"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

PETRZHAK, G. I., et al, Radiokhimiya, Vol 12, No 2, 1970, pp 266-272

of the behavior of solutions of HNO_3, $HClO_4$, $LiClO_4$, $H_2C_2O_4$, and $K_2C_2O_4$. It was established that in solution di- or tetra-charged complexes anions of proposed composition $[U(C_2O_4)_3]^{2-}$, $[U_2(C_2O_4)_5]^{2-}$, and $[U(C_2O_4)_4]^{4-}$ are formed as a function of solution concentration and composition.

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UNCLASSIFIED

TITLE--COMPLEXING IN SOLUTION STUDIED BY DETERMINING THE CHARGE OF ANION COMPONENTS BY AN ION EXCHANGE METHOD -U-

PROCESSING DATE--04DEC70

AUTHOR-(03)-PETRZHAK, G.I., STEPANOVA, L.N., KARAGO, L.V.

COUNTRY OF INFO--USSR

SOURCE--RADIOKHIMIYA 1970, 12(2), 266-72

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ION EXCHANGE, URANIUM COMPOUND, THORIUM COMPOUND, NEPTUNIUM COMPOUND, OXALATE, COMPLEX COMPOUND, ABSORPTION SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/B03 STEP NO--UR/0186/70/012/002/0266/0272

CIRC ACCESSION NO--AP0140238

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

UNCLASSIFIED

CIRC ACCESSION NO--AP0140238 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. U(IV), TH(IV), NP(IV), AND NP(V) OXALATES IN SOLN. WERE STUDIED BY DENT. OF THE CHARGE OF ANIONIC SPECIES BY AN ION EXCHANGE METHOD BY USING: SHOWN ON MICROFICHE.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

UDC 621.359.7:661.528(088.8)

BIBIKOVA, V. I., MARUNOVA, K. V., and STEPANOVA, M. A.

"Process for the Preparation of Ammonia Perrhenates"

Gos. n.-i i proekt. in-t redkometal. prom-sti (State Scientific and Design Institute for Rare Metal Industry), USSR Author's Certificate Kl [expansion unknown] C 01 g 47/00, B 01 d 13/02, No 346230, applied 8/06/70, published 22/08/73 (from Referativnyy Zhurnal -- Khimiya, No 7, 1973, Abstract No 7L321P by N. Sh.)

Translation: Ammonium perrhenates were prepared by the electrodialysis of aqueous solutions of rhenium, for example potassium perrhenate. To strengthen and simplify the process, and also to increase the purity of the final product the electrolysis was performed using an ion exchange membrane at a current density of ≥ 4 ma/cm^2 at a temperature of 50-70°C. For example, an aqueous solution of potassium perrhenate, prepared from the dry salt was electrolyzed in an electrolyzer using ion exchange membranes at a temperature of 62°C and a membrane surface current of 6 ma/cm^2 (space surface current was 2.7 a/ℓ; the anodic chamber was filled with a 1 M solution of NH_4OH) for 5 hours. Upon cooling, crystals of the final products precipitated from the anolite obtained above a yield of 172 g. of the product, containing 69.42% rhenium, was recovered. This represented a recovery of 94% of the theoretical yield.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

Acc. Nr: AP0043732 Abstracting Service: 5/70 INTERNAT. AEROSPACE ABST. Ref. Code: UR0226

A70-23124 # Study of structures and properties of alloys Al-Cr and Al-Fe obtained by an atomization method (Issledovanie struktur i svoistv splavov Al-Cr i Al-Fe, poluchennykh metodom raspyleniia). A. A. Briukhovets, N. N. Barbashin, M. G. Stepanova, and I. N. Fridliander (Moskovskii Aviatsionnyi Tekhnologicheskii Institut, Moscow, USSR). *Poroshkovaia Metallurgiia*, vol. 10, Jan. 1970, p. 108-111. In Russian.

Study of the effect of alloy elements on the structure and properties of sintered alloys Al-Cr and Al-Fe made of powders obtained by atomizing the melt superheated 100 C over the liquidus. It is found that chromium addition together with a high cooling rate of the liquid phase, a high crystallization rate, and a subsequent cooling of the powder, makes it possible to produce more homogeneous aluminum alloys than those to which iron is added.

Z.W.

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19770138

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UDC 669.71:620.187

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

FRIDLIANDER, I.N., BARSUKOV, V.N., STEPANOVA, M.G., and SMIRNOVA, I.N., All-Union Scientific Research Institute of Aviation Materials

"Study of the Fine Structure and Recrystallization of SAP-1 Sheets"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 7, 1971, pp 13-15

Abstract: The fine structure of a powder, as well as the structure and texture of SAP-1 sheet (Sintered Aluminum Powder) were studied. The zone of coherent scattering and the magnitude of microdeformations were determined by the method of harmonic analysis of the Roentgen (111) line and (222) matrix shapes. With increasing degree of deformation the magnitude of the coherent scattering zone of cold rolled sheets (7.8% Al_2O_3) increases and this is related to the heating of the material in rolling. It follows from this that not only the distance between oxide particles, but also the magnitude of aluminum matrix blocks affect positively the strength properties of SAP-1 sheets. The results of a study of the advantageous orientation of sheets, deformed at 80% and annealed at 250-630°C with aging from 15 min to 10 hours are presented.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

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UDC 669 - 174'24

STEPANOVA, M. V., KOROLEV, F. V., ZOLOTUKHINA, A. M., FIGUROVSKAYA, T. A., BOROK, B. A., and SHCHEGOLEVA, R. P., Moscow Institute of Steel and Alloys of MZOTsM (Moscow Plant for the Processing of Non-Ferrous Metals), Central Scientific Research Institue of Ferrous Metallurgy

"The Effect of Alloying of Carbonyl Nickel on its Recrystallization"

Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 1, 1973, pp 150-152

Abstract: Carbonylnickel samples containing W, MgO, Al_2O_3, Zr, and ZrO_2 were cold-deformed with a terminal deformation of 70%. Recrystallization annealing was carried out at 160-800°C (20-degree intervals) with holding times at 30 min. The temperatures of the start and end of recrystallization I (t_r^s and t_r^e, respectively) were determined from the Vickers hardness as a function of annealing temperature, with an experimental error of ± 5°C. The t_r^s and t_r^e of carbonyl nickel without any addivities were 330 and 400°C, respectively. These figures were 660 and 750°C with addition of 0.15% Zr; 500 and 730°C with 0.15% ZrO_2; 540 and 720°C with 4% W; 360 and 510°C with 0.2% MgO; and 400 and 540°C with 0.2% Al_2O_3, respectively. It is evident that the t_r^s increased by 330

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

STEPANOVA, M. V., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 1, 1973, pp 150-152

and 210°C with the addition of Zr and W, respectively. This can be attributed to a slow formation of the recrystallization centers because of the interaction of dislocations with Zr and W atoms. Due to the fact that the t_r^e was increased from 400 to 750°C when 0.15% Zr was added to carbonyl nickel, it is recommended that the intermediate annealing temperature increased from 600 to 750-800°C.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 014 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--MECHANISM OF THE CYTOSTATIC ACTION OF AMINOACRIDINES -U-

AUTHOR-(05)-ZELENIN, A.V., KIRYANOVA, YE.A., LYAPUNOVA, YE.A., MELNIKOVA, YE.YU., STEPANOVA, N.G.

COUNTRY OF INFO--USSR

SOURCE--FARMAKOL. TOKSIKOL. (MOSCOW) 1970, 33(1), 96-101

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTITUMOR DRUG EFFECT, MITOSIS, PROTEIN SYNTHESIS, NUCLEIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1158 STEP NO--UR/0390/70/033/001/0096/0101

CIRC ACCESSION NO--AP0115177

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 014 UNCLASSIFIED PROCESSING DATE--16OCT70

IRC ACCESSION NO--AP0115177

BSTRACT/EXTRACT--(U) GP-0- ABSTRACT. 3,6,DIAMINOACRIDINES, INCLUDING ACRIDINE ORANGE, PROFLAVINE, ACRIFLAVINE, EUCRISINE 2, AND CORIPHOSPHINE, WERE CHARACTERIZED BY SIGNIFICANT ANTIMITOTIC ACTION STARTING IN THE 1ST FEW MIN OF THE EXPT., WITH A SHARP PARALLEL NOTED BETWEEN INHIBITION OF MITOTIC ACTIVITY AND PROTEIN SYNTHESIS, AND DELAYED PASSAGE OF CELLS THROUGH THE MITOTIC G SUB2 PERIOD. ACRICHINE AND RIBOFLAVINE ANTIMITOTIC ACTIONS APPEARED ONLY SEVERAL HR AFTER THE START OF THE EXPT. AND WERE NOT ACCOMPANIED BY EFFECTS ON PROTEIN SYNTHESIS OR BY ANY CHANGE IN THE G SUB2 PERIOD OF THE CYCLE. ANTIMITOTIC ACTIVITY OF THE 3,6,DIAMINOACRIDINES APPARENTLY INVOLVES DIRECT INHIBITION OF PROTEIN SYNTHESIS, WHILE THE 2ND GROUP OF COMPDS. INTERFERES WITH NUCLEIC ACID SYNTHESIS. FACILITY: INST. MOL. BIOL., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 018 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--MORPHOLOGICAL CHANGES IN CULTURED AMNION EPITHELIAL CELLS IN THE PRESENCE OF AMINOACRIDINES -U-

AUTHOR-(03)-STEPANOVA, N.G., BIRYUZOVA, V.I., ZELENIN, A.V.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(2), 453-6

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--EMBRYOLOGY, MORPHOLOGY, CELL CULTURE, ELECTRON MICROSCOPY, CYTOPLASM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1675 STEP NO--UR/0020/70/191/002/0453/0456

CIRC ACCESSION NO--AT0133560

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 018 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0133580

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SINGLE LAYER CULTURES OF STRAIN FL OF CELLS OF HUMAN AMNYOTIC EPITHELIUM WERE INCUBATED WITH VARIOUS CONCNS. OF ACRIDINE ORANGE AND PROFLAVINE AT VARIOUS TIME INTERVALS, THEN SUBJECTED TO ELECTRON MICROSCOPIC EXAMN. BOTH NUCLEI AND CYTOPLASM WERE ALTERED BY TREATMENT WITH THESE DYES AND PHOTOMICROGRAPHS OF TYPICAL STRUCTURES WERE SHOWN. AT HIGHER CONCN. OF THESE DYES THERE IS AN ACCUMULATION OF BASOPHILIC MATTER IN THE CYTOPLASM. FACILITY: INST. MOL. BIOL., MOSCOW, USSR.

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Microbiology

USSR

UDC 577.37

STEPANOVA, N. V., and FEDOROVA, T. A., Institute of Microbiology, Academy of Sciences USSR, Moscow, and Faculty of Physics, Moscow State University imeni M. V. Lomonosov, Moscow

"Optimization of Transition Processes in the Continuous Culturing of Microorganisms (A Model Allowing for Inhibition by Products of Secondary Metabolism)"

Moscow, Biofizika, Vol 16, No 5, Sep/Oct 71, pp 841-848

Abstract: A theoretical study of control procedures to be applied in the operation of an apparatus for the continuous culturing of microorganisms is continued. An apparatus into which fresh culture medium is fed continuously and into which a part of the produced biomass is recirculated, after being freed from spent nutrient medium in a centrifuge, is considered. The spent nutrient medium contains secondary products of metabolism which inhibit the growth of the culture. The methods of phase space and determination of optimal control procedures are used to solve the problem of running the process in such a manner that production is at a maximum and the least time is spent for transitional (auxiliary) stages of the process. It is shown that the optimal procedure from the standpoint of expediting the process consists of programmed control of the inflow of fresh nutrient medium and

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

STEPANOVA, N. V., and FEDOROVA, T. A., Biofizika, Vol 16, No 5, Sep/Oct 71, pp 841-848

of the change-over system of centrifuge operation. Calculations show that control of this type would shorten the time required for transitional processes by a factor of 8-10 in the case of cultivation of Propionibacterium shermanii.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR UDC: 51:155.001.57:001

ROMANOVSKIY, Yu. M., STEPANOVA, N. V., CHERNAVSKIY, D. S.

"What is Mathematical Biophysics. (Kinetic Models in Biophysics)"

Chto takoye matematicheskaya biofizika. (Kineticheskiye modeli v biofizike) (cf. English above), Moscow, "Prosveshcheniye", 1971, 136 pp, ill. 23 k. (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V864 K)

Translation: The book popularizes problems of mathematical modeling of biological processes. Principal attention is devoted to modeling of periodic processes in various biological systems -- This is the so-called "biological clock" problem. Some examples of oscillatory systems are considered: oscillations in the dimensions of colonies of cells and cellular nuclei, the intensity of photosynthesis and population of two coexisting species. The method of the modern theory of oscillations is used as the method of study for these examples. The first chapter is devoted to presentation of kinetic governing principles in biology. The second chapter outlines modern mathematical methods of studying dynamic systems: the phase pattern method

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

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ROMANOVSKIY, Yu. M. et al., Chto takoye matematicheskaya biofizika. (Kineticheskiye modeli v biofizike), Moscow, 1971

and the method of slowly changing amplitudes. The third chapter is devoted to construction and study of a model of growth of a colony of microorganisms and use of the results of modeling in biological industry. The fourth and final chapter deals with a complex of problems related to periodic processes in various kinetic systems. It is noted that this book will be of use to teachers of physics, biology, chemistry and mathematics, and also in biology circles for pupils. V. Mikheyev.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

MINKEVICH, I. G., STEPANOVA, N. V., FEDOROVA, T. A., and SHMAL'GAUSEN, V. I., Physics Faculty, Moscow State University imeni M. V. Lomonosov

"The Shortest Time for Establishing a Steady State in a Cultivator

Moscow, Biofizika, Vol 15, No 5, Sep/Oct 70, pp 867-872

Abstract: Mathematical relationships are established for the formation of a steady state under optimum conditions of operation corresponding to maximum production of biomass in a continuously operating apparatus for the cultivation of microorganisms (fermenter) with complete mixing, to which a part of the outgoing flow consisting of the biomass and nutrient solution is recirculated after centrifuging. The possibility of shortening the time required for the transitional process taking place before a steady state is established is considered. Formulas are derived for an optimal system of programed control, by application of which the time that elapses before a steady state is established can be shortened considerably, e.g., from several days to a few hours in the case of cultivation of Bacterium propioni Sherman.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

UDC 534.2

DEMIDENKO, T. F., STEPANOVA, N. V., and SHMAL'GAUZEN, V. I.

"Disintegrated Structure of Water as a Source of Random Force for Acoustic Measurement"

V sb. Novyye metody issled. shumov i vibratsiy i kibernet. diagnost. mashin i mekhanizmov (New Methods of Studying Noises and Vibrations and Cybernetic Diagnostics of Machines and Mechanisms -- collection of works), Kaunas, 1970, pp 68-70 (from RZh-Mekhanika, No 12, Dec 70, Abstract No 12B254, by G. P. Karaushev)

Translation: To evaluate the efficiency of noise- and vibration-insulating device, it is desirable to have a point source of noise exhibiting a broad spectrum, with adequate stability and easy reproducibility. D. G. Tonkonogov proposed using for this purpose a nonimmersed liquid jet escaping at a pressure of 2-4 atm from a small orifice (0.3-0.6 mm in diameter). Results of tests made of the spectral properties of pressure pulsations generated at the surface of the disintegrating liquid jet are presented. A semi-empirical formula is proposed for the function of the spectral density of the pressure pulsations. The spectral density at low frequencies is constant and decays at high frequencies as $\omega^{-3.4}$.

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USSR UDC 614.882-084.48

ALEKSEYEVA, M. I., MANIKOV, L. M., TSETLIN, V. M., MAL'KOV, O. S., SAVEL'YEVA, A. R., and STEPANOVA, O. L., All-Union Institute of Disinfection and Sterilization, Moscow

"An Aerosol Method for the Disinfection of Ambulances"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, 1973, pp 137-141

Abstract: Evaluation was made of the efficacy of different concentrations of hydrogen peroxide (I) aerosols in disinfecting ambulance interior and exterior surfaces. The surfaces were contaminated with Staphylococcus aureus or anthrax spores to a density of 10^5-10^7 cells/cm^2. The results showed that complete sterilization of the staphylococcus cells on interior surfaces could be attained with 3% I aerosol in 30 min at -6° to 22° and with an aerosol volume of 100 ml/m^2, whereas sterilization of the surfaces contaminated with the spores required 10% I and a volume of 200 ml/m^2. For the exterior surfaced 6% I, 400 ml/m^2, for 30 min was required to sterilize surfaces contaminated with staphylococcus, and 10% I was required for surfaces contaminated with the anthrax spores. Essentially similar results were obtained with calcium hypochlorite (5%, 100 ml/m^2, 60 min) and formaldehyde (10% and 20% for staphylococcus and anthrax spores, respectively, 100 ml/m^2, 30 min).

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 011 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--SULFUR VULCANIZATION OF CURED RUBBERS -U-

AUTHOR-(02)-FRENKEL, R.SH., STEPANOVA, R.N.

S

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 260,876
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--06JAN70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--VULCANIZATION, SULFUR, RUBBER, PATENT, CAPROLACTAM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/0244 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0111438

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

STEPANOVA, S. I.

JPRS 56030
18 May 72

UDC 612.15-06:612.021.7

PULSE RATE ADAPTATION DURING CHANGE IN THE SLEEP-WAKEFULNESS RHYTHM

[Article by S. I. Stepanova, Moscow, Kosmicheskaya Biologiya i Meditsina, Russian, Vol 6, No 2, March-April 1972, pp 81-86, submitted for publication 25 June 1971]

Abstract: Data are given to demonstrate that during habituation to a new work-rest cycle the diurnal heart rate rhythm develops gradually. An impression of adaptation of the frequency of cardiac contractions to an unusual life schedule may be given in those cases when the curve of its diurnal variation is constructed by combining indices obtained in two different body positions: lying and sitting up. Comparison of the indices registered around-the-clock in the same position will make it possible to determine the true times of pulse rate adaptation to a new sleep-wakefulness rhythm.

In studying the possibility of man's adaptation to 18- and 28-hour days, N. Kleitman and E. Kleitman found that the "curve of the frequency of cardiac contractions exhibits no tendency to resistance to a new life schedule and adapts instantaneously to both an 18- and a 28-hour work, rest and eating schedule." "In any case," write the authors, "one cannot escape the conclusion that the diurnal rhythm of the frequency of cardiac contractions . . . is not a strictly physiological rhythm like the diurnal rhythm of oral temperature, but is a simple periodicity directly related to the life schedule."

An impression of an "instantaneous adaptation" of the pulse rate to a new sleep-wakefulness schedule may be gained in a case when its diurnal variation curve is constructed using indices obtained in two different positions -- lying down and sitting up (in a lying position the pulse rate is usually registered during sleep, sometimes before sleep or immediately after awakening, whereas in a sitting position it is registered while the subject is awake). In analyzing this curve the only criterion for

2/2 011 UNCLASSIFIED PROCESSING DATE--02OCT70
CIRC ACCESSION NO--AA0111438
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ACCELERATORS, SUCH AS THIOCAPROLACTAM, WERE USED FOR THE S VULCANIZATION OF CURED RUBBERS BASED ON UNSAID RAW RUBBERS

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RATE AND APPROVE THE USAL TY OF THE VULCANIZED RUBBERS.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

STEPANOVA, S. I.

JPRS 55687
10 Apr 1972

UDC 612.017.2"514-16"

POSSIBILITIES OF MAN'S ADAPTATION TO 16-HOUR DAYS

[Article by S. I. Stepanova, Moscow, Kosmicheskaya Biologiya i Meditsina, Russian, Vol 6, No 1, pp 42-49, 1972, submitted for publication 5 July 1971]

Abstract: This paper presents the results of a study of the pulse rate of seven test subjects (two men and five women) who for sixteen astronomical days lived under a 16-hour work and rest cycle (five hours sleep and 11 hours wakefulness), their contacts with physical and social environments being normal. During the experiment to adaptation of the pulse rate evolved: a 16-hour cycle failed to develop and a 24-hour cycle persisted.

First Communication. Sequence of Conducting Experiment and Research Method. Pulse Rate

A study of the patterns of rhythmic activity of living organisms is one of the timely problems in space biology and medicine. Investigations in this direction are necessary for formulating work and rest schedules for spaceships and bases on other planets because the basis for a correctly formulated regime is a rhythm, a regular alternation of periods of activity and rest ensuring stable variations in body psychophysiological functions synchronous with this.

In space it is not impossible that diurnal cycles of unusual duration will be used (Strughold; Eberhard). A need to live and work under a schedule of shortened days can be imposed on a crew by various emergency situations and also by the ship's orbital precession.

The literature contains a number of communications on attempts to restructure man's diurnal rhythm in accordance with shortened days. In an experiment described by Hauty the subject lived under a schedule of eight-hour days. In experiments conducted by the Lockheed Corporation (Kovit) the subjects worked under a program of six- and eight-hour days. A. N. Litsov studied the process of man's adaptation to "broken" sleep -- wakefulness schedules with three periods of sleep during 24 hours. Man's adaptation to days lasting 12, 18 and 21 hours was studied by Kleitman, Kleitman and Kleitman, Lobban, Ye. M. Krutova, and G. A. Manovtsev; Lobban also studied 22-hour days.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

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UDC 621.762:669.018.5(088.8)

USSR

AMOSOV, V. M., KARELIN, B. A., KITAYEV, B. L., SAVICHEVA, M. A., GUSEV, A. M., PAPILOV, V. P., and STEPANOVA, T. I.

"Powder Metal Alloy"

USSR Author's Certificate No 254092, filed 12 Jun 69, published 20 Mar 70 (from RZh-Metallurgiya, No 11, Nov 70, Abstract No 11G357 P)

Translation: A powder metal electrode alloy based on W is proposed for spark gaps. To stabilize the emission properties and to increase the rate of electrode atomization barium zirconate is introduced into the alloy composition. The barium zirconate possesses stable properties under the conditions of explositation and does not interact with the remaining components of alloy during sintering in the temperature interval 1550-1600°. The alloy is of the following composition: 0.5-4% Ni, 4-5% barium zirconate, and the remainder -- W. The alloy structure is in the form of fine-grain W, coated with solid W solution in Ni, and dispersed particles of barium zirconate uniformly distributed in grains and along grain boundaries.

V. Chelnokov

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR UDC 669.292.018.8.669.295

ANDREYEVA, V. V., STEPANOVA, T. P., DRUZHININA, I., VLADIMIRSKAYA, T. M.

"Influence of Titanium on Corrosion Resistance and Physical-Mechanical Properties of Vanadium"

Nauchn. Tr. N-i. i Proyektn. In-t. Redkomet. Prom-sti [Scientific Works of Scientific Research and Planning Institute for the Rare Metals Industry], 1971, Vol. 32, pp. 175-181. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 I706 by the authors).

Translation: Results are presented from studies of the physical and mechanical properties, structure, corrosion resistance,and electrochemical behavior of alloys in the system V-Ti with 10-90% Ti content. 4 figs; 3 tables; 4 biblio refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 007 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--MOVEMENT OF SINGLE DISLOCATIONS IN A DISLOCATION ENSEMBLE -U-

AUTHOR--STRATAN, I.V., PREDVODITELEV, A.A., STEPANOVA, V.M.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(3), 767-73

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--CRYSTAL DISLOCATION, SODIUM CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0657 STEP NO--UR/0181/70/012/003/0767/0773

CIRC ACCESSION NO--AP0105636

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

UNCLASSIFIED

PROCESSING DATE--11SEP70

2/2 007

CIRC ACCESSION NO--AP0105636

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MOVEMENT OF SINGLE DISLOCATIONS IN THE DISLOCATION ENSEMBLE IN NACL CRYSTALS WAS INVESTIGATED. THE FREE PATHS OF THE DISLOCATIONS DEPEND ON THE MAGNITUDE OF THE APPLIED STRESS AS WELL AS ON THE DISTRIBUTION OF DISLOCATIONS AT A GIVEN POINT IN THE CRYSTAL. DISTRIBUTIONS OBTAINED FOR THE FREE PATHS EXHIBIT A MAX. WHICH IS SHIFTED TOWARD LONGER WAVELENGTHS WHEN THE EXTERNAL STRESS INCREASES AND TOWARD SHORTER FREE PATHS WHEN DISLOCATION D. INCREASES. PROLONGED STOPS OF THE DISLOCATIONS IN THE ENSEMBLE MAY BE CAUSED BY HEAD ON COLLISIONS OF THE DISLOCATIONS AND BY THE FLUCTUATIONS OF LONG RANGE NONCOMPENSATED FIELDS OF THE STRESS OF DISLOCATIONS BY THE ENSEMBLE. THE LATTER IS ESP. PRONOUNCED AT SMALL LEVELS OF EXTERNAL STRESS.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

UNCLASSIFIED PROCESSING DATE--20NOV70

1/2 016

TITLE--LIQUID PHASE EQUILIBRIUM IN THE ORTHOPHOSPHORIC ACID, WATER AND CYCLOHEXANOL SYSTEM -U-

AUTHOR--(02)-KRUPATKIN, I.L., STEPANOVA, V.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(5), 1164-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHASE EQUILIBRIUM, TITRATION, PHOSPHORIC ACID, CYCLOHEXANOL, CRITICAL POINT, DISTRIBUTION COEFFICIENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/1963 STEP NO--UR/0080/70/043/005/1164/1167

CIRC ACCESSION NO--AP0132224

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 016 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132224

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EQUIL. BETWEEN THE LIQ. PHASES WAS STUDIED AT 25DEGREES. THE POINTS OF THE BINODAL CURVE WERE FOUND BY ISOTHERMAL TITRN. AND THE COMPNS. OF THE COEXISTING PHASES WERE ANALYZED FOR THE H SUB3 PO SUB4 CONTENT. THE MAX. H SUB3 PO SUB4 CONTENT IN THE COEXISTING PHASES WAS 61.3PERCENT AND THE MAX. H SUB3 PO SUB4 CONTENT IN THE EXT. WAS 67PERCENT. IN ADDN. TO THE LIMITING CONODE, 16 OTHER CONODES WERE FOUND, THE NOS. OF WHICH INCREASE FROM THE LIMITING CONODE TO THE CRIT. POINT OF THE ISOTHERMAL DISSOLN. THE CONODES WITH THE ALEKSEEV DIAM. AND THE DISTRIBUTION COEFFS. WERE THUS FOUND. THE CORRELATION OF THE CONODES WAS DONE ACCORDING TO D. B. HAND (1930).

FACILITY: KALININ. POLITEKH. INST., KALININ, USSR.

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USSR

UDC 628.1.034:628.175:628.3

KRASNOV, B. P., STEPANOVA, V. P. and SIDYAKINA, N. D.

"Development of a Sorption Method of Purifying the Effluent Formed in the Production of Organosilicon Polymers"

Lakokrasochn. materialy i ikh premeneniye (Paint and Varnish Materials and Their Use), 1969, No 3, pp 71-73 (from RZh-Khimiya, No 1(II), 10 Jan 70, Abstract No 1 I 521)

Translation: A method has been developed for purifying an effluent containing CH_3OH (I), C_2H_5OH (II), C_6H_5OH (III) and C_6H_5OH (IV) in the following concentrations (respectively, grams/liter): 1, 1.4, 2.5, and 0.35. Sorption was studied under kinetic conditions on AG-2 charcoal. It was found that this process is governed by the S. A. VOZNESENSKIY equation. It is shown that the effluent studied can be purified by this method only from III and IV. Regeneration of charcoal is carried out by purging it with live steam at 150°. Repeated cycling does not reduce the sorptivity of the charcoal. I. Pevzner

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

Acc. Nr: AP0041913 S Ref. Code: UR 0245

PRIMARY SOURCE: Voprosy Psikhologii, 1970, Nr. 1, pp 79-89

AGE — SPECIFIC CHANGEABILITY OF INTELLECTUAL FUNCTIONS AT THE PERIOD OF EARLY MATURATION

E. I. STEPANOVA

Summary

The present paper gives an account of the findings of the complex study of psychophysiological functions at the period of early maturation. The first steps of the structural approach towards the study of memory, attention, thinking considered at micro — age intervals were undertaken in this investigation.

Data obtaineld testify to the heterochroneous nature of the evolution of mental functions and the wave — like character of intellectual development.

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19751802

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 010 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ASCORBIC ACID TITRATION IN FOODSTUFFS -U-

AUTHOR-(02)-GRIGORYEVA, M.P., STEPANOVA, YE.N.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY PITANIYA, 1970, NR 3, PP 32-37

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FOOD ANALYSIS, ASCORBIC ACID, ELECTROMETRY, TITRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/2053 STEP NO--UR/0244/70/000/003/0032/0037

CIRC ACCESSION NO--AP0120696

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 010 UNCLASSIFIED PROCESSING DATE--23OCT7

CIRC ACCESSION NO--AP0120696

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THREE METHODS OF DETERMINING ASCORBIC ACID IN FOODSTUFFS, BASED ON ITS ACIDIFICATION WITH 2,6,DICHLOROPHENOLINDOPHENOL, WERE COMPARED. THEY INCLUDED VISUAL TITRATION, EXTRACTION OF THE DYE EXCESS WITH XYLENE AND ELECTROMETRIC TITRATION. THE RESULTANT DATA INDICATE ALL THREE METHODS EQUALLY SUITABLE FOR USE IN THE ANALYSIS OF FOOD PRODUCTS CONTAINING NO PIGMENT HINDERING ITS RELIZATION. XYLENE EXTRACTION OF INDOPHENOL AND ELECTROMETRIC TITRATION MAY BE RECOMMENDED FOR DETERMINING THE ASCORBIC ACID IN COLOURED OBJECTS. ELECTROMETRIC TITRATION IS MOST SUITABLE, SINCE IT IS SIMPLE, EXACT AND HAS NO LIMITATIONS IN MEASURING THE ASCORBIC ACID CONTENT IN FOODSTUFFS. FACILITY: LABORATORIYA PO RAZRABOTKE METODOV VITAMINOLOGICHESKOGO ANALIZA VSES. N-I INSTITUTA VITAMINOLOGII MINISTERSTVA ZDRAVOOKHRANENIYA SSSR, MOSCOW.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR UDC 616.988.75-036.22-084.484:546.215

FEDYAYEV, B. P., FLORENSOVA, K. M., SIDENKO, V. V., and STEPANOVA, Z. I.

"Viricidal Action of Hydrogen Peroxide Aerosols in Disinfecting the Air in an Influenza Focus"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1972, pp 137-142

Abstract: Hydrogen aerosols were sprayed at the rate of 0.020 to 0.31 g/m^3 in a children's institution during an epidemic of A_2 influenza (Hong Kong-68 strain). Virus was isolated from 12 of 27 air samples obtained before the spraying, but it was not found in any of 24 samples obtained 40 minutes to 3 hours afterward. None of the children brought into the sprayed areas 30 to 40 minutes after disinfection experienced any side effects, but the personnel who did the spraying suffered mild irritation of the eyes and upper respiratory tract while those exposed to larger doses (0.029 to 0.035 g/m^3) developed transient nausea, vomiting, headaches, and pronounced irritation of the mucosa.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 016 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ON EARLY REINFECTION OF MICROSPOROSIS DUE TO MICROSPORUM LANOSUM -U-

AUTHOR-(02)-STEPANOVA, ZH.V., SHEKLAKOVA, A.A.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK DERMATOLOGII I VENEROLOGII, 1970, NR 4, PP 68-70

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FUNGUS DISEASE, SKIN, FUNGICIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0935 STEP NO--UR/0206/70/000/004/0068/0070

CIRC ACCESSION NO--AP0109092

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 016 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109092

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FIVE PATIENTS WITH REINFECTION OF MICROSPOROSIS DUE TO M. LANOSUM WERE OBSERVED 2-3 MONTHS AFTER TERMINATION OF GRISEOFULVIN THERAPY. SINCE IN GRISEOFULVIN TREATMENT OF PATIENTS WITH DERMATOMYCOSIS WEAKENING OF IMMUNITY IS SOMETIMES OBSERVED, CASES OF EARLY REINFECTION OF MYCOTIC DISEASES MAY OCCUR.

FACILITY: OTDEL MIKOLOGII TSENTRAL'NOGO KOZHNO VENEROLOGICHESKOGO INST. MINISTERSTVA ZDRAVOOKHRANENIYA SSSR I BOL'NITSA IM. V. G. KOROLENKO, MOSCOW.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

UNCLASSIFIED PROCESSING DATE--11SEP70

1/2 021

TITLE--ON MICROSPORUM LANOSUM CARRIER STATE IN HEALTHY ANIMALS -U-

AUTHOR--STEPANOVA, ZH.V., DAVYDOV, V.I.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK DERMATOLOGII I VENEROLOGII 1970, NR 3, PP 42-46

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CAT, SKIN, LUMINESCENCE, CULTURE MEDIUM, FUNGUS DISEASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0631 STEP NO--UR/0206/70/000/003/0042/0046

CIRC ACCESSION NO--AP0102617

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 021 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102617

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXAMINATION OF 206 CLINICALLY HEALTHY CATS FOR CARRIER STATE OF MICROSPORUM LANOSUM WAS CARRIED OUT. CATS WITHOUT CLINICAL SIGNS ON THE SKIN WERE EXAMINED UNDER A LUMINESCENT LAMP. IN THE ABSENCE OF LUMINESCENCE HAIR FROM DIFFERENT SITES WAS COLLECTED FOR CULTURE. FROM 5 CATS CULTURES OF GROWING M. LANOSUM WERE OBTAINED IN SABOURAUD'S MEDIUM. IT HAS BEEN ESTABLISHED THAT SOME TIMES CLINICALLY HEALTHY CATS MAY BE CARRIERS OF M. LANOSUM.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR UDC 621.787:669.14.018.8

YUSHKEVICH, P. M., and STEPANOVICH, V. YE.

"Strain Hardening and Aging of Kh18N10T Steel"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 12, 1970, pp 15-17

Abstract: It is sometimes difficult to produce transition and austenitic steel with a tensile stress of 170-180 kg/mm^2 at low temperatures, due to cracking as a result of high tensile stresses. Mechanical and isothermal hardening is accomplished by multiple cold straining of K18N10T steel at room temperature with a maximum of 5-7% for each deformation. Temperature constancy in straining is achieved by cooling the strip in water after each pass. As a consequence, after a reduction in area of 70% there is a tensile strength of 142 kg/mm^2 with 7% elongation; after a reduction in area of 97.5%, the tensile strength is 200 kg/mm^2 and elongation is 4%. After aging cold-strained steel for 1 hour at 475°C, the tensile strength is 170 kg/mm^2 and elongation 7% and 250 kg/mm^2 and 4%, respectively. The stress-strain curve reveals second and third hardening stages. It is suggested that additional strain and precipitation hardening of martensite is due to fixing of dislocations by austenite nuclei.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

Plant Pathology

USSR UDC 632.4:582.285.12:633.16

STEPANOVSKIKH, A. S., Chair of Plant Protection, Kurgan Agricultural Institute

"Certain Aspects of Black Loose Smut Development in Barley"

Leningrad, Mikologiya i Fitopatologiya, Vol 7, No 1, 1973, pp 23-26

Abstract: The U. nigra fungus, which causes black loose smut in barley, is widespread in Transuralia, northern Kazakhstan, and Chelyabinskaya Oblast, where it covers 35-60% of the 41,040 ha investigated. The crop becomes infected during the blooming period, and the disease becomes visible during formation of ears. U. nigra usually attacks the whole ear, destroying all its elements except the raceme and converting it into a black mass of spores. When the leaves open, the black ears become very conspicuous in the field. They are covered with a thin, transparent membrane, which soon dries out and ruptures, and the spores spill out and are blown with the wind. In the dry state, the spores retain their germinating capacity for over 3 years, but in the soil they survive for only 2 weeks, and therefore the soil is not a route of infection. In a liquid potatoglucose medium, U. nigra readily grows under formation of tricellular besidia with basidiospores. By this property U. nigra can be distinguished from U. nuda, which forms a mycelium without basidiospores.

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STEPANTSOV, V. I.

JPRS 55341
6 MAR 72

UDC: 611.36.014.477-013.9

CHANGES IN TROPHIC FUNCTION OF THE EMBRYONIC LIVER UNDER THE INFLUENCE OF TRANSVERSE G FORCES ($+G_x$)

[Article by S.K. Konshina, V.I. Stepantsov, A.V. Yeremin, Chair of Normal Anatomy (headed by Professor M.G. Privez, Honored Scientist), First Leningrad Medical Institute imeni Academician I.P. Pavlov; Leningrad, Arkhiv Anatomii, Gistologii i Embriologii, Russian, No 11, 1971, submitted 25 December 1970, pp 50-55]

The problem of investigating the effect of accelerations on the human organism acquired special significance with development of aviation and rocket technology which resulted in high speed flights.

At the present time we have many works by Soviet and foreign authors dealing with physiological, morphological, histochemical, and other changes developing in the organism under the influence of diverse gravitational stress (M.G. Privez, 1963, 1969, and others; V.I. Stepantsov, 1955, 1963; A.V. Yeremin, V.I. Stepantsov, 1969; V.G. Petrukhin, 1954, 1962; V.I. Babushkin, 1958, 1966; N.V. Vasil'yev, 1963; A.R. Kotovskaya, 1962, 1964; R.Ye. Kogan, 1963; A.S. Barer, 1961, 1962; V.A. Otellin, 1964; A.A. Kiselev, 1963; A.D. Voskresenskiy, 1963; Prouor et al., 1952; Webb, 1958; Muller, 1961, and others). All these studies were conducted on adult organisms.

Of particular interest is the study of the effect of accelerations on the normal ontogenetic process. This is not only of theoretical interest, but also of great practical significance for distant and superdistant space flights, living on orbital stations or other planets under conditions that are appreciably distinct from earth. The effect of accelerations on the young developing organism could lead to significant changes and affect its development in a specific manner.

However, we failed to find any special works dealing with changes in organs and systems in the course of ontogeny arising under the effect of accelerations in the literature available to us. For this reason, it appeared purposeful to pursue experimental investigations in this direction.

We selected the liver and, specifically, its trophic function as our investigative object, since it reflects to total energy balance in the

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 023 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--SOME SPECIFIC CHARACTERISTICS OF HUMAN ENERGY CONSUMPTION DURING THE SIMULATION OF MODIFIED GRAVITATION -U-

AUTHOR-(04)-YEREMIN, A.V., STEPANTSOV, V.I., SOKOLOV, V.I., TIKHONOV, M.A.

COUNTRY OF INFO--USSR

SOURCE--KOSMICHESKAIA BIOLOGIIA I MEDITSINA, VOL. 4, JAN.-FEB. 1970, P. 41-45

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--GRAVITATION EFFECT, MEDICAL EXPERIMENT, HUMAN PHYSIOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1967 STEP NO--UR/0453/70/004/000/0041/0045

CIRC ACCESSION NO--AP0120610

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 023 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120610

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE ENERGY CONSUMPTION IN 4 MALE SUBJECTS DURING THE WALKING AT 4-4.5 KM-H AND RUNNING AT 9-9.5 KM-H ON A 'RUNNING LANE' WITH CONTROLLED MOTION. THE FORCE OF GRAVITY WAS MODIFIED DURING THE EXPERIMENTS BY RUBBER SHOCK ABSORBERS ATTACHED TO A GIRDLE ON THE SUBJECT AND PULLING DOWN TO THE PLANE OF THE LANE, OR BY CHANGING HIS POSITION WITH RESPECT TO THE FORCE OF GRAVITY VECTOR ON A SPECIAL 'PSEUDOGRAVITATION' STAND. IT IS FOUND THAT WALKING AND RUNNING REQUIRE MORE ENERGY IN A SUPINE POSITION THAN IN A VERTICAL POSITION EVEN WHEN THE LOADS ALONG THE HORIZONTAL AXIS OF THE BODY ARE EQUAL.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR UDC 611.127+611.145/.146+611.132]:611.83]:613.73

PRIVES, M. G., ASTAKHOVA, V. V., STEPANTSOV, V. I., and YEREMIN, A. V., Chair of Normal Anatomy and Central Scientific Research Laboratory, First Leningrad Medical Institute imeni, Academician, I. P. Pavlov

"The Effect of Transverse Accelerations on the Nerve Structures of the Aorta, Venae Cavae, and Auricles"

Leningrad, [illegible]iv Anatomii, Gistologii i Embriologii, No 5, 1970, pp 32-37

Abstract: In experiments on dogs, single or repeated exposures to steadily intensifying transverse accelerations that did not result in decompensation failed to produce morphological changes in the nerve structures of the auricles, venae cavae, and aorta, regardless of the magnitude of the accelerations. On the other hand, exposure to accelerations of magnitudes that resulted in pronounced decompensation produced gross morphological changes, including disintegration of the nerve fibers and endings in the wall of the articles and blood vessels. Preliminary training on a centrifuge enabled the animals to tolerate stress better and decrease the response of nerve structures even to accelerations of such magnitude as to impair compensation. Relative bradycardia is suggested as an indicator of impending failure of cardiovascular compensation induced by transverse accelerations.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--DYEING OF PROTEIN AND POLYAMIDE FIBERS -U-

AUTHOR-(04)-GELLER, B.E., YERESHCHENKO, A.G., STEPANTSOVA, N.P., SHALAMOVA, A.I.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,064
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI, 1970 47
DATE PUBLISHED--09MAR70

SUBJECT AREAS--MATERIALS, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DYE, PROTEIN, POLYAMIDE RESIN, SYNTHETIC FIBER, CHEMICAL PATENT, POTASSIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/0859 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0136293

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0136293

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PROTEIN AND POLYAMIDE FIBERS ARE DYED WITH AMINO CONTG. ACIDS AND BASIC DYES. AFTER DYEING, THE COLORATION IS STRENGTHENED AND STABILIZED BY TREATMENT IN A REDOX MEDIUM, I.E. A SOLN. CONTG.K PERSULFATE AND K METABISULFITE.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

UDC 531.787

VARDANYAN, V. R., STEPANYAN, A. A., MAMYAN, S. Z., OGANESYAN, M. G., and GAMBARYAN, A. A.

"New Combination Sensor for Registration of the Pressure Shock Waves in Air"

Nauch. Tr. Yerevan. Politekhn. In-ta [Scientific Works of the Yerevan Polytechnic Institute], 1972, Vol 36, No 4, p 1, pp 152-158 (from Referativnyy Zhurnal, No 10, Oct 72. 32. Metrologiya i Izmeritel'naya Tekhnika. Single Issue. Abstract No 10.32.714)

Translation: A new combination altitude sensor is described. It has a movable electrode (membrane) and an immovable electrode located parallel to it. The capacitance originates between the upper movable membrane, on which acts the shock wave, and the plane immovable electrode, the gap between which comprises fractions of a millimeter. Five illustrations, five bibliographical references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--CONVERTER YIELDING A FUNCTION -U-

AUTHOR-(03)-STEPANYAN, A.A., ZAGUDAYEV, YE.I., KATKOV, V.M.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 246160

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI NO 20

DATE PUBLISHED--31OCT69

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--ELECTROMAGNETIC CONVERTER, TRANSISTOR, FILM RESISTOR, PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1518 STEP NO--UR/0482/69/000/000/0000/0000

CIRC ACCESSION NO--AA0115421

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AA0115421

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONVERTER YIELDING A FUNCTION HAS MEASURING BRIDGE (1) CONSISTING OF TEMPERATURE SENSITIVE RESISTORS (1-4). THE RESISTOR (3) HAS BEEN DEPOSITED IN A FILM FORM ON THE TRANSISTOR (8) FOR THE PURPOSE OF PRECISE RELATING THE TEMP. (PROPORTIONAL TO THE POWER DISSIPATED) OF THE TRANSISTOR TO THE BRIDGE. THE EMITTER REPEATER (7) ACTS AS A BALANCING CIRCUIT, IT APPLIES THE UNBALANCED CURRENT TO THE BASE OF THE TRANSISTOR (8) VARYING ITS COLLECTOR CURRENT IN ORDER TO RETAIN A CONSTANT POWER DISSIPATION ON THE TRANSISTOR (8).

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

AP0011954 CHEMICAL ABST. 12/69 UR0426

123435u Sulfonic acid esters. XVI. Reaction of β-chloroethyl sulfonates with amines. Stepanyan, A. A.; Asatbalyan, S. G.; Esayan, G. T. (Inst. Org. Khim., Erevan, USSR). *Arm. Khim. Zh.* 1969, 22(8), 688-92 (Russ). A series of sulfonic acid amino esters were synthesized to test their acaricidal and other biol. activity. Thus, 0.1 mole of a β-chloroethyl sulfonate ester and 0.25 mole Et_2NH in 50 ml. C_6H_6 was refluxed 4-6 hrs. and worked up to give the amino esters. Thus prepd. were $PrSO_3CH_2CH_2NEt_2$, 30%, b_{11} 275°; $BuSO_3CH_2CH_2NEt_2$, 36%, b_3 260°; and $PhSO_3CH_2CH_2NEt_2.HCl$, 85%, m. 105-7°. A chloroethyl sulfonate (0.1 mole) in satd. C_6H_6 soln. with 0.25 mole Me_2NH was kept overnight, heated on a water bath, and worked up to give $RSO_3(CH_2)_2NMe_2.HCl$ (R, % yield, and m.p. given): Et, 30, 210-12°; Bu, 36, 212-14°; and Ph, 43%, 221-3°. β-chloroethyl sulfonate esters were heated with piperidine in C_6H_6 and worked up to give 40% $BuSO_3H$ piperidinoethyl ester HCl salt and 46% $PhSO_3H$ piperidinoethyl ester HCl salt, m. 104-6°. The same reaction with pyridine gave $RSO_3CH_2CH_2NC_5H_5.HCl$ (R and % yield, given): Et, 88; Bu, 90; and Ph, 94.

A. P. Mueller

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

AP0002549

NUCLEAR SCI. ABST. 11/69

46329 ABOUT THE NATURE OF THE CHANGES IN COSMIC-RAY DIURNAL VARIATION DURING MAGNETIC STORMS WITH SUDDEN COMMENCEMENT. Vladimirskii, B. M.; Pankrabov, A. K.; Stepanyan, A. A. Kosm. Luchi, No. 10, 46-9(1959). (In Russian).

The nature of the changes of cosmic-ray diurnal variation during magnetic storms with sudden commencement is considered. (auth)

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

AP0002546

NUCLEAR SCI. ABST. 11/69 UP 3184

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46324 PHASE JUMPS OF DIURNAL VARIATIONS IN COSMIC-RAY INTENSITY. Pankramov, A. K.; Vladimirskii, B. M.; Stepanyan, A. A. Kosm. Luchi, No. 10, 27-9(1969). (in Russian).

The phase jumps of the diurnal variation are considered on the basis of the data of the world-wide network of cosmic-ray stations for the IQSY period. (auth)

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UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 10/69

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216819 CONTACTLESS POTENTIOMETER is made faster acting. It includes a cathode-ray tube (1) and a wound resistor (2) which is situated internally near the screen; its terminals (3,4) are brought out and connected to supply (I_1). Voltage (I_2) deviates the beam which moving along the resistor acts like a wiper. The output current is proportional to the deflecting voltage (I_2) and supply voltage (I_1). The output voltage (I_v) which is proportional to this current is measured across load resistor (5). In order to eliminate the effect of anode voltage (I) the supply voltage is alternating and capacitor (6) serves to remove the a.c. component from the output voltage.

13.4.67 as 1148340/26-24. A A STEPANIAN et alia. (19.5.68) Bul 15/26.4.68. Class 21c. Int.Cl. H 01c.

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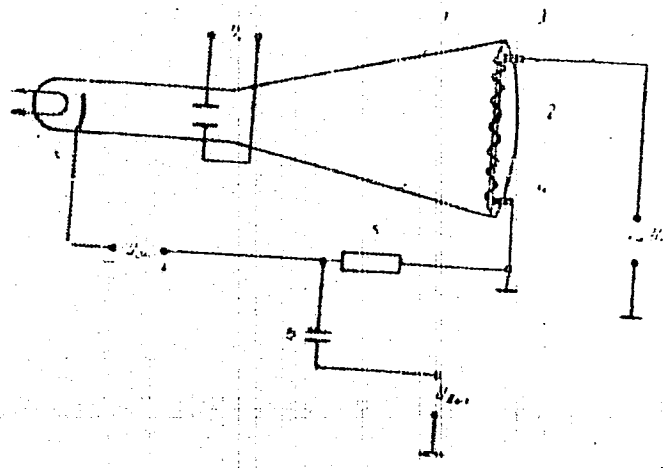
AA0017236



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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

S/019/62/000/020/040/055
A152/A126

9.7800

AUTHOR: Stepanyan, A.A.

TITLE: A method of building a static functional converter

PERIODICAL: Byulleten' izobreteniy, no. 20, 1962, 57

TEXT: Class 42d, 10. No. 151051 (728205/26 of April 26, 1961). The method of building a static functional converter is novel by providing for smooth approximation of any trigonometrical function. To achieve this, use is made of three types of multiplying units connected into the divider circuit via a certain amplifier. These multiplying units are used for the multiplication of scalers, and for scaler and vectorial multiplication of the vectorial values.

[Abstracter's note: Complete translation]

Card 1/1

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

S/0266/63/000/015/0060/0060

ACCESSION NR: AP3009543

AUTHOR: Stepanyan, A. A.

TITLE: Device for reproduction of cosine function

SOURCE: Byul. izobret. i tovarn. znakov, no. 15, 1963, 60

TOPIC TAGS: cosine function, cosine function reproduction, Hall data unit, multiplication unit, division unit

ABSTRACT: Device for reproduction of the cosine function of an angle included between two vectors, modulated by electric alternating voltage and a current containing a multiplication and a division unit has the special feature that, for the purpose of simplifying and augmenting the reliability of the device's operation, the multiplication unit is made in the form of a Hall data unit whose output is connected to one input of the division unit through the capacitance and to the other through the inductance. Orig. art. has: 1 figure.

Card 1/3

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

ACCESSION NR: AP3009543

ASSOCIATION: none

SUBMITTED: 10May62 DATE ACQ: 08Nov63 ENCL: 01

SUB CODE: SD, GE NO REF SOV: 000 OTHER: 000

Card 2/3

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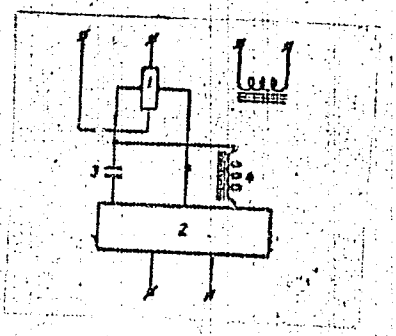
"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

ACCESSION NR: AP3009543

ENCL: 01



1. Hall data unit (multiplication unit); 2. division unit; 3. capacitance; 4. inductance

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

UDC 621.372.8.049.75-416

VENDIK, I. B., STEPANYAN, A. L.

"Calculation of the Coefficient of Attenuation in a Microstrip Line on a Dielectric Substrate"

Izv. Leningr. elektrotekhn. in-ta (News of the Leningrad Electrical Engineering Institute), 1971, vyp. 92, pp 68-71 (from RZh-Radiotekhnika, No 7, Jul 71, Abstract No 7B141)

Translation: A method is outlined for calculating the coefficient of attenuation for a system formed by rows of infinite metal-dielectric layers, which may be used to approximate a real microstrip line. An equation is derived which can be used for practical calculations. A computational example is presented. Two illustrations, bibliography of two titles. N. S.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

UDC 531.76:615.371.004.68:612.014

STEPANYAN, E. D., PETROSYAN, R. A., and GRIGORENKO, L. P., Institute of Zoology, Armenian Academy of Sciences

"The Time Factor in Postvaccinal Shifts in Mitosis of Bone Marrow Cells"

Yerevan, Biologicheskiy Zhurnal Armenii, No 8, 1971, pp 82-88

Abstract: In Wistar rats inoculated once intravenously with brucellosis or paratyphoid cultures, bone marrow cell mitosis increased sharply within 24 hours and did not return to normal until 12 to 16 days later. Revaccination at this time with the same antigen failed to stimulate mitosis. However, the injection of paratyphoid antigen 12 to 16 days after vaccination with brucellosis antigen intensified cell division markedly. The lack of a reaction to repeated injection of the same bacterial agent in the early period after vaccination is ascribed mainly to nonspecific immunological processes and in the later period to specific processes.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 014 UNCLASSIFIED

TITLE--SYNTHESIS AND BIOLOGICAL STUDY OF SOME NEW SUBSTITUTED BENZYLBIS (BETA CHLOROETHYL) AMINES -U- PROCESSING DATE--30OCT70

AUTHOR-(04)-GARIBDZHANYAN, B.T., STEPANYAN, G.M., IRADYAN, M.A., AROYAN, A.A.

COUNTRY OF INFO--USSR

SOURCE--ARM. KHIM. ZH. 1970, 23(2), 166-72

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTITUMOR DRUG EFFECT, CHEMICAL SYNTHESIS, CHLORINATED ORGANIC COMPOUND, BENZENE DERIVATIVE, ALKOXIDE, AMINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0789 STEP NO--UR/0426/70/023/002/0166/0172

CIRC ACCESSION NO--AP0119696

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

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CIRC ACCESSION NO--AP0119696 UNCLASSIFIED PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT.

(2,ALKOXY,5,CHLOROBENZYL)BIS(BETA,CHLOROETHYL) AMINES (I) AND THEIR 4,ALKOXY,3,CHLOROBENZYL ISOMERS (II) WERE PREPD. AS ANTITUMOR AGENTS AND COMPARED WITH THE BROMO ANALOGS. THE CL DERIVS, WERE MORE TOXIC THAN THE BR ANALOGS. LARGER ALKOXY GROUPS IN I WERE LESS TOXIC, BUT IN II THE EFFECT OF LARGER ALKOXY GROUPS WAS THE REVERSE. SOME CHLORO DERIVS. WERE BIOL. MORE ACTIVE THAN THE BROMO COMPDS. 2,ALKOXY,5,CHLOROBENZYL CHLORIDES (III) WERE PREPD. BY CHLOROMETHYLATION OF N,ALKOXYCHLOROBENZENES WITH PARAFORMALDEHYDE AND HCL OVER ZNCL SUB2. (III) (0.1 MOLE), 0.2 MOLE HN(CH SUB2 CH SUB2 OH) SUB2, AND 40-50 ML DIOXANE GAVE 2,5,ROCLC SUB6 H SUB3 CH SUB2 N(CH SUB2 CH SUB2 OH) SUB2 (IV). IV (0.1 MOLE) IN 50 ML C SUB6 H SUB6 WITH 0.4 MOLE SOCL SUB2 IN C SUB6 H SUB6 GAVE I.HCL.

FACILITY: INST. TONKOI ORG. KHIM., EREVAN, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

UDC 628.315.2

VINOKUR, E. A., GRIGORYAN, KH. A., and STEPANYAN, T. S., Kirovokan

"Purification of Sewage From the Production of Ion Exchange Resins"

Moscow, Vodosnabzheniye i Sanitarnaya Tekhnika, No 2, 1972, pp 13-14

Abstract: A study was carried out on the purification of sewage from the production of ion exchange resins KU-2, AV-17 and AN-18. Principal impurities in sewage from KU-2 are dichloroethane and sulfo-acids. Sewage from AV-17 and AN-18 contains methanol, benzene and various amines. Ozonization, chlorination and absorption methods proved to be inadequate for purification purposes. A very successful method was based on incineration, passing sewage through a temperature zone of 900-1000°C. Since KU-2 sewage could not be purified by biological oxidation (dichloroethane is toxic towards the microorganisms), it had to be distilled first through a column with 18 theoretical plates. The distillate collected the dichloroethane, and the residue could then be purified biologically. Sewage from the anions AV-17 and AN-18 could be purified by biological oxidation, using a two stage aeration.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

UDC 577.3

AVAKYAN, Ts. M., ADZHYAN, N. S., and STEPANYAN, L. G., Laboratory of Radiation Biophysics of the State Committee for Use of Atomic Energy, Yerevan Physics Institute

"Abnormal Luminescence of Cells Induced by X-Rays in an Atmosphere of Oxygen at High Pressure"

Yerevan, Biologicheskiy Zhurnal Armenii, No 6, 1971, pp 33-38

Abstract: Chemiluminescence of 4- to 5-day-old x-ray irradiated (500 r to 5 kr) pea roots was studied after exposure to nitrogen, oxygen, and the antioxides cysteine and cystophos (monosodium β-aminothiophosphate, M=179.11). At a pressure of 0.2 atm of nitrogen, the level of luminescence dropped sharply and remained low even after further increases in nitrogen pressure. At pressures of 0.2 to 9 atm of oxygen, the level of luminescence increased, oxygen participated vigorously in the reaction, and the process of oxidation intensified. However, the rate of the reaction slowed when oxygen pressure was increased. Cysteine and cystophos are known to inhibit chemiluminescence sharply and decrease its intensity. But after the pea roots were treated with these agents, chemiluminescence increased after exposure to 2 kr + O_2 and the intensity of chemiluminescence slowly increased after a pressure of 9 atm.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

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UDC 615.384.015.42

STEPANYAN, YE. P., POSPELOVA, YE. P., YARLYKOVA, YE. I., SHURKALINA, T. KH., RYUMINA, YE. N., SHVETSOV, I. M., LOGINOVA, L. I., and KOLESNIK, T. F., Biochemistry Laboratory, Institute of Cardiovascular Surgery imeni A. N. Bakulev, Academy of Medical Sciences USSR

"Experimental Data on the Effects of Rheopolyglucine on the Metabolic Processes"

Moscow, Eksperimental'naya Khirurgiya i Anesteziologiya, No 1, 1970, pp 40-44

Abstract: Rheopolyglucine is a Soviet analog of dextran. In experiments on dogs, doses of 10 and 30 ml/kg of body weight had little effect on the biochemical indices studied (volume of circulating blood, sugar content, total protein, K, Na, and Ca electrolytes, etc.). Larger doses (50 ml/kg) produced more significant effects. Low and moderate doses of the plasma substitute reduced the total plasma protein and lowered the fibrinogen and calcium levels, shifts caused partly by dilution of the blood. However, the fact that these shifts were more substantial after the 50 ml/kg dose, and that oxidative phosphorylation and the electrolyte balance were disrupted at this 1/2

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USSR

STEPANYAN, YE. P., et al., Moscow, Eksperimental'naya Khirurgiya i Anesteziologiya, No 1, 1970, pp 40-44

dilution in the myocardial tissues, suggests that large amounts of rheoglucine impair physiological homeostasis. Despite these disturbances, no functional or morphological complications in animal organs were observed in any of the experiments.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

172 027

UNCLASSIFIED

TITLE--EFFECT OF RHEOPOLYGLUCIN ON METABOLIC PROCESSES IN THE ORGANISM -U-

PROCESSING DATE--20NOV70

AUTHOR-(05)-STEPANYAN, YE.P., POSPELOVA, YE.P., YARLYKOVA, YE.I., SHURKALINA, T.KH., RYUMINA, YE.N.

COUNTRY OF INFO--USSR

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SOURCE--EKSP. KHIR. ANESTEZIOL. 1970, 15(1), 40-4

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DEXTRAN, MOLECULAR WEIGHT, BLOOD PLASMA, BLOOD CHEMISTRY, PROTEIN, FIBRINOGEN, CALCIUM COMPOUND, BLOOD VOLUME, MYOCARDIUM, ENZYME ACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0474

STEP NO--UR/0481/70/015/001/0040/0044

CIRC ACCESSION NO--AP0131111

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 027 UNCLASSIFIED

CIRC ACCESSION NO--AP0131111 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. RHEOPOLYGLUCIN (A PHARMACEUTICAL PREPN. OF DEXTRAN, WITH MOL. WT. 35,000-40,000), INFUSED IN DOGS AT 10, AND 30 MG-KG PRODUCED SLIGHT, AND AT 50 MG-KG PRONOUNCED, DECREASES IN THE CONCN. OF TOTAL PROTEINS, FIBRINOGEN, AND CA PRIME2 POSITIVE IN PLASMA; A TRANSIENT 50PERCENT INCREASE IN THE VOL. OF CIRCULATING BLOOD WAS ALSO OBSD. AT 50 MG-KG, A 50PERCENT DECREASE IN THE OXIDATIVE PHOSPHORYLATION OF MYOCARDIAL TISSUE AND DISTURBANCES OF THE ELECTROLYTE BALANCE WERE EVIDENT. FACILITY: INST. SERDECHNO-SOSUDISTOI KHIR. IM. BAKULEVA, MOSCOW, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

UNCLASSIFIED

TITLE--USE OF PSYCHOTROPIC DRUGS IN INTERNAL MEDICINE -U-

PROCESSING DATE--04DEC70

AUTHOR--STEPANYANTARAKANOVA, A.M.

COUNTRY OF INFO--USSR

SOURCE--KLIN MED 48(1): 12-16, 1970

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PSYCHOPHARMACOLOGY, MUSCLE RELAXANT, TRANQUILIZER, TOXICITY, DERMATITIS, HEPATITIS, BIOLOGIC PIGMENT, METABOLISM, GERONTOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605008/011 STEP NO--UR/0497/70/048/001/0012/0016

CIRC ACCESSION NO--AP0139986

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 041 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139986

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE REVIEWS THE USE OF PSYCHOTROPIC DRUGS (ANTIDEPRESSANTS, MYORELAXANTS, TRANQUILIZERS, ETC.) IN INTERNAL MEDICINE AND CONCLUDES THAT THE RESULT WAS GENERALLY EITHER INDIFFERENT OR SUCCESSFUL. HARMFUL EFFECTS ARE EXTREMELY RARE. USUALLY TOXIC EFFECTS SUCH AS TOXIC HEPATITIS, AGRANULOCYTOSIS, DERMATITIS, AND IMPAIRED PIGMENT METABOLISM ARISE AS THE RESULT OF OVERDOSAGES. THE RISK IS ALSO GREATER ON GERIATRIC PATIENTS SINCE COLLAPSE MAY DEVELOP.

FACILITY: ALL UNION RES. INST. MED. MED.-TECH. INOFRM., MIN. HEALTH USSR, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

UDC 678:539.376

RABOTNOV, YU. N., PAPERNIK, L. KH., and STEPANYCHEV, YE. I., Moscow

"Description of the Creep of Composite Materials Under Tension and Compression"

Riga, Mekhanika Polimerov, No 5, Sep/Oct 73, pp 779-785

Abstract: A study was made of the possibility of applying a simplified variant of the non-linear hereditary theory to describe the creep under uniaxial tension and compression of anisotropic composite materials by means of a single equation. The equation characterizes the processes of active deformation in three principal directions of anisotropy (0°, 45°, and 90°). The direct and reverse creep of TS-8/3-250 glass textolite was investigated. The characteristics of the textolite can be used in calculating the supporting part of machine and structural elements made from this material. Four figures, 13 formulas, five bibliographic references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

Composite Materials

USSR

UDC 678.620.172.251.2

RABOTNOV, YU. N., and STEPANYCHEV, YE. I., State Scientific Research Institute of Machine Science

"Creep Testing of Reinforced Polymers"

Moscow, Zavodskaya Laboratoriya, Vol 39, No 11, Nov 73, pp 1374-1379

Abstract: The characteristics of reinforced polymer materials are considered in developing new test methods and new standards for creep testing them under a constant load. For orthogonally reinforced polymers, with an ordered orthotropic structure, it is advantageous to use the directions coinciding with fiber orientations and at an angle of 45° to the fibers. For tensile creep testing of samples, cut an any angle to the reinforcing fibers, it is required that the side pressure external to the working part be protected from being torn from the holding clamps while at the same time making sure that there is not distortion of the deformation properties of the plastics from an instantaneous concentration of stresses. For compressive creep testing it is best to use samples in the form of a right parallelopiped with a square base with one side corresponding to the thickness of the plastic and a height at least four times that of the thickness. Pictures are shown of stands for the compressive and tensile creep testing of composite materials at room conditions. Two figures, nine bibliographic refernces.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

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UDC: 621.694.2

BEZNOGIKH, YU. D., ZINOV'YEV, L. P., KADYROV, R. B., KARYAGIN, YU. K., PLYASHKEVICH, N. N., POPOV, Y. A., SEMENYUSHKIN, I. N. and STEPANYUK, V. L.

"Injector Debuncher of the OIYAI Synchrophasotron With Energy Modulation of the Accelerated Beam"

Moscow, Pribory i Tekhnika Eksperimenta, Zhurnal Akademii Nauk SSSR, No 1, Jan/Feb 72, pp 37-38

Abstract: The particle intensity in the OIYAI synchrophasotron can be increased by 75% by reducing the energy scattering in the outlet beam and by modulating the energy of the injected beam. Both functions can be performed by a single high-frequency debuncher resonator located at a certain distance from the linear accelerator.

The debuncher resonator is 1/4 of the wave length of the round coaxial line. The tuning is achieved by deflecting the end walls and by a secondary power input. The diagram and the description of this device are presented. Some experimental results obtained with and without the debuncher are also given.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

LYAKHOVITSKIY, A. G., BOROZNA, D. I., STEPANYUK, Ye. I.

UDC 629.12:532

"Investigation of the Hydromechanical Properties of Double-Hull Low-Draft Ship With Supercritical Velocity"

V sb. Materialy 25 Nauch.-tekhn. konferentsii. Leningr. in-t vodn. transp. 1971. T. 2 (Materials of the 25th Scientific and Technical Conference. Leningrad Institute of Water Transportation, 1971. Vol 2), Leningrad, 1971, pp 61-65 (from RZh-Mekhanika, No 10, Oct 71, Abstract No 10B408)

Translation: Two models of a water-displacing catamaran differing with respect to the stern contours were tested in an experimental tank to evaluate the maneuverability of a ship on a limited depth, the resistance of the water to motion, and the possibility of attaining supercritical velocities. It is shown that with practically identical resistance to motion, the model having a bent transom is able to pass through a channel 0.35 meter shallower (as adjusted to full-scale) than the other model. As a result of the study, a theoretical blueprint is developed for a double-hull low-draft ship which will be navigable in water 1.3-1.4 m deep at the critical velocity, and ~1 m deep at supercritical velocity. G. A. Alchudzhan.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

UDC: 681.3

KORSHUNOV, Yu. M., STEPASHKIN, A. I., VAKARIN, I. A., IOFA, A. L., MOLCHADSKIY, L. I., STEPANENKO, V. N., EMIKH, L. A.

"A Digital Spectral Analyzer"

Tr. Ryazan. radiotekhn. in-ta (Works of the Ryazan Radio Engineering Institute), 1970, vyp. 29, pp 158-168 (from RZh-Kibernetika, No 9, Sep 71, Abstract No 9V554)

Translation: The paper describes a model of a specialized digital computer device designed for studying the frequency make-up of random signals. Expressions are presented for estimating the basic parameters of the device under various operating conditions. Authors' abstract.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

UNCLASSIFIED

TITLE--SIGNIFICANCE OF THE STUDIES OF SOME INDICES OF CARBOHYDRATE METABOLISM IN PNEUMONIA -U-

PROCESSING DATE--18SEP70

AUTHOR-(02)-STEPASHKINA, K.I., ILLARIONOVA, E.D.

COUNTRY OF INFO--USSR

SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 2, PP 47-50

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CARBOHYDRATE METABOLISM, PNEUMONIA, BLOOD CHEMISTRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/1616

STEP NO--UR/0504/70/042/002/0047/0050

CIRC ACCESSION NO--AP0101676

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 027

CIRC ACCESSION NO--AP0101676 UNCLASSIFIED

ABSTRACT/EXTRACT--(U) GP-0-- PROCESSING DATE--18SEP70

ABSTRACT. THE AUTHORS INVESTIGATED THE TISSUE CARBOHYDRATE METABOLISM IN 36 PATIENTS (30 WITH ACUTE PNEUMONIA AND 6 WITH EXACERBATED CHRONIC NONSPECIFIC PNEUMONIA). THE AUTHORS DETERMINED SUGAR, TOTAL GLYCOPROTEIDS, SIALIC ACID IN THE ARTERIAL AND VENOUS BLOOD WITH DUE ACCOUNT TO THE ARTERIO VENOUS DIFFERENCE OF THE MENTIONED INGREDIENTS WHICH MAKES IT POSSIBLE TO JUDGE UPON THE OXIDATIVE PROCESSES IN THE TISSUES OF THE BODY. THE INVESTIGATIONS CONDUCTED SHOWED THAT THE ARTERIO VENOUS DIFFERENCE IN SUGAR, GLYCOPROTEIDS AND SIALIC ACID IN PATIENTS WITH NONSPECIFIC INFLAMMATORY DISEASES OF THE LUNGS IN THE STAGE OF THE ACTIVE INFLAMMATORY PROCESS IS REDUCED AS A RULE, THIS TESTIFYING TO A DISORDER OF THE OXIDATIVE PROCESSES OCCURRING IN THE TISSUE. STUDIES OF THE INDICES OF THE TISSUE CARBOHYDRATE METABOLISM IN PATIENTS WITH PULMONARY PATHOLOTY MAY BE USED TO DETERMINE THE DEGREE OF THE INFLAMMATORY PROCESS ACTIVITY, HENCE TO MAKE PROGNOSTIC CONCLUSIONS AND PRESCRIPTION OF THE MOST RATIONAL THERAPY.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

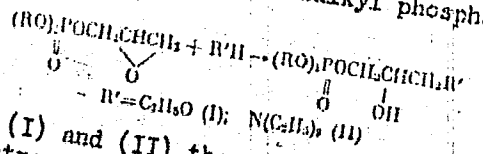
STEPASHKINA, L. V., RIZPOLOZHENSKIY, N. I.

UDC 542.91:547.1'118

"Glycidyl Esters of Phosphorus Acids and Their Characteristics. 5. Interaction of Dialkylglycidyl Phosphates With Diethylamine, Ethyl Alcohol and Acetic Anhydride"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 11, 1973, pp 2585-2589

Abstract: Dialkylglycidyl phosphates react with diethylamine and ethanol with the formation of β-oxy-γ-diethylaminopropyldialkyl phosphates and β-oxy-γ-ethoxypropyldialkyl phosphates



In the infrared spectra of (I) and (II) there is a band in the ~3,400 cm^{-1} range characteristic of a strongly associated OH group. The direction of opening of the ring is confirmed by the reaction with diethylchlorophosphite.

By the interaction of dialkylglycidyl phosphates with diethylamine, ethyl alcohol and acetic anhydride, β-oxy-γ-diethylaminoprophyl, β-oxy-γ-ethoxypropyl and β-γ-diacetoxypropyldialkyl phosphates are obtained respectively.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

STEPASHKINA, L. V., RIZPOLOZHENSKIY, N. I., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 11, 1973, pp 2585-2589

In the case of ethyl alcohol the epoxy ring is opened on the side of the primary carbon atom.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

UDC 542.91:547.1'118

USSR

STEPASHKINA, L. V., AKAMSIN, V. D., and RIZPOLOZHENSKIY, N. I., Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, Academy of Sciences USSR

"Synthesis and Properties of the Glycidyl Esters of Phosphoric Acid. 4 Communication. Synthesis of o-Glycidyl-S,S-dialkyldithiophosphites and Some of Their Properties"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 2, Feb 72, pp 380-384

Abstract: Reaction of glycidol with S,S-dialkyldithiochlorophosphite yields O-glycidyl-S,S,-dialkyldithiophosphites, b.p. 93-95°/0.008 mm, compounds with unpleasant odor, soluble in organic solvents, insoluble in water. These compounds react with sulfur yielding O-glycidyl-S,S-diethyltrithiophosphate, b.p. 116-117°/0.01 mm, and can be oxidized with nitrogen oxides to thiophosphates. The starting S,S-dialkyldithiochlorophosphites were obtained by the reaction of S-alkylthiodichlorophosphites with mercaptans in presence of a base. S-alkylthiodichlorophosphites were synthesized by reacting mercaptans with phosphorus trichloride. They were found to disproportionate on storage to PCl_3 and S,S-dialkyldithiochlorophosphites. In each series a number of analogues was synthesized, their physical properties being reported.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR UDC 612.015:615.739:577.158

VITOLIN', S. P., STEPCHKOV, K. A., FRANK, YE. L., and KREMER, YU. N., Riga Medical Institute and All-Union Scientific Research Institute for the Biosynthesis of Proteins

"Utilization of Nonnutritive Proteins in Human and Animal Nutrition. II. Yeast Proteins as a Source of Nutritive Nitrogen"

Riga, Izvestiya Akademii Nauk Latviyskoy SSR, No 2, 1971, pp 71-77

Abstract: The nutritive value of yeast preparations obtained by enzyme hydrolysis from Torula utilis in combination with various bread grains was studied in weanling rats. The growth of rats fed yeast, wheat flower, and fibrin (4:5:1 or 5:4:1) enriched with methionine was virtually indistinguishable from the control which received casein. A combination of yeast and barley groats or rice (6:4) manifested a much higher anabolic efficiency than did casein. The animals gained 48 and 38 g, respectively, in 10 days compared with 31 g in the control kept on the casein diet. A combination of whole blood proteins, yeast, and casein (3:4:3) or 5:4:1) resulted in weight gains equal to those produced by casein alone. It would appear, therefore, that nonnutritive proteins can be converted into nutritive forms and that the biological efficiency of plant proteins can be enhanced by combining them with a nonnutritive substance like yeast. 1/1

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR UDC: 629.78.018.1

GORISLAVSKIY, V. S. and STEPCHENKOVA, Z. A.

"Experimental Study of Flow Separation Zones on a Plate in a Hypersonic Gas Flow"

Uch. zap. Tsentr. aero-gidrodinam. in-ta (Scientific Notes of the Central Aero-hydrodynamics Institute), 1971, 2, No 5, pp 1-8 (from RZh-41. Raketostroyeniye, Moscow, No 3, Mar 1972, Abstract No 3.41.154)

Translation: The authors study the distribution of pressure on a plate with a sharp leading edge in a hypersonic helium flow. Strong perturbations set up by a falling compression shock from an external wedge or by the deflection of the shield cause the boundary layer to break away. The study was conducted in a hypersonic tunnel at $M=23.3$, $Re_0 = 1.9 \cdot 10^4$ and $6.85 \cdot 10^4$ and at a temperature factor $T_w/T_0 = 1$. It is shown that regions with large pressure gradient arise in the field of flow during break away from the leading edge. Because of this the use of a model based on the approximate integration method of the boundary layer theory is not justified for a complete description of the developed flow separation zones. The similitude relationship is upheld for flows with propagation of perturbations upwards along the flow and with strong interaction regimes. Original article: seven illustrations and eight bibliographic entries. Resume.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

GORISLAVSKIY, V. S., STEPCHENKOVA, Z. A.

"Experimental Study of Separation Zones on a Plate in a Hypersonic Gas Flow"

Uch. zap. Tsentr. Aero-gidrodinam. In-ta [Scientific Writings of Central Aero-Hydrodynamic Institute], Vol 2, No 5, 1971, pp 1-8, (Translated from Referativnyy Zhurnal, Mekhanika, No 4, 1972, Abstract No 4 B208 from the Resume).

Translation: The distribution of pressure on a plate with a sharp leading edge in a hypersonic flow of helium is studied. Strong perturbations created by the incident compression jump from the external wedge or deflection of the shield cause separation of the boundary layer. The study was performed in a hypersonic helium tunnel at $M = 23.3$, $R_0 = 1.9 \cdot 10^4$, $6.85 \cdot 10^4$ with temperature factor $T_w/T_0 = 1$. It is demonstrated that with separation from the leading edge, areas arise in the field of flow with high pressure gradient, so that the application of a model based on the approximate integral method of the theory of the boundary layer for description of developed separation zones is generally not justified. The rule of similarity is confirmed for flows with propagation of perturbations upward through the flow in the mode of strong interaction. 9 Biblio. Refs.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--HIGHER FREQUENCY STATIC SUPPLY SOURCES BASED ON MAGNETIC ELEMENTS -U-

AUTHOR-(04)--ROYZEN, S.S., STEPE, F.YU., PANCHENKO, V.A., SAYENKO, V.M.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, ELEKTRICHESTVO, NO 2, 1970, PP 72-74

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., METHODS AND EQUIPMENT

TOPIC TAGS--FREQUENCY METER, FREQUENCY CONVERTER, HIGH FREQUENCY, MAGNETIC METHOD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1233 STEP NO--UR/0105/70/000/002/0072/0074

CIRC ACCESSION NO--AP0123197

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123197

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SHORT ANALYSIS IS MADE OF THE WORKING CONDITIONS OF A ONE STAGE, MAGNETIC OCTUPLE FREQUENCY METER. THIS SERVES AS THE BASIS FOR INDUSTRIAL, STATIC FREQUENCY CONVERTERS (50-400 CPS) OF THE PCHMS SERIES. ORIGINAL ARTICLE: TWO ILLUSTRATIONS AND FOUR BIBLIOGRAPHIC ENTRIES.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

Acc. Nr: AP0044619 Ref. Code: UR 0497

PRIMARY SOURCE: Klinicheskaya Meditsina, 1970, Vol 48, Nr 1, pp 61-66

HIATUS HERNIA AND PEPTIC ULCER

A. S. Stepenko, A. L. Grebenev, M. M. Salman, A. A. Brodskaya

Summary

The results of studies of 50 patients suffering from gastroduodenal peptic ulcer are presented. For the detection of hiatus hernia the authors conducted complex studies including roentgenological investigation and esophagotonokymography. Axial hernia was revealed in 20 per cent of patients, this giving grounds to consider it as one of the complications of ulcer. The concomitance of hiatus hernia changes somewhat the clinical picture and requires certain corrections in the treatment of patients with peptic ulcer.

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19771296

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

STEPIN, A. L.

Ref. Code: UR0113

Acc. Nr.: AP0046772

UDC 621.785.545

USSR

SHEPELYAKOVSKIY, K. Z., Doctor of Technical Sciences, VOSKRESENSKIY, V. V., Candidate of Technical Sciences, LAPSHIN, M. P., SUKHIN, S. S., CHUDNOVSKIY, V. S., ORLOVSKIY, A. G., ROZENTAL', G. A., and STEPIN, A. L., Moscow Evening Metallurgical Institute, Moscow Auto Plant imeni Likhachev

"High-Frequency Thyristor Converter for Induction Hardening Installations"

Moscow, Avtomobil'naya Promyshlennost' (Motor Vehicle Industry), No 1, 1970, pp 28-29

Translation: A thyristor frequency converter and a dynamoelectric one are compared. The power circuit and control and protection circuits of a 100 kw 2500 cps thyristor converter for an induction hardening installation are described. (4 illustrations)

18 87

Reel/Frame
19790076

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

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UDC 621.314.57

USSR

VOSKRESENSKIY, V. V., ANAN'YEV, V. P., LAPSHIN, M. P., ZAKUTA, YA. B., KUZ'MICHEV, S. A., ORLOVSKIY, A. G., STEPIN, A. L.

"From the Experience of Development and Study of Increased Frequency Converters"

Kiev, V sb. Ustroystva preobrazovat. tekhn. (Converter Technology Devices -- collection of works), No 1, 1969, pp 69-78 (from RZh -- Elektronika i yeye primeneniye, No 2, Feb 70, Abstract No 2B492)

Abstract: The results are presented of an analysis and experience with a 100 kilowatt, 2500 Hz frequency converter. Computations conducted by the basic harmonic method and experimental data give an idea of the course of changes of the inverter's characteristics and of the parameters of the inductor-metal system during the process of heating up to melting. Performance with constant power for a quenching installation can be realized by a minor change of the rectifier's output voltage. The converter's efficiency remains high in a wide range of power changes. For quenching installations a thyristor frequency

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USSR

VOSKRESENSKIY, V. V., et al, V sb. Ustroystva preobrazovat. tekhn., No 1, 1969, pp 69-78 (from RZh -- Elektronika i yeye primeneniye, No 2, Feb 70, Abstract No 2B492)

Abstract: converter with a controlled rectifier and autonomous parallel inverter can be recommended. Various performances for converters are realized by changes of the power-supply voltage and the operating frequency of the inverter, with corresponding variations of the parameters of the oscillatory circuit for change of the magnitude of the parallel capacitance. 5 ill. 3 ref. I.R.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

UNCLASSIFIED PROCESSING DATE--02OCT70

1/2 007

TITLE--SCANDIUM AND ALKALI ELEMENT HEXAFLUOROACETYLACETONATES -U-

AUTHOR-(03)-GUREVICH, N.Z., STEPIN, B.D., ZELENTSOV, V.V.

S

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(3) 890-2

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SCANDIUM COMPOUND, ALKALI METAL COMPOUND, ACETYLACETONATE, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/0075/70/015/003/0890/0892

PROXY REEL/FRAME--1992/1495

CIRC ACCESSION NO--AP0112489

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 007 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112489

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. M(SC(HFACAC) SUB4), WHERE M EQUALS K, RB, OR CS AND HFACAC EQUALS HEXAFLUOROACETYLACETONATE, WERE PREPD. IN AQ.,ALC. SOLNS. THE COMPDS. M, 227, 231, AND 240DEGREES FOR M EQUALS K, RB, AND CS, RESP., AND SUBLIMED AT 145-250DEGREES.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

Acc. Nr. AP0034099 Abstracting Service: CHEMICAL ABST. 4-70

Ref. Code UR 0078

74291d Thermal stability of alkali metal hexachlorotellurates. Allakhverdov, G. R.; Serebrennikova, G. M.; Shmin, D. D. (USSR). *Zh. Neorg. Khim.* 1970, 15(1), 77-80 (Russ). Thermal dissocn. of $M_2[TeCl_6]$, where M = K, Rb, or Cs, was studied by DTA and by deriv. thermogravimetry. $Rb_2[TeCl_6]$ is thermally most stable but the temp. of max. rate of thermal decompn. increases with the cations in the order K < Rb < Cs. Decompn. of $[TeCl_6]^{2-}$ is very complex; it decomps. to $nTeCl_4 \cdot mTeO_2$. The final decompn. products are TeO_2 and KCl.

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REEL/FRAME 19710742

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

1/2 023 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--IMMUNOGENESIS DURING CATTLE BRUCELLOSIS -U-

AUTHOR--STEPIN, V.S.

COUNTRY OF INFO--USSR

SOURCE--VETERINARIYA, 1970, NR 5, PP 59-60

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, AGRICULTURE

TOPIC TAGS--BRUCELLOSIS, COMMERCIAL ANIMAL, AGGLUTININ, BRUCELLA ABORTUS, LYMPHATIC SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605049/D11 STEP NO--UR/0346/70/000/005/0059/0060

CIRC ACCESSION NO--AP0143378

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

2/2 023 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0143378

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTAL BRUCELLOSIS HAS BOTH REGIONAL AND GENERALIZED STAGES, WITH RESPECT TO THE IMMUNOLOGICAL REACTIVITY OF LYMPH ORGANS. THE REGIONAL STAGE IS CHARACTERIZED BY A WELL DEVELOPED REACTION OF PLASMATIC CELLS, AND BY THE FORMATION OF ANTIBODIES ONLY IN THE REGIONAL LYMPH NODES. AGGLUTININS APPEAR IN THE SERUM IN DIAGNOSTIC TITERS. IN THE SECOND, OR GENERALIZED STAGE, ANTIBODY PRODUCTION REMAINS AT THE SAME LEVEL IN BOTH REGIONAL AND REMOTE LYMPH NODES. FORMATION OF AGGLUTININS AND ACCUMULATION OF THEM IN THE BLOOD PRECEDES THE APPEARANCE OF COMPLEMENT FIXING ANTIBODIES. THE EXISTENCE OF A REGIONAL STAGE OF IMMUNOGENESIS CAN BE USED TO STUDY THE BEGINNING OF INFECTION IN THE FIRST FEW WEEKS AFTER EXPERIMENTAL INFECTION. IN THESE TESTS, SIX HEALTHY YOUNG BULLS WERE INFECTED WITH A PATHOGENIC STRAIN OF BR. ABORTUS BOVIS 146, IN A DOSE OF 1 BILLION CELLS. FACILITY: SEMIPALATINSKIY ZOOTEKHNICHESKO-VETERINARNYY INSTITUT SEMIPALATINSK ZOOTECHNICAL AND VETERINARY INSTITUTE.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

UDC: 681.333.519.2

DOLGOV, G. S., KOMANDROVSKIY, V. G., PETROSYANTS, A. A., and STEPIN, Yu. P.
(I. M. Gubkin Institute of Oil Chemistry and Gas, Moscow)

"Device for Digital Recording of a Stationary Random Process"

Avt. sv. SSSR. kl. G 06 g 7/52, No 338909, zayavl. 6.11.70, opubl. 16.06.72 (Author's Certificate, USSR, class G 06 g 7/52, No 338909, claimed 6 November 1970, published 16 June 1972) from RZh--Avtomatika, telemekhanika i vychislitel'naya tekhnika, No 2, 1973, Abstract No 2A457P)

Translation: A device is proposed for the digital recording of a stationary random process, containing a random signal sensor, a registration unit, a signal unit random in follow-up time and single-signalled per cycle of registration unit operation, a unit for controlling the transmission time, and a general control unit. Three illustrations.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

UDC 539.21:536.42

USSR

KOVALENKO, V. V., POLASYA, A. P., and STEPINA, A. I.

"Effect of Crystallization Conditions on the Kinetics of Disintegration of Supersaturated Solid Solutions"

V sb. Kristallizatsiya i faz. prevrashcheniya (Crystallization and Phase Transformations--collection of works) Minsk, "Nauka i Tekhn." 1971, pp 164-171 (from RZh-Fizika, No. 9, 1971, Abstract No. 9E366)

Translation: An x-ray investigation was made of the effect of the temperature of the tempering process from the fluid state, and the cooling rate, on the composition and the kinetics of disintegration of the solid solutions of the following alloys: 1) Al, 3% Mn; 2) Al, 3.1% W; 3) Al, 2.8% Cr; 4) Al, 3.5% Mn, 3% W; 5) Al, 3% Cr, 3% W; 6) Al, 4% Cu, 3% Mn; 7) Al, 5% Cu, 1.2% Cr. Quickly crystallized films were obtained by the Duvets method. The composition of the solid solution was determined roentgenographically. In crystallization on copper and steel substrates of alloys 1-4, supersaturated solid solutions with the composition of

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203210003-8

USSR

KOVALENKO, V. V. et al, Kristallizatsiya i faz. prevrashcheniya, Minsk, "Nauka i Tekhn." 1971, pp 164-171

the original fluid were formed independent of the tempering temperature (830-980° C). However, their temperature stability depends on the crystallization conditions: a reduction in the cooling rate and the tempering temperature leads to an increase in the temperature at the beginning of the disintegration and an increase in the commencement time and duration time of the disintegration. In the crystallization of the alloys 6 and 7, the Mn and Cr are completely fixed in the solid solution, while the Cu content depends on the crystallization conditions. The low-temperature tempering is accelerated with a reduction in the melting point and an increase in the thermal conductivity of the substrate. With an increase in the annealing temperature to 350° C (alloy 6) the disintegration of the solid solution is accelerated with an increase in the tempering temperature of the melt. Author's abstract.

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USSR

POLESYA, A. F., and STEPINA, A. I., Dnepropetrovsk State University, Department of Metal Physics

"Structure of Quickly Crystallized Films of Aluminum Alloys"

Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy — Tsvetnaya Metallurgiya, No 5, 1970, pp 122-125

Abstract: A study was made of the structure of quickly crystallized film across its thickness in order to clarify certain features of the crystallization mechanism of alloys at large deviations from the equilibrium state. Films 0.1-0.2 mm thick were obtained by the Duwez method. The chemical composition of the films is given in a table. Quickly crystallized films 0.1-0.2 mm thick of aluminum alloys with large amounts of Mn, Cr, and W, obtained by the Duwez method, were shown to be heterogeneous across their thickness, so that the microstructure of a selected section cannot be characteristic of the entire film. The gradual increase in grain size and the enlargement of boundaries with increasing distance from the contact surface, points to the substantial role in the formation of saturated solid solutions of alloys, of the relationship between the transposition speed of the growing grain face and the diffusion mobility of atoms of the alloying metal in the

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POLESYA, A. F., and STEPINA, A. L., Izvestiya Vysshikh Uchebnykh Zavedeniy -- Tsvetnaya Metallurgiya, No 5, 1970, pp 122-125

liquid face. Strongly saturated solid solutions do not form during a preliminary crystallization of the intermetallic phase. A relatively sharp transition from the first crystallization of the solid solution toward the initial formation of the Al-Cr phase is observed with a decrease in cooling rate in alloys with Cr. This transition is smoother in alloys with Mn. The variation of film microstructure with the distance from the contact layer is shown.

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POLESYA, A. F., and STEPINA, A. I., Dnepropetrovsk State University

"Kinetics of Decomposition of Supersaturated Binary and Trinary Solid Solutions of Aluminum With Cr and Mo Produced by Hardening of Alloys From the Liquid State"

Moscow, Fizika Metallov i Metallovedeniye, Vol 30, No 5, 1970, pp 928-935

Abstract: A study was made of the kinetics of the decomposition of metastable binary and trinary solid solutions Al-Cr, Al-Mo, and Al-Cr-Mo produced by solidification of melts. It is demonstrated that the binary solid solutions Al-Mo containing up to 4 wt.% Mo do not decompose at up to 600°C. During the process of decomposition of the Al-Cr and Al-Cr-Mo solid solutions at 475°, chromium is separated from them, as well as some molybdenum in the alloy Al-3 wt.% Cr-4 wt.% Mo. At 600 and 625°, molybdenum is separated from the binary and trinary solid solutions in two stages, the beginning of separation being accompanied by an anomalous increase in electrical resistance. Spheric segregations measuring 80-100 Å in diameter are detected in the second stage of the decomposition in the area of the anomalous increase in electrical resistance by electron microscope techniques.

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TITLE--COMPOSITION OF SOLID SOLUTIONS OF ALUMINUM MANGANESE IRON, ALUMINUM MAGANGANESE COLBALT, AND ALUMINUM MANGANESE NICKEL ALLOYS AFTER RAPID

AUTHOR-(02)-POLESYA, A.F., STEPINA, A.I.

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