EXIST SIMULTANEOUSLY IN DIFFERENT REGIONS WITHIN LIQ. PB. IN FACT, THE RESTRUCTURING TO THE BCC. FROM THE FCC. FORM BEGINS AT A TEMP. A FEW DEGREES BELOW THE M.P. FACILITY: INST. YAD. FIZ., TASHKENT, USSR.

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

1/2 024 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--SCATTERING CROSS SECTIONS OF SLOW NEUTRONS IN MOLTEN TIN -U-

AUTHOR--(02)-KHRUSHCHEV, B.I., SHARIPOVA, L.S.

COUNTRY OF INFO--USSR

SOURCE--FIZ. METAL. METALLOVED. 1970, 29(1), 188-9

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--SCATTERING CROSS SECTION, SLOW NEUTRON, LIQUID METAL PROPERTY, TIN, NEUTRON ENERGY DISTRIBUTION, ORDERED ALLOY, CRYSTAL STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1243 STEP NO--UR/0126/70/029/001/0188/0189

CIRC ACCESSION NO--AP0115260

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

2/2 024 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0115260

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SCATTERING CROSS SECTION OF SLOW NEUTRONS WERE DETD. AS A FUNCTION OF NEUTRON WAVELENGHT FROM 3.5 TO 7.5 ANGSTROM FOR CRYST. SN AT 20 AND 225DEGREES AND LIQ. SN AT 235 TO 1250DEGREES. AT 235DEGREES, A MAX. IN THE CURVE AND THE RADIUS (R SUB1 EQUALS 3.2-3.4 ANGSTROM) AND COORDINATION NO. (N SUB1 EQUALS 8-11.5) OF THE 1ST COORDINATION SPHERE ARE CONSISTENT WITH 2 KINDS OF SHORT RANGE ORDER, THAT OF WHITE SN (15PERCENT) AND OF AN ORTHORHOMBIC FACE CENTERED STRUCTURE (85PERCENT). FROM 430DEGREES (R SUB1 EQUALS 3.3, N SUB1 EQUALS 7.5-8.5) TO 650DEGREES, THE SHORT RANGE ORDER IS A MIXT. OF THAT OF WHITE SN AND OF A DISTORTED BCC. STRUCTURE. THIS SHIFTED FURTHER TOWARDS BCC. STRUCTURE BY 1050DEGREES, AND ADDNL. STRUCTURAL CHANGES WERE OBSD. AT 1250DEGREES. FACILITY: INST. YAD. FIZ., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 576.851.71.077.3

SHARIPOVA, Sh. A., and GAYDAMOVICH, S. Ya., Uzbek Institute of Epidemiology and Microbiology, Tashkent, and Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Serological Tests With Viruses of the Phlebotomus Fever Group"

Moscow, Voprosy Virusologii, No 6, 1972, pp 691-695

Abstract: Methods for obtaining antigens from newborn mouse brain to Phlebotomus fever viruses (Sicilian, Neapolitan -- Sabin strain, Bujaru -- ReAn 47693 strain, and Chagres -- JW-10 strain) were developed for use in serological tests. The acetone-sucrose method produced antigens suitable for all tests: Hemagglutination reaction (HR), complement-fixation reaction (CFR), and agar gel diffuse precipitation (AGDP). Antigens produced by the freon and borate-salt methods were best suited for the CFR. Additional antigen treatments were attempted to increase titers: While treatment by protamine sulfate and by Tween-80 and ether did not produce significant changes, ultrasonic treatment (20,000 cps, 2 min) increased titers of acetone-sucrose antigens by 2-64 times and freon antigens by 2-8 times in the HR, by 4 times for acetone-sucrose antigens only in the AGDP, and by 2-4 times for both antigen types in the CFR. Thus acetone-sucrose antigens are best suited for

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GAYDAMOVICH, S. Ya., et al., Voprosy Virusologii, No 3, May/Jun 1973, pp 356-360

The only HAI response in this group was by Bujaru arbovirus, and only after treatment the AGDP titers increased in a few cases. Ultrasonic treatment had an especially favorable effect on CF and AGDP titers in the Uukuniemi group, while changes in HAI titers were less pronounced. Thus ultrasonic treatment normally facilitates antigen activity in CF and HAI reactions and has a variable effect on the AGDP reaction. Treated antigens did not lose specificity. It is concluded that ultrasonic treatment can be used not only to increase titers but also to reveal titers of relatively inactive antigens.

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Immunology

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USSR

SHARIPOVA, Sh. A. and GAYDAMOVICH, S. Ya., Voprosy Virusologii, No 6, 1972, pp 691-695

serological tests. Optimum hemagglutination activity was established at 22°C, pH 6.0 for Sicilian, 37°C, pH 6.0 for Neapolitan and Chagres, and 37°C, pH 6.4 for Bujaru virus. Highest titers were obtained with erythrocytes from geese, chicks, and hamsters, lowest titers prevailed with human and monoky erythrocytes, while those of rabbits and guinea pigs caused spontaneous agglutination.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR UDC 621.793.75

KARPINOS, D. M., ZIL'BERGBERG, V. G., and SHARIVKER, S. YU., Institute of Problems of Material Science, Ukrainian SSR Academy of Sciences

"Plasma Spraying With Submersion of the Nozzle In Water"

Kiev, Poroshkovaya Metallurgiya, No 4, Apr 73, pp 95-96

Abstract: A description is given of a method of plasma spraying involving submersion of the nozzle and the article being sprayed in water during spraying. This method prevents oxidation of the sprayed powder, using zirconium carbide as an example, and allows the spraying distance to be shortened to 25-30 mm while increasing the costing density.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR UDC 531.781.2+536.5:658.62.011.56

BEKLEMISHCHEV, A. I., BLOKIN-MECHTALIN, YU. K., BRENNERMAN, V. M., KUZNETSOV, A. A., LEBEDEVA, A. I., SHARIY, K. A.

"Information Measuring System for Automating Deformation and Temperature Measurements in Testing Structures for Strength"

V sb. Ustroystva i elementy sistem avtomatiz. nauch. eksperimentov (Devices and Elements of Automation Systems for Scientific Experiments -- Collection of Works), Novosibirsk, "Nauka", 1970, pp 169-172 (from Referativnyy Zhurnal, Metrologiya i izmeritel'naya tekhnika, No 11, Nov 71, Abstract No 11.32.145)

Translation: The system includes a digital measuring device, a device for transducer commutation, a centralized computer system and a device for contact with the object. The basic characteristics of the system are: number of transducers connected 2500 (2000 tensometers and 500 thermocouples); range of measuring deformation $\pm 1 \cdot 10^{-5}$ - $\pm 0.5 \cdot 10^{-2}$ relative units; temperature measurement range 0-375°C, 0-750°C and 0-1250°C; the size of the scale of the measuring device is 1000 units; rate of interrogation is 30 transducers per second for each of the channels; the reduced maximum error (without considering transducer error) is 1%; length of measurement distance is up to 150 m.

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MEDICINE

SHARIYA, N. P.

SO: JPRS 54304
22 09 71

UDC: 616-053.31-02:618.53-085.832.9

THE EFFECT OF HYPOTHERMIA OF THE FETAL BRAIN DURING LABOR ON ITS FUNCTIONAL STATE AND ON THE COURSE OF THE NEONATE PERIOD

[Article by K.V. Chachava, P.Ya. Kintraya, A.H. Zirakadze, V.N. Chikvaidze, A.A. Lominadze, N.P. Shariya, Scientific Research Institute of Obstetrics and Gynecology, Georgian Ministry of Health, Tbilisi; Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, Russian, No 8, 1971, pp 52-62]

The prevention and treatment of fetal asphyxia and cerebrocranial trauma during labor has always been in the center of attention of obstetricians and gynecologists, since these conditions are a most important cause of perinatal mortality.

The existing methods of treating asphyxia involve treatment of the maternal organism in order to improve the condition of the fetus; these methods are not effective when there is impairment of maternal-placental and feto-placental circulation or of fetal tissue metabolism, and it becomes necessary to treat the fetus directly.

In view of the fact that the fetal brain is particularly sensitive to hypoxia, the chief objective of prophylaxis and treatment of intra-uterine asphyxia consists of increasing the resistance of brain tissue to oxygen deficiency, of preventing onset of hypoxia, and eliminating the developing pathological consequences.

In the last few years, for this purpose, our clinic has been using hypothermia of the fetal brain during labor.

Both in the Soviet and foreign literature there is an enormous quantity of works dealing with the effect of cerebrocranial hypothermia on the organism and with the good results obtained when this method was used in clinical practice (V.A. Bukov; L.I. Murskiy; I.R. Petrov; B.V. Petrovskiy; P.H. Starkov; N.V. Semenov; Gatt; Miller; Kimoto; Laudhead; Parkings, and others).

In the world literature there are descriptions of a considerable number of brain and heart operations under general hypothermia on pregnant women with a good outcome of pregnancy and labor (Barter; Vandewater; Cannel; Pevehouse; Wilson, and others).

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

ANZON, Z. V., et al, Institute of Nuclear Physics, Academy of Sciences, Kazakh SSR, Alma-Ata; BOZOKI, G., et al, Central Research Institute of Physics, Budapest; DALKHAZHAV, N., et al, High-Energy Laboratory, Joint Institute of Nuclear Research, Dubna; BABETSKIY, Ya., et al, Laboratory of High-Energy Physics, Institute of Nuclear Research, Polish Academy of Sciences, Krakow; MASLENNIKOVA, N. V., TRET'YAKOVA, M. I., CHERNYAVSKIY, M. M., Physics Institute imeni P. N. Lebedev of the Academy of Sciences, USSR, Moscow; ALEKSEYEVA, K. I., Scientific Research Institute of Nuclear Physics, Moscow State University, Moscow; CHERNEV, Kh., TODOROV, P. T., Institute of Nuclear Physics, Academy of Sciences of the People's Republic of Bulgaria, Sofia; TUVDENDORZH, D., SHARKHI, D., CHADRAA, V., Institute of Physics and Mathematics of the Academy of Sciences, Mongol People's Republic, Ulan-Bator); AZIMOV, S. A., et al, Institute of Nuclear Physics Academy of Sciences, Uzbek SSR, Tashkent

"Coherent Generation of Particles by π^--Mesons With Momenta of 45 and 60 Gigaelectron-Volts/Sec on the Basis of Photoemulsion Nuclei"

Moscow, Izvestiya Akademii Nauk SSR. Seriya Fizicheskaya, No 9, 1970, pp 1938-1943

Abstract: In the present report are presented data concerning the coherent generation of π-mesons by π^--mesons at 45 and 60 gigaelectron-volts/sec, obtained by means of nuclear photoemulsion by the laboratories of a number of institutes

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USSR

ANZON, Z. V., et al, Institute of Nuclear Physics, Academy of Sciences, Kazakh SSR, Alma-Ata; BOZOKI, G., et al, Central Research Institute of Physics, Budapest; DALKHAZHAV, N., et al, High-Energy Laboratory, Joint Institute of Nuclear Research, Dubna; BABEPSKIY, Ya., et al, Laboratory of High-Energy Physics, Institute of Nuclear Research, Polish Academy of Sciences, Krakow; MASLENNIKOVA, N. V., TRET'YAKOVA, M. I., CHERNYAVSKIY, M. M., Physics Institute imeni P. N. Lebedev of the Academy of Sciences, USSR, Moscow; ALEKSEYEVA, K. I., Scientific Research Institute of Nuclear Physics, Moscow State University, Moscow; CHERNEV, Kh., TODOROV, P. T., Institute of Nuclear Physics, Academy of Sciences of the People's Republic of Bulgaria, Sofia; TUVDENDORZH, D., SHARKHI, D., CHADRAA, V., Institute of Physics and Mathematics of the Academy of Sciences, Mongol People's Republic, Ulan-Bator); AZIMOV, S. A., et al, Institute of Nuclear Physics Academy of Sciences, Uzbek SSR, Tashkent

"Coherent Generation of Particles by π^--Mesons With Momenta of 45 and 60 Gigaelectron-Volts/Sec on the Basis of Photoemulsion Nuclei"

Moscow, Izvestiya Akademii Nauk SSR. Seriya Fizicheskaya, No 9, 1970, pp 1938-1943

Abstract: In the present report are presented data concerning the coherent generation of π-mesons by π^--mesons at 45 and 60 gigaelectron-volts/sec, obtained by means of nuclear photoemulsion by the laboratories of a number of institutes

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USSR UDC 547.944/947

KHASHIMOV, KH. N., TELEZHENETSKAYA, M. V., SHARKHIMOV, N. N., and YUNUSOV, S. YU., Red Banner of Labor Institute of Plant Chemistry, Uzbek Academy of Sciences

"Dynamics of the Accumulation of Alkaloids in Peganum Harmala"

Tashkent, Khimiya Prirodnykh Soyedineniy, No 3, 1971, p 382

Abstract: This is a continuation of S. YU. YANUSOV's earlier work (1970) on the little-known process of alkaloid accumulation in Peganum harmala, a tall, perennial, deep-rooted grass. Samples were collected in Bukharskaya and Samarkandskaya oblasts. Above-ground portions of the plant were tested o for alkaloid content in the vegetation, budding, flowering, fruit-bearing and terminal periods. There was a steady diminution, in that order, for above-ground portions, and also for roots, except that in the latter there was a slight upswing during the terminal period. Seeds collected following the terminal period showed a high alkaloid content (5.0%, as against a maximum 2.17% for the leaves and stalks), 84% of their alkaloids mass consisting of a mixture of harmine and harmaline. Pods yielded 1.08% of their dry weight in an alkaloid mass from which harmine and vasicinone were extracted. All yields were found to vary in connection with the age of the individual plant and growing site.

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1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--METHANOL AND ETHANOL ADSORPTION ON CATION SUBSTITUTED MONTMORILLONITE AND VERMICULITE -U-

AUTHOR-(04)-TARASEVICH, YU.I., RUDENKO, V.M., SHARKINA, E.V., OVCHARENKO, F.D.

COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 2, PP 266-271

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--METHYL ALCOHOL, ETHYL ALCOHOL, ADSORPTION, MINERAL, ION EXCHANGE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1719 STEP NO--UR/0069/70/032/002/0266/0271

CIRC ACCESSION NO--AP0112713

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

2/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112713

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SORPTION ISOTHERMS OF METHANOL AND ETHANOL VAPORS ON CATION SUBSTITUTED MONTMORILLONITE AND VERMICULITE DEGASSED AT DIFFERENT TEMPERATURES HAVE BEEN STUDIED. THE CATION SUBSTITUTED MINERAL SAMPLES SATURATED WITH LIQUID ALCOHOLS HAVE BEEN EXAMINED ROENTGENOGRAPHICALLY. IN THE CASE OF VERMICULITE IT IS MORE DIFFICULT FOR METHANOL AND ETHANOL MOLECULES TO PENETRATE INTO THE SPACE BETWEEN THE PACKETS, THAN IN THE CASE OF MONTMORILLONITE. EXCHANGE CATIONS AFFECT SIGNIFICANTLY THE INTERLAYER SORPTION OF ALCOHOLS BY BOTH MINERALS.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

UDC: 542.61

USSR

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SHARKOV, A.I., PETRUSHA, YE.A., PERFIL'YEV, A.T., and VOYEVUDSKAYA, S.V., Institute of General and Inorganic Chemistry, Kiev, Academy of Sciences Ukrainian USSR

"Extraction of Germanium With Aniline in the Presence of a Complex Forming Agent"

Kiev, Ukrainskiy Khimicheskiy Zhurnal, Vol 36, No 4, Apr 70, pp 393-395

Abstract: Germanium was extracted with aniline as tripyrocatechuic acid. The ratio of aniline to the acid is 1:1. To diminish the loss of aniline to the aqueous phase, it was used in carbon tetrachloride solution. Germanium was reextracted with an aqueous solution of ammonium carbonate. The extraction begins to be noticeable at pH o.1, increases rapidly to the optimal level around pH range 2.25-5.50, and then drops sharply at pH $\gtrsim$6.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

1/3 008 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--REMOVAL OF PENTOSANS FROM SULFITE PULP -U-

AUTHOR-(02)-DEVYATOVA, A.P., SHARKOV, V.I.

COUNTRY OF INFO--USSR

SOURCE--BUM. PROM. 1970, (3), 4-5

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, MATERIALS

TOPIC TAGS--PENTOSE, GUM RESIN, SULFITE, CELLULOSE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1436 STEP NO--UR/0329/70/000/003/0004/0005

CIRC ACCESSION NO--APC116882

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

2/3 008 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0116882

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPTS. WERE CONDUCTED TO DET. THE EFFECTIVENESS OF PURIFICATION OF SULFITE DISSOLVING PULP BY DIFFERENT METHODS OF ALKALI REFINING. THE SULFITE PULP CONTAINED 92.4PERCENT ALPHA CELLULOSE AND 2.45PERCENT PENTOSANS AND HAD A SOLY. IN 10PERCENT NAOH OF 11.6PERCENT AND A D.P. OF 850. THE PULP WAS REFINED BY THE FOLLOWING 3 PROCESSES: HOT ALKALI REFINING WITH 2PERCENT NAOH AT A BATH RATIO OF 1:25 FOR 1 HR AT 110-170DEGREES; HTO COLD REFINING IN WHICH THE ABOVE PROCEDURE WAS FOLLOWED BY TREATMENT WITH 10PERCENT NAOH FOR 1 HR AT A BATH RATIO OF 1:50 AND 20DEGREES; AND COLD HOT REFINING, CONSISTING IN REVERSAL OF THE ORDER OF TREATMENTS BY THE 2ND PROCEDURE. HOT REFINING AT 110-150DEGREES GAVE PULP STILL CONTG. SIMILIAR TO 1PERCENT PENTOSANS, AND, AT 150DEGREES, THE CELLULOSE LOSS WAS 13.5PERCENT. AT 170DEGREES, THE PENTOSAN CONTENT DROPPED TO 0.5PERCENT, BUT THE CELLULOSE LOSS WAS 18PERCENT, AND THERE WAS A SUBSTANTIAL DECREASE OF D.P. COMBINED REFINING METHODS GAVE BETTER RESULTS: A DECREASE OF PENTOSAN CONTENT TO 0.36-0.31PERCENT, BUT AT A CELLULOSE LOSS OF 17-29PERCENT. HOT COLD REFINING GAVE REFINED PULP WITH THE HIGHEST D.P., BUT ALSO SHOWED THE MAX. LOSS OF CELLULOSE. COLD HOT REFINING STRONGLY REDUCED THE PENTOSAN CONTENT AT RELATIVELY SMALLER LOSSES OF CELLULOSE. AT AN EQUAL DEGREE OF PURIFICATION, THIS METHOD GAVE REFINED PULP WITH THE MIN. D.P. MILLING OF DRY PULP IN A VIBRATORY MILL PRIOR TO ALKALI REFINING MADE THE REMOVAL OF PENTOSANS MORE DIFFICULT, APPARENTLY BECAUSE OF SWELLING OF THE PULP IN THE ALKALI SOLNS., THE SURFACE LAYER OF SWOLLEN MATERIAL PREVENTING HE DISSOLN. OF PENTOSANS.

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UNCLASSIFIED PROCESSING DATE--23OCT70

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CIRC ACCESSION NO--AP0116882

ABSTRACT/EXTRACT--FACILITY: LENINGRAD. LESOTEKH. AKAD. IM. KIROVA, LENINGRAD, USSR.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

AA0043438 Sharkov, V.I.

UR 0482

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Soviet Inventions Illustrated, Section I Chemical, Derwent,

229409 PROTEINACEOUS FODDER YEAST is obtained by cultivationof the Candida yeasts in a nutrient medium comprising a vegetable raw material hydrolysate such as e.g., wood hydrolysate as the carbon source. For ensuring increased yield of the proteinaceous fodder yeast and reducing substances, the starting wood is first subjected to the action of gamma-radiation and then pref. thermally treated at 150-200° for 5-60 mins. 10.5.67. as 1156535/28-13, SHARKOV, V.I. et al. Forestry Acad. Leningrad. (1.9.69) Bul. 15/25.4.69. Class 6a, Int. Cl. C 12k.

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AA0043438

AUTHORS: Sharkov, V. I.; Dmitriyeva, O. A; Baburina, L. A.; Bosenko, A. M.

Leningradskaya Lesotekhnicheskaya Akademiya imeni S. M. Kirova

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 669.71.053.4.067(088.8)

MAL'TSEVA, N. N., PYBAKOV, V. V., SHARKOV, V. I., KUYBINA, N. I.

"Method of Precipitation of Red Slimes"

USSR Author's Certificate No 307065, filed 23/03/70, published 5/08/71. (Translated from Referativnyy Zhurnal Metallurgiya No 3, 1972, Abstract No. 3G129P by G. Svodtseva).

Translation: Intensification of the process of precipitation of red slimes from solutions used in the production of alumina is achieved by using a polysaccharide such as xylane as a flocculant. In the case of the use of xylane, 10 minutes after the beginning of the experiment, the content of solids in the clarified layer is 2.5 times less than when polyacrylamide is used.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 621.372.832

SHARKOV, V. M.

"Scattering Matrix of a Slit Coupler on Multi-Mode Waveguides"

Elektron. tekhnika. Nauch.-tekhn. sb. Ferrit. tekhn. (Electronics Technology. Scientific-Technical Collection of Articles. Ferrite Technology), 1971, vyp.4(31), pp 100-104 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 B131)

Translation: A method is presented for determining the coefficient of the matrix of scattering of a slit coupler on multi-mode waveguides for the most general assumptions concerning the distribution of a tangential electric field at the coupling slit. It is noted that the obtained expressions make it possible to study thoroughly the wave parameters of a slit coupler during multi-mode propagation if the electrodynamic conductivity of the slit is known. Original article: two illustrations and two bibliographic entries. Resume.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

1/2 026 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--COMBINATION AND CROSS DISTORTIONS IN PARAMETRIC VIDEO SYSTEMS -U-

AUTHOR--SHARKOV, YE.A.

S

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, RADIOTEKHNIKA I ELEKTRONIKA, NO 1, 1970, PP 136-142

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., PHYSICS

TOPIC TAGS--PARAMETRIC AMPLIFIER, VIDEO SIGNAL, SIGNAL ANALYSIS, INTERFERENCE LIGHT MODULATOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0338 STEP NO--UR/0109/70/000/001/0136/0142

CIRC ACCESSION NO--AP0117575

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

2/2 026 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0117575

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ANALYSIS IS CARRIED OUT OF COMBUSTION AND CROSS DISTORTIONS IN THREE TYPES OF PARAMETRIC AMPLIFIERS OF VIDEO SIGNALS (PAVS) ON THE ASSUMPTION OF THE NONLINEARITY OF FACTORS OF THE FOURIER EXPANSION OF THE CAPACITY AND LOADS OF REACTANCE MODULATORS WITH RESPECT TO THE INPUT SIGNAL. THE EVALUATION WAS MADE OF THE THREE TYPES OF PAVS FROM THE VIEWPOINT OF THE INSIGNIFICANCE OF THE DISTORTIONS BEING INTRODUCED.

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USSR

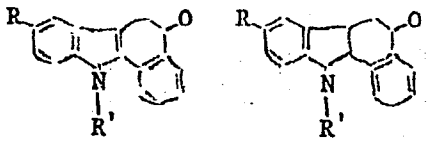
UDC 615.31.547.75

AKSANOVA, L. A., SHARKOVA, L. M., KUCHEROVA, N. F., ARTEMENKO, G. N., and FEDOROVA, I. B., Scientific Research Institute of Pharmacology of the Academy of Medical Sciences of USSR, Moscow

"Indole Derivatives. XXXVI. Synthesis and Pharmacological Investigation of Some Benzoxepinoindole Derivatives"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 5, No 11, 1971, pp 3-5

Abstract: In searching for psychotropic agents several N-substituted dihydro- and tetrahydrobenzoxepinoindoles with sedative and antidepressant properties were synthesized.



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USSR

AKSANOVA, L. A., et al., Khimiko-Farmatsevticheskiy Zhurnal, Vol 5, No 11, 1971, pp 3-5

I $R' = H$; Ia $R = H$; Ib $R = CH_3$; Ic $R = Cl$; Id $R = Br$.

IIa $R = H$, $R' = (CH_2)_2N(CH_3)_2$; IIb $R = H$, $R' = (CH_2)_3N(CH_3)_2$;

IIc $R = CH_3$, $R' = (CH_2)_2N(CH_3)_2$; IId $R = CH_3$, $R' = (CH_2)_3N(CH_3)_2$;

IIe $R = Cl$, $R' = (CH_2)_2N(CH_3)_2$; IIf $R = Cl$, $R' = (CH_2)_2N(CH_3)_2$;

IIg $R = Br$, $R' = (CH_2)_2N(CH_3)_2$; IIh $R = Br$, $R' = (CH_2)_3N(CH_3)_2$.

IIIa $R = R' = H$; IIIb $R = CH_3$, $R' = H$; IIIc $R = H$, $R' = CO(CH_2)_2Cl$;

IIId $R = H$, $R' = COCH_2CH_2N(CH_2)_4CH_2$; IIIe $R = H$, $R' = CO(CH_2)_2N(C_2H_5)_2$.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

AKSANOVA, L. A., et al., Khimiko-Farmatsevticheskiy Zhurnal, Vol 5, No 11, 1971, pp 3-5

Some compounds were prepared by the cyclization of corresponding arylhydrozons of homochroman-5-one (Ia-Id); others (IIa-IIh), by the reaction of dialkylaminoalkyl chlorides with Na derivatives of oxepinoindoles (Ia-Id). The latter were synthesized by treating oxepinoindoles (Ia-Id) with NaH in dimethylformamide. Reduction of oxepinoindoles Ia and Ib with Zn dust in HCl, in the presence of $HgCl_2$ yielded corresponding IIIa and IIIb. Reaction of IIIa with chloropropionyl chloride yielded IIIc which in turn formed IIId and IIIe on reaction with piperidine and diethylamine. Pharmacological tests for cholinolytic, antiserotouine and spasmolytic activity were carried out with white mice. Empirical formulas and melting points for IIb-IIh compounds are given, as well as detailed descriptions of some reactions.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 547.728.2'83.07

KUCHEROV, N. F., AKSANOVA, L. A., SHARKOVA, L. N., and ZAGOREVSKIY, Institute of Pharmacology, USSR Academy of Sciences, at Moscow

"Synthesis of Derivatives of a New Heterocyclic System of 1,2,3,4-Tetrahydrobenzofuro[3,2-c]pyridine"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 11, Nov 71, pp 1469-1472

Abstract: Even though 1,2,3,4-tetrahydro-γ-carboline and its derivatives have been the objects of pharmaceutical research for some years, their oxygenous analogs, the 1,2,3,4-tetrahydro[3,2-c]pyridines, have so far not been synthesized. Using the fairly new method of creating a benzofuran system by cyclization of aryl esters of the ketoximes, the authors synthesized a tricyclic system of thiopyrano[4,3-b]benzofuran. Melting points, empirical formulas, compositions and yields of nine oxime esters and seven of the above-mentioned pyridines were determined.

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USSR UDC 547.751'891.1.07

SHARKOVA, L. M., AKSANOVA, L. A., and KUCHEROVA, N. F., Institute of Pharmacology, Academy Medicinal Sciences USSR, Moscow

"Indole Derivatives. XXXV. Synthesis of 12H-6,7-Hihydrobenz[2',3'] oxepino-[4,5-b]-indoles"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 1, Jan 71, pp 65-67

Abstract: Fisher condensation of 4,5-dihydro-1-benzoxepinane-5 (I) with various arylhydrazines was studied. It was determined that cyclization of (I) arylhydrazones is facilitated by introduction of electron donating substituents into the para position, the electron accepting substituents having the opposite effect. A mixture of 3 g of (I) and 2.7 g of p-tolylhydrazine hydrochloride was refluxed for 15 min in 30 ml of 15% alcoholic HCl, then poured into 120 ml water. The separated oil was triturated and recrystallized to give 9-methyl-12H-6,7-dihydrobenz[2,3']-oxepino-[4,5-b]-indole, m.p. 135--137°. A series of derivatives with varying substituents at 9 (and 8-9) position was obtained analogously. 9-(β-diethylaminoethoxycarbonyl)-12H-6,7-dihydrobenz-[2',3']-oxepino-[4,5-b]-indole and its 12H-benzyl analogue were tested for and found to be devoid of antiserotonin activity.

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USSR

AMELIN, V. G., SHARKOVA, L. P.

"Results of Preliminary Studies of Processes of Rupture of Frozen Rock and Coal in HF and SHF Fields"

Termomekh. Metody Razrusheniya Gorn. Porod. Ch. 5 [Thermomechanical Methods of Rock Destruction, Part 5 -- Collection of Works], Kiev, Nauk. Dumka Press, 1972, pp 43-46, (Translated from Referativnyy Zhurnal, Mekhanika, No 10, 1972, Abstract No 10 V757, by B. D. Khristoforov).

Translation: Experiments are described studying the influence of HF and SHF fields on frozen sand and Kuznets Basin coal type K_{13} and G_6. Rupture of the coal in an SHF field excited by a magnetron with a wavelength of 12.6 cm with a mean radiated power density of 2.5-4 w/cm^2 was observed following 3 minutes due to thawing related to heating of the surface layers 10-12 cm thick. The coal was thawed by irradiation through an intermediate layer of wood (imitating the walls of a coal car). The thawing depth was 6-7 cm, with the outer surface of the wood heated to 60-70°. The measured coefficients of absorption of SHF for moist coal and wood are similar, 0.05-0.15 cm^{-1}. The power consumption of the process of thawing is 30-40 kw/m^3. The dielectric permeability and dielectric loss angle tangent of coal are defined as functions of moisture content and temperature. It is noted that

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USSR

AMELIN, V. G., SHARKOVA, L. P., Termomekh. Metody Razrusheniya Gorn. Prood. Ch. 5, Kiev, Nauk. Dumka Press, 1972, pp 43-46.

the breakup of frozen rock is most effective with combined use of an HF field for thawing and mechanical loads for rupture. Results are presented from experiments on the rupture of frozen sands under the combined influence of an HF field at 5-3 MHz and a vibrator of 0.4 kw power oscillating at 1,400 cycles per minute.

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1/2 008 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--3,METHYL,9,BENZYL,1,2,3,4,TETRAHYDRO GAMMA CARBOLINE -U-

AUTHOR-(03)-KUCHEROVA, N.F., SHARKOVA, N.M., ZAGOREVSKIY, V.A.

COUNTRY OF INFO--USSR

SOURCE--USSR 261,386
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--13JAN70

SUBJECT AREAS--CHEMISTRY, MISSILE TECHNOLOGY

TOPIC TAGS--ORGANIC SYNTHESIS, CHEMICAL PATENT, BENZENE DERIVATIVE, PHENOL, BENZYL CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1462 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128861

UNCLASSIFIED

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CIRC ACCESSION NO--AA0128861

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COMPD. IS PREPD. BY TREATING A SUSPENSION OF AN ALKALI METAL HYDRIDE, E. G. NA HYDRIDE, WITH A SOLN. OF 1,2,3,4,TETRAHYDRO-GAMMA-CARBOLINE IN HCONME SUB2. BENZYL CHLORIDE IS THEN ADDED TO THE REACTION MASS. FACILITY: INSTITUTE OF PHARMACOLOGY AND CHEMOTHERAPY, ACADEMY OF MEDICAL SCIENCES, USSR.

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USSR UDC 547.759.3'728.2'821.07

SHARKOVA, N. M., KUCHEROVA, N. F., and ZAGOREVSKIY, V. A., Institute of Pharmacology, Academy of Medical Sciences USSR, Moscow

"Indole Derivatives. XL. Synthesis of Novel Condensed Indole Systems"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 8, Aug 72, pp 1075-1078

Abstract: Fisher reaction of 2-methyl-5-hydrazinobenzofurane, m.p. 187-188°, 2,3-dimethyl-5-hydrazinobenzofurane, m.p. 179.5-180°, and 2-methyl-8-hydrazinobenzofuro/3,2-c/pyridine, m.p. 121-122° with methylethyl ketone, methylpropyl ketone, cyclohexanone, 1-methylpiperidone-4, and tetrahydropyrone-4 yielded a series of novel condensed indoles. Following compounds were actually synthesized: 2-methyl-6,7,8,10-tetrahydrofuro/3,2-e/thiopyrano/4,3-b/indole, m.p. 188-190°; 2-methyl-6H-7,8,9,10-tetrahydrofuro/2,3-c/carbazole, m.p. 142-143°; 2,7,8-trimethyl-6H-furo/3,2-e/indole, m.p. 132-134°; 2,9-dimethyl-6H-7,8,9,10-tetrahydrofuro/3,2-e/pyrido/4,3-b/indole, m.p. 213-215°; 1,2-dimethyl-6,7,8,10-tetrahydrofuro/3,2-e/thiopyrano/4,3-b/indole, m.p. 230-232°; 2,11-dimethyl-8H-1,2,3,4,9,10,11, 12-octahydropyrido/3,4';4,5/furo/3,2-e/pyrido/4,3-b/indole, m.p. 255-257°; 2-methyl-1,2,3,4,9,10,11,12-octahydropyrido/3',4';4,5/furo/2,3-c/carbazole, m.p.
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USSR

SHARKOVA, N. M., et al., Khimiya Geterotsiklicheskikh Soyedineniy, No 8, Aug 72, pp 1075-1078

242-244°; 11-methyl-1,3,4,5,9,10,11,12-octahydropyrido[3',4',4,5]furo[3,2-e]thiopyrano[4,3-b]indole, m.p. 250-252°; and 1,2,9-trimethyl-3H-7,8,9,10-tetrahydropyrido[3',4',4,5]furo[3,2-e]indole hydrochloride, m.p. 290-292°.

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USSR UDC 517.948.34

SHARKOVA, N. V.

"Solving Integrodifferential Equations With Self-Regulated Delay"

Minsk, Differentsial'nyye Uravneniya, Vol 7, No 12, 1971, pp 2259-2264

Abstract: The problem defined by the author is to solve the equation

$$x'(t) = f(t,x(t),x(t - \tau(x(t)))) + \int_{t_0}^{t} F(\xi,x(\xi),x(\xi - \tau(x(\xi))))d\xi,$$

for $t_0 \leqslant t \leqslant T$ under the condition $x(t) = \varphi(t)$ for $t \leqslant t_0$, where the the functions $f(t,x,y)$ and $F(t,x,y)$ have limited partial derivatives for all arguments when $t_0 \leqslant t \leqslant T$, $-\infty < x,y < +\infty$; $\tau(x(t)) \geqslant 0$ is defined and continuous in $t_0 \leqslant t \leqslant T$ and increases monotonically with t, while $|\tau_x'(x(t))| \leqslant P$; $\varphi(t)$ is continuously differentiable for $t \leqslant t_0$ and $\varphi'(t) \leqslant Q$. It is also assumed that $|f_t'| \leqslant M_1$, $|f_x'| \leqslant M_2$, $|f_y'| \leqslant M_3$, $|F_t'| \leqslant N_1$, $|F_x'| \leqslant N_2$, $|F_y'| \leqslant N_3$, and

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USSR

SHARKOVA, N. V., Differentsial'nyye Uravneniya, Vol 7, No 12, 1971, pp 2259-2264

$$T < t_0 + \sqrt{1/4 + \frac{1}{M[2 + (B + Q)P]}} - 1/2 ,$$

where $M = \max(M_2, M_3, N_2, N_3)$ and $B = \sup(f + \int_0^t F d\xi)$. The solution exists and is equal to unity; it is found by the method of oscillating functions, as explained in Mel'nik, S. I., Matematicheskiy sbornik (Mathematical Collection), 38 (80), No 4, pp 465-477, 1956. The author of this paper is associated with the A. M. Gor'kiy State University of Perm.

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SHARKOVSKIY, P. A.

Radiation Biology

SO:JPRS 55100
4 FEB 72

UDC 581.13:577.15/.057:629.78.048

EFFECT OF FLIGHT FACTORS ON THE FORMATION OF ANOMALOUS METABOLITES AND ACTIVITY OF ENZYMES IN PLANTS

All (Radiation biology)

/Article by P. A. Sharkovskiy, A. T. Miller, Yu. I. Shaydorov and A. O. Krustyn'; Moscow, Kosmicheskaya Biologiya i Meditsina, Russian, Vol 5, No 6, 1971, submitted for publication 25 June 1971, pp 36-38/

Oxidation processes play an important role in the development of primary radiation damage reactions. Peroxidase is among the typical oxidative enzymes. The activity of these enzymes is a sensitive index of radiation impairment of metabolism in plants (V. A. Kopylov and A. M. Kuzin; A. M. Kuzin; Siberia and Nilan). The activation of oxidative enzymatic systems (peroxidase + polyphenol oxidase) in the tissues of irradiated plants leads to an accumulation of primary radiotoxins (A. M. Kuzin and N. P. Korolev). These include substances of phenol nature of the orthoquinone type and the oxidation products of unsaturated fatty acids intensifying the development of primary and initial radiation damage processes (A. M. Kuzin; Yu. B. Kudryashov; P. A. Sharkovskiy). Exposure to different factors (storage, washing, heating, hypoxia, mineral nutrition, protective substances) can substantially change the content of these substances in the body of irradiated animals and plants and thereby decrease the biological effect of irradiation (N. M. Berezina, et al.; L. I. Deyev; A. M. Kuzin, et al.).

Accordingly, as criteria of the biological effect of ionizing radiation and spaceflight factors we used the content of anomalous metabolites (radiotoxins) and the activity of redox enzymes in plant tissues.

Method

The experimental model and the method for cultivating the plants grown from seeds exposed aboard an artificial earth satellite are described in other articles in this number of the journal. The content of anomalous metabolites was determined in plants 7, 10, 20 and 30 days in age. The metabolites were extracted from the plant tissue over a period of 2 hours at room temperature using a quintuple (by weight) quantity of alcohol (purified in $Al(OH)_3$) acidified to pH 3.3. The extract was filtered and the quantity

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UDC 678.652'41'21-9

SHARKOVSKIY, V. A., AKUTIN, M. S., KERBER, M. L. SHCHEGLOV, L. L., MATVELASHVILI, G. A., PUKHOVITSKAYA, A. N., MILL', L. I., GREBENNIKOV, A. V., OSTROVSKAYA, A. YE., and DYMARSKAYA, YE. L.

"New Types of Aminoplastics"

Moscow, Plasticheskiye Massy, No 12, Dec 70, pp 53-54

Abstract: The article describes synthesis of fiberglass plastics based on carbamide binders. These binders include a carbamide oligomer modified by polyvinylacetate emulsion during synthesis, and ures-benzoguanamine-formaldehyde oligomer. Fiberglass textolites based on these oligomers and TS-8/3-250 glass treated with lubricant 752 are mechanically strong. In addition to its excellent strength properties, the plastic based on urea-benzoguanamine-formaldehyde oligomer is also water-resistant.

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC: 621.373:530.145.6

SHARLAY, S. F., PRIYATELEVA, L. P.

"Investigation of Emission in a Ruby With Q-Switching by Selenium-Cadmium Glass"

Tr. Leningr. in-ta tochnoy mekh. i optiki (Works of the Leningrad Institute of Precision Mechanics and Optics), 1970, vyp. 67, pp 123-127 (from RZh--Radiotekhnika, No 1, Jan 71, Abstract No 1D144)

[No abstract]

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR UDC: 621.376:530.145.6

SHARLAY, S. F.

"On Classifying Phototropic Solutions of the Phthalocyanine Series With Respect to Absorption Spectra From the Standpoint of the Possibility of Using Them as Passive Switches in Ruby Lasers"

Tr. Leningr. in-ta tochnoy mekh. i optiki (Works of the Leningrad Institute of Precision Mechanics and Optics), 1970, vyp. 67, pp 110-123 (from RZh--Radiotekhnika, No 1, Jan 71, Abstract No 1D281)

[No abstract]

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

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SO: JPRS 60598
20 NOV 73

DESIGN AND ELECTRICAL CHARACTERISTICS OF COMMUNICATIONS CABLES

Communications Equipment

[Selected portions of a book by I. Ye. Yefimov, M. A. Klimov, R. M. Lakernik, and D. L. Sharle, Moscow, Konstruktivnyye i elektricheskiye kharakteristiki kabeley svyazi, Russian, Gosudarstvennoye izdatel'stvo literatury po voprosam svyazi i radio, 1959, pp 38-55, 186-196, 282-361]

Chapter 2

BASIS OF THE THEORY OF TRANSMISSION ALONG COMMUNICATIONS CABLES

2.1. Basic principles and circuits of electrical communications along cables

The transmission of communications from one point to another by means of electrical energy is called electrical communications. Electrical communications may be telegraph or telephone.

In telegraphy, by means of direct current pulses of current of various duration and various combinations are sent to the line. In the receiving apparatus these pulses are reproduced on a moving paper tape in the form of dots and dashes. The conventional combinations of dots and dashes, replacing the letters of the alphabet, are called a telegraph code (Morse alphabet). Modern high-speed telegraph apparatuses make it possible to transmit letters rather than conventional signs.

Telegraph signals are sent to the line in the form of combinations of pulses of direct current of various duration and various sign. In the study of processes of the transmission of telegraph signals along a line, the currents and voltages of these signals can be conveniently considered as periodic transmissions of elementary pulses (Figure 2.1). Such pulses correspond to dots in the operation of the Morse apparatus and to the transmission of the letter T in the operation of letter-printing

SHARLE, D. L.

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

1/2 009 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--BROWN COALS FROM THE KHOLBOL'DZHINSKII PART OF THE GUSINOOZERSK DEPOSIT AS FUEL FOR LARGE SCALE POWER PLANTS -U-

AUTHOR-(04)-SHARLOVSKAYA, M.S., PUGACH, L.I., KOLBASOV, YE.V., SKERKO, N.N.

COUNTRY OF INFO--USSR

SOURCE--TEPLOENERGETIKA 1970, 17(5), 45-7

DATE PUBLISHED--------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--COAL, ELECTRIC POWER PLANT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0389 STEP NO--UR/0096/70/017/005/0045/0047

CIRC ACCESSION NO--AP0132618

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

2/2 CC9 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132618

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COMBUSTIBLE MASS CONTAINED 69-73PERCENT C, 4.5-5.1PERCENT H, AND 38-43PERCENT VOLATILE MATTER. SOME COALS HAD 4.5 PERCENT S (DRY BASIS), CONSISTING OF 72-90PERCENT ORG. AND PYRITE S. THE ASH CONTENT WAS 9-30PERCENT. THE ASH CONTAINED 30-70PERCENT SIO SUB2, 11-24PERCENT AL SUB2 O SUB3, 1.7-16PERCENT CAO, 3-27PERCENT FE SUB2 O SUB3, 0.35-3PERCENT NA SUB2 O K SUB2 O, AND 0.77-16PERCENT O SUB3. WITH DECREASING ASH CONTENT, THE AMT. OF CAO AND SO SUB3 IN THE ASH INCREASED. THE ASH WAS LOW MELTING.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC: 621.396.6-181.5

BRITSIS, A. B., GOTLIB, D. S., KRUCHAN, Ya. Ya., OZOLS, K. K., and SHARLOVSKIY, B. V.

"Investigating the Characteristics of Thin Film Contact Areas for Hybrid Integrated Circuits"

Elektron. tekhnika. Nauchno-tekhn. sb. Mikroelektronika (Electronic Engineering, Scientific-Technical Collection, Microelectronics) 1970, No. 2(23), pp 20-27 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3V330)

Translation: It is shown that copper films can be used instead of gold as the conducting layer of contact areas for hybrid micro-circuits when the assembly is sealed. Resume

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

SHARMANOV, T. Sh.

KAZSSR min. of Health

UDC: 614.2(574)

PUBLIC HEALTH ACHIEVEMENTS IN KAZAKHSTAN

[Article by Professor T. Sh. Sharmanov, Kazakh Minister of Health; Moscow, Sovetskoye Zdravookhraneniye, Russian, No 12, 1972, submitted 15 July 1972, pp 21-25]

It is with great joy and pride that the Soviet people are celebrating the 50th anniversary of the USSR.

Our entire country lives and works in an atmosphere of industrial and political enthusiasm inspired by the historical 24th Congress of the Party, which defined a clear and inspired program for the further building of communism. As we survey the 50 years of heroic struggle and glorious victories, traveled by the multinational Soviet socialist government under the leadership of the Communist Party, each of us reiterates with enthusiasm that the cause initiated by Great October is alive and triumphant.

Thanks to the consistent realization of Lenin's national policy there have been enormous transformations in all areas of the national economy and public life in Kazakhstan. One of the vivid examples is the achievements in the building of the public health service. It is difficult to imagine today that in the enormous territory of prerevolutionary Kazakhstan, there were only 244 physicians and 293 paramedical personnel, about 100 hospitals (with 1800 beds) and the same number of outpatient offices. These institutions were located primarily in the cities and as a rare exception in rural centers. There were no hospitals in rural areas. Medical care for the rural population amounted to periodic visits by a doctor over a large district and prescribing drugs for the sick.

The road traveled by public health in Soviet Kazakhstan is indeed remarkable. Under the old regime, in order to see a feldsher let alone a doctor, the patient had to travel hundreds if not thousands of kilometers. Today with respect to availabity of physicians, the republic is ahead of Japan, France, England, Italy, and even the USA. Considerable capital investments are assigned for improvement of the material and technical base of therapeutic institutions -- hospitals, polyclinics, maternity homes, tuberculosis dispensaries, psychiatric hospitals, and other public health services. In the last 5 years alone, 167.9 million rubles were

JPRS 58117
31 Jan 73

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 621.357.7.035.4:669.587(035.8)

YAKOBSON, S. S., SHARMAYTIS, R. R., MATULIS, YU. YU.

"Bright Zinc Coating Electrolyte"

USSR Author's Certificate No 306189, filed 20 Oct 69, published 21 Jul 71 (from RZh-Khimiya, No 6 (II), Jun 72, Abstract No 6L294P)

Translation: A zincate electrolyte for bright zinc coating containing ZnO, NaOH, the product of condensation of monoethanolamine with aromatic aldehyde (I) is introduced. It is distinguished by the fact that in order to obtain bright coatings and to increase the stability of the electrolyte, polyglycol is introduced in it with the following component ratio (in grams/liter): 12-24 ZnO; 80-140 NaOH; 1-25 I; 0.2-06 polyglycol. It is indicated that the following can be used as the polyglycol: polyethyleneglycol, polypropyleneglycol, polyethylene-polypropyleneglycol or polyethyleneglycol + polypropyleneglycol. Example. An electrolyte of the following composition was prepared (in grams/liter): 25-30 ZnO, 80-100 NaOH, 12-15 I, 0.4-0.6 polyethyleneglycol. The Zn coating was deposited with D_c 2-4 a/dm^2 at room temperature. The precipitates obtained with a thickness of 2 μ were nonporous, and the degree of luster with respect to an Ag-mirror was 75-80%. The electrolyte remained stable for 25-30 hours of operation. The electrolyte was adjusted by the addition of polyethylenepolyglycol after passage of 18-20 a-hr/liter of electrolytes.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--AROMATIC COMPOUNDS WITH HYDRAZO AND AZO GROUPS. II. NITRATION OF PENTANITROAZOBENZENES -U-

AUTHOR-(03)-SHARNIN, G.P., BUZYKIN, B.I., SHAKUROVA, K.KH.

COUNTRY OF INFO--USSR

S

SOURCE--ZH. ORG. KHIM. 1970, 6(5), 1036-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AROMATIC NITRO COMPOUND, ORGANIC AZO COMPOUND, NITROBENZENE, NITRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1281 STEP NO--UR/0366/70/006/005/1036/1038

CIRC ACCESSION NO--AP0134955

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

2/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0134955

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NITRATION OF 2,2PRIME,4,6,6PRIME,PENTANITROAZOBENZENE WITH 98PERCENT HNO SUB3 OR HNO SUB3 -H SUB2 SO SUB4 MIXTS. GAVE 2,2PRIME,4,4PRIME,6,6PRIME, HEXANITROAZOBENZENE (I). SIMILARLY, 5,5PRIME,DIMETHYL,2,2PRIME,4,4PRIME,6,PENTANITROAZOBENZENE WAS NITRATED TO THE 5,5PRIME,DI,ME DERIV. OF I. THE ATTEMPTED NITRATION OF 2,2PRIME,4,4PRIME,6,PENTANITROAZOBENZENE (II) OR ITS DERIVS. CONTG. ELECTRON ACCEPTING SUBSTITUENTS, WITH 98PERCENT. HNO SUB3 OR HNO SUB3 -H SUB2 SO SUB4 MIXT. WAS NOT SUCCESSFUL. THE NITRATING MIXTS. CONTG. FREE SO SUB3 DECOMPO. II AND ITS DERIVS. FACILITY: KAZAN. KHIM.-TEKHNOL. INST. IM. KIROVA, KAZAN, USSR.

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

1/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--AROMATIC COMPOUNDS WITH HYDRAZO AND AZO GROUPS. III. NITRATION OF TETRA AND PENTANITROHYDRAZOBENZENES -U-

AUTHOR-(02)-BUZYKIN, B.I., SHARNIN, G.P.

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COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(5), 1039-41

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AROMATIC NITRO COMPOUND, ORGANIC AZO COMPOUND, BENZENE DERIVATIVE, CHLORINATED ORGANIC COMPOUND, NITROBENZENE, TRINITROBENZENE, NITRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1282 STEP NO--UR/0366/70/006/005/1039/1041

CIRC ACCESSION NO--AP0134956

UNCLASSIFIED

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

2/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0134956

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE OXIDN.-NITRATION OF 2,4,(O SUB2 N) SUB2 C SUB6 H SUB3 NHNHC SUB6 H SUB3 (NO SUB2) SUB2 -2,4 WITH 98PERCENT HNO SUB3 OR HNO SUB3 -H SUB2 SO SUB4 MIXT. GAVE 2,4, (O SUB2 N) SUB2 C SUB6 H SUB3 N:NC SUB6 H SUB3 (NO SUB2)-2,4 AND 2,4,6-(O SUB2 N) SUB3 C SUB6 H SUB2 N: NC SUB6 H SUB3 -(NO SUB2) SUB2 -2,4 (I). ALSO 2,4,6,(O SUB2 N) SUB3 C SUB6 H SUB2 NHNHC SUB6 H SUB4 NO SUB2 -2 WAS OXIDIZED TO I. SIMILARLY, 1,3,BIS(4,NITROPHENYLHYDRAZO),2,4,6, TRINITROBENZENE WAS OXIDIZED NITRATED TO 1,3,BIS(2,4,DINITROPHENYLAZO), 2,4,6,TRINITROBENZENE. UNDER THESE CONDITIONS 2,4,6, (O SUB2 N) SUB3 C SUB6 H SUB2 NHNHC SUB6 H SUB4 NO SUB2 -4, ITS CHLORO DERIVS., ITS ME DERIVS., AND PENTANITROHYDRAZOBENZENES ARE ONLY OXIDIZED TO NITROAZOBENZENES, BUT NOT NITRATED. FACILITY: KAZAN. KHIM.-TEKHNOL. INST. IM. KIROVA, KAZAN, USSR.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

Acc. Nr.: M0046530 Ref. Code: UR0144

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USSR UDC 62-507

POLYAKOV, VALENTIN, YEFIMOVICH, Candidate of Technical Sciences, Professor of the Ural Polytechnical Institute, SHARNIN, YURIY KONSTANTINOVICH, Postgraduate of the Ural Polytechnical Institute

"Problem of Planning and Designing Logical Potential Circuits Using Transistor Elements Series ET"

Novocherkassk, Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika (News of the Institutions of Higher Learning, Electromechanics), No 1, 1970, pp 23-26 (from Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika, No 1, 1970, p 112)

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

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Translation: A procedure is proposed for determining the number of logical LOI elements required for realizing the functions of disjunction and conjunction for any number of arguments. This offers the possibility of selecting the minimum form of the logical part of automation devices. An illustration of determining the number of logical elements for 18 input variables is presented. It is demonstrated that the selected number of elements is minimal. There is 1 table, 2 illustrations and a 3-entry bibliography.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

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

GUBKIN, A. N., BIYEVETSKIY, E. A., SHARNOPOL'SKAYA, YE. T.

"Glass Electrets"

Tr. Mosk. in-ta elektron. mashinostr. (Works of Moscow Institute of Electronic Machine Building), 1970, No. 8, pp 108-118 (from RZh Fizika, No 12, Dec 71, Abstract No 12Ye1155)

Translation: Correction methods and the properties of electrets of a pyroceramic of various compositions (cordierite, glass-porcelain, and placopyroceramic) and borosilicate glass with liquation are described. The physical nature of the residual polarization in the glasses and the role of the heterogeneous structure in the electret effect are discussed. Resume.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 534.2

APANASENKOV, V. A., NEFEDOV, P. M., SHAROMOV, I. P.

"Study of Fluctuations of Propagation Velocity of Sound in the Region of the Frontal Zone"

Tr. Sakhalin. Kompleks. NII [Works of Sakhalin Combined Scientific Research Institute], No 28, 1972, pp 25-31, (Translated from Referativnyy Zhurnal, Mekhanika, No 11, 1972, Abstract No 11 B290 by N. K. Ivanov-Shits).

Translation: The Sakhalin Institute has measured the propagation times of a pulse signal in the surface layer of the ocean. The time of arrival of the leading edges (rays traveling through the mass of the ocean) and trailing edges (surface rays) of the signal were recorded. The fluctuations in travel time (Δt^2) were calculated for these cases. It was shown that for the leading edge, this quantity is practically independent of distance, while there is a linear relationship for the trailing edge between Δt^2 and distance (up to 100 km). This agrees with the assumption made concerning the path of the rays. An estimate is given for the mean horizontal heterogeneity, equal to 4 km.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 534.6

BOBKOV, Yu. A., ZVEREV, V. A., PAVLENKO, A. M., and SHARONOV, G. A., Gor'kiy State University

"Method of Amplitude and Phase Registration of Ultrasonic Waves Based on Double Interaction of Light With Sound"

Moscow, Akusticheskiy Zhurnal, Vol 17, No 4, 1971, pp 529 –532

Abstract : A method of visualization of sound fields in a liquid based on consecutive interaction of light with two travelling acoustic waves is discussed. By this method, both, amplitude and field phase are recorded and, in contrast to other methods, sound field visualizations not requiring high voltages and distinguished by simplicity of the used equipment can be realized. Visualization experiments of sound fields were carried out by translucence of ultrasonic waves by coherent light according to an illustrated schema. Examples of photographed visualized sound fields show that the discussed method makes possible to register the ultrasonic bundle itself and also the fine structure of the wave field. The method can be applied not only for acoustic holography purposes but also for solving other problems of acoustics, e. g., investigation of characteristics of ultrasound emitters. Three illustr., nine formulas, five biblio. refs.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 621.396.677:523.164

DUGIN, N.A., TURCHIN, V.I., TSEYTLIN, N.M., SHARONOV, G.A.

"On The Use Of A Two-Element Interferometer With Fixed Base For Obtaining A Knife-Edge Directivity Diagram"

Radiotekh. i elektronika (Radio Engineering And Electronics), 1971, 16, No 6, pp 918-928 (from RZh--Radiotekhnika, No 9, Sept 1971, Abstract No 9B17)

Translation: The singularities are considered of the synthesis of the linear antenna of a two-element interferometer with a fixed base during rotation of the earth. The conditions during which such synthesis can take place are obtained. The possible directional diagrams for such a system are calculated and certain requirements placed on the receiving apparatus of the interferometer are determined. 7 ill. 8 ref. Author's abstract.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC: 621.936.677.012.12

DUGIN, N. A., TURCHIN, V. I., TSEYTLIN, N. M., SHARONOV, G. A.

"On Using a Two-Element Interferometer With Fixed Base to Produce a Knife Radiation Pattern"

Moscow, Radiotekhnika i Elektronika, Vol. 16, No 6, Jun 71, pp 918-928

Abstract: The authors consider some peculiarities and parameters of an equivalent antenna with a "knife" radiation pattern synthesized from a two-element interferometer with a base which remains fixed as the earth rotates for the case of observation of sources with "optimum" inclinations. Some requirements of the main parameters of the receiver are considered -- the width of the passband, selection of the time constant, use of a phase shifter, phase stability. The results of the analysis show that when observational data are appropriately processed, the proposed two-antenna interferometer system can give a "finger" radiation pattern with low side-lobe level at the expense of reduced sensitivity.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 621.396.677.4.012.12

DUGIN, N. A., TURCHIN, V. I., SHARONOV, G. A.

"On the Radiation Pattern of Ring Antenna Arrays"

Moscow, Radiotekhnika i Elektronika, Vol 16, No 7, Jul 71, pp 1152-1157

Abstract: The authors examine radiation patterns of synthesized equidistant and nonequidistant antenna arrays with different numbers of rings realized by aperture synthesis utilizing the rotation of the earth. The results of computer calculations are presented for radiation patterns of arrays with different configurations and numbers of rings, as well as the corresponding radiation patterns obtained by the method of optical modeling. It is noted that the method of aperture synthesis utilizing the rotation of the earth (supersynthesis) has the advantage over conventional methods of multielement synthesis that wider variation of distribution is possible with respect to the synthesized aperture, which means that a more detailed study can be made of the distribution of radio brightness with respect to sources. In conclusion the authors thank N. M. Tseytlin for constructive criticism and constant interest in the work.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 669.1:621.873

GOGENKO, V. A., SHARONOV, G. YE., and GROSVAL'D, V. G.

"Devices for Weighing Metal in Steel Pouring Ladles During Extraction of a Melt From an Open Hearth Furnace"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of Works], No 75, Metallurgiya Press, 1970, pp 52-56

Translation: The design of electrotensometric devices for weighing of metal in a steel pouring ladle during extraction of the melt from an open hearth furnace is described.

The scales consist of four water-cooled dosimeters installed on the stand carrying the steel pouring ladle, an electrical attachment and a secondary instrument. The range of the device is 0 to 320 T. The error of the scale did not exceed 1.25% of the maximum full scale reading in calibration on a 600 T hydraulic press. The tensometric scales are installed on two stands.

Comparison of the results of weighing by tensometric scales with the results of calculation of the theoretical mass of the metal (by volume) was performed. The average deviation of mass from the theoretical value did not exceed the error of calibration. 2 figures; 1 table; 1 biblio. ref.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR UDC 669.1:621.873

GOGENKO, V. A., SHARONOV, G. YE., and GROSVAL'D, V. G.

"Devices for Weighing Metal in Steel Pouring Ladles During Extraction of a Melt From an Open Hearth Furnace"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of Works], No 75, Metallurgiya Press, 1970, pp 52-56

Translation: The design of electrotensometric devices for weighing of metal in a steel pouring ladle during extraction of the melt from an open hearth furnace is described.

The scales consist of four water-cooled dosimeters installed on the stand carrying the steel pouring ladle, an electrical attachment and a secondary instrument. The range of the device is 0 to 320 T. The error of the scale did not exceed 1.25% of the maximum full scale reading in calibration on a 600 T hydraulic press. The tensometric scales are installed on two stands.

Comparison of the results of weighing by tensometric scales with the results of calculation of the theoretical mass of the metal (by volume) was performed. The average deviation of mass from the theoretical value did not exceed the error of calibration. 2 figures; 1 table; 1 biblio. ref.

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

1/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ARTIFACTS IN MEASUREMENTS OF THE FARADAY EFFECT -U-

AUTHOR-(02)-CHIKALOVADUZINA, O.P., SHARONOV, YU.A.

COUNTRY OF INFO--USSR

SOURCE--OPT. SPEKTROSK. 1970, 28(2), 419-20

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DNA, ABSORPTION SPECTRUM, FARADAY EFFECT, UV SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0241 STEP NO--UR/0051/70/028/002/0419/0420

CIRC ACCESSION NO--AP0119237

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

2/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119237

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DIFFERENCES BETWEEN THE THEORETICAL AND EXPTL. DATA OF MAGNETIC ROTATORY DISPERSION OF NATIVE AND DENATURATED DNA AT THE 260 M MU ABSORPTION BAND WAS FOUND. DNA POSSESSED INSUFFICIENT SYMMETRY TO OBSERVE THE DISPERSION OF TYPE A. THE ROTATORY VALUE AT 260 M MU INCREASED NONLINEARLY DURING A CHANGE OF ABSORBANCE OF THE SOLN. UP TO 0.5 AND THEN IT REMAINED CONST. THIS MAX. VALUE WAS PROPORTIONAL TO A MAGNETIC FIELD INTENSITY AND DECREASED WITH INCREASING WAVELENGTH. AT WAVELENGTHS LOWER AND HIGHER THAN 260 M MU, A LINEAR DEPENDENCE OF DIFFERENT SIGN WAS OBSD. AT HIGHER ABSORBANCE; IN THE CASE OF DNA, A SMALL TYPE B EFFECT PARTICIPATED. SIMILAR ARTIFACTS WERE OBSD. IN THE CASE OF GUANOSINE, THYMIDINE, AND BA SALT OF CYTIDYLIC ACID. ACETONE AND METHYL ETHYL KETONE SHOWED NO EFFECT, ACETOPHENONE, A SMALL TYPE B EFFECT. THESE ARTIFACTS ARISING DURING THE MEASUREMENT IN THE ABSORPTION REGION WERE EXPLAINED BY REPEATED REFLECTIONS FROM CUVETTE WALLS BY LIGHT DISPERSION. AT LOW TRANSPARENCY, THE EFFECT CAUSED BY A SOLVENT WAS GIVEN BY A MAIN COMPONENT ONLY, WHICH EXPLAINED THE "SATN." AT HIGH ABSORBANCE. THESE ARTIFACTS WERE IMPORTANT IN MEASUREMENTS IN THE UV SPECTRAL REGION.

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 620.196

ZHADAN, T. A., BABAKOV, A. A., SHARONOVA, T. N., and VASIL'YEVA, N. M., Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin, State Scientific Research Institute of the Nitric Industry

"Investigation of the Inclination of 000Kh20N20S5 (ZI-52) Steel to Intercrystalline Corrosion"

Moscow, Zashchita Metallov, Vol 9, No 1, Jan-Feb 73, pp42-44

Abstract: 000Kh20N20S5 (ZI-52) steel, in spite of its carbon content, shows a tendency to intercrystalline corrosion (ICC) in strong nitric acid in zones of welded joints or after tempering at 700-800°, but the steel retains high resistance to ICC in tests by the AM (GOST 6032-52) method after analogous processing. The tendency of ZI-52 steel to embrittlement and to ICC (after tests in 23 n. HNO_3 on the temperature and duration of tempering are discussed by reference to diagrams. On the basis of experimental data, 000Kh20N20S5 (ZI-52) steel which has been subjected to a 23 n. HNO_3 reaction at 85-100° can be recommended only in the hardened state for unwelded constructions or with obligatory hardening after welding. Three figures, four bibliographic references.

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

Acc. Nr: AP0044016

Ref. Code: UR 0240

PRIMARY SOURCE: Gigiyena i Sanitariya, 1970, Nr 2, pp 26-30

HYGIENIC WORK CONDITIONS AND HEALTH STATUS OF WORKERS ENGAGED IN PRODUCTION OF TOLUENEDIAMINE

V. S. Filatova, A. Ya. Tubina, Z. V. Sharonova, I. A. Golova, V. I. Filina, Dorofeyeva, Ye. D.

While obtaining toluenediamine by using Baier's method the air of work shops can be polluted with toluenediamine, methanol, o-dichlorobenzene and dinitrotoluene. The two lastly named substances could not be traced in most of the samples. The most commonly encountered TDA and methanol concentrations were below the maximally permissible levels. Materials derived from these investigtions bring evidence that continuous method of TDA production with remote and automatic control of technological operations and the equipment employed for this purpose deserve high appraisal. The study of the workers' health status revealed mildly pronounced pathological shifts on the level of nervous system, blood and liver.

REEL/FRAME
19770453

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

1/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--THE GALACTIC STRUCTURE AND THE APPEARANCE OF THE MILKY WAY -U-

AUTHOR-(02)-PAVLOVSKAIA, E.D., SHAROV, A.S.

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

TOPIC TAGS--SPIRAL GALAXY, MODEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605030/F04 STEP NO--SZ/0000/70/000/038/0222/0224

CIRC ACCESSION NO--AT0141877

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

2/2 009 UNCLASSIFIED

CIRC ACCESSION NO--AT0141877 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE GALACTIC SPIRAL STRUCTURE AND THE APPEARANCE OF THE MILKY WAY, USING DIFFERENT MODELS OF THE GALACTIC STRUCTURE WITH DIFFERENT VALUES OF ABSORPTION INSIDE AND BETWEEN THE ARMS AS WELL AS MODELS WITH VARIABLE ABSORPTION ACROSS THE ARMS. THE ANALYSIS OF ALL THE RESULTS SHOWS THAT EVEN WITHIN THE LIMITS OF THE MODELS CONSIDERED, THE APPEARANCE OF THE MILKY WAY ESSENTIALLY DEPENDS ON THE VALUE OF THE ABSORPTION, AND ALSO ON OTHER PARAMETERS OF THE SYSTEM. FACILITY: MOSKOVSKII GOSUDARSTVENNYI UNIVERSITET, MOSCOW, USSR.

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

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USSR

UDC 669.71.053.2(088.8)

GROSHEV, G. L., DANOV, S. M., YURLOVA, Z. I., SHILOVA, A. V., CHAUSOVSKIY, D. A., MOVSHEVICH, Yu. M., and SHAROV, A. V.

"Method of Producing Anhydrous Aluminum Chloride"

USSR Author's Certificate No 268397, Filed 8/04/68, Published 13/07/70 (Translated from Referativnyy Zhurnal-Metallurgiya, No 2, 1971, Abstract No 2 G132 P)

Translation: A method is presented for producing anhydrous $AlCl_3$ from Na tetrachloroaluminate at elevated temperatures. To simplify the process, the Na tetrachloroaluminate is treated with gaseous NH_3, the ammoniates formed are evaporated and condensed, and metallic Al is added to them with subsequent heating to 800-850° in a medium of an inert gas such as N_2.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

SHAROV, M. V., PIMENOV, YU. P.

UDC 669.71.018.9.4

"Processes of Absorption and Separation of Hydrogen by Aluminum and Alloys"

Metalloved. splavov legkikh met. -- V sb. (Physical Metallurgy of Alloys of Light Metals -- collection of works), Moscow, Nauka Press, 1970, pp 80-87 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G207)

Translation: The laws of the processes of absorption and separation of hydrogen by melts based on aluminum are investigated. The Al_2O_3 distributed in the alloy and found on its surface noticeably reduces the rate of achievement of physical and chemical equilibrium in the gas-metal system. There are 5 illustrations and an 8-entry bibliography.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR UDC 669.721.018.9.4

SHAROV, M. V., and MOLCHANOV, M. D.

"Filtration of Magnesium Alloys"

Tr. Mosk. aviats. tekhnol. in-ta (Works of Moscow Aviation Technological Institute), 1970, vyp. 71, pp 93-106 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 G254 by authors)

Translation: The authors suggest an improved technological melt treatment process permitting a rise in metal purity, corrosion resistance, and modification effect, which is achieved by the use of combined filters. The process is distinguished by its simplicity and eases the labor of foundry workers. Six illustrations. Five tables.

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 621.762:669.018.29

SHAROV, M. V., and PIMENOV, YU. P.

"Study of Structure of Aluminum Oxide Enclosed in Aluminum"

Tr. Mosk. aviats. tekhnol. in-ta (Works of Moscow Aviation Technological Institute), No 71, 1970, pp 32-40, (from Referativnyy Zhurnal-Metallurgiya, No 1, 1971, Abstract No 1 G476 by the authors).

Translation: A method is described for x-ray structural analysis of Al oxides present in Al. It is demonstrated that three types of Al oxide may be present in the liquid metal. The structure of Al oxides on the surface of the metal is also studied. 3 figures; 3 tables; 6 biblio. refs.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC 669.71.017:669.788

SHAROV, M. V., and PIMENOV, Yu. P.

"Processes of Absorption and Hydrogen Separation by Aluminum and Alloys"

Metallovedeniye Splavov Legkikh Metallov-Sbornik, Moscow, "Nauka", 1970, pp 80-87, resume

Translation: Regularities of absorption and hydrogen separation processes by aluminum melts are discussed. It is demonstrated that aluminum oxide distributed in the metal and on its surface, considerably decreases the rate at which the physico-chemical equilibrium in the gas-metal system is achieved. Five figures, eight bibliographic references.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC: 621.317.384

SHAROV, P. P., PANKRATOV, L. V.

"A Device for Measuring SHF Power"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 28, 1970, Soviet Patent No 280583, Class 21, filed 7 Apr 69, p 50

Abstract: This Author's Certificate introduces a device for measuring SHF power which contains a dielectric vessel with a resistive film applied to its surface, series connected thermocouples, and an indicator device. As a distinguishing feature of the patent, sensitivity is increased and the dynamic range of measurable powers is extended by locating the hot junctions of the thermocouples on the inner surface of the vessel, while the cold junctions are fastened to the massive dielectric sleeve.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

UDC: 681.128

KIYASHEV, A. I., Engineer, PIVTSAYEV, I. I., Engineer, POLETAYEV, B. K., Engineer, SHAROV, V. A., Engineer

"A Resonance Level Indicator for Measuring the Level of the Interface Between Two Media"

Moscow, Pribory i Sistemy Upravleniya, No 1, Jan 72, pp 46-48

Abstract: The paper describes a resonance level indicator for measuring the level of the interface between a "light" dielectric liquid and a "heavy" electrically conductive liquid. The instrument is based on a resonance method of measurement developed at the Institute of Control Problems, Academy of Sciences of the USSR. The device is designed for use with a dielectric liquid having a permittivity of 1.8-2.5 and a conductive liquid with conductivity of more than 2 mho/m. The pickup is a section of nonhomogeneous long line shorted at the end with a resonance frequency which changes in proportion with the level of the liquid interface. The pickup parameters are calculated and a block diagram of the level indicator is

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

SHAROV, V. A.

SO: JPRS 54171
01 OCT 71

UDC 681.3.007

SIMULATION OF COMPLEX CONTROL SYSTEMS WITH AN OPERATOR

[Article by Engineer V. A. Sharov; Moscow, Pribory i Sistemy Upravleniya, Russian, No 10, 1970, pp [illegible]]

In connection with broad introduction of computers into monitoring and control systems, it is necessary to consider that such complex systems are not only made up of a set of devices (and people), but also, what is more important, a set of algorithms for operation of the devices (and behavior of the people). As a rule, the functions of the operator in such systems are not limited to preparation and starting the system and observation of its operation. If control is even realized by the machine, the operator usually controls the validity of the development of the most important control inputs, he can actively intervene in the data processing activity of the machine and in the most responsible cases, participate in the decision-making.

During the course of joint operation of the operator and the computer when solving monitoring and control problems and also when performing various calculations, there is active two-way exchange of information between the operator and the machine. In particular, the operator inputs data to the computer by means of a keyboard, he controls the data processing by changing the operating program of the computer (for example, he indicates the number of the program required by the computer), he monitors the course of solving the problem by the results of intermediate calculations and the recording and erasing of information, and he fixes the results of the calculations for further use, controlling the data output to digital displays or registers.

When planning and designing such systems, an effort is made to distribute functions between the man and the machine so that the system will be optimal with respect to the given technical and economic indexes. This problem reduces primarily to efficient selection of the algorithms for the computer, the work of the operator and the exchange of information inasmuch as such system characteristics as loading the machine (its ready-access memory), intensity of work by the operator, that is, in the final analysis, the reliability and effectiveness of operation of the system, depend primarily on how well the operating algorithms of the operator and the computer are matched. Only after selecting the optimal version of the algorithms for the system is it expedient to concern [illegible] planning and designing the operator's work space considering the engineering psychology data.

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

Acc. Nr.: AN0045495

S

Ref. Code: UR 9012

JPRS 50052

"Orbita" Receiving Station Begins Operation in Ulan-Bator

(Excerpt: "The First Abroad," by V. Sharov, Moscow, Pravda, 3 February 1970, p. 5)

The cosmic television bridge Moscow - Ulan-Bator has begun operation. The "Orbita" space communications television receiving station, the first outside the borders of the USSR, was erected in the capital of the republic by Moscow construction and communications workers. More than 150 complicated pieces of equipment and instruments were assembled. A complex of buildings was created. The State Commission rated the quality of the work "outstanding." The "Orbita" station began operation almost three months ahead of schedule. [4]

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Reel/Frame
19780460

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

Acc. Nr. AP0034206 Abstracting Service: CHEMICAL ABST. 4-70 Ref. Code UR 0078

S

74247u Compounds of uranyl oxalate with hydrazine. Volchkov, G. N.; Krylov, E. I.; Sharov, V. A.; Khakhalov, A. A. (Ural. Politekh. Inst. im. K[redacted]dlovsk, USSR). Zh. *Neorg. Khim.* 1970, 15(1), 41-2 (Russ). $UO_2C_2O_4.N_2H_4.0.75H_2O$ (I) formed as bright yellow ppt. when a suspension of 2 g $UO_2C_2O_4$ in 200 ml EtOH was mixed at room temp. with 0.4 ml 92% N_2H_4. Yellow-brown cryst. $UO_2C_2O_4.2N_2H_4.H_2O$ (II) was prepd. analogously at 50-60° by using 16 ml 92% N_2H_4. I and II decompd. 1st by losing H_2O, then, at 200-70°, by losing N_2H_4, and, finally, at 335-55°, by oxidn. of $C_2O_4^{2-}$. U_3O_8 is the final product of oxidn. of I or II. HMJR

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REEL/FRAME

19710859

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

Acc. Nr. AP0034205

Abstracting Service: CHEMICAL ABST. 4-70

Ref. Code UR 0078

74229q Synthesis and properties of nickel oxalate monohydrazinate. Krylov, E. I.; Nikonenko, E. A.; Sharov, V. A.; Ovchinnikov, Yu. M. (Ural. Politekh. Inst. im. Kirova, Sverdlovsk, USSR). *Zh. Neorg. Khim.* 1970, 15(1), 38-40 (Russ). A mixt. of 1 g powd. $NiC_2O_4.2H_2O$, 8.8 ml H_2O, and 0.2 ml 92% N_2H_4 was stirred for 1 hr and then left standing at room temp. for 5 hr. The bright-blue ppt. of $NiC_2O_4.N_2H_4.2H_2O$ (I) was washed with alc. and Et_2O; at 20°, d. of I is 2.21 g/cm³. The magnetic susceptibility of I, detd. at 87-299°K, agrees with the Curie-Weiss law, with $\theta = -45$°K. I is assumed to have an octahedral structure ($\mu_{eff.} = 3.37\ \mu B$). HMJR

REEL/FRAME

19710858

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

Thorium and Uranium

USSR UDC 546.791.6:546.171.5

VOLCHKOV, G. N., KRYLOV, YE. I., SHAROV, V. A., and KHAKHALOV, A. A., Ural Polytechnical Institute imeni S. M. Kirov, Sverdlovsk, Ministry of Higher and Secondary Specialized Education RSFSR

"Compounds of Uranyl Oxalate with Hydrazine"

Moscow, Zhurnal Neorganicheskoy Khimii, Vol 15, No 1, 1970, pp 41-42

Abstract: A study was made of products of the reaction of uranyl oxalate with hydrazine using x-ray phase, derivatographic, and chemical methods of analysis. The starting preparations included 92% N_2H_4 and $UO_2C_2O_4$. The synthesis was conducted in alcoholic medium (96% C_2H_5OH) to avoid displacing hydrazine from the internal coordination sphere of water, since uranium exhibits greater affinity for oxygen than for nitrogen. Synthesis of the following products is described: $UO_2C_2O_4 \cdot N_2H_4 \cdot 0.75\ H_2O$ and $UO_2C_2O_4 \cdot 2N_2H_4 \cdot H_2O$. Study of the thermal decomposition of these compounds in air followed the derivatograph of the Paulik-Paulik-Erdey system, along with chemical analysis of the solid decomposition products. Thermal decomposition is accompanied by endo- and exo-effects: endo-effects at 140 and 130° are caused by the release of water, exo-effects at 200, 270, and 210°C -- by dissociation of N_2H_4 or by its oxidation by air oxygen, and at 335 and 355°C -- by oxidation of the oxalate ion. The end product of thermal decomposition is U_3O_8.

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

1/2 024

UNCLASSIFIED

TITLE--COMPOUNDS OF CERIUM (III) OXALATE WITH HYDRAZINE -U-

PROCESSING DATE--13NOV70

AUTHOR-(04)-BEZDENEZHNYKH, G.V., KRYLOV, YE.I., SHAROV, V.A., NEUYMIN, A.D.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970 15(3) 629-32

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--TERNARY FLUID SYSTEM, IR SPECTROSCOPY, HYDRAZINE, OXALATE, CERIUM COMPOUND, METAL COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1871

STEP NO--UR/0078/70/015/003/0629/0632

CIRC ACCESSION NO--AP0115690

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

UNCLASSIFIED PROCESSING DATE--13NOV70

2/2 024

CIRC ACCESSION NO--AP0115690

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SYSTEM CE SUB2-(C SUB2 O SUB4)SUB3. 10.3H SUB2 O-N SUB2 H SUB4 -H SUB2 O WAS STUDIED BY IR SPECTROSCOPY. THE COMPLEXES ARE FORMED (MU SUBEFF, CURIE TEMP.): CE SUB2 (C SUB2 O SUB4). 6N SUB2 H SUB4. 7.4H SUB2 O, 2.61, 18DEGREES; CE SUB2(C SUB2 O SUB4)SUB3. 4N SUB2 H SUB4. 9H SUB2O (I), 2.37, MINUS 40DEGREES; CE SUB2(C SUB2 O SUB4)SUB3. 3N SUB2 H SUB4. 10.26 SUB2 O, 2.51 MUB, MINUS 10DEGREESK. H SUB2 O CONTENT OF THESE COMPLEXES CHANGED EASILY. THE IR SPECTRA OF THE COMPLEXES ARE GIVEN AND A PARTIAL INTERPRETATION OF THEIR BANDS IS TABULATED. IT IS ASSUMED THAT I HAS ONLY BIDENTATE N SUB2 H SUB4 AND THE REMAINING 2 COMPDS. HAVE MONO AND BIDENTATE N SUB2 H SUB4 LIGANDS.

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

2/2 012

UNCLASSIFIED

CIRC ACCESSION NO--AA0137006 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COMPN. CONSISTS OF 7:3-5:5 VOL. POLYETHYLENEPOLYAMINES AND ETOH.

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

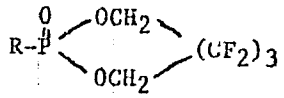
UDC 541.64:542.952

SHAROV, V. N., and KLEBANSKIY, A. L., All Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev

"Polymers Based on Cyclic Polyfluoroalkylenealkyl(aryl)phosphonates"

Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 15, No 11, Nov 73, pp 2543-2457

Abstract: Cyclic hexafluoroamyleneheptafluoropropylphosphonate and hexafluoroamylenedimethylamidophosphate were synthesized. Hexafluoroamylenealkyl(aryl)phosphonates with radicals C_3H_7, C_6H_5, CH_3, and $CH_2{=}CH$ as well as hexafluoroamylenedimethylamidophosphate polymerize thermally at 270° and catalytically at 220°. It was shown that the rate of thermal polymerization of cyclic monomers with the structure



increases with increased electronegativity of the radical R.

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USSR

UDC 546.185+547.241

SHAROV, V. N., KLEBANSKIY, A. L., BARTASHEV, V. A. (DECEASED), All-Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev, Leningrad, State Committee for Chemistry USSR

"Synthesis of Cyclic(Polyfluoro)alkylene(polyfluoro)alkylphosphates and (Polyfluoro)Alkylenealkyl(aryl)phosphonates"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70, pp 2011-2014

Abstract: A solution 1,1-dihydrotrifluoroethanol in ether was added to phosphorus oxychloride in ether and allowed to stand overnight. The solids were they filtered off, the solvent evaporated and 1,1-dihydrotrifluoroethyldichlorophosphate was distilled. 1,1-Dihydropentafluoropropyl-, 1,1-dihydroheptafluorobutyl-, 1,1-dihydrononafluoroamyl-, 1,1-dihydro-3-(trifluoromethoxy)-tetrafluoropropyl- and 1,1,3-trihydrotetrafluoropropyldichlorophosphates were obtained analogously. To obtain 3,3,3-trifluoropropyldichlorophosphine (I), 3,3,3-trifluoropropylmagnesium chloride was first converted to the corresponding cadmium reagent and then

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APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

USSR

SHAROV, V. N., et al, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70, pp 2011-2014

reacted with phosphorus trichloride. The product (I) boiled at 120-122°, d_4^{20} 1.4514, n_D^{20} 1.4290; it was converted to the 3,3,3-trifluoropropyldichlorophosphonate by treatment with chlorine followed by SO_2. The synthesis of 1,1,5,5-tetrahydrohexafluoroamylenechlorophosphate consisted of reacting phosphorus oxychloride with 1,1,5,5-tetrahydroxyfluoroamylene glycol and triethylamine. The additions were carried out in cold ether and the reaction mixture was allowed to come to room temperature and stand overnight. The solution was cooled again and treated with gaseous HCl. The precipitate was filtered and washed with ether and the product was vacuum-distilled. 1,1,5,5-Tetrahydrohexafluoroamylene-1,1-dihydrotrifluoroethylphosphate -pentafluoropropylphosphate, -heptafluorobutylphosphate, nonafluoroamylphosphate and -3-(trifluoromethoxy)-tetrafluoropropylphosphate were obtained analogously. Physical properties of the products are tabulated in the article.

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UDC 547.26.118.07

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SHAROV, V. N., KLEBANSKIY, A. L., BARTASHEV, V. A., VALYASNIKOVA, T. D., GRINBLAT, M. P., SOKOLOV, YE. I., TSERRETELI, I. YU.

"A Method of Producing Organofluoride Cyclic Esters of Alkyl (aryl)phosphonic Acids"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 17, 1970, Author's Certificate No 270732, filed 25 Mar 69, p 23

Abstract: This Author's Certificate introduces a method of producing organofluoride cyclic esters of alkyl(aryl)phosphonic acids. As a distinguishing feature of the patent, alkyl(aryl)dihalophosphonates are interacted with polyfluoroalkylene glycols in the presence of a tertiary amine in an inert solvent.

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UDC 547.26'118'233'221.07

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GRINBLAT, M. P., PRONS, V. N., SHAROV, V. N., KLEBANSKIY, A. L.

"A Method of Producing Alkylene-bis-(N,N-dialkylamidofluoroalkylphosphonites)"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 27, 26 Aug 69, P 34, USSR Patent No 250907, filed 8 Oct 68

Abstract: This Author's Certificate introduces a method of producing alkylene-bis-(N,N-dialkylamidofluoroalkylphosphonites). N,N-dialkylamidofluoroalkylhalide phosphines are interacted with glycols or polyfluoroglycols in the presence of a tertiary base in an organic solvent with subsequent isolation of the desired product by conventional methods.

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AA0051836 SHAROV Yu. K. UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General, Derwent, 2-70

236489 AIR HUMIDIFIER comprises body connected by pipelines to a topping-up connection, tubular evaporating elements, an air duct formed by the inter-tube space and diffusors, and a ventilator set in a diffusor, having in its body levelling valves and compensatory elements in the form of rubber bulbs, within which are tubes with apertures on the surface. The working cavities of the body and the tubular evaporating elements are filled with hygroscopic material of wick type. On the topping-up connection is a removable filter filled with ion-exchange resins. This enables the device to work independently from a high pressure source. Air from the cabin is sucked up by the ventilator and goes via the diffusor into the inter-tube space, where it passes round the tubular evaporating elements, through the pores of which water is constantly evaporated into the air flow. From the inter-tube space the humidified air is ejected into the cabin. The evaporation of water from the pores of the tubular evaporating elements is due

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to the psychosometric temperature difference. The rate of evaporation of the water automatically increases or decreases as the humidity of the incoming air decreases or increases, i.e. the cabin air is kept properly humidified without automation equipment. The device is applicable to air conditioning systems of aircraft.
30.10.67 as 1193827/40-23 VORONIN G.I. et al.
(17.69) Bul. 7/3.2.69. Class 17f, 62c, Int. Cl.
F 25h, B 64d.;

Authors: Voronin, G.I.; Sharov, Yu.K.; Zav'yalov, Yu.F.; Fiks, A.R.; Matov, A.A.; Khobotov, A.P.

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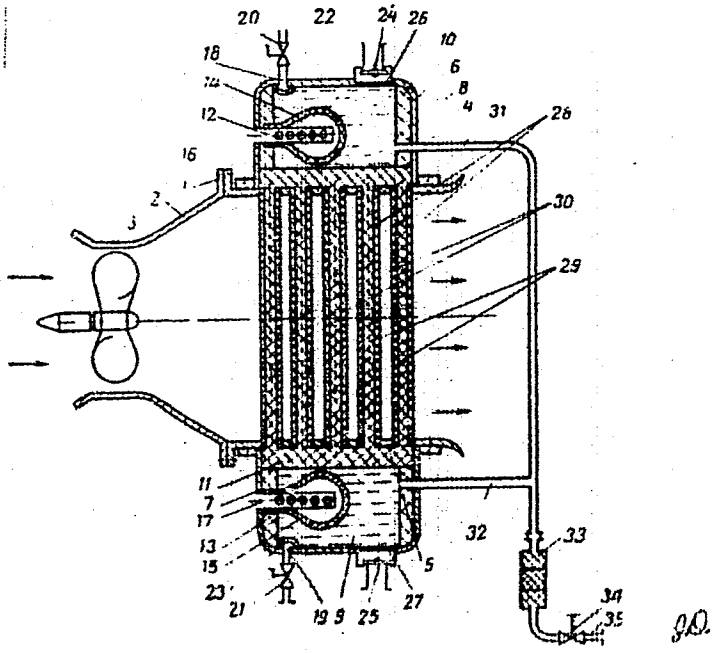

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Coatings

UDC: 546.831+546.821.824

USSR

YEMYASHEV, A. V., KILIN, V. S., MARTYNOV, S. Z., and SHAROVA, A. V.

"Pyrolytic Nitrides of Titanium and Zirconium and Areas of Their Application"

Moscow, Tsvetnyye Metally, No. 12, Dec 70, pp 30-32

Abstract: Data on the deposition of titanium and zirconium nitrides from the gas phase are discussed. Use was made of commercial zirconium and titanium tetrachloride, hydrogen, and nitrogen. The process of deposition of zirconium pyronitride takes place at 1400--2000°C, with the deposition rates sufficiently high to obtain coatings of appropriate thickness. The most favorable conditions for depositing zirconium pyronitride are attained at a molar ratio of initial components of $ZrCl_4:N_2:H_2=1:3:2$. The temperature may be varied within 1700--2000°C. A table in the original article indicates the same processing relationships and specifications for titanium

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YEMYASHEV, A. V., et al, Tsvetnyye Metally, no. 12, Dec 70, pp 30-32

pyronitride. The maximum deposition rate, however, was observed at 1600-1700°C. The decrease in the deposition rate with an increase in temperature is related to the fact that the titanium pyronitride deposition rate becomes commensurable with the vaporization rate. It was also found that the deposition rate of pyronitrides is directly proportional to the effective cross section of the vapor-gas mixture in the reaction zone. The high electroconductivity of titanium and zirconium nitrides permits their use in special areas of electrical engineering and electronics. The superconductivity of zirconium nitride makes it a potential material for subzero-temperature technology. High melting temperatures and good refractory properties make these materials suitable for use as strengthening components. The method of deposition from the gas phase may be used for applying refractory coatings to parts of intricate configuration.

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"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

1/2 032 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--THE THERAPEUTIC EFFICACY OF HIGH POLYMER HETEROLOGOUS DNA IN DOGS WITH ACUTE RADIATION SICKNESS -U-

AUTHOR--ROGACHEVA, S.A., LUZANOVA, O.V., KLYZHUK, K.N., RUSINOVA, G.G., SHAROVA, E.G.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 3, PP 44-49

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DOG, RADIATION SICKNESS, DNA, CESIUM ISOTOPE, RADIATION SOURCE, THYMUS GLAND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/1693 STEP NO--UR/0241/70/015/003/0044/0049

CIRC ACCESSION NO--AP0101748

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910010-4

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CIRC ACCESSION NO--AP0101748 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN EXPERIMENTS ON 52 DOGS IRRADIATED FROM A CS PRIME137 SOURCE (6 R-MIN) IN DOSES OF 700 AND 750 R THE AUTHORS DEMONSTRATE THE THERAPEUTIC EFFECTIVENESS OF HIGH POLYMER HETEROLOGOUS DNA OF CALF THYMUS. DNA PREPARATIONS WERE OBTAINED BY THE METHOD OF KAY ET AL. THE THERAPEUTIC EFFECT OF DNA, INTRODUCED INTRAVENOUSLY IN A DOSE OF 15 MG-KG OF BODY WEIGHT, DEPENDED UPON THE TERM BETWEEN IRRADIATION AND INJECTION OF THE PREPARATION. THE GREATEST SURVIVAL (8 OUT OF 11 DOGS) WAS NOTED WHEN THE PREPARATION WAS INTRODUCED 24 HOURS AFTER IRRADIATION. IN DNA INJECTION 3 DAYS OR 30-60 MINUTES AFTER IRRADIATION THE SURVIVAL WAS 6 OUT OF 11 AND 4 OUT OF 12 ANIMALS RESPECTIVELY. IN THE CONTROL GROUP 2 OUT OF 18 DOGS SURVIVED. THE AUTHORS DISCUSS THE RELATIONSHIP BETWEEN THE THERAPEUTIC EFFECT AND TERM OF DNA INJECTION AFTER IRRADIATION.

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