

1/2 016 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--SYNTHESIS AND X RAY DIFFRACTION STUDY OF TUNGSTEN AND RHENIUM  
TELLURIDES -U-  
AUTHOR--(05)-OPALOVSKIY, A.A., FEDOROV, V.YE., LOBKOV, E.U., ERENBURG,  
V.G., SENCHENKO, L.N.  
COUNTRY OF INFO--USSR  
SOURCE--IZV. AKAD. NAUK SSSR; NEORG. MATER. 1970, 6(3), 561-3  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY, MATERIALS  
TOPIC TAGS--X RAY DIFFRACTION, TUNGSTEN COMPOUND, TELLURIDE, RHENIUM  
COMPOUND, CHALCOGENIDE GLASS  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1996/0898 STEP NO--UR/0363/70/006/003/0561/0563  
CIRC ACCESSION NO--AP0118067  
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0118067

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. W-TE AND RE-TE MIXTS. AT A METAL CHALCOGEN RATIO OF 1:2 WERE HEATED IN EVACUATED AND SEALED QUARTZ AMPULES AT A RATE OF 8-10DEGREES PER MIN. AND CALCINED AL SUB2 O SUB3 SERVED AS THE DTA REF. THE HEATING CURVES ARE CHARACTERIZED BY 2 HEATING EFFECTS, OF WHICH THE ENDOTHERMAL EFFECT IS CAUSED BY THE MELTING OF TE AND THE EXOTHERMAL EFFECT CORRESPONDS TO OXIDN. OF THE METAL WITH TE. THIS MEANS THAT THE REACTION BETWEEN W AND RE PROCEEDS ONLY WITH FUSED CHALCOGEN. THE RATE OF THE HETEROGENEOUS REACTIONS IS STRONGLY DEPENDENT ON THE INTERACTION SURFACE, WHICH VARIES SIGNIFICANTLY IF GAS IS USED IN THE REACTION. WTE SUB2 WAS SYNTHESIZED AT 750DEGREES FOR 25-30 HR, AND RETE SUB2 AT 800DEGREES FOR 60-5 HR. THE SAMPLES WERE STUDIED BY X RAY PHASE AND IR ANALYSES. THE UNIT CELL PARAMETERS WERE CALCD. BY USING COMPUTERS. THE AGREEMENT BETWEEN THE MEASURED AND THE CALCD. D SUBHKL VALUES WAS NOT VERY GOOD, ESP. IN THE LARGE ANGLES REGION. FACILITY: INST. NEORG. KHIM., NOVOSIBIRSK, USSR.

UNCLASSIFIED

1/2 031 UNCLASSIFIED PROCESSING DATE--18SEP70  
TITLE--CORROSION OF COPPER AND STEELS IN WASTE WATERS -U-

AUTHOR--FEDOROV, YE.A.

COUNTRY OF INFO--USSR

SOURCE--GIDROLIZ. LESOKHIM. PROM. 1970, 23(2), 28

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CORROSION RATE, STAINLESS STEEL, PHENOL, WOOD CHEMICAL  
PRODUCT, COPPER, STEEL, METAL COATING, CORROSION RESISTANCE/(U)KHLBNLOT  
STAINLESS STEEL, (U)ST3 STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1989/0773

STEP NO--UR/0328/70/023/002/0028/0028

CIRC ACCESSION NO--AP0107315

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--1RSEP70

2/2 031

CIRC ACCESSION NO--AP0107315

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

ABSTRACT. DETNS. (GRAVIMETRIC) WERE MADE OF THE RATE OF CORROSION OF CU, STAINLESS STEEL KH19NIOT, AND CARBON STEEL ST. 3 IN THE EFFLUENT FROM THE SYASYA WOOD CHEM. PLANT. THE EFFLUENT HAD A PH 3.5-4, AN OXIDIZABILITY OF 1900 MG-L., AND CONTAINED UNSATD. HYDROCARBONS 1380, VOLATILE PHENOLS 44, AND VOLATILE ACIDS 2962 MG-L. UNDER THE CONDITIONS OF THE TESTS (2-3 MONTHS AT 40-50DEGREES), CT. 3 STEEL AND CU UNDERWENT CONSIDERABLE CORROSION, AND SHOULD BE REGARDED AS UNSUITABLE FOR CONTAINERS, PIPING, AND CLOSURES. STAINLESS STEEL SHOWED CONSIDERABLE RESISTANCE TO CORROSION CAN BE RECOMMENDED FOR USE IN WOOD CHEM. PLANT EQUIPMENT. SUCH EQUIPMENT CAN ALSO BE MADE OF STEEL CT. 3 COATED WITH STAINLESS STEEL.

UNCLASSIFIED

USSR

UDC 539.214:539.374

FEDOROV, Ye. I.

"On the Probability of Calculating a Column Under Longitudinal-Transverse Bending"

V sb. Probl. nadezhnosti v stroit. proyektir. (Reliability Problems in Structural Design -- Collection of Works), Sverdlovsk, 1972, pp 255-261 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V464)

Translation: A formal solution is obtained for the problem of the reliability of a column made from an ideally elastic-plastic material under longitudinal-transverse bending. It is assumed that the longitudinal and transverse forces consist of random independent Markov processes. The solution is reduced to the integration of a Fokker-Planck-Kolmogorov equation with boundary and initial conditions. 5 ref. I. Sh. Rakhmatulin.

1/1

USSR

UDC 621.382.3.026.439

KISURIN, A.A., FEDOROV, YE.I., SHCHEVELEV, M.I.

"Some Problems Of The Initial Statistical Processing Of The Results Of Measurements Of The Electrical Parameters Of Power High-Frequency Transistors"

Sb. Tr. po poluprovodnikovym materialam, priboram i ikh primeneniyu (Collection Of Works On Semiconductor Materials, Devices, And Their Applications), Voronezh, 1971, pp 169-178 (from RZh:Elektronika i yeye primeneniye, No 11, Nov 1972, Abstract No 11B252)

Translation: The application of methods of correlation--regressive analysis to the results of measurements of the electrical parameters of power HF transistors is described. For correct application of these methods, the requirements which are imposed on the conditions for collection of statistical material are considered: 1) Elimination of sharply separated results of measurements; 2) Determination of the necessary and sufficient quantity of transistors in the sample; 3) Verification of homogeneity of several samples. The analysis was conducted on ten lots. It is shown that 100 transistors in a lot is a sufficient quantity for the specific case considered of the difference of a temporal nature during the collection of statistical material for a correlation--regressive analysis of parameters. 3 ref. A.M.

1/1

- 132 -

USSR

UDC: 624.072.21.075.04

DRIVING, A. YA., FEDOROV, YE. I. (Moscow)

"Concerning the Calculation of Rods of a Nonlinearly Elastic Material With Large Deflections"

Moscow, Stroitel'naya Mekhanika i Raschet Sooruzheniy, No 1, 1972, pp 43-45

Abstract: The authors obtain a visible analytic solution of the problem in a strict geometrically nonlinear formulation for a rod made of a nonlinearly elastic material and compare the obtained results with the results of a solution of the same problem in a geometrically linear formulation. The article deals with an eccentrically compressed rod of a nonlinearly elastic material with an ideal double-T cross section. A closed solution of the problem is obtained in a strict geometrically nonlinear formulation. Four figures, six references.

1/1

- 120 -

USSR

UDC 538.576.23

KRASNUSHKIN, P.YE., ~~FEDOROV, YE.N.~~

"Multiplicity Of The Wave Numbers Of Normal Waves In Laminated Media"

Radiotekhnika i elektronika, Vol XVII, No 6, June 1972, pp 1129-1140

Abstract: Transformations of normal waves at neighboring points of a multiplicity of wave numbers are studied on the basis of the theory of not self-conjugate differential operators and the theory of many complex variables. Among the examples considered are waves of Type TH<sub>z</sub> in the isotropic wave guide "earth--lower ionosphere." The model discussed relates to a summer day in the middle latitudes and makes it possible to calculate the field of super-long waves on sea routes. 4 fig. 24 ref. Received by editors, 12 April 1971.

1/1

104



USSR

UDC: 621.382.029.6

VIKULINA, L. F., GONYAYEV, G. S., LYUZE, L. L., FEDOROV, Ye. V., SHIROKOVA, L. S.

"Investigation of the 'Second Threshold' Effect in Gallium Arsenide Cavity Oscillators"

Moscow, Radiotekhnika i Elektronika, Vol 16, No 1, Jan 71, pp 131-133

Abstract: An attempt is made to explain the "second threshold" effect reported by Gunn in 1966. The essence of this phenomenon is that an abrupt change in the frequency of oscillations takes place with an accompanying reduction in the average current through some gallium arsenide specimens when the bias voltage exceeds a certain value. The following mechanism is proposed as an explanation of the effect. At bias voltages between the threshold value and the "second" threshold, the specimen is operating in a "resonance-drift" mode. The overall voltage during the negative part of the cycle of the variable component falls below the threshold value, which delays the time for generation of a new domain. Above a certain bias voltage, which differs for different specimens, the amplitude of the variable component may be too small, so that the overall voltage does not fall below the threshold value. Thus there

1/2

66

USSR

VIKULINA, L. F., et al, Radiotekhnika i Elektronika, Vol 16, No 1, Jan 71, pp 131-133

is a jump to the drift mode of operation. The lower amplitude of the oscillations in this mode is due to the reduction in current pulse duration. Frequency jumps do not take place when the specimens are connected in higher-Q oscillator sections, or when the elements of the section are adjusted with a change in voltage.

2/2

USSR

BAYCHENKO, I. P., Candidate of Biological Sciences, STEPANOV, Ye. I., and FEDOROV, Ye. N., Candidate of Biological Sciences, Leningrad Scientific Research Institute of Physical Culture

"Improvement of Vestibular Function in Young Skiers"

Moscow, Teoriya i Praktika Fizicheskoy Kul'tury, No 1, 1972, pp 60-63

Abstract: Ninety-eight 11- to 12-year old boys and girls were given 16 skiing lessons over a period of 9 weeks on different kinds of terrain (rugged, flat, combination of rugged and flat) to determine the effect of terrain on the acquisition of motor skills and the effect of practice on different kinds of terrain on vestibular function. The children who skied on rugged terrain did best. Beneficial changes were observed in the vestibular analysor in the form of decreased excibility on the periphery and increased resistance to extreme stimuli. By the end of the program, all the groups showed improvement in technique, speed, and balance, but the latter was most developed in those who skied on rugged terrain.

1/1

- 46 -

USSR

UDC: 529.781:621.397.6:629.195.1

PALIY, G. N. and FEDOROV, Yu. A.

"A Method of Tying Time Scales Using Satellite Communication and Ground TV Nets"

Moscow, Izmeritel'naya tekhnika, No 3, 1972, pp 23-26

Abstract: The present methods for tying time scales use television signals to provide simultaneous vertical sync pulse recording at two different points or to transmit special pulses or time markers within the television signal. The system proposed in this article takes advantage of the experimental system that has been created in the Soviet Union for transmitting time and frequency information from the highly stable quartz oscillator from the television station in Moscow. Its advantage is that it resolves the ambiguity of counting at second intervals with the reception of vertical pulses without first tying in the scales of compared clocks. The use of satellites involved in TV broadcasting guarantees the constancy of the moment for release of second pulses from the satellite transmitting antenna, and permits combining this moment with that of second pulses from the Moscow transmitter.

1/1

USSR

529.781:621.397.6

PALIY, G.N., LUK'YANCHENKO, YA.I., FEDOROV, YU.A., VRUKOV, YE.M.

"Experimental High-Precision System Of Transmission Of The Dimensions Of Time And Frequency Units On Television Broadcasting Channels"

Izmeritel'naya tekhnika, Moscow, No 1, Jan 1972, pp 34-37

Abstract: An established experimental system is described which assures joining the time scale of television channels in various cities of the European part of the USSR with an error of less than 1 microsecond. A block diagram of the system is shown. The authors express their thanks to S.N. Mordovin, V.F. Zhelezov, V.S. Krasulin, V.G. Il'in, L. A. Abramov, G.A. Zadykin, M.D. Sopol'nikov and other specialists who took an active part in creation of the system. Received by editors 20 Sept 71. " fig. 1 tab. 7 ref.

1/1

USSR

UDC 539.67

DARINSKIY, B. M., and FEDOROV, Yu. A.

"On the Theory of Amplitude-Dependent Internal Friction"

Sb. "Vnutrenneye treniye v metallicheskih materialakh" (Internal Friction in Metallic Materials), Moscow, Izd-vo "Nauka," 1970, pp 82-85

Abstract: Internal friction governed by a breakaway of dislocations from locking points is considered.

Expressions are derived for the number of breakaway dislocations from locking points and internal friction as a function of the applied stress amplitude. The amplitude dependence of internal frictions at the beginning growth stage is compared with a corresponding dependence obtained by Granato-Lucke. 1 figure, 3 references.

1/1

1/2 021 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--HYGIENE OF THE ORAL CAVITY -U-  
AUTHOR--FEDOROV, YU.A.  
COUNTRY OF INFO--USSR  
SOURCE--STOMATOLOGIYA, 1970, VOL 49, NR 3, PP 6-12  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--ORAL DISEASE, PROPHYLAXIS, ORAL HYGIENE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1998/0099 STEP NO--UR/0511/70/049/003/0006/0012  
CIRC ACCESSION NO--AP0120799  
UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120799

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER DISCUSSES THE RESULTS OF SOVIET STUDIES CONCERNING ORAL HYGIENE DURING THE LAST YEARS, PRESENTS DATA ON THE ABRASIVE, ANTISEPTIC AND CURATIVE PROPHYLACTIC PROPERTIES OF SOME SAMPLES OF SOVIET AND FOREIGN DENTAL PASTES AND POWDERS, GIVES INFORMATION ON THE FREQUENCY OF ORAL CARE AND ITS IMPORTANCE, AS WELL AS SETS FORTH THE ROLE OF THE HYGIENIC FACTORS IN GENERAL MEASURES FOR THE PREVENTION OF THE PRINCIPAL STOMATOLOGICAL DISEASE. WAYS OF DEVELOPMENT OF SCIENTIFIC RESEARCH IN THE REFERRED TO FIELD ARE OUTLINED.  
FACILITY: ODESSKIY N-I INSTITUT STOMATOLOGII.

UNCLASSIFIED



FEDOROV, Yu

Urbikar, A. S., Krasovskiy, R. R.	Reception of a Fluctuating Optical Signal .....	122
Voytsel', V. I.	Optimization of an Optical Detection System .....	122
Shcherbakov, K. N.	Analysis of the Synchronization of an Optical Communication Channel with Time Division Multiplexing of the PUL Trunks .....	134
Litvinova, T. P., Lobkov, L. H.	Frequency-Space Correlation Function of the Amplitude of Noise Propagated in a Locally Isotropic Turbulent Atmosphere .....	150
Lobkova, L. M., Chistyakov, A. B., Lobkov, M. M.	Effect of Amplitude and Phase Field Distribution at a Laser Output on the Spatial Coherence of the Laser Emission .....	174
Lobkova, L. M., Chistyakov, A. B., Lobkov, M. M.	Rate and Slow Fluctuations of the Angles of Arrival of Laser Emission .....	184
Khalitsyn, R. V., Podubnyy, V. V.	Statistical Description of Hermitian and Laguerre Photon Fluxes .....	189
Khalitsyn, N. V., Podubnyy, V. V., Polenin, V. P.	Quantum Mechanical Description of Some Proce- dures of Nonparametric Statistics .....	190
Podubnyy, V. V., Tsvetkov, B. Ye.	Potential Accuracy of Measuring the Angular Position of Photon Source .....	196
Yelisyev, E. G., Fedotov, Yu. F., Kazhinovskiy, L. G.	Application of Semiconductor Lasers for Multichannel Optical Communications .....	202
Sviridovskiy, V. L., Karpov, S. G., Biryayev, A. V.	Relation of the Distribution Functions of a Quasimonochromatic Signal and Its Amplification ..	205
Deryugin, I. A., Kuracov, V. H.	Optimization of Optical-Band Quantum Counting Systems .....	210
Adrianova, I. I., Brodovitch, N. A., Vol- shinsky, V. R., Danilov, B. S., Hesterova, Z. V., Petrova, A. V., Popov, Yu. V., Kozanov, H. N.	Laser Emission Modulation .....	221

41

TECHNICAL TRANSLATION

10

1007 | FSTC/JT-23 2015-72  
29 April 22

INCLASH TITLE: PROBLEMS OF LATER HEAR DATA TRANSMISSION  
PROCEEDINGS OF THE FIRST ALL-UNION CONFERENCE, KIEV,  
SEPTEMBER 1969

ORIGINS TITLE: PROBLEMY PEREDACHI INFORMATSII LAENNYM TELVCENTYEM

AUTHOR: I. A. DERUGIN, ET AL.

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

Translated for FSTC by: ACS1

NOTICE

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

Approved for public release. Distribution unlimited.

Final Page

1/2 049 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--APPLICATION OF LOGIC ELEMENTS MADE OF INJECTION LASERS IN  
COMMUNICATIONS SYSTEMS WITH TIME DIVISION MULTIPLEX -U-  
AUTHOR-(04)-KOZLYAEV, I.P., NIKITIN, V.V., SAMOYLOV, V.D., FEDOROV, YU.F.  
COUNTRY OF INFO--USSR  
SOURCE--RADIOTEKHNIKA I ELEKTRONIKA, VOL. 15, APR. 1970, P. 772-777  
DATE PUBLISHED-----70  
SUBJECT AREAS--NAVIGATION, PHYSICS  
TOPIC TAGS--LOGIC ELEMENT, LASER, MULTIPLEX, OPTIC COMMUNICATION,  
COMMUNICATION SYSTEM  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FKAME--1996/1087 STEP NO--UR/0109/70/015/000/0772/0777  
CIRC ACCESSION NO--AP0118237  
UNCLASSIFIED

2/2 049

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118237

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTAL DATA FOR THE USE OF INJECTION LASERS AS LOGIC ELEMENTS IN OPTICAL COMMUNICATION SYSTEMS EMPLOYING TIME DIVISION MULTIPLEXING OF LIGHT PULSES. RECOMMENDATIONS ARE GIVEN FOR THE OPTIMAL SWITCHING OF THE LASER DIODES INTO A COHERENT EMISSION REGIME, AND METHODS OF REDUCING THE PULSE DURATIONS ARE EXAMINED. IT IS SHOWN THAT THE USE OF THE PROPOSED LASER ELEMENTS MAKES IT POSSIBLE TO OBTAIN INFORMATION TRANSFER RATES OF ABOUT 10 TO THE 10TH POWER BITS-SEC.

UNCLASSIFIED

Pharmacology and Toxicology

USSR

FEDOROV, YU. G., and GRIGOR'YEV, M. YU.

"Diagnostic Value of the Determination of the Titer of Chorionic Gonadotropin and of the Antihormonal Antibodies"

Vopr. Okhrany Materinstva i Detstva (Problems of the Protection of Motherhood and Childhood), 1973, No 7, pp 74-78 (from RZh - Biologicheskaya Khimiya, No 22, Nov 73, Abstract No 1744)

Translation: On the basis of experimental evidence the authors believe it necessary to perform parallel dynamic determination of the titer of chorionic gonadotropin and antihormonal diagnosis of uterine and extrauterine pregnancy.

1/1

USSR

UDC: 531.571/572

YEROKHIN, B. T., FEDOROV, Yu. I., Moscow

"An Analytical Method of Calculating Gas-Dynamic Parameters in a Semiclosed Space With Regard to Nonhomogeneity of the Velocity Profile and Turbulent Combustion of Condensed Systems"

Moscow, Izv. AN SSSR: Energetika i Transport, No 4, Jul/Aug 72, pp 131-134

Abstract: An analytical method is proposed for calculating gas-dynamic parameters of a condensed system in an axisymmetric channel with regard to nonhomogeneity of the velocity profile with respect to the cross section of the flow and taking account of the effect of turbulent combustion. In deriving the basic expressions, forces of friction, forces of inertia and heat conduction are disregarded. Heat losses are accounted for by introducing a special coefficient. Compressibility of the gas and hydrodynamic losses are also accounted for. The proposed method can be used to calculate gas-dynamic parameters with respect to channel length of the condensed system and with respect to the time of the process in a semiclosed space with accuracy sufficient for practical purposes for average cross sectional areas  $\bar{F}_L = F_T/F_{cr} \geq 1.5-1.7$ .

1/1

USSR

UDC 621.874:624.023.9337:620.178.3.-974

KOBRIN, M. M., Candidate of Technical Sciences, FEDOROV, YU. K., Engineer,  
ZINGERMAN, B. Z., Engineer, ZOTEYEV, V. S., Candidate of Technical Sciences, and  
TYLKIN, M. A., Doctor of Technical Sciences

"Fatigue Strength of the Welded Beam Support Subassembly of Overhead Travelling  
Cranes at Minus Temperatures"

Moscow, Vestnik Mashinostroyeniya, No 4, Apr 73, pp 16-19

**Abstract:** The authors determine the effect of low temperatures on the fatigue strength of the support subassemblies of welded metal structures with sharply varying cross sections. The jib of a 20-ton series produced travelling crane is studied. The beam is made from St3 grade steel and welded with the E42A electrodes. The bent sheet of the bottom band is welded to the vertical wall by a bilateral angular seam (10 mm fillet). Tests were conducted at +20 and -40°C on a hydraulic-pulsed testing machine including refrigeration equipment. The fatigue limits for the full scale beams of a travelling crane are determined by the interpolation method and are  $\sigma=13.4 \text{ kg/mm}^2$  for +20°C and  $\sigma=11.3 \text{ kg/mm}^2$  for -40°C.

USSR

UDC 620.17:669.27'71'295'296

KLYPIN, B. A., MANEGIN, Yu. V., MARKIN, V. G., and FEDOROV, Yu. K., Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin

"Technological and Mechanical Properties of Some Tungsten Alloys"

Moscow, Metallovedeniye, No 6, 1971, pp 44-47

Abstract: Mechanical and technological properties of tungsten alloys containing W-0.5% Ti, W-10% Mo-0.5% Ti, and W-0.5% Ti-0.1% Zr, vacuum smelted in an arc furnace with consumable electrode, were investigated on pressed, forged, and rolled bars. Highest quality bars were obtained by use of dies covered with  $Al_2O_3$  and by a drawing rate of not less than 4. Introduction of 10% Mo into the alloy W-0.5% Ti at temperatures up to 2000°C increases its strength and improves its macrostructure and the quality of the ingot. Introduction of 0.1% Zr into the alloy W-0.5% Ti sharply increases the recrystallization temperature and the hardness of the alloy at 1500-1700° C which hinders its deformation. Effects of drawing (1600-1640° C) on the specific pressure and of the temperature on mechanical properties and the dependence of hardness on the annealing temperature are shown. Four figures, six bibliographic references.

1/1



Veterinary Medicine

USSR

UDC 636+576.8.094.29

KOVALENKO, Ya. R., SIDOROV, M. A., FESENKO, I. D., FEDOROV, Yu. N.

"Reactogenic and Immunogenic Properties of Cholera Virus Vaccine from the K Strain for Hogs Kept at High Ambient Temperature"

Moscow, Sel'skokhozyaystvennaya Biologiya, Vol 7, No 5, 1972, pp 759-762

Abstract: A study was made of the reactogenic and immunogenic properties of the cholera virus vaccine from the K strain for hogs kept at high ambient temperatures for the period of the adaptive and productive phases of immunogenesis. Under the conditions of high temperatures and humidity, gilts exhibit a standard stress reaction. The live virus vaccine from the K strain injected in these gilts causes a severe postvaccinal reaction, and some of them become sick and die exhibiting clinical and pathoanatomical symptoms characteristic of cholera. A stressed immunity develops in the gilts injected with the live virus vaccine by the fifth day.

A total of three experiments were performed over the course of 3 years on 92 gilts with a live weight from 22 to 45 kg. One group of pigs was kept under the customary conditions of the hoghuse (a temperature of 16-22<sup>o</sup>, a relative humidity of 75-85%, air movement at 0.1 m/sec, a carbon dioxide gas content of 0.22-0.23%, and an oxygen content of 20.8-20.85%); another group 1/3

USSR

KOVALENKO, Ya. R., et al., Sel'skokhozyaystvennaya Biologiya, Vol 1, No 5, 1972, pp 759-762

of the same age which had previously been kept under the same conditions was moved to the climate chamber 3 days before vaccination and for 7 days after injection of the vaccine they were kept in it 8 hours a day and then in the hothouse. In the climate chamber at a level of 30 cm from the floor the temperature was maintained at 30-32°C with air circulation of 0.15 m/sec and a relative humidity of 75-90%. At night when the heaters were shut down the temperature dropped to 22-25°C for 5 hours, the relative humidity reached 95-100%, and the carbon dioxide gas concentration in the daytime did not exceed 0.25% and at night 0.32% with an oxygen content of 20.81 to 20.71%. Comparative data are tabulated for the different groups of gilts. As a result of the stressed state arising from the increased temperature and humidity, the phagocytic activity of the blood neutrophils of the pigs dropped, the synthesis of specific globulins was suppressed, and the overall resistance of the organism was lowered. Against this background, the reactogenic property of the live virus vaccine from the lapinized K strain is intensified, and individual series of this vaccine caused postvaccinal cholera and death in the animals. The intensified proliferation of the cells in the lymphatic series with intense synthesis of ribonucleic acid caused by the high temperatures insures rapid

2/3

- 95 -

USSR

KOVALENKO, Ya. R., et al., Sel'skokhozyaystvennaya Biologiya, Vol 1, No 5,  
1972, pp 759-762

penetration and reproduction of the lapinized cholera virus in the organism of  
the gilts. This promotes the manifestation of the reactogenic property and  
the creation of a stressed immunity.

3/3

USSR

UDC 575.24:576.858

SOLYANIK, R. G., FEDOROV, Yu. V., and RAPOPORT, I. A., Tomsk Scientific Research Institute of Vaccines and Sera, Tomsk, and Institute of Chemical Physics, Academy of Sciences USSR, Moscow

"The Mutagenic Effect of Some Alkylating Compounds on the Virus of Eastern Equine Encephalomyelitis"

Moscow, Genetika, Vol 8, No 3, Mar 72, pp 164-165

Abstract: The mutagenic effect of N-nitrosomethylurea, formaldehyde, 1,4-bis-diazoacetylbutane, and dimethylsulfate on the virus of eastern equine encephalomyelitis was studied, using strain 2627 of this virus obtained from the Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR. The cultures of chicken embryo cells were prepared by trypsinization. The virus clones were isolated by the platelet method. The intracellular virus was treated with the mutagens at the moment of its replication. The size of negative colony platelets and the pathogenicity of the virus upon intraperitoneal injection of mice were used as criteria of the mutagenic effect. A change in the size of platelets was observed only upon treatment with formaldehyde or dimethylsulfate. The mutants isolated upon treatment of the virus with dimethylsulfate showed a less pronounced residual pathogenicity (the titer of the 1/2

USSR

SOLYANIK, R. G., et al, Genetika, Vol 8, No 3, Mar 72, pp 164-165

majority of them was  $< 1.0$ ) than those obtained on treatment with N-nitroso-methylurea or formaldehyde (titer 1.5-2.0) - i.e., dimethylsulfate had a stronger mutagenic effect as far as pathogenicity was concerned. No mutations were obtained upon subjecting the virus to the action of 1, 4-bis-diazoacetylbutane.

2/2

Microbiology

USSR

UDC 575.24: 636.1

SOLYANIK, R. G., FEDOROV, Yu. V., and RAPOPORT, I. A., Tomsk Scientific Research Institute of Vaccines and Sera, Institute of Chemical Physics, Academy of Sciences USSR, Moscow

"Genetic Characteristics of Eastern Equine Encephalomyelitis Virus Mutants Induced by Alkylating Compounds"

Moscow, Genetika, Vol 8, No 5, 1972, pp 109-114

Abstract: Characteristics of attenuated mutants obtained from treating the pathogenic strain with alkylating compounds are described. Mutants were tested for degree of uniformity in regard to size of negative colonies and pathogenesis for white mice. Mutants induced with dimethylsulfate were uniform in both respects, while those induced with N-nitrosomethylurea and formaldehyde showed molecules of varied size, and of varying degrees of virulence. Through additional selection, subclones with desirable uniform characteristics were obtained. The pathogenicity of a virus variant for sensitive animals is an extremely important genetic characteristic, and this experiment showed that it is possible to obtain an Eastern equine encephalomyelitis virus mutant with decreased peripheral activity, apathogenic for susceptible animals. Correlation was noted between capacity to cause viremia and the pathogenicity of the  
1/2

USSR

SOLYANIK, R. G., et al., Genetika, Vol 8, No 5, 1972, pp 109-114

virus upon peripheral methods of infection, as the pathogenic variant was detected in the blood sooner and for a longer time in titers much higher than those of the attenuated variant. No strong correlation between virulence and thermoresistance was found. There were thermolabile and thermostable attenuated variants. Most of the variants of lowered virulence for the animals remained immunogenic, showing a pronounced resistance index and general stability.

2/2

- 27 -

USSR

UDC 616.988.25-022.395.42-056.3

KARPOV, S. P. and FEDOROV, Yu. V., Tomsk Medical Institute and Tomsk  
Institute of Vaccines and Sera

"Recent Data on the Immunology of Tickborne Encephalitis (Review)"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 10, 1971,  
pp 89-93

Abstract: This review of the literature (mostly Soviet) of the last 10 years touches on the following aspects of tickborne encephalitis: (a) antigenic structure of the agent; (b) allergenic properties of the virus; (c) serological tests developed for identifying the strains of viruses isolated and their antigenic properties, determining antibodies in serum preparations, diagnosing the disease, and detecting natural foci; (d) principal methods of diagnosing the disease; (e) immunological structure of foci of tickborne encephalitis; (f) physiological mechanisms of natural immunity; (g) development of live vaccine; (h) prophylactic and therapeutic uses of gamma globulin.

1/1

- 31 -



USSR

UDC 575.111.576.858

SOLYANIK, R. G., PODOPLEKIN, V. D., and FEDOROV, YU. V., Tomsk Scientific Research Institute of Vaccines and Sera, Tomsk

"Experimental Modifiability of the Virus of Venezuelan Equine Encephalomyelitis. II. Characteristics of Mutants Obtained by the Action of Nitrous Acid"

Moscow, Genetika, Vol 7, No 7, Jul 71, pp 109-113

Abstract: The mutability of the virus of Venezuelan equine encephalomyelitis under the effect of  $\text{HNO}_2$  was studied. The extracellular virus was treated for 5 min with 4M  $\text{HNO}_2$ . The mutagen induced formation of strains with an altered pathogenicity, but no change in the size of negative plaques only. The relation between pathogenicity and the size of negative plaques that had been established in earlier work was retained (cf. Solyanik et al, Genetika, 7, No 5, p 130, 1971). Eleven of the 52 strains isolated on treatment with  $\text{HNO}_2$  showed reduced virulence. Nine of the 11 strains were unstable to culturing on chicken embryo cells, reverting to their initial pathogenicity after four passages. Two of the modified strains (A-30 and A-31) were non-pathogenic to mice, guinea pigs, and rabbits on subcutaneous infection, while exhibiting pronounced antigenic and immunogenic properties. They were stable  
1/2

USSR

SOLYANIK, R. G., et al., Genetika, Vol 7, No 7, Jul 71, pp 109-113

on heating at 50°C for 30 min, but were inactivated on being kept for 10 min at 60° C. Strains A-30 and A-31 are being studied from the standpoint of possible application as vaccines.

2/2

- 20 -

USSR

UDC 576.858

SOLYANIK, R. G., PODOPLEKIN, V. D., and FEDOROV, YU. V., Tomsk Scientific  
Research Institute of Vaccines and Sera

"Experimental Mutability of Venezuelan Equine Encephalomyelitis Virus. I.  
Properties of Mutants Induced by Alkylating Compounds"

Moscow, Genetika, Vol 7, No 5, 1971, pp 130-137

Abstract: The mutability of various properties of Venezuelan equine encephalo-  
virus was investigated experimentally. Mutations were induced by three  
alkylating compounds: formaldehyde, nitrosomethylurea, and ethylenimine.

Nitrosomethylurea possesses the greatest mutagenic activity (frequency of  
mutations induced -- 42.5%), while the activity of the two other mutagens is  
essentially identical (formaldehyde -- 33.6%, and ethylenimine -- 33.3%).  
Formaldehyde has the widest spectrum of mutations, inducing changes not only  
in pathogenic properties but also in formation of small plaques (1mm or  
less in diameter). Changes in the pathogenic properties of Venezuelan  
equine encephalomyelitis virus are associated with modifications of certain  
other properties of this microbe, which can be utilized for evaluating the  
attenuation of the cultured variants.

1/1

USSR

UDC 621.371

DMITRIYEV, V. I., KOROLEVA, K. P., SKUGAREVSKAYA, O. A., and  
FEDOROVA, E. A.

"Investigating the Electromagnetic Field of an Electric Dipole in  
the Presence of Powerful High-Resistance Layers in the Earth"

Moscow, V sb. X Vses. konf. vo rasprostr. radiovoln. Tezisy dokl.  
Sekts. 6 (Tenth All-Union Conference on the Propagation of Radio  
Waves; Report Theses; Section 6--collection of works) "Nauka,"  
1972, pp 40-44 (from RZh--Radiotekhnika, No 10, 1972, Abstract No  
10A388)

Translation: Computation of the field with powerful high-resistance  
layers in the earth involves a great deal of difficulty, caused by  
the need for computing integrals in the Hankel inverse transform.  
For this purpose, a calculating algorithm is developed by which  
the function under the integral sign is approximated in the low-  
frequency region with the required degree of accuracy. For the  
high-frequency region, where the required degree of accuracy can-  
not be attained, asymptotic formulas are obtained for making the  
calculations with the presence of the layers taken into account.  
Three illustrations, bibliography of two. N. S.  
1/1

1/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--CALCULATION OF PHYSICOCHEMICAL PROPERTIES OF ALKYLGERMANES -U-  
AUTHOR--(03)-SHAULOV, YU.KH., VYGODSKAYA, YE.M., FEDDOYA, A.K.  
COUNTRY OF INFO--USSR  
SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 268-9  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--CALCULATION, ORGANOGERMANIUM COMPOUND, HYDROCARBON, PHYSICAL CHEMISTRY PROPERTY  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--1995/1265 STEP NO--UR/0076/70/044/001/0268/0269  
CIRC ACCESSION NO--AP0116727  
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0116727

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PHYSICOHEM. PROPERTIES (P) OF TETRAALKYLGERMANES AND HYDROCARBONS CAN BE EXPRESSED AS A SUM OF SOME VALUES; EACH OF THEM CORRESPONDS WITH THE PARTIAL PROPERTY CHARACTERISTIC OF A PARTICULAR BOND. (FORMULA SHOWN ON MICROFICHE), WHERE THE NS REFER TO THE RESP. BOND AND THE P TO THE PARTIAL PROPERTY. THE EQUATION AS WELL AS THE METHOD OF CALCN. OF THOSE PROPERTIES ARE GIVEN. THE CALCD. VALUES OF HEAT OF COMBUSTION FOR A SERIES OF TETRAALKYLGERMANES WERE IN A GOOD AGREEMENT WITH THE EXPTL. DATA. FACILITY: MOSK. INST. ELEKTRON. MASHINOSTR., MOSCOW, USSR.

UNCLASSIFIED

USSR

ZAPOL'SKAYA, N. A., et al, Gigiyena i Sanitariya, No 7, 1971,  
pp 53-57

the type of radiation, and the development of malignant neoplasms. Malignant neoplasms appeared chiefly in animals exposed to the combined radiation and in those that received a single mixture of isotopes with an initial activity of 20 microcuries. If the total dose from internal radiation sources was higher than that from external sources, the nature of the long-term effects was determined by the internal dose.

2/2

- 23 -

1/2 007 UNCLASSIFIED PROCESSING DATE--11SEP70  
TITLE--TRIETHYLCHOLINE AND PARAMION ACTION ON THE ADSORPTION OF THE VITAL  
STRIATED MUSCLE STAIN UNDER THE EFFECT OF GUANIDINE -U-  
AUTHOR--TREGUBOV, S.M., FEDOROVA, A.V.  
COUNTRY OF INFO--USSR  
SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69, NR  
3, PP 74-76  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--ANTIDIABETIC, FROG, METHYLENE BLUE, CHOLINOLYTIC  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY PEEL/FRAE--1992/0840 STEP NO--UR/0219/70/069/003/0074/0076  
CIRC ACCESSION NO--AP0052274  
UNCLASSIFIED



2/2 007

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0052274

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TESTS CONDUCTED AFTER NASONOV MADE IT CERTAIN THAT GUANIDINE INCREASED THE ABILITY OF AN ISOLATED SARTORIUS MUSCLE OF THE LAKE FROG TO SORB THE VITAL STAIN METHYLENE BLUE. THIS ACTION IS ASSOCIATED WITH THE STIMULATION OF CHOLINERGIC RECEPTORS, SINCE IT CAN BE FORSTALLED BY THE ANTICHOLINERGIC (MUSCLE RELAXANT) PAMAMION. TRIETHYLCHOLINE IS ALSO CAPABLE OF INCREASING THE SORPTION OF THE VITAL STAIN BY THE MUSCLES, ITS ACTION, HOWEVER, BEING INDEPENDENT FROM THE EFFECT OF TRIETHYLCHOLINE ON THE CHOLINERGIC PROCESSES IN THE STRIATED MUSCLE. TRIETHYLCHOLINE DOES NOT PREVENT THE GUANIDINE INDUCED INCREASE OF THE STAIN SORPTION BY THE STRIATED MUSCLE.

UNCLASSIFIED

1/2 007 UNCLASSIFIED PROCESSING DATE--11SEP70  
TITLE--TRIETHYLCHOLINE AND PARAMION ACTION ON THE SORPTION OF THE VITAL  
STRIATED MUSCLE STAIN UNDER THE EFFECT OF GUANIDINE -U-  
AUTHOR--TREGUBOV, S.M., FEDOROVA, A.V.

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69, NR  
3, PP 74-76  
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTIDIABETIC, FROG, METHYLENE BLUE, CHOLINOLYTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY PEEL/FRAPE--1982/0840

STEP NO--UR/0219/70/069/003/0074/0076

CIRC ACCESSION NO--AP0052274

UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0052274

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TESTS CONDUCTED AFTER NASONOV MADE IT CERTAIN THAT GUANIDINE INCREASED THE ABILITY OF AN ISOLATED SARTORIUS MUSCLE OF THE LAKE FROG TO SORB THE VITAL STAIN METHYLENE BLUE. THIS ACTION IS ASSOCIATED WITH THE STIMULATION OF CHOLINERGIC RECEPTORS, SINCE IT CAN BE FORSTALLED BY THE ANTICHOLINERGIC (MUSCLE RELAXANT) PAMMION. TRIETHYLCHOLINE IS ALSO CAPABLE OF INCREASING THE SORPTION OF THE VITAL STAIN BY THE MUSCLES, ITS ACTION, HOWEVER, BEING INDEPENDENT FROM THE EFFECT OF TRIETHYLCHOLINE ON THE CHOLINERGIC PROCESSES IN THE STRIATED MUSCLE. TRIETHYLCHOLINE DOES NOT PREVENT THE GUANIDINE INDUCED INCREASE OF THE STAIN SORPTION BY THE STRIATED MUSCLE.

UNCLASSIFIED

USSR

UDC 539.238:666.1

LYUBIN, V. M., and FEDOROVA, G. A.

"Production and Properties of Thin Films of Multicomponent Vitreous Semiconductors"

Moscow, Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy, Vol 6, No 10, Oct 70, pp 1891-1892

Abstract: The authors used the method of flash evaporation for the production of thin layers of vitreous semiconductors of the As-Se-Tl system. The resultant specimens of constant composition made it possible to trace variations in the optical and photoelectric properties of thin layers of the As-Se-Tl system with variations in composition. The article gives the dark resistivity, photosensitivity, and band gap values for layers of various compositions. The authors thank N. N. KUZ'MENKO and A. S. PRYAMITSYN for working out the procedure for preparing the specimens and YE. O. KURCHEVSKAYA and YU. F. ORLOV for performing the microchemical analysis.

1/1

USSR

UDC 53.07/.08+53.001.5

LYUBIN, V. M., PLAKHOV, S. A., FEDOROVA, G. A., TSUKERMAN, V. G.

"Experimental Vidicon Sensitive to Soft X-Radiation"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektronoluch. i fotoelektr. pribory  
(Electronic Engineering. Scientific-Technical Collection. Electron Ray and  
Photoelectric Devices), 1970, No 1(15), pp 3-7 (from RZh-Fizika, No 1, Jan 71,  
Abstract No 1A323)

Translation: The characteristics of an experimental x-ray vidicon with a Be window  
and a target of vitreous material  $Tl_2Se \cdot As_2Se_3$  sensitive to soft x-radiation in  
the region 5-30 kev are described. Authors abstract.

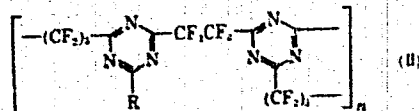
1/1

- 78 -

Acc. Nr: **AP0052535** Abstracting Service:  
CHEMICAL ABST. 5-70

Ref. Code:  
**4R0460**

101336f Synthesis and characteristics of some perfluoroalkylenetriazine polymers. Fedorova, G. B.; Dolgopolskii, I. M. (USSR). *Vysokomol. Soedin., Ser. B* 1970, 12(1), 14-16 (Russ). The polycondensation of RC(:NH)NH<sub>2</sub> (H. C. Brown, 1960 and U.S. 3,086,946) with perfluoroglutaroimidine (I) gave II [R =



CF<sub>3</sub>, CF<sub>2</sub>CF<sub>2</sub>, CF<sub>2</sub>CF<sub>2</sub>CF<sub>2</sub>, CF<sub>2</sub>(CF<sub>2</sub>)<sub>3</sub>, or CF<sub>2</sub>(CF<sub>2</sub>)<sub>4</sub>], which are stable to ~400°, and resist radiation and the action of strong oxidizing agents. The size of R above C<sub>4</sub> has no effect on the properties of II. Besides the copolycondensation, there is also crosslinking of II with I. CPJR and 4mc.

REEL/FRA  
19821178

7

1/2 009 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--STUDIES ON CARBOHYDRATE COMPOSITION OF RUBOMYCIN B -U-  
AUTHOR--(04)-FEDOKOVA, G.B., BRAZHNIKOVA, M.G., MEZENTSEY, A.S.,  
KSHEPINSKIY, I.  
COUNTRY OF INFO--USSR  
SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 5, PP 403-406  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--CARBOHYDRATE, ANTIBIOTIC/(U)RUBOMYCIN C ANTIBIOTIC,  
(U)RUBOMYCIN B ANTIBIOTIC  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1994/0153 STEP NO--UR/0297/70/015/005/0403/0406  
CIRC ACCESSION NO--AP0114549  
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0114549

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TRIDESOXY SUGAR (C SUB6 H SUB12 O SUB3), A CARBOHYDRATE FRAGMENT, POSSIBLY IDENTICAL WITH RODINOSE, RESPONSIBLE FOR THE DIFFERENCE BETWEEN RUBOMYCINS B AND C, WAS ISOLATED FROM RUBOMYCIN B (A COMPONENT OF RUBOMYCIN COMPLEX). FACILITY: INSTITUTE FOR NEW ANTIBIOTICS OF ACADEMY OF MEDICAL SCIENCES OF THE USSR, MOSCOW. FACILITY: INSTITUTE FOR ORGANIC CHEMISTRY AND BIOCHEMISTRY OF ACADEMY OF SCIENCES OF CZECHOSLOVAKIA.

UNCLASSIFIED



USSR

VERNOV, S. N., IVANOVA, T. A., SOSNOVETS, E. N., TVERSKAYA, L. V., FEDOROVA, G. F.,  
and KHOROSHEVA, O. V.

"Injection of High-Energy Electrons into the Inner Regions of the Magnetosphere  
During a Magnetic Storm 29 October - 4 November 1968"

→ Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, No. 11, Nov 70,  
pp 2270-2274

Abstract: Measurements of electron fluxes ( $E > 250, 500, \text{ and } 800 \text{ kev}$ ) made with the satellite "Molniya-1" [Lightning-1] during a magnetic storm are reported. The trajectory of the satellite was the following: apogee 39,600 km in the Northern Hemisphere, perigee 520 km in the Southern Hemisphere, inclination of orbit  $65^\circ$ , period of rotation  $\approx 12$  hours. The data is compared with readings made at various ground stations during the same period. It was found that after a series of strong minor storms the intensity of electrons in the gap ( $E_e > 250 \text{ kev}$ ) rose by more than a factor of 2. In a subsequent series of such disturbances, additional injection occurred and the front of the injected electrons moved closer to the earth. An

1/2

USSR

VERNOV, S. N., et al, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya,  
No 11, Nov 70, pp 2270-2274

injection of electrons of higher energies in the region  $L < 3$  was not as effective as for  $L = 3$ , and the spectrum here was softer. It is observed that these phenomena are closely associated with increased intensity of polar disturbances and in all probability are of great interest in understanding the dynamics of the magnetosphere as a whole.

2/2

USSR

UDC 621.22.01

FEDOROVA, G. I. (Summary)

"Laminar Flow in a Gap Between Coaxial Rotating Cones in the Presence of a Pressure Gradient on the Ends"

Moscow, Mashinovedeniye, No 6, November-December 1970, pp 90-93

Abstract: The article deals with a problem of the laminar flow of a viscous liquid in a narrow gap of variable width between coaxial cones, of which the internal one rotates at a constant angular velocity. The pressure gradient at the ends of the gap is given. The laminar flow is stabilized, the entry sector is not considered. Analytical expressions are obtained for the velocities and pressures, the flow rate of liquid through the gap, and the hydrodynamic force. A comparison is made with the data available in the literature for radial and cylindrical gaps which are special cases of the conical gap considered in the article. 1 figure, 6 bibliographic entries.

1/1

UNCLASSIFIED

PROCESSING DATE--17JUL70

TITLE--PRODUCTION OF VARIOUS FORMS OF L GROWTH BY SPHEROPLASTS -U-

AUTHOR--FEDOROVA, G.I.

F

COUNTRY OF INFO--USSR

SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 3, PP 240-243

DATE PUBLISHED-----70

15  
5  
20

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PENICILLIN, GLYCINE, SALMONELLA, SUCROSE, MAGNESIUM SULFATE, AGAR, CULTURE MEDIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1582/0439

STEP NO--UR/0297/70/015/003/0240/0243

CIRC ACCESSION NO--AP0051952

UNCLASSIFIED

Acc. Nr: AP0051952

Ref. Code: UP0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 3, pp 240-243

PRODUCTION OF VARIOUS FORMS OF L-GROWTH BY SPHEROPLASTS

G. I. Fedorova

D. I. Ivanovsky, Institute for Virusology of the USSR Academy of Medical Sciences  
Moscow

Lysozyme, penicillin and glycine spheroplasts of *S. typhi* 5606 and *S. typhimurium* 3048, as well as intact bacterial cells were plated out to semi-liquid (0.3 per cent agar) and semisolid (1.3 per cent agar) nutrient media with stabilizers (horse serum, hypertonic concentrations of sucrose and magnesium sulfate) and L-transforming agent (penicillin or glycine). At optimal concentrations of the stabilizers and L-transforming agents the spheroplasts produced classical L-variants in the form of L-colonies. As a rule, spheroplasts produced greater numbers of L-colonies than intact cells plated out in the same amounts. When the doses of the L-transforming agents were higher than the optimal ones, the growth of granular L-forms was observed.

11

Edh

REEL/FAME  
19820439

2

USSR

UDC 547.241'341

FEDOROVA, G. K., ANAN'YEVA, L. G., KONONENKO, I. M., MAKSYUTINA, L. I., and  
~~KIRSANOV, A. V.~~

"Derivatives of  $\beta$ -Chloroalkyl- and Alken-1-ylphosphonic and Thiophosphonic  
Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 3, Mar 73, pp 538-543

Abstract: Heating  $\beta$ -chloroalkylphosphonic acids with sodium in octane yields monosodium salts of these acids which upon solution in water split along the C-P bond. Alkoxylation of  $\beta$ -chloroalkylthiophosphonic acid dichlorides with alcohols in presence of acrylonitrile yields diesters of  $\beta$ -chloroalkylthiophosphonic acids, while alkoxylation with sodium alkoxides -- the diesters of alken-1-ylthiophosphonic acids. Amidation of  $\beta$ -chloroalkylphosphonic acid dichlorides with aliphatic amines produces diamides of alken-1-ylphosphonic acids, and the use of aromatic amines leads to the formation of the diamides of  $\beta$ -chloroalkylphosphonic acids. The reaction of triethylamine with  $\beta$ -chloroalkylthiophosphonic acid dichlorides yields the dichlorides of alken-1-ylphosphonic and alken-1-yl-thiophosphonic acids.

1/1

USSR

UDC 547.341

GANUSHCHAK, N. I., VENGZHZHANOVSKIY, V. A., and FEDOROVA, G. K., Institute of Organic Chemistry, Academy of Sciences of the UkrSSR

"4-Aryl-1,3-butadienylphosphonic Acids and Their Derivatives"

Leningrad, Zhurnal Obshechey Khimii, Vol 42(103), No 2, Feb 72, pp 291-293

Abstract: Hexachlorophosphorates  $[\text{ArCH}=\text{CRCHCPCH}_2 \text{ FCl}_3^+ \text{ PCl}_6^-]$  are treated with sulfur dioxide at 20°C to produce 4-aryl-1,3-butadienylphosphonic acid dichlorides, which are then hydrolyzed to give the free acids. Reaction of the dichlorides with ethanol and piperidine in the presence of pyridine produces diethers and dipiperidides of the corresponding aryl-butadienylphosphonic acids. The IR-spectra of 4-phenyl-1,3-butadienylphosphonic acid and its derivatives show no band typical of terminal methylene or vinyl radicals. Absorption bands are observed which indicate a double bond conjugated with the benzene ring, and a trans C=C bond.

1/1

USSR

UDC 547.241

MOSKALEVSKAYA, L. S., and FEDOROVA, G. K.

"Derivatives of  $\beta$ -Ketophosphinic Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 10, Oct 73, pp 2183-2187

Abstract: Thionyl chloride reacted with diphenylacyl-, phenylphenacyl- and styrylphenacylphosphonium salts leads to the formation of corresponding acid dichlorides which can be easily alkoxyated with alcohols in presence of pyridine or reacted with amines to form respective esters and amides of  $\beta$ -ketophosphinic acids. The esters and amides of  $\beta$ -ketophosphinic acids react with phenyl- and 2,4-dinitrophenylhydrazines yielding corresponding hydrazones; with hydroxylamine corresponding oximes are obtained.

1/1

- 35 -



USSR

UDC 547.572 : 547.241

F  
FEDOROVA, G. K., SHATURSKIY, YA. P., MOSKALEVSKAYA, L. S., and  
KIRSANOV, A. V., Institute of Organic Chemistry, Academy of Sciences  
Ukrainian SSR

"Synthesis of  $\beta$ -Ketophosphinic Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 5, May 70, pp 1167-  
1168

Abstract: Phosphorylation of  $\alpha$ -methoxystyrene with phosphorus penta-  
chloride, phenyl- and styryltetrachlorophosphorus, with subsequent  
treatment of the primary reaction products with water, gives phenacyl-  
phosphonic acid and phenacylphenyl- and phenacylstyrylphosphonic acids.  
The product of the reaction of  $\alpha$ -methoxystyrene with phosphorus  
pentachloride when treated with sulfur dioxide is converted into  
 $\beta$ -methoxystyrylphosphonic acid dichloride, which also gives phen-  
acylphosphonic acid on hydrolysis with water.

1/1

- 55 -

USSR

UDC 620.193.52

BYALOBZHESKIY, A. V., PLAVNIK, G. M., ANUROVA, G. M., and  
FEDOROVA, G. M., Academy of Sciences USSR, Institute of Physical  
Chemistry

"Composition of Films Formed on Metals in Distilled Water at 250°"

Moscow, Zashchita Metallov, Vol 7, No 2, Mar-Apr, 1971, pp 177-178.

Abstract: The authors performed x-ray phase analysis of the films formed on copper, cadmium, tungsten, molybdenum, niobium, zirconium, titanium, nickel, and iron in distilled water at 250°. The films formed on each of these types of metals are described.

1/1

2

USSR

UDC: 669.018.8

TOMASHOV, N. D., RUSKOL, Yu. S., FILIPPOV, A. F., BELYANGUIKOV, L. N.,  
PLAVNIK, G. M., and FEDOROVA, G. M., Institute of Physical Chemistry,  
Academy of Sciences, USSR

"Corrosion Behavior of Titanium-Molybdenum-Chromium Alloys"

Moscow, Zashchita Metallov, Vol 6, No 5, Sep-Oct 70, pp 499-504

Abstract: This paper deals with the effect of chromium on the corrosion resistance of titanium alloys containing 5 and 10% molybdenum. The electrochemical and corrosion behavior of the alloys was studied by potentiometry, both the current and weight losses being the indicators of the corrosion rate. It has been shown that the  $\beta$ -phase of titanium alloys containing a stable (under the testing conditions) component such as molybdenum, possesses elevated corrosion resistance. In the active dissolution of two-phase  $\alpha+\beta$  alloys of titanium with molybdenum, predominantly the  $\alpha$ -phase goes into solution, while the  $\beta$ -phase remains at the surface in the form of a finely disperse layer. In the active

1/2

USSR

TOMASHOV, N. D., et al, Zashchita Metallov, Vol 6, No 5, Sep-Oct 70, pp 499-504

dissolution in nonoxidizing media, the corrosion rate of Ti-Mo-Cr alloys markedly decreases only on addition of chromium in an amount sufficient for producing single-phase  $\beta$ -alloys (Ti-5Mo-10Cr and Ti-10Mo-10Cr); however, if the alloys have an  $\alpha+\beta$ -structure, then the corrosion rate remains about the same (as compared to Ti-Mo alloys). Chromium addition reduces the tendency of alloys to over-passivation, which is caused by the presence of Mo, and the Ti-5Mo-10Cr alloy exhibits the same low corrosion rate within 0.15 to 1.2 v as titanium or Ti-10Cr alloy. At potentials which are more positive than 1.2 v, the corrosion rate of Ti-Mo-Cr alloys begins to increase owing to the tendency of chromium to over-passivation.

2/2

1/2 017 UNCLASSIFIED PROCESSING DATE--18SEP70  
TITLE--USE OF ETHYLENEDIAMINE AURINTRICARBOXYLATE FOR THE PHOTOMETRIC  
DETERMINATION OF THE RARE EARTH ELEMENTS -U-  
AUTHOR-(02)-SERDYUK, L.S., FEDOROVA, G.P.  
COUNTRY OF INFO--USSR  
SOURCE--ZH. ANAL. KHIM. 1970, 25(1), 172-5  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--ETHYLENEDIAMINE, RARE EARTH METAL, PHOTOMETRIC ANALYSIS,  
CARBOXYLIC ACID, CHEMICAL ANALYSIS  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1987/1092 STEP NO--UR/0075/70/025/001/0172/0175  
CIRC ACCESSION NO--AP0104490  
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--18SEP70

2/2 017

CIRC ACCESSION NO--AP0104490  
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. AURINTRICARBOXYLIC ACID REACTS WITH ETHYLENEDIAMINE IN A 1:2 MOLAR RATIO TO FORM LIGHT YELLOW I WHICH CAN BE USED AS A REAGENT FOR THE PHOTOMETRIC DETN. OF RARE EARTHS. DISSOLVE 0.05 G SAMPLE IN 2-3 ML 1:1 HCL WITH MODERATE HEATING AND OIL. TO 100 ML WITH H SUB2 O. THEN DIL. 17.8 OF THIS SOLN. TO 50 ML IN A VOLUMETRIC FLASH. PLACE INTO A 25-ML VOLUMETRIC FLASH SEVERAL ML OF A PH 6.7 AMMONIACAL-ACETATE BUFFER, 0.5-0.9 OF THE OIL. SAMPLE, 1 ML 0.2PERCENT REAGENT AND DIL. TO VOL. WITH H SUB2 O. (PH OF THE SOLN. SHOULD BE 7.4). DET. THE ABSORBANCE COLORIMETRICALLY BY USING A GREEN FILTER AND FIND THE CONC. OF TOTAL RARE EARTHS BY THE METHOD OF COMPARISON. A LA CL SUB3 SOLN. IS SUED AS STD. SOLN. THE ERROR IN THE DETN. OF 2.4-3 5 TIMES 10 PRIME .NEGATIVE5 M RARE EARTHS IS PLUS OR MINUS 3.4PERCENT.

UNCLASSIFIED

USSR

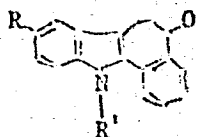
UDC 615.31.547.75

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

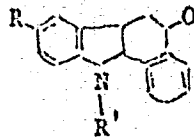
"Indole Derivatives. XXXVI. Synthesis and Pharmacological Investigation of Some Benzoxepinoindole Derivatives"

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

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



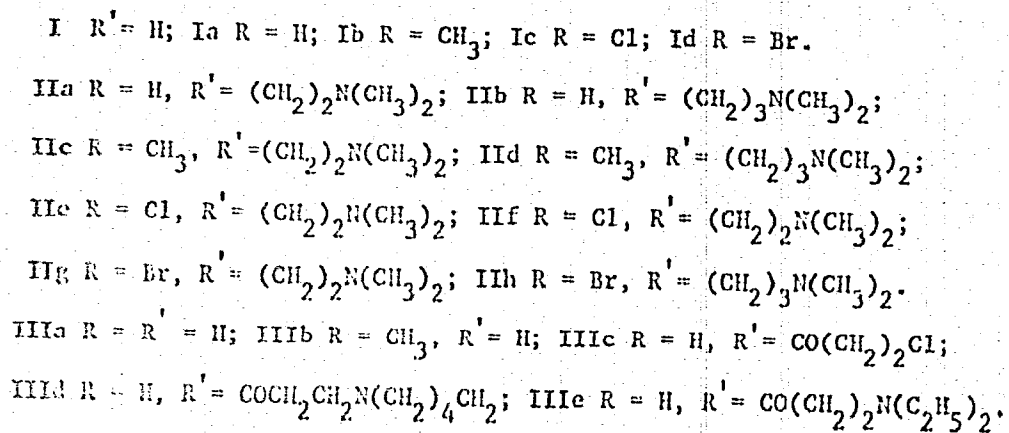
I-II



III

1/3

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





SAROVA, L. A., et al., *Khimiko-Farmatsevticheskiy Zhurnal*, Vol 5, No 11, 1971,  
p 3-5

Some compounds were prepared by the cyclization of corresponding arylhydrazones of homochroman-5-one (Ia-Id); others (IIa-IIh), by the reaction of dialkylaminoalkyl chlorides with Na derivatives of oxepinoindoles (Ia-Id). The latter were synthesized by treating oxepinoindoles (Ia-Id) with NaH in dimethylformamide. Reduction of oxepinoindoles Ia and Ib with Zn dust in HCl, in the presence of HgCl<sub>2</sub> yielded corresponding IIIa and IIIb. Reaction of IIIa with chloropropionyl chloride yielded IIIc which in turn formed IIId and IIIe on reaction with piperidine and diethylamine. Pharmacological tests for cholinergic, antiserotonine and spasmolytic activity were carried out with white mice. Empirical formulas and melting points for IIb-IIh compounds are given, as well as detailed descriptions of some reactions.

USSR

UDC 615.217:547.751

PIDEVICH, I. N., SENOVA, Z. P., and FEDOROVA, I. B., Laboratory of the Pharmacology of Cardio-Vascular System and the Psychopharmacology Laboratory of the Institute of Pharmacology Ac. Med. Sc. USSR, Moscow

"Study of the Peripheral Antiserotonin Properties of a Series of Novel Indole Derivatives"

Moscow, Farmakologiya i Toksikologiya, Vol 34, No 2, Mar-Apr 71, pp 155-159

Abstract: The investigated indole derivatives exhibit different effect on the serotonin reactive structures of the D-, M-, and the T- type. The strongest D-antiserotonin properties are shown by diamind and indocarb, strongest M-antiserotonin activity is exhibited by K-277, and T-antiserotonin properties - by tipindol. The serotonin-reactive structures leading to positive inotropic effect of serotonin on isolated rabbit's atrium are closely related to T-serotonin reactive structures of the cardio-pulmonary reflexogenic zone of cats, as far as the sensitivity to the investigated blocking agent is concerned.

1/1

UDC 77

USSR

AVRAMENKO, L. F., VILENSKIY, YU. B., IVANOV, B. M., OLISHNEVSKAYA, I. A.,  
POCHINOK, V. YA., SKRIPNIK, L. I., FEDOROVA, L. N., FEDOROVA, I. P.

"Synthesis of Tetrazoles, Triazoles, Triazines, and Azo Compounds and a Study of Them as Additives to Silver Halide Photographic Emulsions. II. Photographic Study of Material"

Uspekhi nauchn. fotogr. (Advances in Scientific Photography), 1970, Vol. 14, pp 12-23 (From RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1334)

Translation: Three indices are introduced to evaluate quantitatively various types of photographic activity of materials synthesized previously: (see RZh-Fizika, No12(I), Dec 70, Abstract No 12D1333): stabilizing, depressing, and defogging effects and certain combinations of these parameters in the kinetic curves for sensitivity and fogging in the second aging before and after introduction of the substances tested. If the substance was at the same time an optical sensitizer, the value of the depressing index was negative. Besides the testing of substances in AgCl- and AgBr(I)-emulsions, the kinetics of their adsorption by AgHal, the absorption spectrum in solution and after adsorption by AgHal, and the sensitization spectrum was studied. A correlation

USSR

AVRAMENKO, L.F., et al, Uspekhi nauchn. fotoogr., 1970, Vol 14, pp 12-23  
was found for condensed

tetrazoles between the stabilizer and the irreversible adsorption of material and between the depressing and defogging agents and reversible adsorption; irreversible adsorption on a small portion of the AgHal surface was sufficient for total stabilization. The same was true for the stabilization of triazenes. Depression of fogging was apparently always associated with the slowing down of the appearance of reversibly adsorbed substances, although in many cases there simultaneously occurred desensitization or slowing down of aging. Certain connections were established between photographic activity and the structure and substitutes in molecules of triazoles and optical sensitizers on the basis of their quaternary salts and also in molecules of heterocyclic azo compounds. The formation of iono-dipole or coordinated compounds of the material with AgHal was necessary for stabilization, which requires the coincidence of their dipole distances; the latter partially explains the differences in the behavior of materials in AgCl- and AgBr(I)-emulsions. One must take into account, however, that in view of the large homeopolarity of the bond in AgBr, even in AgCl, the latter requires more polar stabilizers. 12 references.

2/2

USSR

UDC 77

AVRAMENKO, L. F., VILENSKIY, YU. B., IVANOV, B. H., OL'SHEVSKAYA, I. A.,  
POCHINOK, V. YA., SKRIPNIK, L. I., FEDOROVA, L. N., FEDOROVA, I. P.

"Synthesis of Tetrazoles, Triazoles, Triazenes, and Azo Compounds and a Study of Them as Additives to Silver Halide Photographic Emulsions. I. Synthesis, Structure, Chemical Properties, and Photographic Activity"

Uspekhi nauchn. fotogr. (Advances in Scientific Photography), 1970, Vol. 14, pp 5-11 (from RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1333)

Translation: Data on the synthesis, structure, and properties of over 300 organic compounds intended for stabilizing and defogging or depressing additives in Agial emulsions are presented; in certain cases these substances were also optical sensitizers. Among the 40 tetrazoles not all were stabilizers of the photoemulsions; there was also established a difference in the chemical behavior in similar reactions. This duality is explained by the existence of azido-tetrazole tautomerism in many condensed tetrazoles; stabilization is caused by adsorption by ions

1/2

USSR

of the AgHal lattice of these azido forms in which there is an increased electron density on the heterocyclic N atom. Many stabilizers were observed among the triazoles, and not only condensed triazoles; among these many could be converted into cyanin dyes by combining stabilizers and optical sensitizers. It is shown that it is necessary for a stabilizer that three N atoms enter into the ring, as in triazoles: a considerable number of stabilizers of AgCl-emulsion was also found among the triazenes. These compounds are simultaneously optical sensitizers, defoggers, and depressers; in AgBr-emulsions only the last two properties are retained, in view of differences in the formation of ion-dipole compounds of AgCl and AgBr lattices with a polar triazene molecule. Of the azo compounds only nonsymmetric substances with heterocyclic radicals were photographically active. 31 references.

1/3 022 UNCLASSIFIED PROCESSING DATE--09OCT70  
TITLE--THE EFFECTS OF MUTATIONS TOWARDS ULTRAVIOLET SENSITIVITY IN YEAST  
-U-  
AUTHOR--(03)-ZAKHAROV, I.A., KUZINA, T.N., FEDUROVA, I.V. F  
COUNTRY OF INFO--USSR  
SOURCE--MUTAT RES 9(1): 31-39. ILLUS. 1970  
DATE PUBLISHED-----70  
  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--YEAST, MICROORGANISM MUTATION, UV RADIATION, RADIATION  
SENSITIVITY, SACCHAROMYCES, ESCHERIA COLI, DNA, RADIATION DAMAGE  
  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--1993/0591 STEP NO--NE/0000/70/009/001/0031/0039  
CIRC ACCESSION NU--AP0113481  
UNCLASSIFIED

2/3 022

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0113481

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UV SENSITIVE MUTANTS WERE INDUCED BY THE ACTION OF UV LIGHT AND WERE ISOLATED BY THE REPLICA PLATING METHOD. HIGHLY HOMOZYGOUS STOCKS OF YEAST SACCHAROMYCES CEREVISIAE DESCENDING FROM RACE XII WERE UTILITZED. TWO MUTANTS, DESIGNATED UVS SUB1 AND UVS SUB2, CARRYING NONALLELIC MUTATIONS OF RADIOSENSITIVITY, WERE STUDIED MORE CAREFULLY. UV SENSITIVITY APPEARED TO BE OF A RECESSIVE MONOGENIC CHARACTER; HETEROZYGOUS DIPLOIDS WERE UV RESISTANT AND SEGREGATED 1:1 RESISTANT AND SENSITIVE CLONES IN THE RANDOM ASCOSPORE SAMPLES. THE UV SENSITIVITY OF THE STRAINS BEARING MUTANTS UVS SUB1 AND UVS SUB2 DIFFERS. THE HAPLOID UVS SUB1 MUTANT AND THE HAPLOID UVS SUB2 MUTANT HAVE SENSITIVITIES 25 AND 1.8 TIMES HIGHER, RESPECTIVELY, THAN THE WILD TYPE HAPLOID. THE UVS SUB1 MUTANTS EXHIBIT AN EXPONENTIAL SURVIVAL CURVE, WHILE THE UVS SUB2 MUTANTS AND THE WILD TYPE HAPLOID HAVE SIGMOIDAL SHAPED CURVES. THE RADIORESISTANCE OF THE ISOGENIC STRAINS, CARRYING THE MUTATIONS AT THE UVS SUB1 LOCUS, INCREASES WITH POLYPLOIDY. WE WERE ABLE TO STUDY THE EFFECT OF UVS MUTATIONS ON THE FREQUENCY OF INDUCED GENIC MUTATIONS DUE TO THE FACT THAT THE RESISTANT MUTANTS COULD EASILY BE DETECTED IN THE MEDIA WITH A HIGH SERINE CONCENTRATION. THE RESULTS INDICATE THAT THE UVS SUB1 AND UVS SUB2 MUTATIONS SIGNIFICANTLY INCREASE THE SENSITIVITY OF HAPLOIDS TO MUTAGENIC ACTION OF UV LIGHT. THE UVS SUB1 AND UVS SUB2 MUTATIONS ALSO RESULT IN AN INCREASE IN SENSITIVITY TO MUTAGENIC ACTION OF UV LIGHT TO REGARD TO CYTOPLASMIC DETERMINANTS.

UNCLASSIFIED



3/3 022

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0113481

ABSTRACT/EXTRACT—THE DIPLUIDS HOMOZYGOUS FOR UVS SUB1 AND UVS SUB2 MUTATIONS PROVED TO BE HIGHLY SENSITIVE TO THE ACTION OF UV LIGHT CAUSING RECOMBINATION WHEN THE FREQUENCY OF INDUCED MITOTIC RECOMBINATION IN RESISTANT AND SENSITIVE DIPLOIDS HETEROZYGOUS FOR AD SUB1 AND AD SUB2 GENES WAS RECORDED. THE FREQUENCY OF SPONTANEOUS MUTATIONS INDEPENDENT OF ADENINE WAS RECORDED IN HAPLOIDS OF GENOTYPE AD SUB2, AD SUB2 UVS SUB1 AND AD SUB2 UVS SUB2. THE MUTATIONS TOWARDS UV SENSITIVITY CAUSE A SHARP INCREASE IN SPONTANEOUS MUTABILITY, THE RISE BEING ESPECIALLY SIGNIFICANT DUE TO UVS SUB2 MUTATIONS. THE SPECIFIC FEATURES OF UVS SUB2 MUTANTS OF SACCHAROMYCES ARE SIMILAR TO THOSE OF UV SENSITIVE MUTANTS OF E. COLI; THEREFORE, ONE MIGHT SUGGEST THAT THE UVS MUTANTS IN YEAST ALSO HAVE A LESS EFFICIENT OR BLOCKED SYSTEM FOR REPAIR OF UV DAMAGE IN THE DNA. THE FACT THAT THE UV SENSITIVE MUTANTS ARE SENSITIVE NOT ONLY TO THE LETHAL ACTION OF UV LIGHT BUT ALSO TO THE MUTAGENIC AND RECOMBINUGENIC ONES SUGGESTS THAT SIMILAR MOLECULAR DAMAGES OF THE DNA UNDERLIE ALL THESE EFFECTS. THE INDUCTION OF CYTOPLASMIC MUTATIONS IN UV SENSITIVE MUTANTS SUGGESTS THAT THE REPAIR SYSTEM UNDER CONSIDERATION IS LOCALIZED NOT ONLY IN THE NUCLEOUS BUT ALSO IN THE CYTOPLASM OF THE CELL. THE SHARP INCREASE IN SPONTANEOUS MUTABILITY IN UV SENSITIVE MUTANTS INDICATES THAT THE MAIN FUNCTION OF THE REPAIR SYSTEM IS TO MAINTAIN THE STABILITY OF GENETIC MATERIAL UNDER NATURAL CONDITIONS.

FACILITY: INST. PHYS. TECH., A. F. IOFFE  
ACAD. SCI., LENINGRAD, USSR.

UNCLASSIFIED

Acc. Nr. **AP0041604** Abstracting Service: **4-70 NE** Ref. Code **0000**  
CHEMICAL ABST

17 87400p Effects of mutations on ultraviolet sensitivity in yeast. Zakharov, I. A.; Kozina, T. N.; Fedorova, I. V. (Inst. Phys.-Tech., Leningrad, USSR). ~~Ann. N.Y. Acad. Sci.~~ 1976, 9(1), 31-9 (Fr). Uv-sensitive mutants of *Saccharomyces cerevisiae* were induced by uv light and were isolated by the replica plating. Two mutants, designated *urs1* and *urs2*, carrying non-allelic mutations of radiosensitivity, were studied more carefully. Uv sensitivity appeared to be of a recessive monogenic character; heterozygous diploids were Uv-resistant and segregated 1:1 resistant and sensitive clones in the random ascospore samples. The haploid *urs1* mutant and the haploid *urs2* mutant have uv sensitivities 25 and 1.8 times higher, resp., than the wild-type haploid. The radioresistance of the isogenic strains, carrying the mutations at the *urs1* locus, increases with polyploidy. The effect of *urs* mutations on the frequency of induced genic mutations could be studied easily due to the fact that the resistant mutants could easily be detected in the media with a high serine concn. The results indicate that the *urs1* and *urs2* mutations significantly increase the sensitivity of haploids to mutagenic

1/2

02

REEL/FRA  
19771280

AP0044604

action of uv light. The *urs<sub>1</sub>* and *urs<sub>2</sub>* mutations also result in an increase in sensitivity to mutagenic action of uv light in regard to cytoplasmic determinants. The diploids homozygous for *urs<sub>1</sub>* and *urs<sub>2</sub>* mutations proved to be highly sensitive to the action of uv light causing recombination when the frequency of induced mitotic recombination in resistant and sensitive diploids heterozygous for *ad<sub>1</sub>* and *ad<sub>2</sub>* genes was recorded. The frequency of spontaneous mutations independent of adenine was recorded in haploids of genotype *ad<sub>1</sub>*, *ad<sub>2</sub>*, *urs<sub>1</sub>*, and *ad<sub>1</sub> urs<sub>1</sub>*. The mutations towards uv sensitivity cause a sharp increase in spontaneous mutability, the rise being especially significant due to *urs<sub>1</sub>* mutations. The specific features of *urs<sub>2</sub>* mutants of *Saccharomyces* suggest that the *urs* mutants in yeast also have a less efficient or blocked system for repair of uv damage in the DNA. Uv-sensitive mutants are sensitive not only to the lethal action of uv light but also to the mutagenic and recombinogenic actions. This suggests that similar mol. damages of the DNA is responsible for all these effects. The induction of cytoplasmic mutations in uv-sensitive mutants suggests that the DNA repair system is localized not only in the nucleus but also in the cytoplasm of the cell. The sharp increase in spontaneous mutability in uv-sensitive mutants indicates that the main function of the repair system is to maintain the stability of genetic material under natural conditions.

RCMR

LD

19771281

1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--SECOND SERIES DRUGS IN THE TREATMENT OF PATIENTS WITH CHRONIC  
DESTRUCTIVE PULMONARY TUBERCULOSIS -U-  
AUTHOR-(03)-FEDOROVA, I.YE., UTKIN, V.V., RUDDY, N.H.  
COUNTRY OF INFO--USSR  
SOURCE--VRACHEBNOYE DELO, 1970, NR 4, PP 136-138  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--TUBERCULOSIS, LUNG, ANTITUBERCULAR DRUG, CHEMOTHERAPY, DRUG  
RESISTANCE  
CENTRCL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--3001/1597 STEP NO--UR/0475/70/000/004/0136/0138  
CIRC ACCESSION NO--AP0127088  
UNCLASSIFIED

+2

UDC 669.715'3'721:620.186:539.4

USSR

GALATSKIY, B. D., VAYNBLAT, Yu. M., PESHUKOV, K. G., KLEPACHEVSKAYA, S. Yu., SAGALOVA, T. B., and FEDOROVA, K. A.

"Dependence of Texture and Mechanical Properties on Shape Factor and Degree of Deformation of Extruded Aluminum-Alloy Products"

Tekhnol. legkikh splavov. Nauchno-tekhn. byul. VILSa (Technology of Light Alloys. Scientific and Technical Bulletin of the All-Union Institute of Light Alloys), 1970, No 3, pp 28-35 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 1757 by E. KADANER)

Translation: An investigation was conducted on alloy D16 produced under industrial conditions by the semicontinuous casting method with subsequent extrusion under various regimes. With an increase in the shape factor of extruded products, uniform variation of deformation texture from biaxial {11}, {100} orientation to rolling texture takes place with predominant {110} {112}. With the same degree of deformation and shape factor, strength anisotropy decreases. Its anisotropy are independent of the size of the section of the product. Five illustrations. Three tables. Bibliography of seven titles.

2/2 020  
CIRC ACCESSION NO--AP0127068

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE USE OF SECOND SERIES DRUGS (ETHIONAMIDE, CYCLOSERINE AND OTH.) INCREASED THE EFFICIENCY OF CHEMOTHERAPY IN TUBERCULOUS PATIENTS. RESISTANCE TO TUBERCULOUS BACTERIOLOGICAL OR CLINICAL RESISTANCE TO THE MAIN DRUGS. SIDE EFFECTS WITH SECOND SERIES PREPARATIONS WERE OBSERVED IN 50.3 PERCENT OF CASES, INCLUDING 16 PERCENT OF UNCONTROLLED SIDE EFFECTS. THE PRESENCE OF GASTROINTESTINAL PATHOLOGY WORSENS THE TOLERANCE OF ETHIONAMIDE. RESISTANCE OF TUBERCULOUS MYOBACTERIA TO ETHIONAMIDE WAS SEEN IN 26.7 PERCENT, TO CYCLOSERINE, IN 5.8 PERCENT. FACILITY: ISENTRAL'NIY INSTITUT TUBERKULEZA.

"APPROVED FOR RELEASE: 09/17/2001" CIA-RDP86-00513R002200810004-4

USSR

UDC: 542.61

LASKORIN, B. N., BUCHIKHIN, V. P., ~~FEDOROVA, L. A.~~

"Investigation of the Behavior of Organophosphorus Acids in Aqueous and Nonaqueous Media"

Leningrad, Radiokhimiya, Vol 14, No 3, 1972, pp 356-366

Abstract: The method of potentiometric titration was used to determine the dissociation constants of a number of dialkylphosphoric, phosphonic and phosphinic acids in water, 75% ethyl ethanol and acetone. A linear relation was established between the sum of the induction constants of substituents and the logarithms of the constants of acid dissociation of the investigated organophosphorus acids in these solvents. The induction constants of long-chain alkyl and alkoxy radicals were calculated. The method of distribution was used to determine the constants of distribution and dimerization of the homologous series of dialkylphosphoric and phosphinic acids for the benzene-water system. It was found that there is a linear relation between the values of  $\log K_d$  of organophosphorus acids and the total number of carbon atoms ( $\sum C$ ) in their molecules ( $\sum C \leq 16$ ). An empirical method of characteristics is proposed for the distribution of organophosphorus acids between the organic and aqueous phases, utilizing distribution parameters which characterize the

1/2

USSR

LASKORIN, B. N., et al., Radiokhimiya, Vol 14, No 3, 1972, pp 356-366

change in free energy of the distribution process with a change in the structure of the radical. The paper presents a graph of the constants of dimerization of dialkyl phosphoric and phosphinic acids as functions of the number of carbon atoms in the molecules of these compounds.

2/2

- 32 -

USSR

UDC:542'61:541'69

LASKORIN B. N., SKOROVAROV, D. I., FEDOROVA, L. A., and  
SHATALOV, V. V.

"Basic Regularities of Extraction of Uranium with Phosphine Oxides"

Moscow, Atomnaya Energiya, Vol 28, No 5, May 70, pp 383-388

Abstract: The authors studied the influence of changes in the structure of radicals in mono-, di-, and polyphosphine oxides. The results showed that there is a general regularity of increasing extraction properties with the transition from triaryl to trialkyl and tricycloalkyl phosphine oxides. The removal of the electronegative substituent from the phosphorus atom causes an increase in the extraction properties of the phosphine oxides. However, the degree of this increase depends on the type of group introduced. The double bond in the alpha position in phosphine oxide radicals has a significant

1/2



USSR

LASKORIN B. N., SKOROVAROV, D. I., FEDOROVA, L. A., and SHATALOV, V. V., Moscow, Atomnaya Energiya, Vol 28, No 5, May 70, pp 383-385

influence on their extraction properties, decreasing the distribution factor. Further increases in the extraction properties can be achieved by increasing the number of phosphoryl groups in the molecule of the extraction agent. Comparison of the properties of phosphine oxides studied confirms the significant influence of the type of substituent radical (aromatic, alkyl, or alicyclic), then of its structure (benzyl greater than phenyl; octyl greater than cetyl; cyclohexyl-methyl less than cyclohexyl). It is also shown that an increase in the number of phosphoryl groups in the phosphine oxide molecule helps to improve the extraction of uranium; the length of the alkylene bridge between the atoms of phosphorus is one of the main factors determining the properties of polyphosphine oxides.

2/2

1/2 015 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--PRINCIPAL RULES FOR URANIUM, EXTRACTION BY PHOSPHINE OXIDES -U-  
AUTHOR--(04)-LASKORIN, B.N., SKOROVAROV, D.I., FEDOROVA, L.A., SHATALOV,  
V.V.  
COUNTRY OF INFO--USSR  
SOURCE--AT. ENERG. (USSR): 28: 383-8, MAY 1970  
DATE PUBLISHED-----70  
SUBJECT AREAS--MATERIALS  
TOPIC TAGS--URANIUM, EXTRACTIVE METALLURGY, ORGANIC OXIDE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3008/0564 STEP NO--UR/0089/70/028/000/0383/0388  
CIRC ACCESSION NO--AP0137649  
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0137649

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEPENDENCE OF EXTRACTION OF URANIUM FROM HNO<sub>3</sub>, HCL, AND H<sub>2</sub>SO<sub>4</sub> SOLUTIONS BY MONO, DI, AND POLYPHOSPHINE OXIDES OF DIFFERENT STRUCTURE WAS INVESTIGATED. THE LARGEST COEFFICIENTS OF DISTRIBUTION WERE OBSERVED AMONG TRI(ALKYL)PHOSPHINE OXIDES WHEN THE LENGTH OF CHAIN WAS C<sub>8</sub> MINUS C<sub>10</sub>. TRI(ARYL)PHOSPHINE OXIDES WERE FOUND TO HAVE VERY POOR EXTRACTION PROPERTIES. THESE PROPERTIES FOR MIXED DERIVATIVES INCREASED FROM TRI(ARYL) YIELDS DIARYLALKYL YIELDS ARYLDIALKYL. TRI(CYCLOHEXYL)PHOSPHINE OXIDE HAS THE BEST EXTRACTION PROPERTIES. THE MAIN REGULARITIES OF EXTRACTION WERE INVESTIGATED ON TRI(OCTYL)PHOSPHINE OXIDES; COMPLEXES GENERATED WITH URANIUM SULFATE WERE DEFINED. TO DEFINE CHARACTERISTICS OF EXTRACTION PROPERTIES OF PHOSPHINE OXIDES INTERDEPENDENCE BETWEEN PHYSICAL PROPERTIES (VP EQUALS 0) AND DISTRIBUTION COEFFICIENT OF URANIUM WAS INVESTIGATED. THE INFLUENCE OF LENGTH ALKYLENE BRIDGE BETWEEN PHOSPHORUS ATOMS ON URANIUM EXTRACTION WAS INVESTIGATED FOR BIDENTATE PHOSPHINE OXIDES. IT WAS SHOWN THAT COMPOUNDS WITH ETHYLENE BRIDGE HAVE THE LARGEST EXTRACTION PROPERTIES.

UNCLASSIFIED

USSR

UDC 533.6.011

KUTUKHIN, V. P., FEDOROVA, L. D., EL'GUDINA, B. A.

"Study of the Optimal Form of Lifting Bodies in a Hypersonic Flow"

Uch. zap. Tsentr. Aerogidrodinam. In-ta. [Scientific Writings of Central Institute of Aerodynamics and Hydrodynamics], Vol 3, No 3, 1972, pp 100-106, (Translated from Referativnyy Zhurnal, Mekhanika, No 11, 1972, Abstract No 11 B336).

Translation: A method of direct variation is suggested for determination of the shape of a body of fixed volume with fixed lift, having minimum drag (or a body with maximum aerodynamic quality): the surface of the body is represented by exponential polynomials, the coefficients of which are determined by a system of algebraic equations. The pressure of the flow is determined using Newton's law, the friction resistance -- using a mean coefficient which is independent of the shape of the body. The results are presented from calculations for conical bodies, from which it follows that the angle of attack, read from the plane of the leading edges, changes little with changing lift factor, but the shape of the cross section does change with changing lift factor. The lower surface of the body may be either concave or convex. 9 Biblio. Refs.

1/1

USSR

UDC: 612.273-03:612.453.014.46:615.357.453

FEDOROVA, L. D., and NOZDRACHEV, A. D., Laboratory of Experimental Endocrinology, Institute of Physiology imeni I. P. Pavlov, Academy of Sciences USSR, Leningrad

"The Effect of Hydrocortisone on the Excitability of the Cortical and Subcortical Structures Under the Influence of Hypoxia"

Moscow, Problemy Endokrinologii, Vol 16, No 6, Nov/Dec 70, pp 59-62

Abstract: Moderate and severe hypoxia was found to induce various changes in the primary responses of the acoustic cortex and posterior corpus quadrigeminum in rats. For example, hypoxia markedly increased the latent period while reducing the amplitude of both the positive and negative phases of the responses. Injection of hydrocortisone (0.2 to 5 mg) into hypoxic rats altered the nature of the primary responses in the cortical and subcortical structures, regardless of the degree of hypoxia. A 5-mg dose of the hormone was most effective in normalizing the rate of conduction of excitation and the functional state of the cortical neurons; 0.2 and 1 mg doses produced the same effect on the neurons of the posterior corpus quadrigeminum. Thus, the course of oxygen insufficiency evidently depends on adrenocortical function. Resistance to hypoxia can be markedly in-

1/2

USSR

FEDOROVA, L. D., and NOZDRACHEV, A. D., Problemy Endokrinologii, Vol 16, No 6,  
Nov/Dec 70, pp 59-62

created by artificially altering adrenocortical activity. The adaptive effects  
of hydrocortisone in hypoxia are probably due to the influence it exerts on the  
functional stability and lability of the nervous system.

Hematology

USSR

UDC 615.385.1.03:616.12-008.1-78

RUDAYEV, Ya A., FEDOROVA, L. I., LIFLYANDSKIY, D. B., BATUKAYEV, A. I., and SEMENOVA, N. V., Central Institute of Hematology and Blood Transfusion, Ministry of Public Health USSR, and Institute of Cardiovascular Surgery imeni Bakuleva, Academy of Medical Sciences USSR, Moscow

"Thawed Erythrocytes as A New Charge for Artificial Circulation Equipment"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 15, No 7, Jul 70, pp 3-5

Abstract: Whole donor blood has been used in equipment for artificial circulation, but substantial difficulties are encountered when such blood must be ready for administration at a given moment. To study the overall perfusion of thawed and washed erythrocytes in open-heart surgery, 250 ml of thawed erythrocytes was introduced with small doses of whole blood. It was found that satisfactory blood levels could be maintained. The hemoglobin content in the peripheral blood was 8%, and the number of thrombocytes was reduced. The erythrocytes, which had been preserved for long periods of time, appeared to be resistant to all traumas during perfusion. No operative hemolysis was observed. Further study of this highly effective medium (erythrocytes diluted in a low-molecular-weight medium) is recommended.

1/1

USSR

UDC 632.95

FEDOROVA, L. N., and SAMOSVAT, L. S.

"Combining Thin Layer Chromatography and Ultraviolet Spectrophotometry to Determine Triazines in Soils and Water "

Tr. 2-go Vses. soveshch. po issled. ostatkov pestitsidov i profilakt. zagryazneniya imi produktov pitaniya, kormov i vnesh. sredy (transaction of the Second All-Union Conference on the Study of Pesticide Residue and Prevention of Their Contamination of Food Products, Fodder and the External Environment), Tallinn, 1971, pp 207-209 (from RZh-Khimiya, No 13, 19 Jul 72, Abstract No 13N540 by T. A. Belyayeva)

Translation: A method has been devised for the identification and quantitative determination of triazines by thin layer chromatography with spectrophotometric conclusion of analysis. Atrazine is extracted with  $\text{CHCl}_3$  from a water or soil sample, chromatographed, the sorbent layer with the preparation has  $\text{CHCl}_3$  poured on it and is filtered, 50-percent  $\text{H}_2\text{SO}_4$  is added to the filtrate, and it is held for 15 min. on a boiling-water bath, diluted with water, washed with ether, and the optical density at 225, 240 and 255 nm is determined.

1/1

- 58 -



USSR

UDC 77

AVRAMENKO, L. F., VILENSKIY, YU. B., IVANOV, B. M., OL'SHEVSKAYA, I. A.,  
POCHINOK, V. YA., SKRIPNIK, L. I., FEDOROVA, L. N., FEDOROVA, I. P.

"Synthesis of Tetrazoles, Triazoles, Triazines, and Azo Compounds and a Study of  
Them as Additives to Silver Halide Photographic Emulsions. I. Synthesis, Struc-  
ture, Chemical Properties, and Photographic Activity"

Uspekhi nauchn. fotogr. (Advances in Scientific Photography), 1970, Vol. 14,  
pp 5-11 (from RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1333)

Translation: Data on the synthesis, structure, and properties of over 300 organic  
compounds intended for stabilizing and defogging or depressing additives in AgHal  
emulsions are presented; in certain cases these substances were also optical  
sensitizers. Among the 40 tetrazoles not all were stabilizers of the photoemul-  
sions; there was also established a difference in the chemical behavior in similar  
reactions. This duality is explained by the existence of azido-tetrazole tauto-  
merism in many condensed tetrazoles; stabilizaticn is caused by adsorption by ions

1/2

USSR

of the AgHal lattice of these azido forms in which there is an increased electron density on the heterocyclic N atom. Many stabilizers were observed among the triazoles, and not only condensed triazoles; among these many could be converted into cyanin dyes by combining stabilizers and optical sensitizers. It is shown that it is necessary for a stabilizer that three N atoms enter into the ring, as in triazoles: a considerable number of stabilizers of AgCl-emulsion was also found among the triazenes. These compounds are simultaneously optical sensitizers, defoggers, and depressers; in AgBr-emulsions only the last two properties are retained, in view of differences in the formation of ion-dipole compounds of AgCl and AgBr lattices with a polar triazene molecule. Of the azo compounds only nonsymmetric substances with heterocyclic radicals were photographically active. 31 references.

UDC 77

USSR

AVRAMENKO, L. F., VILENSKIY, YU. B., IVANOV, B. M., GLUSHCHENKO, I. A.,  
POCHINOK, V. YA., SKRIPNIK, L. I., FEDOROVA, L. H., FEDOROVA, I. P.

"Synthesis of Tetrazoles, Triazoles, Triazines, and Azo Compounds and a Study of  
Them as Additives to Silver Halide Photographic Emulsions. II. Photographic  
Study of Material"

Uspekhi nauchn. fotogr. (Advances in Scientific Photography), 1970, Vol. 14,  
PP 12-23 (From RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1334)

Translation: Three indices are introduced to evaluate quantitatively various  
types of photographic activity of materials synthesized previously: (see RZh-  
Fizika, No12(I), Dec 70, Abstract No 12D1333): stabilizing, depressing, and  
defogging effects and certain combinations of these parameters in the kinetic  
curves for sensitivity and fogging in the second aging before and after intro-  
duction of the substances tested. If the substance was at the same time an  
optical sensitizer, the value of the depressing index was negative. Besides  
the testing of substances in AgCl- and AgBr(I)-emulsions, the kinetics of  
their adsorption by AgHal, the absorption spectrum in solution and after ad-  
sorption by AgHal, and the sensitization spectrum was studied. A correlation

USSR

AVRAMENKO, L.F., et al, Uspekhi nauchn. fotogr., 1970, Vol 14, pp 12-23  
was found for condensed

tetrazoles between the stabilizer and the irreversible adsorption of material and between the depressing and defogging agents and reversible adsorption; irreversible adsorption on a small portion of the AgHal surface was sufficient for total stabilization. The same was true for the stabilization of triazenes. Depression of fogging was apparently always associated with the slowing down of the appearance of reversibly adsorbed substances, although in many cases there simultaneously occurred desensitization or slowing down of aging. Certain connections were established between photographic activity and the structure and substitutes in molecules of tetrazoles and optical sensitizers on the basis of their quaternary salts and also in molecules of heterocyclic azo compounds. The formation of iono-dipole or coordinated compounds of the material with AgHal was necessary for stabilization, which requires the coincidence of their dipole distances; the latter partially explains the differences in the behavior of materials in AgCl- and AgBr(I)-emulsions. One must take into account, however, that in view of the large homeopolarity of the bond in AgBr, even in AgCl, the latter requires more polar stabilizers. 12 references.

2/2

1/2 016 UNCLASSIFIED PROCESSING DATE--18SEP70  
TITLE--EXPANSION OF THE SPECTRAL REGION OF LIGHT SENSITIVE VARIATION IN  
THE VOLUME OF THIN COLOPHONY FILMS -U-  
AUTHOR--(05)-KUVSHINSKIY, N.G., TANTSYURA, L.YA., FEDOROVA, L.N.,  
NAKHODKIN, N.G., POCHINOK, V.YA.  
COUNTRY OF INFO--USSR  
SOURCE--ZH. NAUCH. PRIKL. FOTOGR. KINEMATOGR. 1970, 15(1), 57-9  
DATE PUBLISHED-----70  
SUBJECT AREAS--METHODS AND EQUIPMENT  
TOPIC TAGS--DYE, SPECTRUM, PHOTOSENSITIVITY, PHOTOGRAPHIC FILM  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1983/1485 STEP NO--UR/0077/70/015/001/0057/0059  
CIRC ACCESSION NO--AP0054341

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--A00054341

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SPECTRAL SENSITIVITY REGION OF ROSIN (I) ABIETIC ACID (II) FILMS WAS EXPANDED BY PHOTSENSITIZED O TRANSFER WITH EOSIN, METHYLENE BLUE, OR CHLOROPHYLL (III). THE FILMS WERE EXPOSED TO FILTERED LIGHT FROM AN INCANDESCENT LAMP AND WERE SENSITIZED ONLY IN THE PRESENCE OF O, THE DYE PRESUMABLY CATALYZING THE PHOTSENSITIZED TRANSFER OF O WHICH CAUSED IRREVERSIBLE CHANGES IN II, THUS INCREASING THE VOL. OF THE IRRADIATED FILMS ON HEATING. THE SENSITIVITY WAS EXTENDED TO INCLUDE THE ENTIRE VISIBLE REGION; FILMS CONTG. III WERE SENSITIVE TO LAMBDA GREATER THAN 630 NM.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--THE VESTIBULAR SYNDROME IN MIGRAINE -U-  
AUTHOR--FEDOROVA, M.L.  
COUNTRY OF INFO--USSR  
SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 48, NR 5, PP 70-76  
DATE PUBLISHED-----70  
  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--HEACACHE, VESTIBULAR DISTURBANCE, NERVOUS SYSTEM DISEASE  
  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--3001/1039 STEP NO--UR/0497/70/048/005/0070/0076  
CIRC ACCESSION NO--AP0126677  
UNCLASSIFIED

2/2 017 UNCLASSIFIED PROCESSING DATE--300CT70  
CIRC ACCESSION NO--AP0126677  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER ANALYZES VESTIBULAR  
DISTURBANCES IN 280 PATIENTS SUFFERING FROM DIFFERENT FORMS OF MIGRAINE.  
IN 130 CASES IN THE INTERPAROXYSMAL PERIOD THERE WAS NOTED VESTIBULAR  
HYPERESTHESIA, IN 26, A MARKED VESTIBULAR SYNDROME OF MIGRAINE ORIGIN.  
IT WAS MANIFESTED BY VERTIGO, NYSTAGMUS, ATAXIA, A SENSATION OF EAR  
CLOGGING, SOMETIMES A MILE TRANSITORY REDUCTION OF HEARING. THE  
VESTIBULAR SYNDROME WAS ATTENDED BY MIGRAINE CEPHALGIA, PRECEDED THE  
LATTER OR BE EQUIVALENT TO THE MIGRAINE ATTACK. VESTIBULAR MIGRAINE WAS  
OF MANY YEAR DURATION PREVALENTLY IN THE AGE RANGE 35-40 YEARS, OCCURRED  
MORE OFTEN IN WOMEN AND MORE COMMONLY IN ASSOCIATED MIGRAINE. IN A  
NUMBER OF CASES MIGRAINE TRANSFORMED INTO MENIERE'S DISEASE, THIS MAY  
SERVE AS PROOF OF THE COMMON PATHOGENESIS OF THESE TWO PAROXYSMAL  
VASCULAR AFFECTIONS. FACILITY: KAFEDRA NERVNYKH BOLEZNEY II  
MOSKOVSKOGO MEDITSINSKOGO INSTITUTA IM. N. I. PIROGOVA I  
NEVROLOGICHESKOYE OTDELENIYE GORODSKOY KLINICHESKOY BOL'NITSY NO. 1 IM.  
N. I. PIROGOVA.

UNCLASSIFIED



USSR

F UDC: 632.951:633.2

KALASHNIKOV, K. YA., and FEDOROVA, M. N., Pushkin Scientific Research Base, All-Union Institute of Plant Protection, Leningrad, All-Union Academy of Agricultural Sciences imeni V. I. Lenin

"Fungicide Treatment of Fodder Grass Seeds"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 4 (78), Apr 70, pp 44-46

Abstract: The authors studied 50%-TMD (tetramethylthiuram disulfide) and granozan in dry, liquid, and water soluble form as agents for fungicide treatment of seeds. They concluded that TMD should be used in treating seeds of fodder grass, timothy grass, fescue grass, collective fodder, canary grass, and foxtail. The recommended doses are: 3 gm of a 50% preparation and 2 gm of an 80% preparation per kg of seeds. Standard granozan in a dose of 1-1.5 gm/kg may be used to digest seeds of fodder grass by the dry method. Digestions even 6 months prior to seeding shows no detrimental effect on the seeds.

1/1

- 115 -

USSR

UDC 543.77

FEDOROVA, M. N., KRIVODUBSKAYA, K. S., OSOKINA, G. N., and KOSTOUSOVA, T. I.  
Fazovy Khimicheskiy Analiz Rud Chernykh Metallov i Produktov ikh Pererabotki  
(Phase Chemical Analysis of Ores of Ferrous Metals and Products of Their  
Treatment) "Nedra" Publishing House, Moscow, 1972, 160 pp

Translation of Foreword Annotation: The further development of ferrous metallurgy requires an ever increasing amount of high-quality ores. Therefore, the dressing of ores for metallurgical treatment is of great importance. More sophisticated technological schemes of ore beneficiation for assuming complete and complex extraction of valuable ore components should be developed in the coming years.

In order to correctly evaluate the industrial properties of ores being processed, a thorough and detailed study of their compositions is required, especially, a determination of the quantitative ratio of different mineral forms of elements composing them. Phase analysis, which along with other methods has found wide application in various branches of science and technology, is of importance in the compositional study of minerals.

The phase analysis method for non-ferrous and trace elements is the most highly developed (Dolivo-Dobrovolskiy, Klimenko, 1947; Filippova, 1964; Khristoforov, 1964, 1965). The literature regarding the methods of phase analysis of ores of ferrous metals is represented only by a few journal articles and several manuscripts.

1/6

USSR

FEDOROVA, M. N., et al., Fazovyy Khimicheskii Analiz Rud Chernykh Metallov i Produktov ikh Pererabotki, "Nedra" Publishing House, 1972, 160 pp

The methods of phase analysis for iron, manganese, and chromium ores that are mentioned in the monograph of V. V. Dolivo-Dobrovolskiy and Yu. V. Klimenko have not been developed very far. Presently they do not satisfy the high standards set up by concentration plants with respect to the elemental composition of ferrous ores. It should be noted that neither the domestic nor the foreign literature provides sufficiently complete manuals for the phase analysis of ferrous ores. Thus, it was thought expedient to generalize the works done in this field.

The present work systematizes the experience accumulated by many scientific research institutes (Uralmekhanobr, Mekhanobr, Mekhanobrchermet) and tested at industrial plants in the Ural, Kazakhstan, Central, and Southern regions of the USSR for many years. Most of the methods presented were developed, tested, and perfected by the authors of this book.

The book describes the methods of phase analysis of different types of iron, manganese, titanium, and chromium ores, as well as beneficiation products and pelletized products prepared from iron concentrates. In some cases a detailed description is given of individual methods. This material can be useful for the evaluation of the ore analysis results, and in individual cases,

2/6

USSR

FEDOROVA, M. N., et al., Fazovyy Khimicheskiy Analiz Rud Chernykh Metallov i Produktov ikh Pererabotki, "Nedra" Publishing House, 1972, 160 pp

where data are available for comparison, it can be of help in selecting a more rational direction for future studies.

The authors will gratefully accept any comments regarding the application of methods given in this book to various ores, suggestions regarding modifications, improvements, and simplification of these methods, and reports of the development of new methods at various laboratories.

The authors thank Senior Scientist F. K. SOLOMONOVA for valuable comments and for the mineralogical analysis of ores during the development of the phase analysis methods. The authors are also grateful to Candidate of Technical Sciences N. N. MASLENITSKIY, YE. T. KARAPETYAN, Doctor of Technical Sciences V. V. DOLIVO-DOBROVOL'SKIY, Doctor of Chemical Sciences N. A. FILIPPOVA, and senior scientists R. S. MIL'NER, A. G. LYASHENKO, I. G. GULEVITSKAYA and F. YE. MERLINA who gave us much valuable advice in examining the manuscript and gratefully helped us in the preparation of the manuscript for publication.

Translation of Table of Contents:  
Foreword  
Problems and methods of phase analysis  
Chapter I. Phase analysis of iron ores  
3/6

Page  
3  
5

- 94 -