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1/2 024 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--ENZYMATIC DIAGNOSIS OF ACUTE PANCREATITIS -U-

AUTHOR-(04)-LEVITSKIY, A.P., SYNOVETS, A.S., DEKHTYAR, A.L., TSVIRKUN, F.M.

COUNTRY OF INFO--USSR

SOURCE--KHIRURGIYA, 1970, NR 2, PP 94-98

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PANCREAS, ENZYME ACTIVITY, AMYLASE, BLOOD SERUM, URINE, DIAGNOSTIC METHOD, DIGESTIVE SYSTEM DISEASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/1328 STEP NO--UR/0531/70/000/002/0094/0098

CIRC ACCESSION NO--AP0054212

UNCLASSIFIED

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2/2 024 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054212

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS INVESTIGATED THE ACTIVITY OF AMYLASE (SMITH AND ROE MICROMETHOD), PROTEASE UTKINYKH LYNBOVTSEVYKH METHOD IN SHIERGE'S MODIFICATION) AND LIPASE (LEVITSKY'S COLORIMETRIC MICROMETHOD) IN THE BLOOD SERUM OF CATS WITH EXPERIMENTAL ACUTE PANCREATITIS. THERE WERE A SIGNIFICANT RISE OF THE ACTIVITY OF PANCREATIC LIPASE, INESSENTIAL INCREASE OF THE PROTEASE LEVEL, SHORT TERM RISE AND SUBSEQUENT SHARP DECLINE OF THE AMYLASE ACTIVITY. IN THE DETERMINATION OF THE REFERRED TO ENZYMES IN THE BLOOD SERUM AND AMYLASE IN THE URINE OF PATIENTS WITH ACUTE PANCREATITIS THE AUTHORS NOTED A SIGNIFICANT INCREASE IN THE ACTIVITY OF LIPASE AND AMYLASE AND AN INSIGNIFICANT INCREASE OF THE PROTEASE ACTIVITY. A STABLE ACTIVITY RISE WAS OBSERVED IN RESPECT TO LIPASE, THE BLOOD AMYLASE ACTIVITY SEVERAL DAYS AFTER THE ONSET OF THE DISEASE DROPPED ALMOST TO NORMAL VALUES, HOWEVER THE URINARY LEVEL OF AMYLASE WAS STATISTICALLY SIGNIFICANT ABOVE NORMAL LEVELS. THE AUTHORS ALSO DETERMINED THE BLOOD SERUM ACTIVITY OF LIPASE AND AMYLASE, AND URINARY LEVEL OF AMYLASE IN PATIENTS WITH ACUTE CHOLECYSTITIS, APPENDICITIS AND GASTRODUODENAL PEPTIC ULCER. THE NONSPECIFICITY OF THE ACTIVITY OF VLODD AMYLASE WAS ESTABLISHED. THE INCIDENCE OF RISE OF THE BLOOD SERUM ACTIVITY OF LIPASE IN ACUTE PANCREATITIS AMOUNTED TO 90PERCENT OF CASES, THAT OF URINARY AMYLASE, 70PERCENT. FOR THE DIAGNOSIS OF ACUTE PANCREATITIS THE AUTHORS RECOMMEND THE DETERMINATION OF BLOOD SERUM PANCREATIC LIPASE ALONG WITH THAT OF URINARY AMYLASE.

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1/2 024 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--NONLINEAR PERTURBATION OF PLASMA OSCILLATION UNDER CONDITIONS OF AN ELECTRON CYCLOTRONIC RESONANCE -U-

AUTHOR-(02)-LIVSHITS, M.A., TSVTOVICH, V.N.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL TEKHNICHESKOI FIZIKI, VOL. 40, JAN. 1970, P. 18-31

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PLASMA OSCILLATION, CYCLOTRON RESONANCE, NONLINEAR EFFECT, PLASMA HEATING, STRONG MAGNETIC FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1978/1505 STEP NO--UR/0057/70/040/000/0018/0031

CIRC ACCESSION NO--AP0046344

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 024 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0046344

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXAMINATION OF A NONLINEAR INTERACTION BETWEEN THE PLASMA AND THE HIGH FREQUENCY FIELDS WITH FREQUENCIES CLOSE TO THE ELECTRON GYROFREQUENCY. A STUDY IS MADE OF THE EFFECT OF A KINETIC NONLINEAR GENERATION OF OSCILLATIONS IN A PLASMA SUBJECTED TO A STRONG MAGNETIC FIELD. AN EVALUATION IS MADE OF THE PROBLEMS CONCERNING THE NONLINEAR THEORY OF A CYCLOTRONIC PLASMA HEATING. FACILITY: AKADEMIIA NAUK SSSR, FIZICHESKII INSTITUT, MOSCOW, USSR.

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USSR UDC: 621.372.413:535

TSVYK, A. I.

"On Electron-Beam Excitation of a Flat Resonator Containing a Diffraction Grating"

Radiotekhnika. Resp. mezhved. nauch.-tekhn. sb. (Radio Engineering. Republic Interdepartmental Scientific and Technical Collection), 1970, vyp. 13, pp 49-54 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5B178)

Translation: The problem of self-excitation of an open structure of the Fabry-Perot type with one of the mirrors in the form of a reflective diffraction grating is solved in the predetermined-field approximation. The electromagnetic field is selected from strict solution of the electrodynamic problem of natural oscillations in a flat resonator. This makes it possible to determine the relationship between trigger currents and the parameters of the structure, particularly the width of the slits in the diffraction grating. Trigger current relationships are found for small and large space charges. The results of the research are compared with previously known relationships. Resumé.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR UDC: 621.372.8:621.385.63

TSVYK, A. I.

"Excitation of Diffraction Emission by a Bounded Electron Beam Moving in an Open Resonator"

Radiotekhnika. Resp. mezhved. nauch.-tekhn. sb. (Radio Engineering. Republic Interdepartmental Scientific and Technical Collection), 1970, vyp. 13, pp 43-48 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5B109)

Translation: The author gives a strict solution for the problem of excitation of electromagnetic oscillations by a flat electron beam of finite dimensions moving at a constant velocity inside an open structure which is formed by a strip diffraction grating and a metal screen. This type of structure may be treated as a model of an oscillator with energy coupled out through a semitransparent mirror-grating. Analytical expressions are found for the power radiated in free space. Radiation conditions are studied as a function of the parameters of the structure. Two illustrations, bibliography of four titles. Resumé.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR UDC 621.371.332.1

S"YEDIN, V.YA., KHELEVISOV, S.S., TSVYK, R.SH. [Institute Of Atmospheric Optica, Siberian Branch, AS, USSR]

"Intensity Fluctuations In A Focused Light Beam Passed Through Turbulent Atmosphere"

Izv. VUZ: Radiofizika, Vol XV, No 5, May 72, pp 798-800

Abstract: The paper is concerned with an experimental study of the intensity fluctuations at the focal point of a laser beam, both at the axis of the optical system and in a randomly wandering beam. The applicability is studied of the results of a calculation by K.S. Gochelashvili [Izv.VUZ:Radiofizika, 14, No 4, 592 (1971)] to a description of the fluctuations in a focused beam. The experimentally measured intensity fluctuations are compared with calculated data. 3 fig. 5 ref. Received by editors, 10 May 1971.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR UDC 621.371.332.1

TROYEPOL'SKIY, V. A., KHMELEVTSOV, S. S., and TSVYK, R. SH.

"Using a Position-Sensitive Photodiode for Recording Approach Angles of Optical Radiation"

Tomsk, Izvestiya VUZ -- Fizika, No 9, 1973, pp 149-151

Abstract: Because the photographic and photoelectronic methods of recording the approach angles of light rays have a number of disadvantages, the authors of the present brief communication used a position-sensitive diode with an output signal amplitude which is, in general, proportional to the intensity of the incident beam and to the shift in the center of the light spot from some zero position. The photodiode was tested for its effectiveness in this application and its characteristic plotted by an LG-36 helium-neon laser operating at a wavelength of 0.63 μ and with its intensity varied by a mechanical modulator at a frequency of 4 k Hz. The photodiode output was recorded on a V6-2 selective microvoltmeter. Curves are given for the photodiode output voltage as a function of the shift of the light spot for various values of the incident beam, and for the slope of the characteristic as a function of the incident beam intensity. Also given is a block diagram of the equipment used by the authors to measure approach angles of optical radiation, and curves for the fluctuation dispersion of the measured angles as a function of the receiver aperture dimensions for various temperature gradients.

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USSR UDC 621.371.332.1

KHEMELOVTSOV, S. S., and TSVYK, R. SH.

"Fluctuations in Intensity and Incidence Angles of Light Waves in Space-Limited Collimated Beams in a Turbulent Atmosphere"

Tomsk, Izvestiya VUZ -- Fizika, No 9, 1973, pp 108-112

Abstract: The purpose of the experiments described in the present paper is to determine the incident angles and fluctuations in intensity in collimated laser beams under various geometrical conditions. It is asserted that the question of what effects the spatial limitations of a collimated light beam have on the variations of its parameters with the beam propagated in a turbulent atmosphere has not been given sufficient experimental study. The measurements were made over a range of 500-7000 m. For a range of 1360 m, with the radiation emitted from and returning to the source, the altitude of the beam was 0.5-1.5 m above the smooth surface of the Tom' river valley, the profile of which is sketched. Over the longer ranges, the beam was maintained at an altitude of 10-30 m above rugged terrain. The radiation source was a helium-neon laser operating at a 0.63 μ wavelength and power output of 10 w, with axial oscillation. The experimental data characterizing the change in dispersion of the fluctuation of the intensity in the transition from

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USSR

KHMELEVTSOV, S. S., and TSVYK, R. SH., Izvestiya VUZ -- Fizika, No 9, 1973, pp 108-112

spherical to unbounded plane waves shows that the dispersion level is between the fluctuation levels for the spherical and plane waves.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 051 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--INVESTIGATION OF INTENSITY FLUCTUATIONS IN A BOUNDED OPTICAL BEAM -U-

AUTHOR-(02)-KHMELEVTSOV, S.S., TSVYK, R.SH.

COUNTRY OF INFO--USSR

SOURCE--FIZIKA, IZV. V.U.Z. VOL. 13, NO. 2, 1970, P. 52-56

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LASER BEAM, CORRELATION FUNCTION, PROBABILITY DISTRIBUTION, RADIATION INTENSITY, OSCILLATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1125 STEP NO--UR/0139/70/013/002/0052/0056

CIRC ACCESSION NO--AP0124780

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 051 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124780

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTAL INVESTIGATION OF THE DISPERSIONS AND CORRELATION FUNCTIONS OF INTENSITY FLUCTUATIONS OF LASER EMISSION AT DISTANCES OF 0.5, 2.4, AND 7.0 KM. IT IS SHOWN THAT THE AVERAGING EFFECT OF THE RECEIVER APERTURE IS WEAKER THAN THE THEORETICAL EFFECT. FOR STRONG FLUCTUATIONS, THE CORRELATION TIME OF INTENSITY FLUCTUATIONS DEPENDS ONLY SLIGHTLY ON THE DISTANCE. FOR APERTURES OF THE RECEIVER SYSTEM HAVING DIMENSIONS MUCH GREATER THAN THE DIMENSION OF THE LASER BEAM, THERE OCCUR SUBSTANTIAL INTENSITY FLUCTUATIONS, WHILE THE PROBABILITY DISTRIBUTION FUNCTION OF THE FLUCTUATIONS IS CLOSE TO THE NORMAL LAW. FACILITY: TOMSKII GOSUDARSTVENNYI UNIVERSITET, TOMSK, USSR.

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Acc. Nr: AP0043926 Abstracting Service: 5/70 Ref. Code: UR0141

INTERNAT. AEROSPACE ABST.

A70-23142 # Fluctuations of laser beam intensity during propagation in a turbulent atmosphere (Fluktuatsii intensivnosti lazernogo lucha pri rasprostranenii v turbulentnoi atmosfere). S. S. Khmelevtsov and R. Sh. Tsvyk. (Tomskii Gosudarstvennyi Universitet, Tomsk, USSR). *Radiofizika*, vol. 13, no. 1, 1970, p. 142-146-148. 9 refs. In Russian.

Experimental verification of Fried and Seidman's (1967) theoretical study of intensity fluctuations in a collimated and focused laser beam and Gurvich's (1969) study of the intensity fluctuations in a divergent beam. The theoretical results are found to correlate well with corresponding measurements performed for a helium-neon laser operating at a wavelength of 0.63 micron, under various meteorological conditions. V.P.

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USSR

DEM'YANENKO, V. P.; TSYASHCHENKO, Yu. P.; VERLAN, E. M. (Kiev State University)

"Infrared Absorption of the Complex $CrO_4^{2-} \cdot M^{2+}$ in KCl and KBr Crystals"

Leningrad, Solid State Physics; November, 1970; pp 3124-32

ABSTRACT: The infrared absorption spectra of KCl and KBr crystals alloyed with CrO_4^{2-} ions and cations $M^{2+} = Mg^{2+}$, Sr^{2+}, Ba^{2+}, Pb^{2+} were studied in the 100-300°K temperature interval. These impurities form complexes of symmetry C_{2v}, causing disintegration of the triply degenerate valence oscillation ν_3 and the appearance of completely symmetrical oscillation ν_1 of the CrO_4^{2-} ion.

The frequencies in the infrared spectra of these complexes are given, and a comparison of them is made depending on the form of the M^{2+} cation.

From the data on the integral absorption of the complexes of a triplet oscillation ν_3 are evaluated the magnitudes of the charges localized on atoms of oxygen and chromium from a CrO_4^{2-} ion excited by an M^{2+} cation.

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USSR

UDC 546.185

KOZLOV, E. S., GAYDAMAKA, S. N., BOROVIKOV, Yu. Ya., TSYBA, V. T., and KIRSANOV, A. V., Institute of Organic Chemistry, Ukrainian Academy of Sciences

"The Infrared Spectra and Nuclear Magnetic Resonance Spectra of P^{31}, and the Dipole Moments of Bistrychloromethylchlorophosphazohydride and -chlorophosphazoalkanes"

Leningrad, Zhurnal Obshchey Khimii, Vol XL, No 12, Dec 70, pp 2549-2552

Abstract: Recent studies of the synthesis of bistrychchloromethylchlorophosphazo compounds $(CCl_3)_2ClP = NR$ (R = H, Alk) (I) have allowed us to observe the effect of bulky electrophilic substituents at the phosphorus atom -- and of electron donor substituents at the nitrogen atom -- on the character of the P = N bond; but information on the trichlorophosphazoalkanes $(Cl_3P = N\ Alk)_2$ has not offered the same possibility.

To achieve this, the authors made experimental studies of trichlorcmethylchlorophosphazo-β-chloroethane.

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USSR

KOZLOV, E. S., et al., Zhurnal Obshchey Khimii, Vol XL, No 12, Dec 70, pp 2549-2552

It was found that with increase in the PNC angle, there is a shift in the resonance of the phosphorus atom, and an increase in the dipole moment, and in the bond order of the P = N bond.

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UDC 547.26'118

USSR

SHOKOL, V. A., GOLIK, G. A., TSYBA, V. T., YEGOROV, YU. P., DERKACH, G. I. (DECEASED), Institute of Organic Chemistry, Kiev, Academy of Sciences Ukrainian SSR

"Phosphoazoalkylphosphonic Acid Esters"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 8, Aug 70, pp 1680-1691

Abstract: Reaction of trialkylphosphites, triamidophosphites, dialkyl- and diamidophosphonites, and triphenylphosphine with the azides of alkylphosphonic acid esters yields esters of phosphazo-alkylphosphonic acids -- compounds with pesticidal activity. The reaction is exothermic and occurs easily at room temperature either in ether or in benzene. After evaporation of the solvent, liquid phosphazophosphinyls are obtained. Depending on heating conditions, the esters of trialkyl- and methyldialkylphosphazoalkylphosphonic acids rearrange into diesters of the alkyldialkoxyphosphazo-phosphoric acid or into esters of N-alkyl-N-dialkylphosphoncamido-alkylphosphonic acid. In all cases the side products consist of the

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USSR

SHOKOL, V. A., et al, Zhurnal Obshchey Khimii, Vol 40, No 8, Aug 70, pp 1680-1691

diethyl ester of methylphosphonic acid and a yellow, viscous fluid, probably polyphosphorene formed by condensation. Detailed analysis of the IR and NMR spectra of the above compounds is reported and characteristic bands and shifts are listed. Physical properties of the products obtained are tabulated, but no biological data are reported.

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UDC: 546.185

USSR

SHOKOL, V.A., GOLIK, G.A., TSYBA, V.T., and DERKACH, G.I., (Deceased), Institute of Organic Chemistry, Kiev, Academy of Sciences Ukrainian SSR

"Structure of Reaction Products of Amidoesters of Alkylphosphonic Acids With Phosphorus Pentachloride"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 4, Apr 70, pp 931-932

Abstract: A detailed study of the reaction product of amide of ethyl ester of methylphosphonic acid with phosphorus pentachloride showed that in its physicochemical constants it is identical to the isomeric product obtained by the authors from amide of diethyl ester of phosphoric acid and methyltetrachlorophosphorus. A comparison of IR spectra, P^{31} NMR and especially Cl^{35} NQR spectra shows that the compounds obtained in both cases have the structure of methyldichlorophosphazophosphoric acid dichloride $CH_3(Cl_2)P_\alpha = NP_\beta OCl_2$ rather than isomeric trichlorophosphazomethylphosphonic acid $CH_3PO(Cl)N=PCl_3$.

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USSR

UDC 535.33/.34:539.184

TSYBA, V. T., and YEGOROV, Yu. P.

"Emission Phenomena in IR Absorption Spectra of Polydimethyl Silalkanes"

Spektroskopiya Atomov i Molekul [Spetroscopy of Atoms and Molecules -- Collection of Works] Kiev, Nauk. Dumka Press, 1969, pp 464-457 (translated from Referativnyy Zhurnal Fizika, No 6, 1970, Abstract No 6D462 by V. N.)

Translation: The variation with temperature of the intensity of IR absorption bands of polydimethyl silalkanes is investigated and a correlation of the variation of their radiation with temperature is presented. It is shown that when rotary isomers are studied using IR spectra, a correction must be introduced for the natural emission of the material.

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USSR

UDC 539.192/.194:535.33/.34

TSYBA, V. T., YEGOROV, Yu. P., and LOKTIONOVA, R. A.

"Normal Oscillations of Hexamethyl Disilalkanes"

Spektroskopiya Atomov i Molekul [Spectroscopy of Atoms and Molecules -- Collection of Works] Kiev, Nauk. Dumka Press, 1969, pp 333-336 (translated from Referativnyy Zhurnal Fizika, No 6, 1970, Abstract No 6D216 by V. A. Morosov)

Translation: The serial regularities of distribution of frequencies of pendulum oscillation of the molecule $(CH_3)Si$, $(CH_2)_nSi$, $(CH_3)_3$ are studied, where n = 1, 2,.... 6. It is concluded that these molecules are suitable objects for the study of standing waves in one-dimensional structures.

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USSR

UDC 577.472(26):576.851

KRISS, A. Ye., STUPAKOVA, T. P., and TSYBAN', A. V., Institute of Microbiology, Academy of Sciences USSR

"Ecological and Geographic Patterns of Distribution of Heterotrophic Bacteria in the Central Pacific"

Moscow, Mikrobiologiya, No 3, 1972, pp 542-549

Abstract: The quantitative distribution of heterotrophic bacteria was studied (by growing them on membrane ultrafilters) at different depths of the Pacific from the surface to the bottom. Samples were obtained at stations in all the geographic zones from the subarctic to the subantarctic. The density of the microbial population was found to decrease toward the Central Pacific, although remaining greater than in the corresponding regions of the Atlantic. This phenomenon is attributed to the many islands in the tropical Pacific lying near Asia and Australia which discharge large quantities of organic matter into the surrounding waters. The general pattern is for water layers of equatorial-tropical origin with a high content of heterotrophic bacteria to alternate with layers of arctic or antarctic origin possessing a low bacterial abundance.

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USSR

TSYBAN', A. V.

Bakterioneyston i Bakerioplankton Shel'fovoy Oblasti Chernogo Morya (Bacterioneuston and Bacterioplankton of the Shelf Area of the Black Sea), Kiev, "Naukova Dumka," 1970, 276 pp

Translation: Annotation: In this book, results from research on microbiological processes taking place in one of the most developed shelf areas of the Black Sea, the northwest part, are given. Questions of the distribution, taxonomy, and ecology of marine microorganisms are considered. The morphology, cultural, biochemical and physiological features of heterotrophic bacteria are described. Materials are presented on quantitative content and the biomass of microorganisms, and the role of bacteria in the biological productivity of the sea is demonstrated. In analyzing materials, the methods of mathermatical statistics were used, involving also computers.

The book is intended for microbiologists, marine biologists, and oceanologists.

Table of Contents:

Foreward 3
Chapter 1. Brief Sketch of the History of Marine Microbiology 6
Chapter 2. Hydrology, Hydrochemistry, and Marine Biology of the Northwest Part of the Black Sea 15

1/6

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

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USSR

TSYBAN', A. V., Bakterioneyston i Bakterioplankton Shel'fovoy Oblasti Chernogo Morya, Kiev, "Naukova Dumka, 1970, 276 pp

2.1 Biology
2.2 Microbiological Research 20
Chapter 3. Brief Description of Communities of the Sea-Atmosphere Border Layer 23
3.1 Pleuston 24
3.2 Neuston 24
3.3 Adaptation Features of Neuston Organisms 25
3.4 Hyponeuston 29
3.5 Significance of Neuston In Life of the Sea 29
Chapter 4. Methods of Marine Microbiological Research 30
4.1 Description of Microbiological Stations and Cross Sections 32
4.2 Methods of Selecting Samples From the Water Strata of the Sea 32
4.3 Methods of Selecting Samples in the Surface Microlayer of the Sea 35
4.4 Gathering Samples of Sediment 41
4.5 Methods of Studying Marine Bacteria 46
4.6 Statistical Processing of Materials 46
Chapter 5. Population and Distribution of Heterotrophic Bacteria 52

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

TSYBAN', A. V., Bakterioneyston i Baterioplankton Shel'fovoy Oblasti Chernogo Morya, Kiev, "Naukova Dumka," 1970, 276 pp

5.1 Seasonal Dynamics of Heterotrophic Bacteria Population and Distribution 55
5.2 Vertical Distribution of Heterotrophic Bacteria 62
5.3 Seasonal Dynamics of Heterotrophic Bacteria Population in Atmospheric Microlayer of the Sea 64
5.4 Population of Heterotrophic Bacteria in the Hydrofront Area. Sea Foam - Ecological Niche for Microorganisms 66
Chapter 6. Total Number and Biomass of Microbe Population 71
6.1 Regularities of Vertical Distribution of Microorganisms at Different Seasons 72
6.2 Morphology of Microbe Cells 78
6.3 Correlation of Number of Microorganisms Between Different Layers of Marine Stratum 79
6.4 Average Annual Number of Microorganisms and Its Fluctuation 84
6.5 Seasonal Dynamics of Density Distribution of Microbe Population 85
6.6 Nature of Distribution of Density of Microbe Population in the Cross Section Prorva Island-Karkinitskiy Bay 85
6.7 Nature of Distribution of Density of Microbe Population in Cross Section Karkinitskiy Bay-Dnestr Estuary 88

3/6

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USSR

TSYBAN," A. V., Bakterioneyston i Bakterioplankton Shel'fovoy Oblasti Chernogo Morya, Kiev, "Naukova Dumka," 1970, 1 276 pp

6.8 Nature of Distribution of Density of Microbe Population in Cross Section Sanzheyka-Tendrovskaya Bar 90
6.9 Nature of Distribution of Density of Microbe Population in the Cross Section Sychavka-Kinburnskaya Bar 93
6.10 Influence of River Flow on Number and Distribution of micro-organisms at Different Seasons 96
6.11 Seasonal Dynamic of Biomass of Microorganisms 100
Chapter 7. Species Composition of Microorganisms 106
7.1 Species Composition of Microorganisms in Different Regions of the Pacific Ocean 106
7.2 Species Composition of Heterotrophic Bacteria in the Northwest Part of the Black Sea 110
Chapter 8. Rate of Occurrence of Bacterial Species at Different Seasons 154
8.1 Influence of River Flow 167
Chapter 9. Biochemical Features of Microorganisms 172
9.1 Comparative Biochemical Features of Cultures of Bacterioneuston and Bacterioplankton 175

4/6

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USSR

TSYBAN', A. V., Bakterioneyston i Bakterioplankton Shel'fovoy Oblasti Chernogo Morya, Kiev, "Naukova Dumka," 1970, 276 pp

9.2 Biochemical Features of Heterotrophic Bacteria Isolated at Different Seasons 180
9.3 Biochemical Features of Danube Cultures 181
Chapter 10. Physiological Activity of Marine Microorganisms 183
10.1 Ammonifying Microorganisms 183
10.2 Denitrifying Microorganisms 185
10.3 Nitrifying Microorganisms 187
10.4 Desulfurizing Microorganisms 188
10.5 Thionic Acid Microorganisms 190
Chapter 11. Interrelationship of Marine Bacteria and Certain Ecological Factors 191
11.1 Influence of Temperature 192
11.2 Influence of Salinity 195
11.3 Thermohaline (termokhalinnyye) Descriptions of Certain Species of Marine Bacteria 198
11.4 Interrelationship of Heterotrophs of Bacterio- and Zooneuston 217
11.5 Species Interrelationships of Heterotrophs of Bacterio- and Zooneuston 218

5/6

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

TSYBAN', A. V., Bakterioneyston i Bakterioplankton Shel'fovoy Oblasti Chernogo Morya, Kiev, "Naukova Dumka," 1970, 276 pp

11.6 Interrelation of Quantitative Content of Heterotrophs of Bacterio- 222
and Zooneuston 226
Chapter 12. Marine Bacterioneuston 226
12.1 Premises of Bacterioneuston Research
12.2 Abiotic and Biotic Conditions in the Surface Microlayer of the 228
Sea 232
12.3 Regularities of Quantitative Change in Bacterio-neuston 247
12.4 Certain Peculiarities and Significance of Marine Bacterioneuston 254
Biolography

6/6

CSO: 1840-W

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR UDC 616.12-007-053.1-089.5-06

SERGIYEVSKIY, V. S., TASHPULATOV, A. T., CHERNOV, V. K., NUGMANOV, YE. K., YAVORSKAYA, G. V., ERENBURG, T. A., LIZUNKOVA, L. P., and TSYBANEVA, N. G., Department of Cardiovascular Surgery, Kazakh Institute of Clinical and Exeperimental Surgery, Ministry of Public Health, Kazakh SSR, Alma-Ata

"Operative Complications During Correction of Congenital Heart Defects Under Conditions of Moderate Hypothermia"

Moscow , Grudnaya Khirurgiya, No 2, 1970, pp 57-62

Abstract: A total of 230 operations were performed using hypothermia at the institute from 1965 to 1969, operations were conducted to correct septal defects, pulmonary and aortic stenosis, tetralogy of Fallot, combined and rare defects. Among the life-threatening complications encountered in the operations were asystole, ventricular fibrillation, aeroembolism of the coronary vessels, loss of blood, atrioventricular and bundle-branch heart block. The causes of the complications are analyzed and suggestions made to prevent them and to control those that occur. With the present level of knowledge, mortality during operations performed under moderate hypothermia should not exceed 1%.

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CSO: 1840 (92 pages) - 92 -

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--SYNTHESIS OF SYMMETRICAL AND UNSYMMETRICAL ACETALS OF NITRO ALCOHOLS -U-

AUTHOR-(03)-TSYBASOV, V.P., TARASOVA, T.I., PETROVICH, V.F.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(1), 70-2

DATE PUBLISHED----------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC SYNTHESIS, ACETAL, ORGANIC NITRO COMPOUND, HYDROXYL RADICAL, PENTANOL, BUTANOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0784 STEP NO--UR/0153/70/013/001/0070/0072

CIRC ACCESSION NO--AP0124453

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124453

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SYM. ACETAL IA) OF 2 NITRO 1 PENTANOL (I) IS PREPD. IN 45.5PERCENT YIELD BY ADDING 1.7 G ACH TO 10 G I AND 0.1 ML CONCD. HCL AND HEATING THE MIXT. 1.5 HR AT 60DEGREES. IA, D PRIME20 1.0801, N PRIME20 SUBD 1.4464, B IS LESS THAN SUB1 136DEGREES. A SYM. ACETAL, B SUB2 110DEGREES, D PRIME20 1.1798, N PRIME20 SUBD 1.4485, IS PREPD. SIMILARLY FROM 2 NITRO 1 PROPANOL IN 25PERCENT YIELD. THE UNSYM. ACETAL OF ETOH AND I, B USB1 73-4DEGREES, D PRIME20 1.0052, N PRIME20 SUBD 1.4303, IS PREPD. IN 48PERCENT YIELD BY REACTING 13.9 G I AND 0.1 ML CONCD. HCL WITH 7.5 G. H SUB2C:CHOET (II), HOLDING THE TEMP. AT 20-30DEGREES DURING ADDN. AND 1 HR AT 60DEGREES. BY REVERSING THE ADDN. OF THE REAGENTS AND DOUBLING THE PROPORTION OF II, THE YIELD IS INCREASED TO 76PERCENT. UNSYM. ACETALS, B SUB1 90-91DEGREES, D PRIME20 1.1371, N PRIME20 SUBD 1.4363, AND B SUB1 94-5DEGREES, D PRIME20 1.1142, N PRIME20 SUBD 1.4378, ARE PREPD. FROM II AND 2, 2 DINITRO 1 BUTANOL AND 2,2 DINITRO 1 PENTANOL IN 62 AND 42PERCENT YIELDS.

FACILITY: LENINGRAD. MEKH. INST., LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 026 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--EMISSION FROM A WIDE SLIT ON A FINITE DIMENSION SCREEN -U-

AUTHOR-(03)-BOGDANOV, G.G., TSYBAYEV, B.G., CHUPROV, M.YE.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, RADIOTEKHNIKA, NO 3, 1970, PP 89-93

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., NAVIGATION

TOPIC TAGS--ELECTRON EMISSION, WAVEGUIDE, RADAR SCREEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1296 STEP NO--UR/0108/70/000/003/0089/0093

CIRC ACCESSION NO--AP0123255

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 026 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0123255

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FORMULAS ARE DERIVED FOR CALCULATING THE CHARACTERISTICS OF EMISSION IN THE E PLANE OF A WIDE SLIT ON A SCREEN OF FINITE DIMENSION FOR CASES INVOLVING FLAT AND CURVED SCREENS. THE RESULTS OF G. N. KUCHERZHEVSKIY'S WORK AND THE THEORY OF EMISSION FROM THE OPEN END OF A WAVEGUIDE WERE USED AS THE BASES FOR ANALYSIS. EXPERIMENTAL RESULTS ARE GIVEN FROM VERIFYING THE DERIVED EXPRESSIONS. ORIGINAL ARTICLE: FOUR ILLUSTRATIONS AND THREE BIBLIOGRAPHIC ENTRIES.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC 621.396.676:629.7(088.8)

BUYVOL-KOT, YU. I., SEROV, L. A., TSIFRINOVICH, I. I., TSYBAYEV, B. G.

"Landing Beam Aircraft Antenna"

USSR Author's Certificate No 253876, Filed 24 Apr 68, Published 3 Mar 70 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9B26P)

Translation: A landing beam aircraft antenna with broad coverage is proposed. In order to create a nonprotruding design, the antenna was executed in the form of a segment of a shorting symmetrical ribbon line. The screen plates of the line are shifted with respect to each other. There is one illustration.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC: 539.3

VOROSHKO, P. P., KVITKA, A. L., TSYBENKO, A. S., Institute of Strength Problems, Academy of Sciences of the UkrSSR, Kiev

"Using the Method of Random Walks to Solve Problems in Elasticity Theory"

Kiev, Problemy Prochnosti, No 4, Apr 73, pp 53-57

Abstract: The probabilistic method of random walks over spherical surfaces is used to solve problems in elasticity theory. The paper gives the results of digital computer solution (BESM-6, FORTRAN) of the second fundamental problem of elasticity theory for a circle and a ring. The accuracy and economy of the method are studied. The results show an error of less than 5% in displacements, and less than 10% in stresses. The effective time of solution with evaluation of variance $\bar{D}|\bar{\psi}| \leqslant 0.05$ for a single point fluctuates from 1.5 to 2 minutes. With an increase in the number of random walks ($N > 30{,}000$), the instability of the random number generator (RNDM) places a limit on accuracy.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 020 UNCLASSIFIED

TITLE—EFFECT OF RADIAL AND LINEAR COMPRESSION ON SOME PROPERTIES OF HIGH BULK CRIMPED YARN -U-

PROCESSING DATE—30OCT70

AUTHOR-(05)-SMIRNOV, L.S., ZAGORODNYAYA, S.S., POZDNIKINA, L.A., TSYBENKO, L.I., NOSOVA, L.V.

COUNTRY OF INFO—USSR

SOURCE—LEGKA PROM. 1970, (1), 19-22

DATE PUBLISHED———70

SUBJECT AREAS—MATERIALS

TOPIC TAGS—CAPRONE, BREAKING STRENGTH, ELONGATION, COMPRESSIVE STRESS/(U)GOFRON CAPRONE YARN

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED

PROXY REEL/FRAME—2000/0880

STEP NO—UR/0518/70/000/001/0019/0022

CIRC ACCESSION NO—AP0124543

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 020 UNCLASSIFIED

CIRC ACCESSION NO--AP0124543 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INFLUENCE WAS STUDIED OF THE TITLE COMPRESSIONS, OCCURRING DURING THE YARN MANUF., UPON THE PROPERTIES OF THE HIGH BULK CRIMPED GOFRON, MADE FROM A SMOOTH KAPRON YARN (10 TEX) COMPRISING 12-39 ELEMENTAL FIBERS. THE COMPRESSION INDUCED FIBER DEFECTS AND CHANGES WERE CLASSIFIED, CHARACTERIZED, AND DISCUSSED. WITH AN INCREASE OF BOTH COMPRESSIONS THE LENGTH OF THE DEFECTIVE FIBER PART INCREASED AND ITS TOTAL MOL. ORIENTATION DECREASED. THE DEPENDENCE OF THE BREAKING STRENGTH OF A DEFECTIVE FIBER ON ITS ELONGATION WAS DETD. THE BREAKING STRENGTH INCREASED WITH INCREASING RADIAL AND LINEAR COMPRESSIONS, AND THE BREAKING ELONGATION OF GOFRON (CONTG. DEFECTIVE FIBERS), AS COMPARED WITH THAT OF THE PARENT YARN, INCREASED BY 2.6PERCENT.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

ANO 012008

UR9007

AUTHORS-- ANOKHIN, S., AND GALLAY, M., MERITORIOUS TEST PILOTS, U.S.S.R., KUPFER, M. AND GRIBOVSKIY, V., AIRCRAFT DESIGNERS, TSYBIN, P. AND PYSHNOV, V., MERITORIOUS SCIENTISTS AND ENGINEERS, RAUSHENBAKH, V., CORRESPONDING MEMBER OF THE ACADEMY OF SCIENCES, AND KOSTENKO, I., CANDIDATE OF TECHNICAL SCIENCES

TITLE-- WINGS FOR THE IMPOSSIBLE DREAM

NEWSPAPER-- KOMSOMOL,SKAYA PRAVDA, JANUARY 15, 1970, P 2, COLS 3-6

ABSTRACT-- THE AUTHORS ARE PROPOSING THE ESTABLISHMENT OF AN INTER-AGENCY COMMISSION ON GLIDERS AND SMALL-ENGINE PLANES WHICH WOULD GUIDE AND COORDINATE ALL THE ACTIVITIES CONNECTED WITH DO-IT-YOURSELF AIRCRAFT.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR UDC 681.332.05

VOSTOKIN, Ye. A., YERSHOV, L. I., ZHURAVLEV, P. A., LEBEDEV, M. P., NOVIKOV, A. I., and TSYBIN, Yu. B.

"Device for Linking a Computer With a Communication Channel"

USSR Authors' Certificate No 341054, Cl. G 06j 3/00, filed 4 May 70, published 5 Jun 72 (from Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 18, 5 Jun 72, p 186)

Abstract: The device contains an electronic telegraph receiver and transmitter, a block of keys, and delay circuit flip-flops. For simplification the outputs of the computer are connected to the inputs of the block of keys, whose outputs are connected to the inputs of the electronic transmitter; and the inputs of the control circuits of the block of keys are connected to the outputs of a flip-flop, one input of which is connected to the "trigger" output of the computer; the other, to the transmitter output; the outputs of the electronic receiver are connected to the inputs of the flip-flops, whose outputs are connected to the inputs of the computer, and the "trigger" output of the electronic receiver is connected through the delay circuit to the "clear" inputs of the flip-flops.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 008 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--REDUCTIVE CONDENSATION OF ACETOPHENONE -U-

AUTHOR-(02)-VOLKOV, R.N., TSYBIN, YU.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 794-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ACETOPHENONE, CONDENSATION REACTION, CHEMICAL REDUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2004 STEP NO--UR/0366/70/006/004/0794/0797

CIRC ACCESSION NO--AP0125593

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 008 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0125593

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SELF CONDENSATION OF PHCONE, UNDER REFLUX IN THE PRESENCE OF KI, H SUB3 PO SUB4, AND RED P GAVE SMALLER THAN OR EQUAL TO 80PERCENT PHCOCH SUB2 CHPHME (I), TOGETHER WITH TARS AND SIDE PRODUCTS AMONGST WHICH 1,3,5,TRIPHENYLBENZENE, PHCH:CHCHPHME, PHCH SUB2 CH SUB2 CHPHME, AND 1,METHYL,3, PHENYLINDAN WERE INDENTIFIED. FACILITY: VORONEZH. GOS. UNIV., VORONEZH, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 014 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--COMPOSITION OF PRODUCTS OF THE LIQUID PHASE OXIDATION OF 1,METHYL,3,PHENYLINDAN -U-

AUTHOR-(02)-VOLKOV, R.N., TSYBIN, YU.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3) 480-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--OXIDATION, FREE RADICAL, CYCLIC GROUP, HYDROCARBON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1420 STEP NO--UR/0366/70/006/003/0480/0485

CIRC ACCESSION NO--AP0112414

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 014 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112414

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. H IN 1 POSITION OF 1,METHYL,3,PHENYLINDAN (I) IS MORE REACTIVE THAN THE 3 POSITION H. THIS WAS SHOWN BY COMPARING THE OXIDN. RATES OF 1,3 DIMETHYL,3,PHENYLINDAN (II), 1,1 DIMETHYL,3,PHENYLINDAN (III), AND 1,1,3 TRIMETHYL,3,PHENYLINDAN (IV). THE RELATIVE OXIDN. RATES OF II-III-IV ARE 3:1:0. ALSO THE ACIDOLYSIS OF I OXIDN. PRODUCTS GAVE PREDOMINANTLY 2,METHYL,4,PHENYL,2,CHROMANOL, 2,METHYL,4,PHENYL,2,CHROMENE (WHICH COULD BE FORMED FROM 1,HYDROPEROXY DERIV. OF I), AND IS LESS THAN 10PERCENT 4,METHYL,2,PHENYL,2,CHROMENE (WHICH WAS FORMED FROM 3,HYDROPEROXY DERIV. OF I). A FREE RADICAL MECHANISM OF I OXIDN. IS PROPOSED.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 015 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--AN INVESTIGATION OF THE POSSIBILITY OF IMPROVING THE PROPERTIES OF A MN-CR-MO-V AUSTENITE STEEL FOR STEAM REHEATER PIPES -U-

AUTHOR-(02)-GULYAEV, V.N., TSYBINA, I.N.

COUNTRY OF INFO--USSR, CZECHOSLOVAKIA

SOURCE--LENINGRAD, ENERGOMASHINOSTROYENIYE, NO 3, 1970, PP 34-36

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--MANGANESE STEEL, CHROMIUM STEEL, MOLYBDENUM STEEL, VANADIUM STEEL, AUSTENITE STEEL, HEAT PIPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/1743 STEP NO--UR/0114/70/000/003/0034/0036

CIRC ACCESSION NO--AP0114245

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 015 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0114245

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FOR PIPES OF THE OUTPUT SECTIONS OF THE STEAM SUPERHEATERS OF LARGE POWER INSTALLATIONS, IT IS FOR A NUMBER OF REASONSMOST EXPEDIENT TO USE AUSTENITE STEEL. HOWEVER, THIS COURSE OF ACTION IS TO A CERTAIN EXTENT HINDERED BY THE SCARCITY OF NICKEL. THEREFORE RESEARCH WAS CARRIED ON IN CZECHOSLOVAKIA IN SEARCH OF VARIOUS TYPES OF CHROME MANGANESE AUSTENITE STEEL. THE BEST STEEL TYPE PRODUCED BY THIS RESEARCH WAS AN MN-CR-MO-V STEEL OF A GIVEN COMPOSITION; THE COMPOSITION IS GIVEN IN THE ARTICLE. NEVERTHELESS, TEST SHOWED THAT THIS STEEL HAD SOME DRAWBACKS. IN ORDER TO ELIMINATE THE DRAWBACKS, A STEEL OF A NEW COMPOSITION WAS TESTED. THE STEEL WAS MELTED IN AN INDUCTION FURNACE WITH A CAPACITY OF 150 KG (MELT NO 341 WEIGHED 90 KG, THE INGOT WEIGHED 45 KG). NOWHERE IN THE ARTICLE IS THE COMPOSITION OF THE STEEL GIVEN. THE INVESTIGATION SHOWED THAT BY CHANGING THE COMPOSITION OF A MN-CR-MO-V STEEL IT IS POSSIBLE TO IMPROVE ITS SERVICE PROPERTIES SUBSTANTIALLY UNDER THE CONDITIONS OF THE OPERATION OF STEAM SUPERHEATING PIPES OF HIGH CAPACITY STEAM BOILERS.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

Acc. Nr. AP0053442 Abstracting Service: CHEMICAL ABST. 3/70 Ref. Code: UR0366

110720d Synthesis of the hemialdehyde of succinic acid and its functional derivatives from 2-acetoxyfuran. Tsubina, N. M.; Protopopova, T. V.; Skoldinov, A. P. (Inst. Farmakol., Moscow, USSR). *Zh. Org. Khim.* 1970, 6(2), 269-74 (Russ). Pyrolysis of 2,5-diacetoxy-2,5-dihydrofuran gave 2-acetoxyfuran which, without isolation, was converted to γ-acetoxy-α,β-dehydrobutyrolactone (I). Catalytic hydrogenation of I gave γ-acetoxybutyrolactone (II), which was hydrolyzed under mild conditions to $OCHCH_2CH_2CO_2H$ (III). Under more vigorous conditions instead of III its trimer [1,3,5-tris(β-carboxyethyl)-s-trioxane (IV)] was obtained. Pyrolysis of IV gave III. Alcoholysis of II in the presence of HCl gave $(EtO)_2CHCH_2CH_2CO_2Et$ (V). Alk. hydrolysis of V gave $(EtO)_2CHCH_2CH_2CO_2H$, which was pyrolyzed to γ-ethoxybutyrolactone. The residue of I distn. contained a small amt. bis(2-oxotetrahydrofuryl) ether, formed by the dehydration of the III isomer γ-hydroxybutyrolactone. CPJR

REEL/FRAME 19830467

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC: 533.697

ARONOV, B. M., DENISOV, I. N., TSYBIZOV, Yu. I.

"Investigation of a Supersonic Ejector Nozzle With Short Mixing Chamber"

Tr. Kuybyshev. aviats. in-t (Works. Kuybyshev Aviation Institute), 1970, vyp. 45, pp 60-70 (from RZh-Mekhanika, No 5, May 72, Abstract No 5B445)

Translation: The paper presents the results of an experimental study of an ejector nozzle with a short mixing chamber of cylindrical shape. The measurement of static pressure revealed the physical flow pattern. The thrust characteristics of a subsonic nozzle, and of a nozzle with and without natural ejection are shown in comparison. Bibliography of 10 titles. Resumé.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC 629.7.036.3:533.697.4

ARONOV, B. M., DENISOV, I. N., TSYBIZOV, YU. I.

"Study of a Supersonic Ejector Nozzle With a Short Mixing Chamber"

Tr. Kuybyshev aviats. in-t (Works of Kuybyshev Aviation Institute), 1970, No. 45, pp 60-70 (from RZh-Aviatsionnyye i raketnyye dvigateli, No 4, Apr 72, Abstract No 4.34.95)

Translation: An experimental study of an ejector nozzle with a short mixing chamber of cylindrical shape is described. Measures taken to measure the static pressures made it possible to determine the approximate physical picture of the flow. The thrust characteristics of a subsonic nozzle and a nozzle with and without natural ejection are given for comparison. 7 ill., 10 ref. Resume.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC 533.6.011

TSYBIZOV, YU. I.

"Construction of a Flow Line in the Complex Region of a Two-Dimension Supersonic Stream"

Kazan', Izvestiya Vysshykh Uchebnykh Zavedeniy, Aviatsionnaya Tekhnika, No 3, 1970, pp 135-139

Abstract: A method is proposed for calculating a flow line of a two-dimensional supersonic stream in terms of the variable r and , which are analogs of generalized polar coordinates. The employment of the movable system of coordinates r and makes it possible to construct the flow line in the plane of the stream on the basis of a known solution of the hodograph equation, and in doing so to avoid difficulties in making quadratures for any value of the adiabatic exponent k. A numerical example is given for computing a definite integral of the type /167 a /, the variables x and y of which may be interpreted as the coordinates of the flow line in a physical plane and for which S. A. Chaplygin's solution of the equation is known. 3 figures, 6 bibliographic entries.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--INVESTIGATION OF A PHASE AUTOMATIC FREQUENCY CONTROL SYSTEM BY A MATHEMATICAL MODELING METHOD -U-

AUTHOR--TSYBULKO, L.YE.

COUNTRY OF INFO--USSR

SOURCE--RADIOTEKHNIKA, VOL. 25. MAR. 1970, P. 55-61

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., MATHEMATICAL SCIENCES

TOPIC TAGS--AUTOMATIC FREQUENCY CONTROL, MATHEMATIC MODEL, AUTOMATIC PHASE CONTROL, ALGORITHM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1081 STEP NO--UR/0108/70/025/000/0055/0061

CIRC ACCESSION NO--AP0118231

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118231

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESCRIPTION OF COMPUTER MODELING OF A PHASE AUTOMATIC FREQUENCY CONTROL SYSTEM IN THE PRESENCE OF A NOISE, TAKING INTO ACCOUNT THE NONLINEARITY OF THE DIFFERENTIAL EQUATION FOR THE SYSTEM. AN ALGORITHM IS DESCRIBED FOR A DIGITAL MODEL OF A PHASE AUTOMATIC FREQUENCY CONTROL SYSTEM, AND RESULTS ARE GIVEN FROM EXPERIMENTS STUDYING TRANSIENT PROCESSES UNDER DIFFERENT INITIAL CONDITIONS. THE EFFECTS OF SIMPLE SINUSOIDAL NOISE ARE DESCRIBED, ALONG WITH THE ACTION OF A DISTURBANCE CONSISTING OF AN OSCILLATION WITH A LINEARLY CHANGING FREQUENCY.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR UDC 621.396.62:621.396.97

GUBEFIATOROV, O. I., PIVOVAR, V. T., PIVOVAR, R. M., GONDIYENKO, A. C., TSYBULNIK, V. I.

"A Medium-Band Radio Receiver With Digital Frequency Synthesizer"

Radiotekhnika. Resp. mezhved. nauch.-tekhn. sb. (Radio Engineering. Republic Interdepartmental Scientific and Technical Collection), 1971, vyp. 12, pp 16-21 (from RZh-Radiotekhnika, No 7, Jul 71, Abstract No 7D11)

Translation: The paper describes a transistorized socket-powered relay receiver with fixed tuning and double frequency conversion designed for huntless and adjustment-free reception of one hundred radio stations in the medium-wave band. Rapid and accurate tuning of the receiver is achieved by using a digital frequency synthesizer as the heterodyne. Tuning precision is ensured by the high stability of the heterodyne, which is determined by the stability of a quartz-crystal reference oscillator. Resumé.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

Aerosols

UDC 543.84:(546.42+546.641):541.182.2/3

YUSHKAN, YE. I., ROVINSKIY, F. YA., STUKIN, YE. D., IOKHEL'SON, S. B., and TSYBUL'NIK, G. S.

"Express Method for the Determination of ^{90}Sr, ^{89}Sr, and ^{91}Y in Aerosol Samples"

Leningrad, Radiokhimiya, Vol 13, No 6, 1971, pp 872-875

Abstract: A rapid method for concurrent determination of ^{90}Sr, ^{89}Sr, and ^{91}Y has been developed. Aerosol samples collected on filters are combusted at 500° and treated repeatedly first with a mixture of hydrofluoric acid and nitric acid, then with concentrated HNO_3. Dry residue is dissolved in 1 M HCl, strontium and yttrium carriers are added, and strontium sulfates are precipitated by addition of a 5% H_2SO_4 solution followed by alcohol. The precipitate is separated by centrifugation and redissolved in 10% ammoniacal solution of trilone B. Yttrium remains in original mother liquor. From this step both materials are processed concurrently. To separate strontium it is converted to a carbonate salt, redissolved, $Fe(NO_3)_3$ is added to precipitate $Fe(OH)_3$ and strontium finally converted again to the carbonate, its activity is counted on a β-spectrometer. In the other sample yttrium is isolated in form of a hydroxide, redissolved to remove possible accompanying impurities of Ce and Sr

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USSR

YUSHKAN, YE. I., et al., Radiokhimiya, Vol 13, No 6, 1971, pp 872-875

by precipitating them as sulfates, and yttrium is finally reprecipitated as a hydroxide, converted to an oxalate and its activity is counted on a β-spectrometer. Both materials are obtained in yields of 75-85%.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC 576.8.093.2

TSYBUL'SKAYA, N. V., SHVARTSMAN, Ya. S., KORNEYEVA, E. P., and SMORODINTSEV, A. A., Academician, Academy of Medical Sciences, USSR, All Union Scientific Research Institute of Influenza, Leningrad

"Antibody Synthesis by Lymphoid Cells After Immunization With Two Viral Antigens"

Moscow, Doklady Akademii Nauk SSSR, Vol 195, No 3, 1970, pp 719-721

Abstract: The adsorption method was used to study antibody formation by spleen cells in mice immunized with influenza A2 and B viruses. The number of cells active in antibody formation did not increase until 48 hours after immunization, reaching a peak on the 5th day and quickly decreasing thereafter. Even at the height of the response, no more than 0.76% of the investigated cell population participated. Of the 24,518 cells from 15 immunized animals, only 293 cells produced antibodies, 160 to the A2 virus and 133 to the B virus. No cell elaborated the two types of antibodies at the same time. The number of cells that produced antibodies to each of the viruses was unrelated to whether the animals were immunized with monovalent or bivalent vaccine. It is thus evident that lymphod cells are

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TSYBUL'SKAYA, N. V., et al, Doklady Akademii Nauk SSSR, Vol 195, No 3, 1970, pp 719-721

functionally differentiated with respect to their reactions with different viral antigens.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC 616.981.553-092.9

MATKOVSKIY, V. S., TSYBULYAK, G. N., ZUBIK, T. M., ZHUK, L. N., AKIMOV, G. A., GAREMIN, Ye. M., GOGLOZHA, R. L., KUSTOV, N. A., PASHKOVSKIY, E. V., and TIMOFEYEV, V. V., Chair of Infectious Diseases, Chair of Military Field Surgery, and Chair of Nervous Diseases, Military Medical Academy imeni S. M. Kirov, Leningrad

"The Pathophysiology of Experimental Botulism"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 3, 1971, pp 16-19

Abstract: A study was carried out of the disturbance of external respiration, gas content and acid-base state of blood, and of hemodynamic shifts with severe experimental intoxication with botulinus toxin. Fifty dogs were intoxicated with type A botulinus toxin. At the time of administration and at the peak of intoxication, the gas content of arterial and venous blood, hemoglobin, hematocrit, specific weight of blood and plasma, and content of sodium, potassium, lactic and pyruvic acid were determined. External respiration was studied by means of a type T35 spirometabolograph and circulation by the modified mechanical cardiographic method. Biocurrents of the cerebral cortex were recorded on a four-channel electroencephalograph. At the peak of

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USSR

MATKOVSKIY, V. S., et al, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 3, 1971, pp 16-19

intoxication, a reduction of per minute respiration with a resulting lowered level of oxyhemoglobin in arterial blood, and respiratory acidosis were noted. EKG data revealed predominantly hypoxic shifts in the myocardium, and the EEG data -- inhibitory processes in the cerebral cortex. Intensified cardiac activity served as a compensatory mechanism for respiratory insufficiency. The secondary shifts in the function of organs and systems in connection with disturbances of a metabolic and functional nature played a vital role in the pathogenesis of botulinus intoxication. Morphological shifts in the CNS were apparently caused largely by disturbances in the microcirculation and were reversible. In treating severe botulinus intoxication, special attention should be paid to timely correction of external respiratory insufficiency, with artificial ventilation of lungs most expedient.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

Acc. Nr.: AP0031636

Ref. Code: UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i Meditsiny, 1970, Vol 69, Nr 1, pp 20-23

CEREBRAL MICROCIRCULATION CHANGES IN ACUTE BLOOD LOSSES AND PROLONGED HYPOTENSION

Filatov, A.I.; Pashkovskiy, E.V.; Tsybulyak, G.N.

S. M. Kirov Military Medical Academy

Cerebral microcirculation was studied in dogs (31 experiments) with acute blood loss and subsequent protracted hypotension after Wigers. Investigations showed that in a massive loss of blood (averaging 41.3±2.2 ml/kg of the body weight) and subsequent hypotension (40 mm Hg) the pial arteries were seen to dilate, the relative degree of their dilatation depending upon the caliber of the arteries. The enlargement of pial arteries fails to compensate for the deranged cerebral circulation, this being witnessed by marked disorders of the carbohydrate metabolism and deccelerated rhythm on the EEG, which continue even after an adequate repletion of the blood loss and restoration of the morphological microcirculation picture.

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USSR

ALEKHIN, I. M., KHAYRUTDINOV, Z. M., TSYBUL'SKIY, G. P. UDC: 51

"On Solving the Problem of Optimum Distribution of a Given Yield of Petroleum or Gas Among Objects by a Dynamic Programming Method"

[Tr.] Krasnodar. fil. Vses. neftegaz. NII ([Works] of the Krasnodar Affiliate of the All-Union Scientific Research Institute of Petroleum and Gas), 1971, vyp. 21, pp 60-66 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V937)

Translation: The analytical form and a modified computational scheme are presented for solution of the problem of distributing the petroleum or gas yield determined for a territory among objects by using the methods of dynamic programming. It is assumed that the extraction capacities of the objects are limited both from below and from above. Both schemes are realized on the "Minsk-22" digital computer. Examples are given of calculations for several cases, and the results found by each scheme are compared. Resumé.

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Measuring, Testing, Calibrating

USSR

KIRICHENKO, YU. A., SOLYANKO, V. P., TSYBUL'SKIY, V. V., YAKOVLEV, YE. V.

UDC 536.24:536.42

"Device for Studying Heat Exchange when Boiling Cryogenic Liquids"

Tr. Fiz.-tekhn. in-t nizk. temperatur AN USSR (Works of the Physico-Technical Low-Temperature Institute of the Ukrainian SSR Academy of Sciences), 1970, vyp. 1, pp 255-264 (from RZh-Mekhanika, No 11, Nov 71, Abstract No 11B689)

Translation: A device permitting the study of a broad class of heat exchange problems during boiling and investigation of heat exchange during boiling of both pure oxygen and oxygen containing a dissolved gas in the temperature range of 65-120° K and at pressures of 0.025-10 absolute atmospheres insuring visual observation and movie photography of the processes taking place is described. The device comprises an operating vessel of 5 liter capacity surrounded by three shells forming buffer, thermostating and vacuum tanks, successively. The vacuum tank and the thermostating tank filled with liquid nitrogen form a special type of dewar protecting the operating vessel from external heat fluxes and insuring the required temperature level of the liquid in the working vessel by pumping nitrogen vapor out of the thermostating tank. Cooling the gas fed to the working vessel and dissolving it in a liquid are carried out by means of a bubbling and circulating system placed in the thermostating and vacuum tanks. The buffer

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USSR

KIRICHENKO, YU. A., et al., Tr. Fiz.-tekhn. in-t nizk. temperatur AN USSR, 1970, vyp. 1, pp 255-264

tank separates the working vessel from the thermostating vessel and can be evacuated or filled with the heat exchange gas. The working vessel and the shells of all the surrounding tanks are equipped with peepholes with flat glass.

Preliminary heat exchange data for the boiling of liquid nitrogen from a horizontal tubular steel heater were obtained on the device. The design of the device permits studies to be performed during boiling not only of oxygen but also a number of other cryogenic liquids. The bibliography has 10 entries.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

Hematology

USSR

UDC 617-001.36-07:616.151.5-07

PLESHAKOV, V. T., TSYBULYAK, G. N., KOTSYUBINSKIY, N. N., and TABATADZE, K. G., Clinic of Military Field Surgery, Hospital Surgical Clinic, and Faculty Therapeutic Clinic, Military Medical Academy imeni S. M. Kirov, Leningrad

"The Coagulation and Fibrinolytic Systems of the Blood in Traumatic Shock"

Leningrad, Vestnik Khirurgii imeni I. I. Grekova, Vol 106, No 6, Jun 71, pp 94-98

Abstract: Observations on 28 patients with shock of the 13 degree due to severe trauma showed that the concentration of fibrinogen in the blood decreased, while the fibrinolytic activity increased markedly and the time of coagulation increased to some extent. Experiments were conducted on dogs in which changes in coagulation and fibrinolysis upon acute blood loss, as a result of pain trauma combined with blood loss, and under the effect of blood loss or trauma and blood loss followed by reverse transfusion of the lost blood were studied. Blood loss as such reduced fibrinolysis in the initial stage. In a later stage, the concentration of fibrinogen decreased because of partial intravascular coagulation. The time of coagulation decreased. As a result of trauma combined with blood loss, hypofibrinogenemia developed because of increased fibrinolysis-intravascular coagulation did not contribute to this

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USSR

PLESHAKOV, V. T., et al., Vestnik Khirurgii imeni I. I. Grekova, Vol 106, No 6, Jun 71, pp 94-98

effect. Blood transfusion accelerated fibrinolysis and increased the coagulation time, with these effects becoming more pronounced as the rate of blood transfusion was increased. The experimental results on the effects of trauma combined with blood loss did not explain the increase in the coagulation time observed on patients; the coagulation time regularly decreased in the experiments (the latter is characteristic for trauma and is due to release into the blood stream of products of tissue degradation as well as to a reflex reaction to pain). The acceleration of fibrinolysis in patients also did not correspond to the results of experiments on the effects of a blood loss in which the fibrinolytic activity was inhibited. Evidently, the increase in the coagulation time and the acceleration of fibrinolysis that were observed on patients were due to blood transfusion.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 008 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--THE TREATMENT OF OXYGEN DEFICIENCY IN GRAVE MECHANIC INJURIES -U-

AUTHOR-(02)-KUSTOV, N.A., TSYBULYAK, G.N.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 5, PP 99-103

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--INJURY, OXYGEN THERAPY, ARTIFICIAL RESPIRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0580

STEP NO--UR/0589/70/104/005/0099/0103

CIRC ACCESSION NO--AP0108795

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 008 UNCLASSIFIED

CIRC ACCESSION NO--AP0108795 PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE PAPER AN ANALYSIS OF THE CAUSES OF OXYGEN DEFICIENCY AND ITS MANIFESTATIONS IN PATIENTS WITH GRAVE INJURIES IS PRESENTED. SOME RECOMMENDATIONS IN TREATMENT OF THIS COMPLICATION AND A COMPARATIVE ESTIMATION OF SEPARATE THERAPEUTIC METHODS ARE GIVEN, AND INDICATIONS TO USING ARTIFICIAL VENTILATION OF THE LUNG IN SUCH PATIENTS ARE DESCRIBE. FACILITY: KAFEDRY VOYENNO POLEVOY KHIRURGII VOYENNO-MEDITSINSKOY ORDENA LENINA DRASNOZNAMENNOY AKADEMII IM. S. M. KIROVA.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

CHIMITDORZHIYEV, N. G., TSYDYPOV, Ch. Ts.

UDC 621.371.1

"Sequential Microwave Diffraction on Several Obstacles with Diffractors"

Tr. Buryatsk. in-ta estestv. nauk. Buryatsk. fil. Sib. otd. AN SSSR (Works of Buryatsk Institute of Natural Sciences. Buryatsk Branch of the Siberian Division of the USSR Academy of Sciences), 1970, vyp. 6, pp 3-14 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A273)

Translation: The problem of diffraction of a spherical electromagnetic wave on two obstacles with auxiliary diffracting systems installed above the screening obstacles is solved in the Kirchhoff approximation. The diffracting systems consist of an arbitrary number -- n -- of rectangular screens forming a diffraction grating. An expression is found for the diffraction field which depends on the dimensions of the diffractor and the geometric parameters of the radio route. A calculational formula is presented for determining the amount of gain arising from the diffractors. From the presented formula, the optimal parameters of the elements of the diffraction system are determined. There is one illustration and a seven-entry bibliography.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

TSYDYPOV, Ch. Ts.

UDC 621.371.1

"Effect of Electrical Properties of Mountain Peaks on the Diffraction Attenuation of Microwaves"

Tr. Buryatsk. in-ta estestv. nauk. Buryatsk. fil. Sib. otd. AN SSSR (Works of Buryatsk Institute of Natural Sciences. Buryatsk Branch of the Siberian Division of the USSR Academy of Sciences), 1970, vyp. 6, pp 92-106 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A271)

Translation: On the basis of the Huygens concepts in the Kirchhoff approximation, a formula is obtained for determining the diffraction attenuation of microwaves on mountain routes considering the effect of the electrical properties of the route and the curvature of the diffracting peak. There are three illustrations, two tables and a 10-entry bibliography.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

TSYDYPOV, Ch. Ts., KUZNETSOV, V. V. UDC 621.371

"Effect of Steepness of the Peak of an Obstacle on the Diffraction Attenuation"

Tr. Buryatsk. in-ta estestv. nauk. Buryatsk. fil. Sib. otd. AN SSSR (Works of Buryatsk Institute of Natural Sciences. Buryatsk Branch of the Siberian Division of the USSR Academy of Sciences), 1970, vyp. 6, 1970, pp 84-91 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A276)

Translation: It is demonstrated in the Kirchhoff approximation that the effect of steepness of a diffracting peak is exhibited in the form of the functions $f_1(a\theta^3/\lambda)\cdot f_2(a\theta^3/\lambda)$ which are multiplied by the attenuation factor of an opaque halfplane with an effective height of enclosure equal to the height of enclosure of the obstacle. Analysis of the limit of applicability of the approximate formula obtained showed that it is suitable for calculating mountain routes in the meter and decimeter ranges of microwaves. There are two illustrations, one table and a three-entry bibliography.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

UNCLASSIFIED

TITLE--SHAPE OF THE POTENTIAL BARRIER IN AN ALUMINUM, ALUMINUM OXIDE AND GOLD FILM SYSTEM -U-

PROCESSING DATE--17JUL70

AUTHOR--MUSATOV, A.L., ISYETAYEV, S.K.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(1), 298-301

DATE PUBLISHED--------70

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SUBJECT AREAS--MATERIALS, ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--ALUMINUM, ALUMINA, GOLD, THIN FILM SEMICONDUCTOR, DIELECTRIC PROPERTY, MEASUREMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1979/2020

STEP NO--UR/0181/70/012/001/0298/0301

CIRC ACCESSION NO--AP0048298

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

Acc. Nr: AP0048298 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code: UR0151

94356g Shape of the potential barrier in an aluminum-aluminum oxide-gold film system. Musatov, A. L.; Tsvetaev, S. K. (Inst. Radiotekh. Elektron. Moscow, USSR). *Fiz. Tverd. Tela* 1970, 12(1), 298-301 (Russ). The dielec. system Al-Al_2O_3-Au 170 Å thick was investigated. The spectral characteristics of the photocurrent in Fowler coordinates [$\sqrt{I_\phi} = f(h\nu)$] close to the long-wavelength boundary is always linear, which allows one to det. the height of the potential barrier (ϕ) on the Al-Al_2O_3 boundary from the point of intersection of the spectral characteristic with the abscissa. Far from the long-wavelength boundary, the spectral characteristic has a break. The voltage dependence of ϕ at the Al-Al_2O_3 boundary is given. A. Libackyj

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC 621.791.75:037-52:62-419.4

TSYGAN, B. G., Engineer, "Pavlogradkhimmash" Works, KAMAKIN, N. I., Engineer, SYCHEV, A. A., Engineer, LOBKOVSKAYA, R. M., Engineer, All-Union Scientific Research, Planning and Technological Institute of Chemical Machinery

"Effectiveness of Using Metal Additions in the Automatic Welding of Two-Ply Steels"

Moscow, Svarochnoye Proizvodstvo, No 3, Mar 72, pp 16-18

Abstract: Results are presented of an experimental investigation to determine the optimum quantity and granulometric composition of metal additions, select the most efficient separation of edges, develop welding methods, and study their effects on the mechanical properties and the corrosion resistance in automatic welding of two-ply steel joints. The optimum quantity of metal additions can be found from an empirical formula. On the basis of investigations and industrial tests, automatic flux welding of two-ply steel St.3+Kh18N10T (up to 32 mm thick) in two welding operations using metallic crumb of cut wire was adopted. Bimetal joints

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

TSYGAN, B. G., et al, Svarochnoye Proizvodstvo, No 3, Mar 72, pp 16-18

welded according to the new technology are of high quality. The use of metallic crumb in welding of bimetals increases the welding output without lowering the quality of welds. 4 illustrations, 2 tables, 5 bibliographic references

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC 621.791.048.045:771.8

TSYGAN, B. G., YEMELIN, V. F., and DEMCHENKO, V. G., "Khimmash" Plant, Pavlograd; and TERESHCHENKO, M. P., Dnepropetrovsk

"Automatic Two-Layered Steel Welding with Metallic Powder"

Kiev, Avtomaticheskaya Svarka, No 6, Jun 70, pp 43-45

Abstract: A welding procedure has been developed which results in welding seams with high mechanical and anti-corrosive properties. PZh-1M and PZh-2M metallic powders are used as the auxiliary material. Essentially, the method involves making a Y-shaped division of the seam edges and filling the division with metal powder before the usual automatic welding process is done. The metallic powder is obtained by the method of reducing iron from slag. To prevent the formation of pores, it is best to use a wire of the Sv-08G2S type. Before the welding, the metallic powder must be cleansed of its impurities and dried at 350-400°C for 1.5-2.0 hours. Microphotographs of welding seams made by this method are shown, and a table gives various data relating to the method.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC 621.383.8:535.317.25

TSYGANENKO, V. V., LACHASHVILI, R. A., BOBROVSKIY, I. A.

"Estimation of the Paraxial Resolving Capacity of Cathode Lenses"

Optiko Mekhanicheskaya Promyshlennost', No 12, 1972, pp 12-16.

Abstract: The paraxial resolving capacity of a cathode lens, consisting of a system of electrostatic and magnetic fields, is determined by the distribution of energy of electrons emitted from the cathode, their angular distribution, chromatic aberrations and spherical aberrations of the lens itself. This article presents a method for estimation of paraxial resolving capcities of cathode lenses by means of the frequency-contrast characteristic (FCC). Results are presented from calculation of the FCC by computer in various planes of an image as a function of the spherical aberration and the distribution of electrons by energies (angular distribution assumed to be Lambert). Dependences of the maximum resolving capacity on position of the image plane and assigned distribution by initial energies are presented. The results produced are used to estimate the influence of fluctuations in the magnetic field on the resolving capacity of biplanar electronic-optical convertors. It is found that fluctuations of the magnetic field are among the main factors reducing the resolving capacity of the convertors.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

MINTSER, O. P., CHEPKIY, L. P., TSYGANIY, A. A., ZASLAVSKIY, S. YA.

UDC 8.74

"Problems of Medical Cybernetics"

Problemy meditsinskoy kibernetiki (Problems of Medical Cybernetics), Moscow, Nauka Press, 1972, 309 pp, ill., 1 r. 44 k. (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V643K)

Translation: A study was made of the problems of applying cybernetics media in medical practice. The use of computers for diagnosing and developing the prognosis of diseases and also when selecting the optimal treatment procedure and constructing the model of the disease is discussed. Comparative characteristics of various medical data processing algorithms are presented in clinical examples.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

Acc. Nr: AP0049053

PRIMARY SOURCE: Vestnik Oftal'mologii, 1970, Nr 1, pp 90-91

Ref. Code: UR0359

AMAVROSIS RESULTING FROM SURGERY FOR SECONDARY STRABISMUS

G. Z. Akchurina, T. A. Tsygarko

Summary

A case of blindness in one eye in a patient 54 years old supervening after surgery for secondary divergent strabismus is described. Prior to operation the visual acuity of this eye was 0.01 because of severe amblyopia with excentric fixation. Blindness came due to an acutely disordered circulation in the arterial system of the optic nerve. Vision was lost on the operating table when pulling Tenon's capsule during an attempt to find the muscle tenotomized in the past. The treatment was of no avail with complete atrophy of the optic nerve. In patients of advanced age a more reserved attitude with regard to such operations should be adopted.

REEL/FRAME 19800839

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC 621.396.677(088.8)

ZAGREBEL'NYY, A. A., POLINOV, YU. S., STESIN, V. V., KHAVKIN, I. M., TSYGANKOV, O. S., YUSHIN, S. I.

"Telescopic Cylindrical Rod"

USSR Author's Certificate No 275177, Filed 17 Oct 68, Published 26 Oct 70 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4B85P)

Translation: The proposed rod contains a drive mechanism for unwinding a metal elastic tape from a drum and formation of a hollow tube from it.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC:621.039.83

BULATOV, B. P. and TSYGANKOV, YE. I.

"Parameters of the Radiation Field Near an Installation for Irradiation of Agricultural Crops"

Moscow, Atomnaya Energiya, Vol 36, No 1, Jan 74, p 52

Abstract: The "γ-field" radiation device is designed for irradiation of agricultural crops under natural conditions during the vegetation period in order to produce initial material for selection. The device includes a Co^{60} source with an activity of 1660 Curies in a container 3.5 m above soil level. Semi-empirical formulas are presented, allowing the level of radiation around the device to be calculated with an error of not over 10%. The formulas are used to calculate the necessary height of protective dyke to be built around the research field as a function of desired effective radius of irradiation.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 013

UNCLASSIFIED

TITLE--OSCILLOPOLAROGRAPHIC DETERMINATION OF THE PRECIPITATION PH AND THE ACTIVITY PRODUCT OF PRASEODYMIUM AND EUROPIUM HYDROXIDES -U-

PROCESSING DATE--20NOV70

AUTHOR-(04)-BUCHENKO, L.I., KOVALENKO, P.N., TSYGANKOV, YE.M., YEVSTIFEYEV, M.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(2) 358-61

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ISOBAR, HYDROGEN ION CONCENTRATION, HYDROXIDE, EUROPIUM COMPOUND, PRASEODYMIUM COMPOUND, HYDROXIDE, POLAROGRAPHIC ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/0906

STEP NO--UR/0078/70/015/002/0358/0361

CIRC ACCESSION NO--AP0053630

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 013

UNCLASSIFIED

CIRC ACCESSION NO--AP0053830 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FORMATION OF EU AND PR HYDROXIDES WAS CONFIRMED BY OSCILLOPOLAROGRAPHY. THE HYDROXIDES FORMED AT PH 5.6 AND 6, RESP. AND THEIR ISOBARIC POTENTIAL OF DISSOCN. IS 34 AND 31.5 KCAL-MOLE, RESP.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--FORMATION OF CARBON BLACK DURING THE THERMAL DECOMPOSITION OF HYDROCARBONS -U-

AUTHOR-(03)-TSYGANKOVA, E.I., ZYUEV, V.P., YEVREINOVA, M.D.

COUNTRY OF INFO--USSR

SOURCE--GAZOV. PROM. 1970, 15(2), 40-3

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CARBON BLACK, THERMAL DECOMPOSITION, PYROLYSIS, ANTHRACENE, NAPTHALENE, XYLENE, BENZENE, TOLUENE, PENTANE, CYCLOHEXANE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0055

STEP NO--UR/0492/70/015/002/0040/0043

CIRC ACCESSION NO--AP0125890

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 013

CIRC ACCESSION NO--AP0125890 UNCLASSIFIED PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PYROLYSIS OF SMALLER THAN 5PERCENT HYDROCARBON IN N WAS STUDIED AT A FEED RATE OF 500 ML-MIN IN 10, 20, AND 30 MM DIAM. TUBES OVER A 360-MM ZONE HEATED TO 1100DEGREES. THE HYDROCARBONS STUDIED WERE ANTHRACENE, NAPHTHALENE, TETRALIN, DECALIN, XYLENE, PHME, C SUB6 H SUB6, PENTANE, CYCLOHEXANE, AND SOME OF THEIR MIXTS. REDUCING THE TUBE DIAM. LOWERED THE YIELD OF C AND INCREASED ITS SPECIFIC SURFACE. YIELDS FROM ALL COMPDS. WERE SIMILAR AND REACHED A MAX. OF 0.5-0.6 G-G HYDROCARBON AT 3PERCENT CONCN., EXCEPT NAPHTHALENE (0.65 G-G AT 1PERCENT), AND ANTHRACENE (0.9 AT 2.5PERCENT AND STILL INCREASING). SPECIFIC SURFACE FOR ALL COMPDS. BECAME CONST. AT 20 M PRIME2-G AT SIMILAR TO 2PERCENT CONCN. BINARY MIXTS. BEHAVED LIKE THE SUM OF THE INDIVIDUAL COMPDS. COMPDS. PRESENT IN LOW CONCN. HAD NO EFFECT.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

1/2 009 UNCLASSIFIED

TITLE--COMPOSITION OF FATLIKE SUBSTANCES IN THE WATER OF BAROMETRIC, CONDENSER, WELLS -U-

PROCESSING DATE--13NOV70

AUTHOR-(03)-ZAMYSHLYAYEVA, A.M., TSYGANKOVA, G.P., GORSHKOVA, E.I.

COUNTRY OF INFO--USSR

SOURCE--MASLO-ZHIR. PROM. 1970, 36(3), 18

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--HYDROGENATION, FATTY ACID, CHEMICAL COMPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0970

STEP NO--UR/9085/70/036/003/0018/0018

CIRC ACCESSION NO--AP0133056

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 009

UNCLASSIFIED

CIRC ACCESSION NO--AP0133056 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE FATLIKE WASTES FROM DEODORIZATION OF HYDROGENATED FATS CONTAIN 48.10PERCENT H SUB2 O AND 51.7PERCENT ORG. COMPDS. THE ORG. FRACTION CONTAINED FATTY ACIDS (MYRISTIC 7.1, PALMITIC 18.9, STEARIC 17.2, OLEIC 18.5, AND LINOLEIC 16.2) AND 22.1PERCENT OXIDN. PRODUCTS AND UNDEFINED COMPDS.

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

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC 620.193.47

TSYGANKOVA, L. YE., VIGDOROVICH, V. I., and PCHEL'NIKOV, I. T., Tambor State Pedagogical Institute

"Corrosion and Electrochemical Behavior of Certain Metals in Water-Ethyleneglycol Solutions of Sodium Chloride"

Moscow, Zashchita Metallov, Vol 6, No 6, Nov-Dec 70, pp 648-652

Abstract: This article contains a study of the behavior of St.3 steel and M-1 copper in water-ethylene-glycol solutions as a function of the concentration of ethyleneglycol (20-99.6%) and fluoride ions (up to 2 normal).

It was found that the corrosion rate of steel in water-ethylene-glycol solutions drops systematically with an increase in the ethylene-glycol content. For copper this relation is more complex with a general trend toward a decrease. Under conditions of periodic heating the corrosion of St.3 steel and copper in the liquid phase decreases with an increase in the chloride ion concentration. Corrosive deterioration of the investigated materials takes place with oxygen depolarization under cathode control conditions. The proposition has been stated that at room temperature and a chloride ion concentration of more than 0.1 gram-

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

TSYGANKOVA, L. YE., et al, Zashchita Metallov, Vol 6, No 6, Nov-Dec 70, pp 648-652

ion/liter, ionization of copper to Cu^{+} takes place, and at 80^{0}, to Cu^{2+}. It is pointed out that the calculated corrosion rate of the metals found by the polarization curves obtained during the experiment agree well with the results of gravimetric measurements. This is a proof of the electrochemical mechanism of corrosion of the investigated materials in the investigated solutions.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

UDC: 681.327.11

3

DENBNOVETSKIY, S. V., LESKIN, V. F., MEDVEDENKO, B. I., SEMENOV, C. F., SIGORSKIY, V. P., TSYGANOK, B. A., PETRENKO, A. I., Kiev "Order of Lenin" Polytechnical Institute imeni the Fiftieth Anniversary of the Great October Socialist Revolution

"A Device for Mapping Information"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 10, Apr 72, Author's Certificate No 332455, Division G, filed 22 May 70, published 14 Mar 72, p 193

Translation: This Author's Certificate introduces a device for mapping information. The device contains a cathode ray tube with deflecting system, and amplifiers. As a distinguishing feature of the patent, the clarity and contrast of the reproduction are improved by adding a deflecting micro-coil placed in the throat of the CRT and connected through a shaper amplifier to the output of the video amplifier.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

TSYGANOK, L. A. UDC 615.916:546

"Comparative Characteristic of Acute Toxicity of Some Organophosphorous Compounds Depending on Their Chemical Structure"

Sb. nauch. tr. Kuybyshev. NII gigienya. (Collected Scientific Works of the Kuybyshev Scientific Research Institute of Hygiene), 1972, vyp 7, pp 196-199 (from RZh--Farmakologiya. Khimioterapevticheskiye Sredstva. Toksikologiya, No 3, Mar 73, Abstract No 3.54.683)

Translation: The DL_{50} of phospolyol (I) for rats and mice was not established in view of the low toxicity; the phostetrol (II) for rats was also not established; for mice it was 33.3 mg/kg (the administration procedure is not indicated); the phosphacrilate (III) for rats was 10 and for mice was 11, and oxyphos KD-6 (IV) was 6.2 and 8 mg/kg respectively. All four compounds were recently synthesized and are used to prepare foam polyurethane, fiberglass or magnetic lacquer. The low toxicity of I, II and III arises from the stability of their molecules, and the higher toxicity of the IV is determined by the formation of residues of phosphoric acid on decay of the unstable molecule of this substance. It is considered that the presence in the molecule of IV

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

TSYGANOK, L. A., Sb. nauch. tr. Kuybyshev. NII gigienya, 1972, vyp 7, pp 196-199

of a carbon chain does not exclude its cancerogenic activity. USSR, Kuybyshev, Scientific Research Institute of Hygiene.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

TSYGANOK, L. V.

UDC: 51

"Concerning an Approximate Method of Solving a Matrix Game"

Dopovidi AN URSR, 1973, A, No 1, pp 45-48 (from RZh-Kibernetika, No 5, May 73, abstract No 5V602 by the author)

Translation: It is shown that the problem of finding a pair of optimum strategies of a matrix game reduces to the problem of finding a pair of points which belong respectively to two sets, each of which is defined as a set of solutions of a specific extremum problem. Two algorithms are proposed for finding the optimum strategies of a matrix game.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

UNCLASSIFIED

MOSSBAUER EFFECT STUDY OF THE STRUCTURE OF INORGANIC GLASSES -U-

PROCESSING DATE--11SEP70

AUTHOR--BARTENEV, G.M., SUZDALEV, I.P., TSYGANOV, A.D.

COUNTRY OF INFO--USSR

SOURCE--PHYSCIA STATUS SOLIDI, 1970, VOL 37, NR 1, PP 73-78

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--MOSSBAUER EFFECT, GLASS STRUCTURE, GLASS FIBER, TIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0234

CIRC ACCESSION NO--AP0106890 STEP NO--GE/0030/70/037/001/0073/0078

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

022

CIRC ACCESSION NO--AP0106890 UNCLASSIFIED

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE OF INORGANIC GLASSES AND GLASS FIBRES HAS BEEN INVESTIGATED BY MEANS OF THE MOSSBAUER EFFECT. ACCORDING TO MOSSBAUER EFFECT DATA THE MICROSTRUCTURE OF GLASS DIFFERS CONSIDERABLY FROM THAT OF THE GLASS FIBRE. THE POLYMERIC CONSTITUTION OF THE GLASS IS OBSERVED TO UNDERGO CERTAIN STRUCTURAL ORIENTATION DURING DRAWING OF GLASS FIBRES WHICH IS INDICATED BY THE PRESENCE OF AN AXIALLY SYMMETRICAL MOLECULAR FIELD, ASYMMETRY OF ATOM OSCILLATIONS, AND CONSIDERABLY LOWER DEGREE OF MICROHETEROGENEITIES. HEAT TREATMENT OF GLASS FIBRES REMOVES STRUCTURAL ORIENTATION. TIN IONS, LIKE OTHER ELEMENTS OF THE IVTH GROUP OF THE MENDELEEV PERIODIC TABLE, CAN ACT AS WELL AS A GLASS FORMER.

PROCESSING DATE--11SEP70

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

UNCLASSIFIED

PROCESSING DATE--18SEP70

EFFECT OF IRON VALENCE STATE ON THE ANGULAR DISTRIBUTION OF ANNIHILATION GAMMA QUANTA IN IRON OXIDES -U-

AUTHOR-(03)-BARTENEV, G.M., TSYGANOV, A.D., VARISOV, A.Z.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(2), 669-70

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--CHEMICAL BONDING, IRON, IRON OXIDE, X RAY ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0124

CIRC ACCESSION NO--AP0054920

STEP NO--UR/0181/70/012/002/0669/0670

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

020

CIRC ACCESSION NO--AP0054920 UNCLASSIFIED

PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF THE METAL CATION VALANCE STATE IN OXIDES WAS STUDIED ON THE ANGULAR CORRELATION OF THE ANNIHILATION PAIRS OF GAMMA QUANTA. THE ANGULAR DISTRIBUTION OF THE ANNIHILATION RADIATION WAS DETD. IN THE FE OXIDES: FEO, FE SUB2 O SUB3, AND FE SUB3 O SUB4. HALFWIDTHS OF THE CURVES AND THE EFFECTIVE CHARGES OF THE O ION AS DETD. FROM THE HALFWIDTH, ARE TABULATED. AS THE OXION. STATE OF FE INCREASES, THE SHIFT OF THE K EDGE INCREASES AND BROADENING OF THE ANGULAR CORRELATION CURVE TAKES PLACE. THE EFFECTIVE CHARGE OF THE O ION INCREASES IN THE SERIES FEO, FE SUB3 O SUB4, AND FE SUB2 O SUB3. THE EFFECTIVE CHARGE OF THE FE ION IN THE ABOVE SERIES IS, RESP., 1.0, 1.6, AND 1.95. THUS, VARIATION OF THE VALANCE STATE OF FE CAUSES A SHIFT OF THE K EDGE OF THE X RAY ABSORPTION SPECTRUM AND BROADENING OF THE ANGULAR DISTRIBUTION OF ANNIHILATION PAIRS OF GAMMA QUANTA INDICATING A VARIATION OF THE DEGREE OF IONIC CHARACTER OF CHEM. BONDING.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

025

UNCLASSIFIED

TITLE--POSITRON ANNIHILATION IN QUARTZ IRRADIATED BY FAST NEUTRONS -U-

PROCESSING DATE--16OCT70

AUTHOR-(04)-BARTENEV, G.M., TSYGANOV, A.D., VARISOV, A.Z., PROKOPYEV, YE.P.

COUNTRY OF INFO--USSR

SOURCE--FIZIKI, 1970, VOL 58, NR 6, PP 1904-1910

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--POSITRON, PARTICLE ANNIHILATION, QUARTZ, NEUTRON IRRADIATION, PHOTON EMISSION, ANGULAR DISTRIBUTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0029

STEP NO--UR/0056/70/058/006/1904/1910

CIRC ACCESSION NO--AP0120729

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

2/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120729

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF FAST NEUTRON IRRADIATION ON THE ANGULAR DISTRIBUTION OF ANNIHILATION V QUANTUM PAIRS IN CRYSTAL AND FUSED QUARTZ IS INVESTIGATED. IT IS FOUND THAT THE HALFWIDTH OF THE CORRELATION CURVES CORRESPONDS TO THE VARIATION OF THE QUARTZ DENSITY. FROM AN ANALYSIS OF VARIOUS POSITRON STATES IN QUARTZ PRECEDING ANNIHILATION AND ON BASIS OF THE EXPERIMENTAL DATA IT IS CONCLUDED THAT VARIATION OF THE HALF WIDTH IS DUE TO THE APPEARANCE IN THE CORRELATION CURVES OF A NARROW COMPONENT WHOSE INTENSITY DEPENDS ON THE RADIATION DOSE. THE NARROW COMPONENT IS DUE TO ANNIHILATION DECAY OF PARA POSITRONIUM ATOMS PRODUCED IN IRRADIATED QUARTZ.

FACILITY: GOSUDARSTVENNYY PEDAGOGICHESKIY INSTITUT IM. V.I. LENINA.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

UDC 661.877

USSR

TSYGANOV, G. A., Doctor of Chemical Sciences, Editor

"Chemistry and Technology of Production of Molybdenum"

Khimiya i Tekhnologiya Proizvodstva Molibdena [English Version Above], Tashkent, FAN Press, 1970, 88 pp

Translation of Annotation: This collection analyzes the primary problems in the chemical technology of the production and analytic determination of molybdenum. Detailed data are presented on the crystallization of ammonium paramolybdate. Studies are presented on the application of new molybdenum precipitants: calcium phosphate and hexamethylene tetramine. The analytic chemistry section shows the possibility of determining molybdenum in nitrate media as a molybdenum-phosphorus-vanadium complex in the presence of various impurities. A new method is presented for the determination of rhenium, using thioglycolic acid as a complex-forming agent. The method allows rhenium to be determined in the presence of molybdenum.

This book is designed for workers of scientific research organizations and non-ferrous metallurgy enterprises.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3

USSR

TSYGANOV, G. A., Khimiya i Tekhnologiya Proizvodstva Molibdena, Tashkent, FAN Press, 1970, 88 pp

Table of Contents
The Chemistry of Molybdenum

B. I. Polyakov, Precipitation of Molybdenum as Molybdenum-Phosphorus Complex From Nitrate Solutions. 3

B. I. Polyakov, V. K. Shevyakina, Effect of Impurities on Precipitation of Molybdenum from Nitrate Solutions as Molybdenum-Phosphorus. 6

B. I. Polyakov, V. K. Shevyakina, Precipitation of Molybdenum from Nitrate Solutions as Molybdenum-Phosphorus Complex. 10

B. I. Polyakov, D. I. Zakarchevnyy, Precipitation of Molybdenum from Hydrochloric Acid Solutions By Hexamethylene Tetramine. 17

B. I. Polyakov, D. I. Zakarchevnyy, Precipitation of Molybdenum by Urotropin from Sulphuric Acid Solutions. 22

2/6

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410006-3"