

USSR

MEYERSON, G. A., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 5, 1972, pp 83-88

activation energies of chemical interaction and heterodiffusion are 32 and 74 kcal/mol, respectively. The method for hydrogen reduction of chromium oxide is unsuitable for powders of dispersion hardened Ni-Cr alloys, owing to enlargement of hardening inclusions at temperatures required for complete reduction. Four figures, one table, eighteen bibliographic references.

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- 109 -

MEYERSON, G.A.

WEAT RESISTANCE OF PRECIPITATION-HARDENED NICKEL

UDC 620.193.1

Article by G. A. Meyerson, L. P. Zhuk, G. A. Meyerson, N. K. Ogora and G. A. Paterson, Journal of Materials Science, No. 1, 1971, pp. 101-107. English translation from the Russian, No. 1, 1971, submitted in June 1970, pp. 101-107.

The contributions found in literature data on the scale resistance of precipitation-hardened materials reduce the practical significance of these data and hamper understanding of the oxidation mechanism of these materials. On the basis of these data it is still not possible to forecast the effect of heat resistance change in nickel while hardening it with different oxides. Table 1 gives the materials and their characteristics as investigated in this work.

Table 1. Composition and characteristics of initial materials.

(a)	(b)	(c)	Heat-treated material (d)				Chemical composition (e)	
			(1) Precipitation hardening	(2) Solution annealing	(3) Tempering	(4) Aging	(1) Nickel	(2) Carbon
Material	Surface area, m ²	Volume, cm ³	Temp., °C	Temp., °C	Temp., °C	Temp., °C	wt. %	wt. %
Ni (100)	9	99.2	18	60	12	1	99.9	0.07
Ni (100)	1	99.2	4	60	12	1	99.9	0.07
Ni (100)	1	99.2	4	60	12	1	99.9	0.07
Ni (100)	1	99.2	4	60	12	1	99.9	0.07
Ni (100)	1	99.2	4	60	12	1	99.9	0.07

- Key: a--Material
b--Content of hardening oxide, volume %
c--Relative density (ρ) with size (μ)
d--Quantity of particles (N) with size (μ)
e--Average distance between particle centers, microns
f--Less than
g--Greater than
h--Average particle size, μ

78.5 55799
1840.2173

(5)

UDC 541.183:545.246 - J1: 546.221

USSR

ASTAKHOV, V. A., DOEROTIN, R. B., MEYERSON, L. A., LUKIN, V. D., and STEPANOV, G. V., Belorussian Technological Institute imeni S. M. Korov

"Adsorption of Carbon Dioxide and Carbon Disulfide by a Suspension of CaA Zeolite in Toluene"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 43, No 12, Dec 70, pp 2655-2658

Abstract: The adsorption of CO_2 and CS_2 by the CaA zeolite, used as a 20% suspension in toluene, was studied. Toluene was selected as the dispersing medium because its molecules are too big to penetrate the micropores of the zeolite used. Binder-free zeolite was used. In addition to the suspension mentioned, also dry powdered zeolite was used in experiments. It was determined that with identical partial CO_2 pressure at equilibrium, the adsorption by a suspension is considerably lower from the adsorption by dry zeolite. At identical molal concentration in toluene solution, adsorption of CS_2 is considerably lower than the adsorption of CO_2 .

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UDC 621.374.33

USSR

VIGDORCHIK, V. G., DARKOV, S. K., KORTEVA, T. V., MEYERSON, S. I., POPOV, V. A., SITNIKOV, O. P., TRYKOV, Yu. V., OSTRYY, Kh. Ya.

"A Magnetic Digital Element"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 21, Jul 71, Author's Certificate No 308518, Division II, filed 16 Feb 70, published 1 Jul 71, pp 207-208

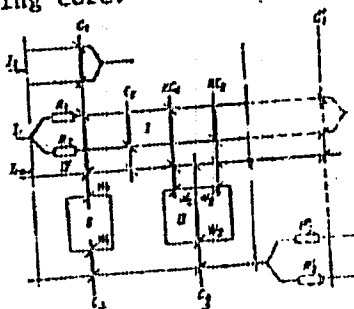
Translation: This Author's Certificate introduces a magnetic digital element which contains information, compensation and two switching cores. The device has a recording circuit, a coupling loop with flux quenching on resistors, and a ready circuit for the switching cores. As a distinguishing feature of the patent, in order to increase speed, improve stability, extend the range of ambient temperature variation and simplify the power supply system, the element is equipped with resistors in the coupling loop, dynamic excitation and dynamic magnetizing cores, one additional winding on each of the switching and compensation cores, and also two additional windings on the information core. The primary windings of the dynamic excitation and dynamic magnetizing cores are connected in series in the circuit of one of the cadence currents. The series-connected auxiliary windings of the switching cores and

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USSR

VIGDORCHIK, V. G., et al., Otkrytiya, izobreteniya, promyshlennyye obratzsy, tovarnyye znaki, No 21, Jul 71, Author's Certificate No 308518, Division H, filed 16 Feb 70, published 1 Jul 71, pp 207-208

the secondary winding of the dynamic excitation core form a loop for dynamic excitation of the switching cores. The series circuit comprised of the secondary winding of the dynamic magnetizing core and one of the auxiliary windings of the information core forms a loop for dynamic excitation of the information core, and the auxiliary winding of the information core and the third winding of the dynamic excitation core are connected in series to the ready winding of the switching core.



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- 16 -

UDC 621.382.2

USSR

KOVALEV, I. S., MEYERSON, V. M., KOVALEV, S. I., SHARAFOV, V. V. [Corresponding Members of AS, BSSR]

"Calculation Of Electronic Retuning Of Oscillator Based On a Tunnel Diode With The Aid Of a Varactor"

Doklady Akademii Nauk BSSR, Vol XVI, No 7, July 1972, pp 607-609

Abstract: An experimental study is made of an oscillator based on a non-symmetrical strip with varactor retuning. The equation of an oscillator based on a tunnel diode with a varactor connected to it is solved graphically, which makes it possible to calculate its retuning curve. An analysis is made of the dependence of the frequency retuning of the oscillator on the parameters of the varactor and the resonance system of the generator. The design of the resonance system of the oscillator makes it possible to change the coupling factor of the varactor. The results of the experimental study of varactor retuning of a tunnel-diode oscillator agree well with calculated data. 2 ill. 2 ref. Received, 7 December 1971.

1/1

1/2 012
UNCLASSIFIED
PROCESSING DATE--09OCT70
TITLE--GENETIC PROBLEMS IN THE STUDY OF SYSTEMIC CONGENITAL ORTHOPAEDIC
DISEASES -U-
AUTHOR--(04)--VOLKOV, M.V., MEYERSON, YE.M., NECHVOLDDOVA, O.L., YUKINA,
G.P.
COUNTRY OF INFO--USSR
SOURCE--ORTOPEDIYA, TRAVMATOLOGIYA I PROTEZIROVANIYE, 1970, NR 4, PP 8-14
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BONE DISEASE, HEREDITARY DISEASE, LESION, DIAGNOSTIC MEDICINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1990/0593

STEP NO--UR/9115/70/000/004/0008/0014

CIRC ACCESSION NO--AP0103808

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--090CT70

2/2 012

CIRC ACCESSION NJ--AP0108808

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INHERITED SYSTEMIC BONE DISEASES BELONG TO HEREDITARY AFFECTIONS OF THE CONNECTIVE TISSUE WITH MARKED SKELETAL AND EXTRASKELETAL LESIONS, AND CONSTITUTE A LARGE GROUP OF DISEASES WITH A WIDE RANGE OF CLINICAL MANIFESTATIONS. A NUMBER OF CLINICAL SIMILAR SYSTEMIC BONE DISEASES ARE THE RESULT OF MUTATIONS IN VARIOUS LOCUSES AND REPRESENT GENOCOPIES. THE CORRELATION AND INTERDEPENDENCE BETWEEN THE CLINICO ROENTGENOLOGIC, LABORATORY AND GENETIC METHODS OF INVESTIGATION IN HEREDITARY SYSTEMIC BONE DISEASES IS DISCUSSED. THE GENIC MUTATIONS ARE CONSIDERED AS THE CAUSE OF DEVELOPMENT OF SPORADIC CASES OF THESE DISEASES, AND THE IMPORTANCE IS STRESSED OF THE KINDRED AND STUDY OF ISOLATES IN THE ELUCIDATION OF THE RECESSIVE FUND OF HEREDITARY MUTABILITY. THE ROLE OF DIAGNOSIS OF MICROSIGNS AND THE EFFACED FORMS OF DISEASES IN THE STUDY OF THE PENETRABILITY AND EXPRESSIVITY OF GENES IS DISCUSSED. FACILITY: TSENTRAL'NOGO INSTITUTA TRAVMATOLOGII I ORTOPEDI.

UNCLASSIFIED

USSR

UDC: 620.171.2

ROZENTAL', L. V., LAPAURI, A. A., MEYERSON, M. B., and SUCHKOVA, O. I.,
State Scientific Research and Designing Institute of the Photographic Chemical
Industry; All-Union Scientific Research Institute of Motion-Picture Photography,
Moscow

"An Instrument for Measuring Internal Stresses in Films, and Film Deformation"

Moscow, Zhurnal Nauchnoy i Prikladnoy Fotografii i Kinetofotografii, Vol I,
No 1, Jan-Feb 72, pp 22-26

Abstract: The authors have designed, and thoroughly tested an apparatus,
provisionally called the IUPS, which is distinguished from other known units
for testing and evaluating the mechanical processes of photographic films, by
virtue of the possibility of the synchronous measurement, under the same
climatic conditions, of the deformation kinetics at constant tension in one
sample, and in another sample of the same film, measurement of the kinetics
of the increase and relaxation of tensions with the maintenance of constant
length of the sample. 5 figures. 9 references.

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USSR

UDC 612.821.6+616.831.311

KAYDANOVA, S. I., MEYERSON, Ya. A. and TRAUGOTT, N. N., Institute of Evolutionary Physiology and Biochemistry, USSR Academy of Sciences and Psychoneurological Institute imeni V. M. Bekhterev, Leningrad

"On the Role of the Parietal Area of the Human Brain in the Analysis and Synthesis of Complex Stimuli"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlov, Vol 23, Vyp 4, Jul/Aug 73, pp 697-703

Abstract: Conditioned reflexes requiring differentiation of simultaneous and successive complex signals, acoustic, visual and positional, were elaborated in patients with local lesions of the parietal lobes, and compared to identical reflexes previously elaborated in patients with extraparietal lesions of the brain. The experimental subjects had more difficulty in differentiating both successive and simultaneous stimuli, in that more repetitions were required to establish the reflex, and in some cases it could not be formed. Signals of differing modes were more easily distinguished than those of one mode. Successive analysis was more affected than

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USSR

KAYDANOVA, S. I., et al., Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlov, Vol 23, Vyp 4, Jul/Aug 73, pp 697-703

simultaneous, especially for acoustic signals. Auditory stimuli were less effective than visual for successive analysis, while the reverse was true for simultaneous analysis. Lesions of the left parietal lobe resulted in more severe disturbances of both kinds of analysis, which was said to reflect the significance of speech in the analysis of complex signals. However lesions of the right lobe affected predominantly visual analysis, which is said to suggest that the analysis of visual non-speech signals is achieved predominantly by the right hemisphere. Those patients who showed the greatest disturbance of higher cortical functions also showed the most disturbed analysis. These results are also considered to show that the analysis of complex signals resides in the parietal region.

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USSR

UDC: 771.531.2: 771.534.14

GLADKOVSKIY, V.V. and MEYKLYAR, P.V.

"On Hypersensitizing Photopapers"

Moscow, Zhurnal Nauchnoy i Prikladnoy Fotografii i Kinematografii,
Vol 17, Vyp 5, 1972, pp 353-359

Abstract: Experimental results of hypersensitizing unibrom type photopapers by preexposing with long wave light are analyzed. This preexposing results in considerable increase of the practical light sensitivity. Sensitized photopapers can be used to photograph infrared spectrums and to obtain prints from black and white negatives without the photopaper being affected by actinic light. The use of oxydizers before and after preexposure reduces the effect of long wave light. The results obtained are attributed to the formation of subcenters due to the effect of red light, which are similar to latent image centers. Graphs and photographs showing the increase of light sensitivity due to preexposing are presented.

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USSR

UDC 77

KOROTAYEV, N.N., MEYKLYAR, P.V.

"Variation of the Absorption Spectrum and Spectral Sensitivity of Photographic Layers with Temperature"

V sb. Mezhdunar. kongress po fotogr. nauke, Moskva, 1970, Priroda fotogr. chuvstvitel'nosti (International Congress on Photographic Science, Moscow, 1970, Nature of Photographic Sensitivity -- Collection of Works), no place of publication given, Vneshtorgizdat, no year given, pp 102-105 (from PZh-Fizika, No 12(I), Dec 70, Abstract No 12D1319)

Translation: The spectral change in the reflection coefficient R , transmission T , and absorption $K = 1 - T - R$ for a series of AgBr- and AgBr(I)-photoemulsions was measured at temperatures of 15-150°C in the region 400-550 mμ. The growth in R and T and the drop in K to approximately 480 mμ were found. Data on the difference in optical densities $D = \lg(1-R)/T$ for different λ at 20 and 120°C showed the presence of a maximum on the curves $\Delta D = f(\lambda)$ located at 440 mμ for AgBr and at 480 mμ for AgBr(I). The temperature changes of the absorption are reversible over the entire range studied. The change in the spectral sensitivity

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KOROTAYEV, N. N., MEYKLYAR, P. V., Mazhdunar. kongress po fotogr. nauke, Moskva, 1970, Priroda fotogr. chuvstvitel'nosti, no place of publication given, Vnesh-torgizdat, no year given, pp 102-105

curves of these layers with the rise in temperature was selective: the greatest growth was observed for λ corresponding to a maximum ΔD , and there is a clear maximum on the curves at 80-100°C. The value of $\lg D$ in the long-wave edge of the band increases linearly with $h\nu$, as for single crystals; for the latter (and hence for photolayers), this is a consequence of electron transition into the conductivity zone from local levels. The nature of the additional band is unclear but the defects associated with it cannot be Br^- ions on the surface, since the concentration of the latter does not change with temperature. In addition, in special experiments the change in their concentration had almost no effect on the height and position of the maximum observed. A. L. Kartuzhanskiy.

USSR

UDC 77

SADYKOVA, A. A., VLASOV, V. F., MEYKLYAR, P. V.

"Luminescence and Photo-emf of Photographic Layers"

V sb. Mezhdunar. kongress po fotogr. nauke, Moskva, 1970, Priroda fotogr. chuvstvitel'nosti (International Congress on Photographic Science, Moscow, 1970, Nature of Photographic Sensitivity -- Collection of Works), no place of publication given, Vneshtorgizdat, no year given, pp 87-90 (from RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1318)

Translation: The behavior of the orange photoluminescence band of AgBr(I) which is caused by the recombination of electrons at impurity centers with free holes is studied. The orange photoluminescence band arises in the emulsion and intensifies during aging, especially in small-grained emulsions; it is only for emulsions with cubic crystals obtained by a double-jet method that there is an intense orange photoluminescence band before aging. The band was observed for powders but it weakens or generally disappears with the growth of the iodine concentration. For large single crystals the band is clear only in the presence of Ag_2S impurities. IR-quenching of the band, identical in spectral characteris-

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SADYKOVA, A. A., et al, Mezhdunar. kongress po fotogr. nauke, Moskva, 1970, Priroda fotogr. chuvstvitel'nosti, no place of publication given, Vneshtorgizdat, no year given, pp 87-90

tics, was observed in all objects; the magnitude of the quenching per unit of IR energy was proportional to $(h\nu)_{IR}^2$; i.e., the recombination centers do not form local levels in the forbidden zone (quenching for these is proportion to $\sqrt{h\nu}$) but form a subzone lying below the conductivity zone by several tens of electron volts (this is evaluated from the intersection of lines with the abscissa). It is evident from this that the orange photoluminescence band is independent of the presence of S^{2-} , and its centers can only be Ag. The correlation between the intensity of the orange photoluminescence band and the sensitivity of the emulsions occurs rarely: i.e., in the general case the centers of radiative recombination are smaller than the sensitivity centers, especially in highly sensitive emulsions. Measurements of the photo-emf, however, showed the relationship between S^{2-} ions and the latter and the formation of p-type acceptor centers during aging. The combined data on photo-emf and orange photoluminescence bands thus make it possible to follow the effect of different centers on the formation of sensitivity. 10 references. A. L. Kartuzhanskiy.

USSR

MEYLANOV, I. S., BENDERSKIY, V. A., and BLYUMENFEL'D, L. A., Institute of Chemical Physics, Academy of Sciences USSR, Moscow

"Photoelectric Properties of Layers of Chlorophyll a and b. I. Photo-currents During Constant Illumination"

Moscow, Biofizika, Vol 15, No 5, Sep/Oct 70, pp 822-827

Abstract: The volt-ampere, spectral, and lux-ampere characteristics of currents in layers of chlorophylls a and b with a thickness of 0.3-2 μ subjected to the action of a direct current and constant longitudinal illumination were studied. Data presented in the article pertain to layers of chlorophyll a; results for chlorophyll b were similar, but the current values were smaller by a factor of 2-3. At the maximum potential applied (250 V), the photocurrent reached 10^{-5} to 10^{-4} A/cm² at light intensities of 10^{13} to 10^{14} photons/cm²sec⁻¹. The lux-ampere characteristic was linear at 10^{11} to 10^{14} photons/cm²sec⁻¹ in the entire spectral range studied ($\lambda = 400-750$ nm). The photoelectric gain reached 10^2 at 10^{13} photons/cm²sec⁻¹ (photocurrent, 5×10^{-5} A/cm²). The photoconduction spectrum was opposite to that of the absorption spectrum and had principal

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USSR

MEYLANOV, I. S., et al, Biofizika, Vol 15, No 5, Sep/Oct 70, pp 822-827

maxima at 540 and 705 mμ. Similar relations were observed on illumination of the anode and cathode; the anodic current exceeded the cathodic by a factor of 2-3. Double injection from the electrodes could be assumed. The quantum yield of the photoeffect exceeded 10% and was estimated at no less than 15-20% at the 705 mμ maximum. The results showed that formation of current carriers is one of the principal ways of conversion of light energy by chlorophyll. Earlier objections to the semiconductor mechanism of photosynthesis on the ground that the quantum yield of the photoeffect in chlorophyll is too small were thus eliminated.

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USSR

UDC: [625.282:621.438]:003.1

BARTOSH, Ye. T. and MEYLIKHOV, M. Ye.

"Problems of Gas Turbine Traction"

Moscow, Izvestiya Akademii Nauk SSSR--Energetika i Transport, No. 4, 1971, pp 82-92

Abstract: Gas turbine engines, as the answer to the problem of more efficient railroad transportation for a growing national economy, are discussed. Because locomotives of this type burn relatively cheap sulphur fuels, require less lubrication, and are simpler in construction, their use throughout the world and especially in the Soviet Union is desirable. They have the additional advantage of providing higher power levels for smaller dimensions and weight. Through three experimental gas turbine locomotives, the freight G1-01 and two passenger GP1 built at the Kolomenskiy Locomotive Plant imeni V. V. Kuybyshev, Soviet engineers have gained a good deal of experience with this type of de-

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USSR

BARTOSH, YE. T., and MEYLIKHOV, M. YE. , Izvestiya Akademii Nauk SSSR - Energetika i Transport, No 4, 1971, pp 82-92

sign. The article discusses some design problems and their possible solutions. A table comparing the characteristics of this type of engine with those of diesels is presented. Among the important problems connected with the gas turbine engine are improvement in its economy, the design of simple transmissions, and adaptation to the use of heavy liquid fuels of various types.

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USSR

UDC: 621.315.592

MEYLIKHOV Ye. Z., Institute of Atomic Energy imeni Kurchatov, Moscow
"Helical Instabilities in Semiconductors in a Strong Magnetic Field"

Leningrad, Fizika i tekhnika poluprovodnikov, vol 6, No 6, 1972,
pp 997-1000

Abstract: Results are given of computations based on research into an expression obtained in an earlier article by the same author in the same journal (4, 1970, p 237) for the value of the threshold electric field at which the helical instability in an electron-hole plasma in a semiconductor in a strong magnetic field appears. The expression was derived by a quasi-classical approximation which maintains the qualitative picture of the phenomenon and produces a general solution. This expression is given in the present paper and its limiting conditions explained. It is shown how the expression can be used to explain the results of experimental work regarding the helical instabilities, and it is noted that the expressions obtained in the present paper agree closely with experimental observations of the general picture of helical instabilities and explain some of the aspects of the phenomenon. The author is associated with the I. V. Kurchatov Atomic Energy Institute in Moscow.

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USSR

UDC 621.315.592

MEYLIKHOV, YE. Z., Atomic Energy Institute imeni I. V. Kurchatov of the USSR Academy of Sciences, Moscow

"Effect of a Quantizing Magnetic Field on the Propagation of Helicons in Semiconductors"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 6, No 5, 1972, pp 839-842

Abstract: A study was made of the effect of a quantizing magnetic field on the damping of semiconductor helicons. The variation (with an increase in the magnetic field) of the dissipative transverse conductivity σ_{xx} can in this case

lead to the appearance of bounded regions of strong and weak damping of the helicon. The magnitudes of the magnetic field corresponding to the boundaries between these regions are estimated for various mechanisms of the electron scattering in degenerate and nondegenerate semiconductors. The specific numerical estimates for degenerate and nondegenerate n-Ge with electron scattering on the acoustic phonons indicate that the transition to strong damping of the helicon takes place in these cases in the ~100 kilogauss field.

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USSR

UDC 576.807.4.8

MEYSEL', M. N.

"Fluorescence Microscopy and Cytochemistry in General Microbiology"

Uspekhi mikrobiologii (Advances in Microbiology), No 7, 1971

Abstract: A survey is presented of the development and current status of fluorescence microscopy with reference to the interests and tasks of general and industrial microbiology. Special attention is devoted to the new and very promising field of fluorescence cytochemistry and to those branches of it which relate directly to problems in molecular biology: detection of the quantitative and structural characteristics of nucleic acids, proteins, lipids, and antigens. The concluding section cites examples of the practical use of fluorescence microscopy, cytochemistry, and immunofluorescence in general and industrial microbiology.

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USSR

UDC 577.3

MEYSEL', M. N., MOKHNACH, V. O., VAKINA, I. P., SELIVENSTOVA, L. A., BCRODINA, V. M., and ROMANOVA, L. L., Institute of Microbiology, Academy of Sciences USSR, and Botanical Institute imeni V. L. Komarov, Academy of Sciences USSR

"The Mechanism of the Antimicrobial Action of Biologically Active Iodine Compounds"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Biologicheskaya, No 6, Nov/Dec 71, pp 819-829

Abstract: Bacteriological, phase-contrast, fluorescence, and electron microscope investigations revealed that the antimicrobial activity of iodine compounds is due to the positive monovalent iodide ion (I^+) and not to molecular iodine (I_2). The most active substances, such as iodine-potassium iodide and its compound with polyvinyl alcohol (iodinol), as well as oxidized hydroiodic acid and its compound with polyvinyl alcohol, readily penetrate yeast and bacterial cells and by combining with oxidizing the mitochondria, intracellular polysaccharides, and membrane lipoproteins, suppress and eventually completely inhibit the respiration of the cells.

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1/2 006 UNCLASSIFIED PROCESSING DATE--090CY70
TITLE--ON THE METHODS OF QUANTITATIVE SPECTRAL ANALYSIS OF SOME
MICROELEMENTS IN MARINE SEDIMENTS -U-
AUTHOR--MEYSHTAS, E.A.

COUNTRY OF INFO--USSR

SOURCE--OKEANOLOGIYA, 1970, VOL 10, NR 2, PP 373-382

DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--BOTTOM SEDIMENT, OCEAN BOTTOM SAMPLING, SPECTRUM ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1282

STEP NO--UR/0213/70/010/002/0373/0382

CIRC ACCESSION NO--AP0109366

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--09OCT70

2/2 006

CIRC ACCESSION NO--AP0109366
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. AN IMPROVED METHOD OF THE CATHOD
LAYER AND STANDARDS MADE WITH CONSIDERATION FOR THE MACROSTRUCTURE OF
MARINE SEDIMENT SAMPLES MAKE IT POSSIBLE TO PERFORM A SPECTRAL ANALYSIS
OF SEDIMENTS WITHOUT DANGER OF GREAT SYSTEMATIC ERRORS. THE ALLOWABLE
DEVIATION OF THE MACROCOMPOSITION OF THE SAMPLE FROM THAT OF THE
STANDARDS USED IS DIFFERENT FOR SPECIFIC ELEMENTS AND DEPENDS MAINLY ON
THE INNER STANDARD APPLIED.

FACILITY: ATLANTICHESKOYE OTO. INST.

OKEANOLOGII IM. P. P. SHIRSHOVA.

UNCLASSIFIED

USSR

UDC 51:155:001:57:681:3:06

MEYSON, S., KLEMENS, J.

"Recognition of Letters in an Experimental Reading Machine for the Blind"

V sb. Raspoznavaniye obrazov (Pattern Recognition -- collection of works),
Moscow, "Mir," 1970, pp 198-211, (from RZh-Kibernetika, No 12, 1970, Abstract
No 12 V 619)

[No abstract given]

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USSR

ACCESSION NR: AP4005592

S/0236/53/000/022/0043/0044

AUTHOR: Gammerman, M. Ya.; Maystar, A. A.

TITLE: Electromagnetic flowmeter. Class 42, No. 158091

SOURCE: Byul. izobret. i tovarn. znakov, no. 22, 1963, 43-44

TOPIC TAGS: flowmeter, electromagnetic flowmeter

ABSTRACT: This Author Certificate introduces an electromagnetic flowmeter containing a flow converter, compensating transformer, amplifier, synchronous detector, measuring instrument, and a modulator with a Hall element. To increase the accuracy of measurement, the Hall electrodes of the modulator are attached to the primary winding of the compensating transformer. The secondary winding of the transformer is connected in opposition and in series with the converter electrodes and amplifier input. To achieve temperature compensation of the Hall element, a thermistor is inserted into the current circuit of this element. To allow checking of the stability of the measuring unit transmission coefficient without disconnecting the flowmeter, an additional coil of the modulator choke is attached through a phase shifter

Card 1/3

ACCESSION NR: AP4005592

and commutator to the input of the measuring unit. Orig. art. has:
1 figure.

ASSOCIATION: none

SUBMITTED: 17Nov62

DATE ACQ: 03Jan64

ENCL: 01

SUB CODE: SD

NO REF SOV: 000

OTHER: 000

Card 2/3

ACCESSION NR: AP4005592

ENCLOSURE: 01

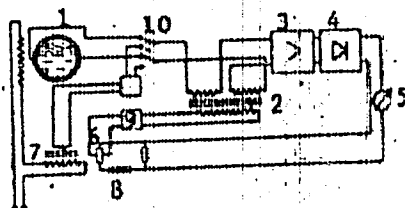


Fig. 1. Electromagnetic flowmeter

1 - Flow converter; 2 - compensating transformer; 3 - amplifier; 4 - synchronous detector; 5 - measuring unit; 6 - modulator with Hall element; 7 - choke; 8 - thermistor; 9 - phase shifter; 10 - commutator.

Card 3/3

USSR

UDC 681.3

ADAVICH, P. N., MEYTIL'SH, A. L., SHPILETZKAYA, Z. V.

"Mathematical Model of Binary Channels Considering Actual Statistics of Distribution of Failures"

Metody. I Sredstva Tekhn. Kibernet., [Methods and Equipment of Technical Cybernetics--Collection of Works], No 10, Riga, 1970, pp 31-41, (Translated from Referativnyy Zhurnal Kibernetika, No 5, 1971, Abstract No. 5V599).

No Abstract.

1/1

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1/2 023 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--MODIFICATIONS IN EXTERNAL RESPIRATION AND BLOOD GAS CONTENT IN
PATIENTS WITH AN OPEN ATRIOVENTRICULAR CANAL -U-
AUTHOR-(02)-ZODELAVA, Z.L., MEYTINA, R.A.

COUNTRY OF INFO--USSR

SOURCE--EKSPERIMENTAL'NAYA KHIRURGIYA I ANESTEZIOLOGIYA, 1970, NR 3, PP
74-77
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RESPIRATION, BLOOD CHEMISTRY, LUNG, HYPERTENSION, HEART
DISEASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3002/1885

STEP NO--UR/0481/70/000/003/0074/0077

CIRC ACCESSION NO--AP0129243

UNCLASSIFIED

2/2

023

UNCLASSIFIED

PROCESSING DATE--0000170

CIRC ACCESSION NO--AP0129243

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

ABSTRACT. EXTERNAL RESPIRATION AND BLOOD GAS

CONTENT WERE STUDIED IN 88 PATIENTS WITH AN OPEN ATRIOVENTRICULAR CANAL

DEPENDENT ON THE FORM OF A DEFECT AND THE DEGREE OF PULMONARY

HYPERTENSION. ALL GROUPS HAVE MARKED HYPERVOLEMIA, DUE TO BLOOD SHUNT

FROM THE GREATER TO THE SMALLER BLOOD CIRCUIT, MAINLY THROUGH A DEFECT

OF THE INTRAARTICULAR SEPTUM. IN HIGH PULMONARY HYPERTENSION REVERSE

BLOOD SHUNT FROM RIGHT TO LEFT TAKES PLACE, THROUGH THE DEFECT OF THE

INTRAARTICULAR SEPTUM AND THE COMMON ATRIOVENTRICULAR CANAL.

MODIFICATIONS OF EXTERNAL RESPIRATION AT REST AND AFTER STRESS (DECREASE

OF RESPIRATORY VITAL VOLUME, MINUTE VOLUME INCREASE, ETC) UPSET OF ACID

BASE BALANCE (DECOMPENSATED RESPIRATORY ALCALOSIS) FOLLOW HYPERVOLEMIA

AND HYPERTENSION OF THE PULMONARY BLOODFLOW. FACILITY:

LABGRATORIYA FUNKSIONAL'NOY DIAGNOSTIKI I OTDELENIYE VROZHDENNYKH

POROKOV SERDCA INSTITUTA SERDECHNO-SOSUDISTOY KHIRURGII IM. A. N.

BAKULEVA, AMN SSSR, MOSKVA.

UNCLASSIFIED

USSR

UDC: 8.74

MEYTUS, V. Yu.

"Controllable Processes and Prognosis of Illnesses"

Kibernet. i vychisl. tekhn. Resp. mezhved. sb. (Cybernetics and Computer Technology. Republic Interdepartmental Collection), 1972, vyp. 14, pp 96-100 (from RZh-Kibernetika, No 5, May 73, abstract No 5V819 by the author)

Translation: The paper deals with the problem of predicting the course of illnesses under condition that all states of the process are known as well as the distributions of probabilities associated with these states, and the influence of controls on these distributions. The problem is solved by methods of dynamic programming of semi-Markov processes.

1/1

- 106 -

MEYER, V. Yu.

Gleim

SO: JPRS 55937
9 MAY 1972

STRUCTURE AND METHOD OF PROBLEM SOLVING
Article by V. Yu. MEYER, Kiev, Algebra i Vychislitel'naya Tekhnika,
Moscow, No. 7, 1970, pp. 41-50.

The problem of designing devices that might successfully compete with man in the solution of intellectual problems was formulated by the authors of the first works on cybernetics published (Wiener, Newman, Lurii, and others).

At the present time, however, the Artint problem (the construction of an artificial intellect) is one of the fundamental directions in the development of cybernetics.

Depending on which form of human activity is chosen as the basic goal, we are given various directions of the Artint problem. Furthermore, it is possible to design systems whose behavior in an actual situation would be comparable with the behavior of man solving an analogous problem. For such systems, one can introduce the modified Turing test (1) by replacing the system of responses with a description of the machine's behavior. The problem in such a test is the specification of the real situation.

The translation to such complex systems leads to a whole series of new and interesting problems. These problems are connected with the description and analysis of the systems, with theoretical and model investigations of their possibilities, and with problems of increasing and self-organization arising at a particular level of complexity.

Let us assume that the systems being considered satisfy an important requirement of the automaton: they perceive the external medium and interact with it without human interference. Without a doubt, the requirement of the automaton brings up a whole series of additional difficulties. But the development of the theory and the design of integrated systems (combined sensors, processing and enabling subsystems) i.e., in our opinion, one of the principal directions in the entire Artint problem.

MEYTUS V. Yu.

neurobiology

SOME PROBLEMS IN NEUROBIOLOGY

[Article by V. Yu. MEYTUS, V. A. LITVINENKO, and V. Yu. MEYTUS;
Moscow, Institute of Higher Nervous Activity and Movement, Moscow, No. 1, 1970, pp. 1-11]

SO: JPRS 55937
9 MAY 1972

GLORIA

The development of electronics and computer technology has promoted the creation of new methods for investigating processes in the nervous system of living organisms. This, in turn, has permitted striking out new frontiers, the opening of using the structural principles of living organisms for creating new techniques, into the new direction of neurobiology, connected with the study and simulation of the functions of the central nervous system.

The fundamental goal of neurobiology is, by using our knowledge of the nervous system, to create technical devices capable of behaving like the brain.

The solution to this problem can be approached in two ways: the first is connected with the technical realization of certain characteristics of the nervous system in general and of the brain in particular; the second is connected with the description of the processes going on in the brain on the information level [1, 2].

The first way involves the following:

- 1) Investigation of the characteristics of the neuron and the neuron assemblies;
- 2) Stimulating the individual functions of the brain -- the memory, recognition of forms, the formation of concepts, the adoption of decisions, etc.;
- 3) Investigating the interactions of individual parts of the brain in the formation of behavior;
- 4) The design of technical systems containing the living organism.

Here, investigations are possible on various levels, beginning with the

USSR

UDC 51:155.001.57:612.82

MEYTUS, V. Yu.

"The Problem of Description of the Behavior of the Organism in an External Medium"

Kibernet. i Vychisl. Tekhn. Resp. Mezhd. Sb. [Cybernetics and Computer Engineering, Republic Interdepartmental Collection], No 4, 1970, pp 79-85, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V664 by the author).

Translation: A structural plan of an organism functioning in an external medium is studied. A general statement of the problem is formulated. A simple example is presented. 12 Biblio. Refs.

USSR

UDC 51:155.001.57:681.3.06.001

MEYTUS, V. Yu.

"Structure and Modeling of Robots"

Kibernet. i Vychisl. Tekhn. Resp. Mezhd. Sb. [Cybernetics and Computer Engineering, Republic Interdepartmental Collection], No 7, 1970, pp 41-50, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V642 by the author).

Translation: The problem of structural description of robots and their computerized modeling is studied. Depending on the principles upon which the description is based, various algorithms can be used in the algorithmic section of a robot. Problems are discussed, related to the formalization of the limitations which the behavior of the robot must satisfy. The mathematical formulation of these limitations is fixed as a pay function. Basic tasks related to the trends in robot theory studied are suggested.

USSR

UDC: 51.801

MEYTIUS, V. Yu.

"Some Properties of Synchronized Grammars"

V sb. Teor. kibernetika. Vyp. 1 (Theoretical Cybernetics--collection of works, No 1), Kiev, 1970, pp 30-43 (from RZh-Kibernetika, No 1, Jan 71, Abstract No 1V669)

Translation: The author considers synchronized grammars, which are a generalization of the multitype grammars of Ya. Kral (RZhMat, 1969, 8y485). It is assumed that an ordered set of contextless rules may be applied to the word z if a certain condition is satisfied for z which is formulated with the aid of the logical connectors $\&$, $\vee$, $\neg$, and some connector of the concatenation type. These connectors are applied to elementary predicates of the form "the contextless rule r is applied to word z ." The definition of direct derivability is not given with complete clarity since it is not clear what sequence of rules should be used if a condition such as $\alpha(z)\&\beta(z)$ is satisfied. The author asserts that synchronized languages form AFL's, but there are gaps in the proof. E. Stotskiy.

1/1

UDC 8.74

USSR

VEL'BITSKIY, I. V., MEYTUS, V. YU., YUSHCHENKO, YE. L.

"M-Formalisms and their Application to Operation Systems"

V sb. Teoriya yazykov i metody postroyeniya sistem programmir. (Language Theory and Methods of Constructing Programming Systems---collection of works), Kiev-Alushta, 1972, pp 22-30 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V427)

Translation: A study was made of the problem of applying the formalisms of M-systems to describe operation systems. The M-systems are a method of giving a representation of a language in another combining certain properties of grammars and the converters. The arbitrary M-system which converts the language L_Σ into the language L_Δ solves the following problems: first, it recognizes that an arbitrary word of the input belongs to the language L_Σ ; secondly, during the recognition process it carries out a syntactic analysis of this word; thirdly, at the output it constructs the word in the language L_Δ into which the input word had to be transmitted for representation defined by the M-system. In the general case the M-system comprises p input tapes on which the word in the L_Σ language is written, q output tapes on which the word in the L_Δ language is written during the operating process and a set of tagged rules. It is noted that the introduction of several input tapes arises from the fact that in many

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USSR

VEL'BITSKIY, I. V., et al., Teoriya yazykov i metody postroyeniya sistem program-
mir., Kiev-Alushta, 1972, pp 22-30

practical applications it is convenient to give the input information in different ways -- input it at each step in parallel and not in series, for example, the program and the initial data for the input information and the control input, and so on. The same thing also pertains to several output tapes on which the pattern of the word is written from L_{Σ} . Each rule includes the following elements: 1) the tag for the given rule; 2) instructions regarding operations of reading from the input tapes and writing on the output tape; 3) instructions regarding operations with the internal memory elements of the M-system; 4) the set of tags of admissible rule-receivers. Various types of memories (for example, cartridge, counter, reel, and others) with admissible operations on them and conditions of their executionability can be used as the internal memory elements. The bibliography has 12 entries.

2/2

1/2 026 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--A CHANGE OF ACID BASE BALANCE AND OF ELECTROLYTIC COMPOSITION OF
THE CEREBROSPINAL FLUID AND BLOOD IN PRIMARY REACTION IN RESPONSE TO
AUTHOR--(04)--IVANOV, B.M., KUZOVKOV, A.G., KUZMINA, F.V., MEYUNAX, I.M.

COUNTRY OF INFO--USSR

SOURCE--PATOLOGICHESKAYA FIZIOLOGIYA I EKSPERIMENTAL'NAYA TERAPIYA, 1970,
VOL 14, NR 3, PP 42-48
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TRAUMATIC SHOCK, CEREBROSPINAL FLUID, BLOOD, ACIDOSIS,
ALKALOSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3002/0625

STEP NO--UR/0396/70/014/001/0042/0048

CIRC ACCESSION NO--AP0128166

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13NOV70

2/2 026

CIRC ACCESSION NO--AP0128166

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

ABSTRACT. IT WAS SHOWN IN EXPERIMENTS ON RABBITS WITH THE USE OF THE METHODS OF FLAME PHOTOMETRY AND MICROASTHRUP THAT TRAUMATIC SHOCK INDUCED A MARKED METABOLIC ACIDOSIS IN THE BLOOD; THE DEGREE OF THIS ACIDOSIS DEPENDED ON THE PHASE OF SHOCK. AN ELEVATION OF BLOOD AND CEREBROSPINAL FLUID POTASSIUM CONTENT WAS SEEN DURING THE ERECTILE AND TORPID PHASES OF SHOCK. AN INCREASE OF SODIUM CONTENT IN THE CEREBROSPINAL FLUID AND ITS FALL IN THE ARTERIAL BLOOD WAS NOTED DURING THE TORPID PHASE OF SHOCK. THERE IS AN INCREASE OF MIXED RESPIRATORY METABOLIC ALKALOSIS IN THE CEREBROSPINAL FLUID DEPENDING ON THE PHASE OF SHOCK. DURING THE ERECTILE PHASE ALKALOSIS IS MAINTAINED ON ACCOUNT OF INTENSIFIED ACCESS OF CARBON DIOXIDE FROM THE CEREBROSPINAL FLUID SPACES INTO THE BLOOD; DURING THE TORPID PHASE OF ALKALOSIS IN THE CEREBROSPINAL FLUID IS INTENSIFIED AS A RESULT OF INCREASED PERMEABILITY OF THE HEMATO ENCEPHALIC BARRIER AND A FALL OF CARBON DIOXIDE TENSION IN THE BRAIN SYSTEM. FACILITY: KAFEDRA NORMAL'NOY FIZIOLOGII VOYENNO-POLEVNOY KHIRURGII VOYENNO-MEDITSINSKOY AKADEMII, LENINGRAD.

UNCLASSIFIED

18(5)

SOV/19-59-8-188/159

AUTHORS:

Matveyenko, N.V., Revazashvili, M.G., Folyakov, A.N.,
Gorodetskiy, M.I., Meyyerovich, V.B.

TITLE:

A Method of Preparing a Charge for the Reverberatory
Smelting of Copper Concentrates

PERIODICAL:

Byulleten' izobreteniy, 1959, Nr 8, p 59 (USSR)

ABSTRACT:

Class 40a, 28. Nr 119343 (613114 of 1 December
1958). To increase the output of the furnaces and
reduce the fuel consumption and the amount of copper
in the slag, the pulverized fluxes are added to the
condensed concentrated pulp until the filtering
operations begin.

Card 1/1

17(8)

SOV/19-59-11-119/277

AUTHOR: Meyershteyn, A.I.

TITLE: An Apparatus for Flickering Stereorontgenoscopy

PERIODICAL: Byulleten' izobreteniy, 1959, Nr 11, p 31 (USSR)

ABSTRACT: Class 30a, 6⁰¹. Nr 120293 (365380/51 of 23 October 1948). Submitted to the Administration of Inventions and Discoveries of the USSR Gosstekhnika. 1) To eliminate the distortion of the stereopictures caused by the duration of the afterglow of the screen of the apparatus, the screen moves in phase with the pulses of the roentgen radiation, so that one half of the screen is alternately radiated while the other half is shaded by a stationary screen. 2) To obtain stereopictures on the stationary screen, the apparatus is provided with a device for brightening the screen with infrared rays which quench the pre-existing picture prior to the appearance of the following one.

Card 1/1

1/2 028 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--KINETIC CHANGES IN THE NRNA OF THE HIPPOCAMPUS, THE CEREBELLUM AND
THE CEREBRAL CORTEX OF RATS IN THE PROCESS OF LEARNING -U-
AUTHOR-(04)-TIMKIN, V.N., KUZMIN, S.M., MEZEBTSEVM, A.N., DANILOVA, R.A.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 1, PP
185-190
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HIPPOCAMPUS, CEREBELLUM, CEREBRAL CORTEX, RAT, RNA,
PSYCHOLOGIC CONDITIONING, LEARNING MECHANISM, CONDITIONED REFLEX

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1982/0734

STEP NO--UR/0247770/020/001/0135/0190

CIRC ACCESSION NO--AP0052187

UNCLASSIFIED

2/2 028

UNCLASSIFIED

PROCESSING DATE--10SEP70

CIRC ACCESSION NO--AP0052187

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE PROCESS OF SIMPLE INSTRUMENTAL CONDITIONING IN RATS THE RNA CONTENT IN THE NUCLEI OF THE CORTEX, THE HIPPOCAMPUS AND THE CEREBELLUM AT FIRST INCREASES, PASSES A MAXIMUM, AND BY THE END OF LEARNING DROPS TO NORMAL. THE MAXIMUM OF RNA CONTENT CORRESPONDS TO THE BEGINNING OF THE CONDITIONED REFLEX STABILIZATION. AFTER THE END OF LEARNING, THE RNA CONTENT IN THE CORTEX AND THE HIPPOCAMPUS SLOWLY GOES UP, REACHING 30 TO 50 PERCENT IN 24 HOURS, AND DIMINISHES TO NORMAL IN TWO OR THREE DAYS. NO SUCH CHANGES ARE OBSERVED IN THE CEREBELLUM. IN ANIMALS WHICH RECEIVED SIMULTANEOUSLY WITH THE EXPERIMENTAL ONES, SIGNAL AND ALIMENTARY STIMULI REGARDLESS OF THE MOTOR REACTIONS, SIMILAR RNA CHANGES OCCURRED IN THE PROCESS OF LEARNING; BUT THEIR DEPENDENCE ON TIME DISPLAYED A LESS PRONOUNCED MAXIMUM AND A SLOWER DROP BY THE END OF LEARNING. APART FROM THIS, IN THE LATTER CASE THE RNA CONTENT DOES NOT INCREASE AFTER THE ELABORATION OF THE CONDITIONED REFLEX. THESE DIFFERENCES ARE APPARENTLY LINKED WITH THE PECULIARITIES OF THE NERVE CELL ACTIVITIES DURING LEARNING AND STIMULATION.

UNCLASSIFIED

1/2 032 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--METABOLISM OF THE NUCLEAR RNA OF THE CEREBRAL CORTEX IN THE PROCESS
OF MOTOR ALIMENTARY CONDITIONING -U-
AUTHOR-(04)-KUZMIN, S.M., TIMKIN, V.N., MEZENTSEV, A.N., VASILYEV, O.P.
COUNTRY OF INFO--USSR M
SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 3, PP
474-477
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, BEHAVIORAL AND SOCIAL
SCIENCES
TOPIC TAGS--CONDITIONED REFLEX, BRAIN, NERVE TISSUE, RNA, LEARNING THEORY,
METABOLISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0385

STEP NO--UR/0247770/020/003/0474/0477

CIRC ACCESSION NO--AP0121072

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23 OCT 70

2/2 032

CIRC ACCESSION NO--AP0121072

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT HAS BEEN FOUND THAT IN THE PROCESS OF ELABORATION OF A SIMPLE FOOD PROCURING CONDITIONED REFLEX IN RATS, THE METABOLISM OF THE NUCLEAR RNA OF THE CORTICAL NERVE CELLS INCREASES, PASSES THROUGH A MAXIMUM AND BY THE END OF LEARNING REVERTS TO THE INITIAL VALUE. WITHIN THE LIMITS OF EXPERIMENTAL ERROR, A LINEAR CORRELATION IS RECORDED BETWEEN THE INCREMENT OF THE ANIMAL'S BEHAVIOUR ENTROPY IN THE PROCESS OF LEARNING AND AN ENHANCED NUCLEAR RNA METABOLISM.

UNCLASSIFIED

M
USSR

UDC 612.833.81

TIMKIN, V. N., KUZ'MIN, S. M., MEZENTSEV, A. N., and DANILOVA, R. A.

"Kinetic Changes in Nuclear RNA of the Hippocampus, Cerebellum, and Cerebral Cortex in Rats in the Process of Learning"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti, No 1, 1973, pp 165-190

Abstract: The RNA content of the nuclei of nerve cells in the cortex, cerebellum, and hippocampus of Wistar rats increase shortly after the beginning of formation of a food conditioned reflex, reaching a peak in 20-30 min and returning to normal in about 40 min. The peak coincided with the beginning of stabilization of the reflex. After the reflex was formed, the rRNA content in the cortex and hippocampus slowly increased, returning to normal after 2 or 3 days. This did not occur in the cerebellum. Control rats (animals receiving signal and food stimulation unrelated to motor responses) also exhibited an increase in the RNA content of the neuron nuclei, but the time dependence had a less pronounced peak and a slower decrease by the end of the "learning" period. Possible causes and mechanisms of the phenomena observed are discussed.

1/1

Acc. Nr: **AP0051945**

Ref. Code: **VR 0297**

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 4, pp 297-300

CHEMICAL STUDIES ON SIBIROMYCIN, AN ANTITUMOR ANTIBIOTIC

M. G. Brazhnikova, I. N. Kousharova, N. V. Konstantinova, A. S. Mezentsen,
V. V. Proshlyakova, I. B. Tolstykh

Institute for New Antibiotics of USSR Academy of Medical Sciences, Moscow

A new antibiotic named sibiromycin was isolated. It has the following empirical formula: $C_{21-23}H_{33-35}N_3O_{6-7}$, $\lambda_{\text{max}}^{CH_3OH}$, 230 and 310 m μ . Sibiromycin possesses amphoteric properties, pKa 7.5 (in 75 per cent ethanol). It contains 1 amine, 3 C-methyl and 2-acetylating groups. A crystalline sulfur containing derivative with a composition of $C_{21-23}H_{33-35}N_3SO_{6-9}$ and a melting point of 203° was prepared. The ultraviolet spectrum is identical to that of an antibiotic, $[\alpha]_D^{20}$ 100 $\pm$ 2° (c. 0.15, DMPHA).

41

REEL/FRA
19820428

2.4c

1/2 009 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--STUDIES ON CARBOHYDRATE COMPOSITION OF RUBOMYCIN B -U-
AUTHOR--(04)-FEDOKOVA, G.B., BRAZHNIKOVA, M.G., MEZENTSEV, 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/FRA--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

UDC 581.15:635.21

MEZENTSEV, A. V., Scientific Research Institute of Potato Growing

"Assessment of the Relative Biological Effectiveness of Fast Electrons and X-Rays After Irradiation of Potato Seeds"

Kiev, Tsitologiya i Genetika, No 5, 1971, pp 399-402

Abstract: Potato seeds from the self-pollinating Tsentifoliya variety were exposed to ^{60}Co gamma rays at 10, 10, and 30 kr and dose rates of 50, 500, and 5,000 r/min and/or to fast 1 Mev electrons at the same doses and rate of 5,000 r/min. The germination and survival rates of the seeds decreased with increasing intensity of gamma irradiation. However, the results of both types of irradiation were close when the same dose rate (5,000 r/min) was used. The number of induced chromosomal aberrations following gamma irradiation increased with increasing dose rate. At the rate of 5,000 r/min there were $1\frac{1}{2}$ times and twice as many aberrations as after dose rates of 500 and 50 r/min, respectively. The relative biological effectiveness of the 1 Mev electrons was 1.

1/1

USSR

UDC 681.326.33:621.382.323-416

BAYKOV, V. D., and MEZENTSEV, A. V.

"Registers and Counters Made From Metal-Dielectric-Semiconductor Transistors"

Moscow, V sb. Mikroelektronika. Vyp. 1 (Microelectronics, No 1 -- Collection of Works), Atomizdat, 1971, pp 102-116 (from Referativnyy Zhurnal -- Avtomatika, Telemekhanika, i Vychislitel'naya Tekhnika, No 8, 1971, Abstract No 8B157 by B. K.)

Translation: Design variations for registers and counters which possess a diverse functional complexity and which are installed in chassis having 14 outputs are considered. Included are those designs for static registers made from MDS (metal-dielectric-semiconductor) transistors of a single type of conductivity and of mutually supplementing types, two-step and four-step dynamic registers, and decade and reversible counters. The special features of each of these designs is pointed out, and time diagrams which clarify their operation are given. A composite table is presented and in it the different variants of the designs are compared with respect to their functional complexity, number of bit positions, and efficient use of the area of the semiconductor plate. It is noted that the basic method of constructing registers and counters made from MDS transistors is the use of dual flip-flops and dynamic memories. 9 illustrations, 7 titles in bibliography.

1/1

1/2 012 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--PHYSIOLOGICAL ROLE OF THE LUMINESCENCE OF WOOL FAT -U-
AUTHOR--MEZENTSEV, E.G. *m*
COUNTRY OF INFO--USSR
SOURCE--DOKL. VSES. AKADE. SEL'SKOKHOZ, NAUK 1970, (1) 33-6
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--FAT, LUMINESCENCE, LIGHT ABSORPTION, GALVANOMETER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1980/0029 STEP NO--JR/3275/70/000/001/0033/0036
CIAO ACCESSION NO--AT0048327
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13SEP70

2/2 012

CIRC ACCESSION NO--AT0048327
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. VALUES OF THE LIGHT ABSORPTION WERE CALCD. AS DIFFERENCES BETWEEN DATA MEASURED BY A GALVANOMETER COUPLED TO A DETECTOR REGISTERING THE LIGHT PASSING THROUGH SHEEP WOOL SAMPLES PRIOR TO AND AFTER FAT REMOVAL. RELATIVE ABSORPTIONS, IN PERCENTAGE WITH RESPECT TO FAT CONCNS. IN WOOL WERE AS FOLLOWS (IN THE CASE OF YELLOW RED, YELLOW, LIGHT YELLOW, WHITE GREEN, AND WHITE FATS): (WITH VIOLET LIGHT) 1.25, 1.50, 1.81, 1.56, 2.26; (WITH GREEN LIGHT) 0.82, 1.29, 1.31, 1.22, 1.79; (WITH RED LIGHT) 0.52, 1.08, 1.09, 1.04, 1.44. FOR THE SAME KINDS OF FAT, THE FOLLOWING PORTIONS OF LIGHT ENERGY (IN PERCENTAGE) PASSED THROUGH VIOLET FILTER, GREEN FILTER, RED FILTER, VIOLET FILTER PLUS WOOL SAMPLE, GREEN FILTER PLUS WOOL SAMPLE, RED FILTER PLUS WOOL SAMPLE: 8.78, 8.60, 9.72, 9.80, 10.12; 47.80, 46.24, 48.44, 49.89, 49.88; 43.42, 45.16, 41.84, 40.36, 40.00; 4.22, 3.28, 6.26, 6.74, 6.38; 47.58, 45.58, 49.36, 50.20, 50.70; 43.20, 51.14, 44.38, 43.09, 42.42. A STRONG DEPRESSION OF THE LUMINESCENCE OCCURRING AFTER REMOVING FAT SUGGESTED THAT FAT IS RESPONSIBLE FOR THE LUMINESCENCE. PROTEINS IN THE WOOL SHOWED NO LUMINESCENCE. A DISPERSION ANAL. SHOWED THAT THE LUMINESCENCE DEPENDS ON FAT COLOR AND NOT ON BREED OF SHEEP. THE HIGHEST LUMINESCENCE WAS OBSD. IN YELLOW RED AND YELLOW FATS. IN THE CASE OF A STRONG ABSORPTION, VERY SIGNIFICANT DIFFERENCES OCCUR BETWEEN LIGHT AND DARK FATS. DIFFERENCES IN LIGHT ABSORPTION PLAY AN IMPORTANT ROLE FROM THE STANDPOINT OF THERMAL EQUIL.

UNCLASSIFIED

1/2 010
UNCLASSIFIED
PROCESSING DATE--11 DEC 70
TITLE--THE UNIVERSAL LONGITUDINAL DIFFERENTIAL PROTECTION OF SHORT
OVERHEAD LINES -U-
AUTHOR--(04)--MEZHANS, L.V., OREKHOV, L.A., FABRIKANT, V.I., SMIRNOVA, T.V.
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, ELEKTRICHESTVO, NO 3, 1970, PP 22-26
DATE PUBLISHED--70
SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.
TOPIC TAGS--TRANSMISSION LINE, OVERVOLTAGE, CIRCUIT BREAKER, PROTECTIVE
EQUIPMENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/1198
STEP NO--UR/0105/70/000/003/0022/0026
CIRC ACCESSION NO--AP0125186
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--110670

2/2 C10

CIRC ACCESSION NO--AP0123166
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. A DESCRIPTION AND DIAGRAMS ARE GIVEN OF LONGITUDINAL DIFFERENTIAL PROTECTION SUITABLE BOTH FOR TWO TERMINAL OVERHEAD LINES (OL) AND FOR OL WITH BRANCH LINES. THE PROTECTION IS ACCOMPLISHED BY A SCHEME WITH CIRCULATING CURRENTS AND HAS LINEAR CHARACTERISTICS AT EXTERNAL SHORT CIRCUITS. UPON SHORT CIRCUITS IN THE ZONE THE MAXIMUM VOLTAGE ON AUXILIARY CONDUCTORS IS LIMITED. RESTRAINT, INTRODUCED INTO PROTECTION SCHEMES, IS PROPORTIONAL TO THE CURRENT OF ITS TERMINAL ON OL. TO PREVENT SPURIOUS OPERATION IN THE CASE WHEN THE CURRENT AT ONE TERMINAL OF THE OL IS LOW OR EQUALS ZERO, BLOCKING IS APPLIED, ACTING THROUGH A DEVICE OF THE GOOD WORKING ORDER CONTROL OF THE AUXILIARY CONDUCTORS.

UNCLASSIFIED

172 013
TITLE--HEREDITY AND ANOMALIES OF THE WEIGHTBEARING LOCOMOTOR APPARATUS -U-
AUTHOR--MEZHENINA, YE.P.
COUNTRY OF INFO--USSR
SOURCE--ORTOPEDIYA, TRAVMATOLOGIYA I PROTEXIROVANIYE, 1970, NR 4, P 14-18
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BONE DISEASE, HEREDITARY DISEASE, ETIOLOGY, CHROMOSOME, HUMAN GENETICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1990/0592

STEP NO--UR/9115/70/000/004/0014/0018

CIRC ACCESSION NO--AP0103807

UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0108807

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CHARACTERISTIC OF BONE ABNORMALITIES IN SOME CHROMOSOMAL AND GENIC DISEASES IS SET FORTH IN THE ARTICLE, AND THE ROLE OF CYTOGENETIC INVESTIGATIONS IN THE ELUCIDATION OF ETIOLOGY OF THE HEREDITARY DISEASES IS STRESSED. DATA ARE PRESENTED ON THE WORK AND PROBLEMS OF MEDICO GENETIC CONSULTATION, ORGANIZED IN 1968 AT THE KIEV INSTITUTE OF ORTHOPAEDICS. THE LEADING PROBLEMS OF MEDICO GENETIC CONSULTATION ARE: REGISTRATION OF CONGENITAL HEREDITARY AND NONHERITABLE DISEASES OF THE WEIGHTBEARING LOCOMOTOR APPARATUS, ELUCIDATION OF THE GENUINE CAUSE OF DISEASE BY MEANS OF GENEALOGICAL ANALYSIS, DETERMINATION OF DEGREE OF PROBABILITY OF BIRTH OF CHILDREN WITH MALDEVELOPMENTS, EARLY DIAGNOSIS AND TREATMENT OF CONGENITAL DISEASES OF THE WEIGHTBEARING LOCOMOTOR APPARATUS. MEASURES OF PROPHYLAXIS ARE RECOMMENDED DIRECTED AT ELIMINATION OF NOXIOUS EFFECTS OF ENVIRONMENTAL FACTORS ON THE GRAVID WOMAN AND DEVELOPING NEW ORGANISM.

FACILITY: KIEV INSTITUTA ORTOPEDIJ.

UNCLASSIFIED

USSR

UDC 621.3.032.3

ZUBENKO, YE. I., MEZHERITSKIY, A. M., and VDOVENKO, V. V.

"Investigation of the Relationship Between the Granulometric Composition of a Luminophore and the Starting Dicalcium Phosphate"

V sb. Tekh. progress is dostizh. nauki v khim. prom-sti (Technical Progress and Achievements of Science in Chemical Industry -- collection of works), Barnaul, 1973, pp 23-25 (from RZh-Khimiya, No 19, Oct 73, Abstract No 19L143)

Translation: The photoluminescent material LG-1K with the composition $3\text{Ca}_3(\text{FO}_4)_2 \cdot \text{Ca}(\text{F}, \text{Cl})_2 (\text{Sb}, \text{Mn})$ used in low pressure luminescent lamps with 70 lm/vt light yield can be obtained by calcination of a batch consisting of CaHPO_4 , CaCO_3 , CaF_2 , Sb_2O_3 , MnCl_2 , CdCO_3 at 1100-1200°. To obtain this luminescent material with a given granulometri composition it is necessary to use CaHPO_4 with the desired granulation. The optimal granulometric composition of CaHPO_4 producing the particle content in the luminescent material $\gg 14$ ak 15-18%, is in the range of 6-14 ak - 60-70%, $\gg 14$ -8-12%.

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- 34 -

1/2 019

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--NEUTRON ACTIVATION DETERMINATION OF MACRO AMOUNTS OF TUNGSTEN BY
MEANS OF AMPULE SOURCES -U-

AUTHOR--(02)--MEZHIBORSKAYA, KH.B., KRASIKOVA, M.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. ANAL. KHIM.; 25: 581-3 (MAR 1970)

DATE PUBLISHED--MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--TUNGSTEN, TRACE ANALYSIS, NEUTRON ACTIVATION ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/1048

STEP NO--UR/0075/70/025/000/0581/0583

CIRC ACCESSION NO--AP0123041

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 019

CIRC ACCESSION NO--AP0123041

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. A NEUTRON ACTIVATION METHOD IS SUGGESTED FOR DETERMINING TUNGSTEN IN MACROCONCENTRATIONS BY MEANS OF AN AMPULE SOURCE. AT THE INTENSITY OF THE SOURCE OF ABOUT N TIMES 10 PRIME7 NEUTRON-SEC THE DETERMINABLE CONCENTRATIONS ARE WITHIN THE RANGE OF 0.5 TO 100PERCENT ABSOLUTE, THE ACCURACY IS 10 TO 3PERCENT. THE IRRADIATION OF THE SAMPLE PROCEEDS OVER 1 TO 2 DAYS, THE MEASUREMENTS TAKE 10 TO 30 MIN.

UNCLASSIFIED

1/2 023

UNCLASSIFIED

PROCESSING DATE--0901170

TITLE--STEREOSPECIFIC MECHANISM OF OLEFIN POLYMERIZATION BY HETEROGENEUS
COMPLEX CATALYSTS. I. DEGREE OF THE CATALYST SURFACE FILLING WITH ACTIVE
AUTHOR--(C3)--KISSIN, YU.V., KESHKOVSKIY, S.M., CHIRKOV, N.M.

COUNTRY OF INFO--USSR

SOURCE--EUR. POLYM. J. 1970, 6(2), 267-79

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYMERIZATION, CATALYST ACTIVITY, ORGANOMETALLIC COMPOUND,
PROPYLENE, TITANIUM CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1850

STEP NO--UK/0000/70/006/002/0267/0077

CIRC ACCESSION NO--AP0112834

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--0700170

CIRC ACCESSION NO--AP0112834

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

ABSTRACT. THE PROBLEM OF THE DEGREE OF FILLING OF THE CATALYST SURFACE BY ACTIVE SITES IN THE CASE OF HETEROGENEOUS ZIEGLER NATTA CATALYST (A-TICL SUB3-ALET SUB3) IS EXAMD. THE KINETIC DATA FOR PROPYLENE POLYM. ON THE A-TICL SUB3-ALET SUB3 SYSTEM IN THE PRESENCE OF MECH AND WATER SHOW THAT THE CONC. OF ACTIVE SITES ON THE CATALYST SURFACE IS SIMILIAR TO 3.10 PRIME18 SITES-M PRIME2. THIS VALUE CORRESPONDS TO SIMILIAR TO 35 A PRIME2 PER ACTIVE SITE AND LEADS TO THE CONCLUSION THAT ACTIVE SITES COVER PRACTICALLY ALL OF THE CATALYST SURFACE AND CONSEQUENTLY ARE PREDOMINANTLY LOCATED ON THE BASAL PLANES OF THE TICL SUB3 CRYSTALS. SOME ASPECTS OF THE REACTIONS BETWEEN THE CATALYST COMPONENTS AND THE NATURE OF THE ACTIVE SITE ARE DISCUSSED.

FACILITY: POLYM. DEP., INST. CHEM. PHYS.,

MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 629.7.034.3:533.697.4

KUDRYAVTSEVA, L. I., MEZHNEV, I. I., PONOMAREV, S. P., YAKUSHEVA, V. L.

"Experimental Study of Axisymmetrical Profiled Supersonic Nozzles with Low Re Numbers"

Uch. Zap. Tsentr. Aerogidrodinam. In-ta [Scientific Writings of Central Institute of Aerodynamics and Hydrodynamics], 1973, 4, No 3, pp 123-126
(Translated from Referativnyy Zhurnal Aviatsionnyye i Raketnyye Dvigateli, No 11, 1973, Abstract No 11.34.85, from the resume)

Translation: Results are presented from experimental study of the flow into axisymmetrical profiled supersonic nozzles, designed considering the influence of viscosity on the production of a flow with $M=6$ and various design values of wall temperature. The Re_L number for both nozzles is $9.3 \cdot 10^3$, the thickness of extraction of the laminar boundary layer in the output cross section of the nozzle is comparable to the radius of the isentropic contour or even greater than it. It is shown that consideration of the influence of the viscosity, consisting in addition of the thickness of extraction of the boundary layer to the radius of the isentropic contour, leads to satisfactory results: in spite of the small dimensions of the nonviscous core, the M number in it, within the limits of the output characteristic rhombus, is practically constant and equal to its design value.

6 Figures; 3 Biblio. Refs.

1/1

AA0044791

MEZHROV

10/12

Soviet Inventions Illustrated, Section II Electrical, Derwent,

2/70

243222 SUPERSONIC DIFFUSER FOR A WIND TUNNEL provides more versatility by making use of interchangeable revolving sections formed in a drum and cooled by a common supply of water. In the diagram, the diffuser consists of inlet and outlet portions 1,2, with the centre sections 3 built into drum 4.

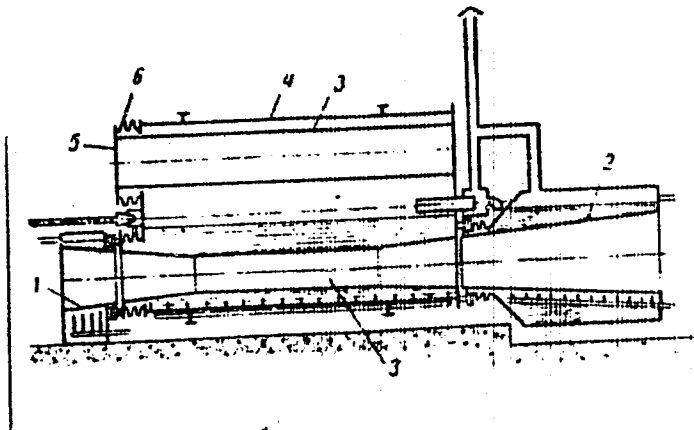
and forming the working tract. To allow for thermal deformation, the section 3 is fastened to the front end 5 of drum 4 with the bellows connector 6. Each section 3, in the working position, is sealed to parts 1,2 by means of an annular plunger on each of its ends, provided with a rubber O-ring packing and forced against the mating end surface of 1 or 2 by a diaphragm in an annular intensifier chamber fed with compressed air. 18.12.67 as 1204562/40-23.L.N.KOPP at al.(24.9.69) Bul 16/5.5.69. Class 42k. Int.Cl.G Olm.

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AA0044791



AUTHORS: Kopp, L. N.; Kuleshov, V. I.; Mezhirov, I. I.;
Safronov, L. A.

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19771614

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USSR

UDC: 533.697

MEZHIROV, I. I., TIMOFEYEV, T. A., CHISTOV, Yu. I.

"Experimental Study of Axisymmetric Profiled Hypersonic Nozzles"

Uch. zap. Tsentr. aerogidrodinam. in-ta (Scientific Notes of Central Aerohydrodynamics Institute), 1971, 2, No 6, pp 1-8 (from RZh-Mekhanika, No 5, May 72, Abstract No 5B444)

Translation: The paper presents the results of an experimental study of three axisymmetric profiled hypersonic nozzles designed with regard to the influence of viscosity on the production of uniform airflow with Mach numbers of $M=10$, 12 and 14. The studies were done under conditions close to specifications, and also at Reynolds numbers greater than specifications. Satisfactory Mach number distributions are found in all investigated nozzles (under rated conditions the Mach number nonuniformity was within limits of $\pm 1-2\%$). Bibliography of 5 titles. Resumé.

1/1

USSR

UDC 621.4/.6:533.6

MEZHIROV, I. I.

"On the Mixing of Nonisothermal Gas in a Cylindrical Tube"

Uch. zap. Tsentr. aero-gidrodinam. in-ta (Scientific Notes of the Central Aerohydrodynamics Institute), 1970, Vol. 1, No. 6, pp 113-116 (from EZh-Mekhanika, No 12, Dec 71, Abstract No 12B633)

Translation: The steady-state flow of an ideal gas in a cylindrical tube is discussed. It is assumed that there is nonuniformity of the retardation temperature and other parameters of the gas such as total pressure and Mach number at the input to the tube, and that all parameters are constant over the cross section of the tube at the output as a result of complete mixing. It is further assumed that the walls of the tube are adiabatic and gas friction is absent at the wall. It is shown from analysis of the equations for the conservation of mass, energy, and momentum between the input and output cross sections of the tube that the presence of nonuniformity in the retardation temperature of the input to the tube always leads to additional losses in total pressure as compared with the "isothermal" case so that balancing of the temperature nonuniformity is equivalent to supplying a certain momentum to the flowing gas.

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USSR

MEZHIROV, I. I.,

"The Influence of Unevenness of Flow on Total Momentum"

Uch. Zar. Tsentr. Aerogidrodinam., In-ta., [Scientific Writings of the Central Aerohydrodynamic Institute], 1971, 2, No 3, pp 81-86. (Translated from Referativnyy Zhurnal Mekhanika, No 1, 1972, Abstract No 1B405 by I. M. Baskin).

Translation: The influence of unevenness of the braking temperature and corrected velocity in the cross-section of a reactive nozzle on total momentum is studied. It is demonstrated that unevenness of deceleration temperature and corrected velocity results in slight losses of total momentum of the gas stream. For example, in the case of parabolic distribution of temperature through the radius of the cross-section of an axisymmetrical nozzle, when the deceleration temperature on the axis is double the temperature at the wall, the loss of momentum is about 0.4% at $\lambda = \text{const}$ and $P_0 = \text{const}$, where λ is the corrected velocity, P_0 is the total pressure in the output cross-section of the reactive nozzle. The problem of determination of the completeness factor of combustion by the gas dynamic method is also studied when the deceleration temperature is uneven.

It is concluded that the combustion completeness factor, determined from the mean deceleration temperature, characterizes the loss of momentum related

1/2

Acc. Nr: **AP0047251**

Ref. Code:

UR 0606

PRIMARY SOURCE: **Urologiya i Nefrologiya, 1970, Nr 1**

PP 56-59

PN

THE RESISTANCE OF GONOCOCCI TO PENICILLIN

A. M. Golosouker, K. K. Soina, Kh. A. Alimov, S. A. Mezhlumov

Summary

The authors studied the resistance of 52 strains of gonococci obtained from 44 patients suffering from various forms of gonorrhea. The highest resistance (to 1 to 2 Units of penicillin per 1 ml of the medium) was noted in the strains of gonococci isolated from the patients suffering from chronic gonorrheal urethritis, refractory to penicillin therapy.

Penicillin resistance of gonococci in 5 patients who failed to be cured with bicillin-6 (total dose 1,200,000 Units) proved to be from 2 to 10 times greater than before administration of bicillin.

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USSR

UDC: 577.1:615.7/9

MEZHLUMYAN, L. M. and VARTAZARYAN, N. D.

"Activity of Alkaline Phosphatase of Liver and Blood Serum After Treatment with Dichlorobutene"

Zh. eksperim. i klinich. med. (Journal of Experimental and Clinical Medicine), Vol 11, No 1, 1971, pp 27-33 (from Referativnyy Zhurnal -- Biologicheskaya Khimiya, No 15, 10 Aug 71, Abstract No 15F1710)

Translation: Inhalational intoxication of rats with dichlorobutene in concentrations from 0.1 to 3 mg/l of air (once or daily for 45 days or 5 months) induced increased activity of alkaline phosphatase in the liver and blood serum. The degree and nature of these changes are directly related to concentration of the poison and the exposure time.

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1/2 011
TITLE--ETHYL VINYL ETHER -U-

UNCLASSIFIED

PROCESSING DATE--27NOV70

AUTHOR--(03)-GUREVICH, V.R., BOGOD, I.A., MEZHLUMYAN, L.YE.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 263,594

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--10FEB70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ETHYL ETHER, VINYL COMPOUND, CHEMICAL PATENT, ETHANOL,
CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1593

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0135234

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AA0135234

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ETHYL VINYL ETHER IS PREPD. BY
HEATING ETOH AT 150-350DEGREES IN THE PRESENCE OF A CATALYST.

UNCLASSIFIED

USSR

MEZHLUMYAN, R. A., SOLOMONYAN, R. SH., Kirovakan Branch of the Yerevan Poly-
technical Institute imeni Karl Marx

"A Method for Determining the Unsteady Downwash Behind a Wing of Finite
Span in Supersonic Motion"

Yerevan, Izvestiya Akademii Nauk Armyanskoy SSR -- Mekhanika, No 6, 1970,
pp 50-53

Abstract: In the paper is presented a method for determining the unsteady downwash behind a wing of finite span in the case of a supersonic flow, when the wing, in addition to the basic translational motion, also performs small supplemental oscillations according a harmonic law. By means of expanding the stream into an exponential series on the basis of powers of the Strouhal number, two-dimensional integral equations of the Abel type are obtained for coefficients of expansion, the right-hand parts of which have singularities at the ends of the integration intervals. Formulas for solving these equations are given. Two figures, 7 bibliographic entries.

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- 5 -

USSR

MEZHOV, A. YE.

"Quality Criteria of the Operation of a Tracking System with Great Initial Mismatch Considering the Influence of Noise"

Nauch. Tr. In-t Mekh. Mosk. Un-ta [Scientific Works of the Institute of Mechanics, Moscow University], 1973, Vol 23, March, pp 235-247
(Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V212)

Translation: The behavior of a nonlinear tracking system designed to track a light spot and subject to the influence of noise is studied. It is assumed that the equations of motion of the tracking system and noise are such that the process at the output of the tracking system is a Markov process. This assumption allows the quality of operation of the tracking system to be studied using the results of the theory of Markov processes. In particular, the probability of transition from a given point in a certain area in a fixed sector of time and the distribution function of the time of transition from the given point to a certain vicinity of the origin of coordinates are calculated.

R. Liptser

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1/2 017 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--EFFECT OF THE NATURE OF THE DILUENT ON THE EXTRACTION OF ACIDS BY
AMINES AND THEIR SALTS DURING EXTRACTION BASED ON ADDITION,
AUTHOR--(02)-SHMIDT, V.S., MEZHOV, E.A.

COUNTRY OF INFO--USSR

SOURCE--RADIOKHIMIYA 1970, 12(1), 38-47

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SOLVENT EXTRACTION, NITRIC ACID, HYDROCHLORIC ACID, AMIDE,
AMINE, ORGANIC SOLVENT, CHEMICAL NEUTRALIZATION, ION EXCHANGE, DILUTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/1492

STEP NO--UR/0186/70/012/001/0038/0047

CIRC ACCESSION NO--AP0135153

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0135153

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPTS. WITH A NO. OF SOLVENT EXTN. SYSTEMS (E.G., EXTN. OF HNO SUB3 AND HCL BU N, N DIOCTYLACETAMIDE, TRIOCTYLAMINE, AND TRILAURYLAMINE IN BENZENE, CHCL SUB3, CCL SUB4, BROMOBENZENE, P XYLENE, AND CYCLOHEXANE) IN WHICH THE EXTN. INVOLVES AN ADDN. REACTION SHOWED THAT LOG K (WHERE K IS THE EXTN. CONST.) INCREASE LINEARLY WITH INCREASING DILUENT EFFECT PARAMETER (DE), WHEN USING THE DE VALUES REPORTED BY V.C. SHMIDT, ET AL., (1967). IN THE CASE OF EXTN. INVOLVING NEUTRALIZATION OR ION EXCHANGE REACTIONS, E.G. EXTN. OF HI, HBR, CHLO SUB4 AND IN SOME CASES HCL BY TRIOCTYLAMINE, BENZYLIDINONYLAMINE, DIBENZYLDECYALAMINE, AND TRILAURYLAMINE IN 2 NITROPROPANE, TOLUENE, CYCLOHEXANE, OCTANE PLUS OCTANOL, AND OTHER SOLVENTS, AND EXTN. FO TEO SUB4 PRIME NEGATIVE BY DIMETHYLDIDODECENYLAMMONIUM SULFATE IN VARIOUS DILUENTS, A LINEAR INCREASE IN LOG K WITH INCREASING DE WAS OBTAINED WHEN USING THE FOLLOWING VALUES OF DE: FOR CYCLOHEXANE 0.5, XYLENE 0.8, BUTYLBENZENE 1.5, TOLUENE 1.8, CCL SUB4 1.8, BENZENE 2.3, OCTANE PLUS 10PERCENT OCTANOL 2.9, 2 NITROPROPANE 4.0, NITROBENZENE 4.3, CHCL SUB3 4.5. THE FACTORS AFFECTING THE DE EXTN. RELATION ARE DISCUSSED IN DETAIL.

UNCLASSIFIED

USSR

UDC: 542.61:(546.791+546.831+546.36)

MEZHOV, E. A., NOVIKOVA, S. A., SHMIDT, V. S.

"Using Various Types of Amines to Extract Uranium, Zirconium, and Nitrosonitrates of Trivalent Ruthenium From Nitrate Solutions"

Leningrad, Radiokhimiya, Vol 14, No 3, 1972, pp 473-476

Abstract: A study was made of the effect which amine structure has on the capacity of amine compounds to extract small concentrations of hexavalent uranium and trace concentrations of ^{95}Zr and ^{106}Ru (in the form of a mixture of nitrosonitrates of trivalent ruthenium) from nitrate solutions. The experimental data for uranium extraction confirm the results found previously by Schmidt and Mezhev ((Uspekhi Khimii, Vol 34, No 8, 1965, p 1338). The results for zirconium and ruthenium showed no definite correlation between the structure of the amines and their capacity for extraction of these elements.

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USSR

UDC 621.315.592

AVER'YANOVA, T. V., BAKHMETKO, V. L., ZARGAR'YANTS, M. N., KURBATOV, L. N.,
MEZIN, YU. S.

"Photoluminescence of the GaAs:Zn, Ge-GaAs:Ge p-n-Junction"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 6, No 2, 1972, pp 376-380

Abstract: Results are presented from spectral microphotoluminescent investigations of p-n-junctions obtained by diffusion of zinc in n-type GaAs alloyed with germanium. Inasmuch as the results of investigating the long wave component of the photoluminescence of these p-n-junctions was discussed earlier [T. V. Aver'yanova, et al., FTP, No 5, 331, 1971], only the shortwave part of the emission (3,100-3,500 Å) is investigated in the present paper. All the studies were performed at a temperature of 77° K. The photoluminescence was observed from the shearing side with respect to the cleavage planes perpendicular to the p-n-junction plane. A He-Ne laser with $\lambda = 6,318 \text{ Å}$ was used as the excitation source. Curves are presented showing the spectral composition of the photoluminescence of n-type GaAs alloyed with Ge for $n = (2.7-4) \cdot 10^{16} \text{ cm}^{-3}$ and $T = 77^\circ \text{ K}$, the photoluminescence and photoresistance characteristics for the structure obtained by diffusion of Zn in n-type GaAs:Ge and the photoluminescence characteristic of the structure obtained by diffusion of zinc in 1/2

RYANOVA, T. V., et al., Fizika i Tekhnika Poluprovodnikov, Vol 6, No 2,
1972, pp 376-380

n-GaAs: Te. The proposed model for explaining the results of the spectral
microphotoluminescent measurements appears plausible but requires direct proof.

USSR

UDC: 51

MEZVRISHVILI, T. Ye.

"Calculating Calendar Plans of Loading Equipment in Series Production"

Mekhaniz. ucheta i vychisl. rabot. Mezhved. nauch. sb. (Mechanizing Accounting and Computing Jobs. Interdepartmental Scientific Collection), 1972, vyp. 15, pp 141-147 (from RZh-Kibernetika, No 5, May 73, abstract No 5V717 by the authors)

Translation: A method verified by a series of practical calculations is proposed for constructing calendar plans of equipment loading for machine shop departments of enterprises with series production. The method is based on the rule of priority in starting machining operations on articles, which takes account of the difficulty involved in making the article, the extent of unfinished production, and the requirements of the production program. It is assumed that the size of a batch of articles put into production is a multiple of productivity per shift of the equipment.

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USSR

UDC 51

MESHCHANINOV, L. S., MEZVRISHVILI, T. YE.

"A problem of Constructing a Calendar Plan"

Mekhaniz. ucheta i vychisl. rabot. Mezhd. nauch. sb. (Mechanized Accounting and Computation Operations. Interdepartmental Scientific Collection), 1972, vyp. 14, pp 124-136 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V531)

Translation: A study was made of the problem of the best distribution of limited manpower for enterprises with a multirequest plan of development, and the method of solving this problem based on the multinetwork models is discussed. Each operation of the PERT charts is executed by a group of resources of different type where the composition of each group is put together during the process of compiling the calendar plan for the operation of the enterprise. For the operations entering into the separate sections of the PERT charts in a special form, the problem of determining the optimal intensity of their execution is solved using the methods of linear programming. For the remaining operations of the PERT charts a heuristic algorithm of resource distribution is proposed.

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1/2 017

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--THE EFFECT OF SUKHUMI MINERAL WATERS, BURDVAYA I AND BURDVAYA II,
ON REACTIVITY OF THE ORGANISM IN PATIENTS WITH DIFFERENT DERMATOSES -U-
AUTHOR--(02)-KHAUNGVA, A.P., MGEURISHVILI, D.M.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK DERMATOLOGII I VENEROLOGII, 1970, NR 6, PP 31-34

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SKIN DISEASE, MINERAL, WATER, SULFIDE, CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1347

STEP NO--0070206/707000/00070031/0034

CIRC ACCESSION NO--AP013302

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133302

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERMAL MINERAL SULFID CHLORIDE SODIUM POTASSIUM WATERS OF SUKHUMI SPRINGS BUDOVAYA I AND BUDOVAYA II WERE FIRST USED FOR TREATMENT OF 40 PATIENTS WITH ECZEMA, 20 PATIENTS WITH NEURODERMATITIS AND 40 PATIENTS WITH PSORIASIS. REACTIVITY OF THE ORGANISM WAS STUDIED DYNAMICALLY BEFORE AND AFTER A COURSE OF COMPLEX CLIMATO BALNEOTHERAPY BY METHODS OF THERMOREGULATION REFLEX, ORTHOCLINOSTATIC TEST, CAPILLAROSCOPY AND SENSORY CHRONAXY. IT WAS FOUND THAT DESPITE A POSITIVE THERAPEUTIC EFFECT THE FUNCTIONAL DISORDERS OF THE NERVOUS SYSTEM JUDGED BY THE VASCULAR VEGETATIVE DETERMINATIONS PERSISTED IN 40PERCENT OF THE PATIENTS. FOR STRENGTHENING THE CLINICAL RESULTS IT WOULD BE EXPEDIENT FOR THE PATIENTS TO STAY FOR A LONG PERIOD AFTER A COURSE OF CLIMATO BALNEOTHERAPY IN THE CLIMATIC ZONE OF SUKHUMI OR TO VISIT THE SPA ONCE MORE. FACILITY: OTDEL PATOFIZIOLOGII TSENTRAL'NOGO NAUCHNO-ISSLED. KOZHNO-VENEROLOGICHESKOGO INSTITUTA MZ SSSR I RESPUBLIKANSKIY KOZHNO-VENEROLOGICHESKIY DISPANSER MZ ABKHAZSKOY ASSR.

UNCLASSIFIED

USSR

UDC 616.12-008.331.4:613.11(23)

MGELADZE, N. V., and DZHAGASHVILI, O. A., Clinical Department, Abkhaz ASSR
Affiliate of the Institute of Health Resorts and Physiotherapy, Ministry
of Health Georgian SSR, Sukhumi

"Clinicophysiological Investigations on Patients with Hypotension During
Adaptation to a Middle Mountain Climate and During Readaptation"

Moscow, Voprosy Kurortologii, Fizioterapii, i Lechebnoy Fizicheskoy Kul'tury,
No 2, Mar/Apr 72, pp 101-105

Abstract: Cardiovascular, respiratory, and EEG measurements were taken on
72 females and 32 males mostly 20-40 years old suffering hypotension 3-5
years before admission to the Avdkhaz Health Resort, during the first days
of treatment, upon termination of treatment (24 days), during the first 10
days of readaptation to Sukhumi conditions, and 2-3 months after treatment.
During adaptation, symptoms disappeared in 32 patients, remained the same
in 47, and new ones appeared in 25, insomnia, headaches, and labored breathing
being most common. Upon readaptation, 26 patients complained of a return of
insomnia, headaches, and giddiness. Arterial pressure increased 17 mm in
patients with highest initial pressure (90 mm) and 10 mm with lowest initial
pressure (65 mm). Circulation rates, intensity of oxidative processes,
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USSR

NGELADZE, N. V., and SZHAGASHVILI, O. A., Voprosy Kurortologii, Fizioterapii, i Lechebnoy Fizicheskoy Kul'tury, No 2, Mar/Apr 72, pp 101-105

and the oxyhemometric index increased at the resort, while all indexes decreased during readaptation. ECG indexes indicated that the P-Q segment and the QRS complex shortened in patients with high tones in the vagus system due to stimulation of the sympathetic nervous system, while a lengthening of the P-Q segment and QRS complex were observed in patients with high sympathetic tension due to stimulation of the parasympathetic nervous system. Indexes for vital capacity, breathing volume per minute, breathing depth, O_2 absorption, and the O_2 utilization factor demonstrated that breathing functions and effectiveness improve at the resort. Cerebrocortical stimulation increases during adaptation and is inhibited after readaptation. Thus treatment of hypotension in a middle mountain climate improves the conditions of most patients. Treatment was not as effective for patients that evidenced a pathological reaction during the adaptation period, but effectiveness could be improved if the reaction is recognized immediately and handled accordingly. Treatment response is persistent, as is evidenced by further increases in arterial pressure and continued improvement in general condition 2-3 months after treatment.

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USSR

UDC: 681.327.21.06

PATRATIIY, I. Z. and MGELADZE, Sh. G.

"MGCA Probability Algorithm With Paired Sequential Introduction of Symbols"

Tbilisi, V sb. Dokl. 2-y resp. nauch.-tekhn. konf. po metrologii 27-29 noyabrya 1972 g. Ch. 1, Tbilis. fil. VNII metrologii (Reports of the Second Republic Scientific-Technical Conference on Metrology, 27-29 November 1972, Part 1, Tbilisi Branch of the All-Union Scientific Research Institute of Metrology, 1972, pp 47-52 (from RZh--Avtomatika, telemekhanika i vychislitel'naya tekhnika, No 12, 1973, Abstract No 12B131)

Translation: The probability algorithm of the method of grouped consideration of arguments (MGCA) is considered with the criterion of paired sequential introduction of symbols. According to the algorithm, the indeterminacy of the solution of all possible pairs of symbols from N given pairs is computed; all pairs of symbols are ranged in the order of increase of the indeterminacies of the solution they present.

The pairs of symbols are introduced into a recognition formula, and its accuracy is checked in a separate verification sequence. The introduction of

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USSR

PATRATY, I. Z. and MGEADZE, Sh. G., Dokl. 2-y resp. nauch.-tekhn. konf. po metrologii 27-29 noyabrya 1972 g. Ch. 1, Tbilis. fil. VNI, 1972, pp 47-52

the symbol pairs is continued until the required accuracy is attained at a particular step or until the accuracy improves. Bibliography of three. T. V.

2/2

M

UDC: 621.317.725

USSR

MICHLAURI, A. A., MANUKYAN, Yu. S., GOGELIANI, M. Kh., Tbilisi Affiliate of the
All-Union Scientific Research Institute of Metrology imeni D. I. Mendeleev

"A Device for Determining the Amplitude of Harmonic Signals of Low and Very Low
Frequencies"

Moscow, Otkrytiya, Izobroteniya, Promyshlennyye Obratzy, Tovarnyye Znaki, No 12,
1970, Author's Certificate No 266936, filed 14 Aug 68, p 6.

Abstract: This Author's Certificate introduces a device for determining the
amplitude of harmonic signals of low and very low frequencies. The unit contains
an analog-to-code converter with a pulse distributor connected to its synchro-
nization input. As a distinguishing feature of the patent, the measurement time
is kept independent of the period of the signal being studied by using a computing
module in the device with the analog-to-code converter connected to one of its
inputs, and the pulse distributor connected to the other.

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1/2 012 UNCLASSIFIED PROCESSING DATE--02 OCT 70
TITLE--MECHANISM OF THE REACTION OF TRICHLOROACETONITRILE WITH SULFURIC
ACID MONOHYDRATE -U-
AUTHOR-(03)-MICHURIN, A.A., SIVENKOV, YE.A., ZILBERMAN, YE.N.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(3) 626
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL REACTION RATE, CHLORINATED ORGANIC COMPOUND,
ACETONITRILE, SULFURIC ACID, AMINE, SULFUR OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
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STEP NO--UR/0366/70/006/003/0626/0526

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PROCESSING DATE--070CT70

2/2 012
CIRC ACCESSION NO--AP0112541

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF CL SUB3 CON WITH H
SUB2 SO SUB4 GAVE SMALLER THAN OR EQUAL TO 40PERCENT CL SUB3 CONH SUB2
(I) AND SO SUB3. HEATING I IN A 3 FOLD EXCESS OF CL SUB3 CON GAVE (CL
SUB3 CONH) SUB2-SO SUB2 (II). THIS COMPD. IS NOT FORMED WHEN I IS
HEATED WITH SO SUB 2 ALONG; HOWEVER, UNDER CERTAIN CONDITIONS (P.
BAUMGARTEN, ET AL., 1931) I REACTS WITH SO SUB2 TO GIVE CL SUB3 CONHSD
SUB2 OH. A CYCLIC MECHANISM IS PROPOSED FOR THE FORMATION OF II.

UNCLASSIFIED

USSR

WDC 621.396.6.002:621.795

MIDELYSHEVA, L. ., CHUYKO, G. M.

"Thermomechanical Reliability of Seals Between 22KhS Ceramic and Molybdenum-Manganese Metallizing Coatings, and Between 22KhS Ceramic and Molybdenum-Manganese-Titanium Metallizing Coatings"

Elektron. tekhnika. Nauchno-tekhn. sb. Gazorazryadn. pribory (Electronics Technology. Scientific and Technical Collection. Gas-Discharge Devices), 1970, Typ. 1 (17) (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 13V296)

Translation: The authors give the results of a comparative analysis of thermomechanical reliability of joints with Mo-Mn-Ti and Mo-Mn metallizing coatings under tropical climatic conditions and temperatures up to 700°C in air. It is found that metallic ceramic seals with Mo-Mn-Ti metallization are more reliable. It is shown that the thermomechanical reliability of joints with Mo-Mn-Ti metallization is reduced by active oxidation of the solder; the thermomechanical reliability of joints with Mo-Mn metallization is reduced by uncontrollable changes in the spinel layer. Resumé.

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UDC: 681.332.65

USSR

SOKOLOV, L. A., GRAFOV, B. M., MIDLER, V. M., Institute of Electrochemistry,
Academy of Sciences of the USSR

"An Electrical VLF Filter"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,
No 24, 1970, Soviet Patent No 277412, Class 42, Filed 12 April 1969, p 133

Abstract: This Author's Certificate introduces an electrical VLF filter based on an electrochemical oxidation-reduction system. The filter is made in the form of a channel with continuous hydrodynamic flow of an electrolyte in which spaced electrodes lie in the direction of the flow. As a distinguishing feature of the patent, a signal with a definite, very low frequency is isolated by spacing the input electrodes by a distance equal to the product of the flow rate and the period of the signal to be isolated, while the output electrodes are separated by half this distance.

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UDC 547.242

USSR

MIFTAKHOVA, R. G., AKHMETOVA, F. V., and SULTANOVA, R. KH., Kazan' Chemical-
Technological Institute Imeni S. M. Kirov

"Synthesis of Ketoxime Alkyl- and Arylarsinous Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 9, Sep 72, pp 1966-1969

Abstract: Reaction of various ketoximes with alkyl- and arylarsineoximes or
with alkyl- and arylhaloarsines in presence of triethylamine yields ketoxime
esters of trivalent arsenic acids. The products are colorless liquids with
characteristic odors; they are easily hydrolyzed by atmospheric moisture.

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USSR

UDC 547.242

MIFTAKHOVA, R. G., MAKSIMENKO, S. G., and KUSOV, YU. I., Kazan' Chemical-
Technological Institute Imeni S. M. Kirov

"Aldoxime Esters of Alkyl- and Dialkylarsinous Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 9, Sep 72, pp 1969-1972

Abstract: Aldoxime esters of alkyl- and dialkylarsinous acids were synthesized by the reaction of aldoximes (acetaldoxime, propionaldoxime, butyraldoxime) with haloarsines in presence of triethylamine. The products are colorless liquids with a sharp, unpleasant odor.

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Thorium and Uranium Refining

USSR

UDC 541.15

DMITRIYEVSKIY, V. A., and MIGACHEV, A. I.

"Radiolysis of Uranium Hexafluoride"

Moscow, Atomnaya Energiya, Vol 30, No 5, May 71, pp 438-443

Abstract: Uranium hexafluoride is the only uranium compound having a relatively large vapor elasticity, thus making it one of the most promising compounds for use in various atomic assemblies. One of the difficulties in using UF_6 is the radiation damage to its molecules, mainly under the action of kinetic energy from fission fragments. The authors first determine this rate of damage per unit of power and then proceed to give the appropriate equations following therefrom. They find that by using a strong oxidizing agent (chlorine trifluoride) the radiation stability of the UF_6 molecules can be ensured.

The main purpose in studying the radiolysis of UF_6 acted on by kinetic energy from fission fragments is to determine the stationary concentrations as a function of initial pressure and strength of the dose as well as to define the magnitude of G more precisely. The strength was computed from the magnitude of the neutron flux and the pressure of the $U^{235}F_6$, and all the values of G for UF_6 acted on by the kinetic energy of the fission fragment 1/2

USSR

DMITRIYEVSKIY, V. A., and MIGACHEV, A. I., Atomnaya Energiya, Vol 30, No 5, May 71, pp 438-443

ments are given in the table.

The authors then carried out a special test to determine the function of stationary concentrations of fluorine with high energy release. They describe the experimental procedures and derive the appropriate equations.

The article contains five figures, fourteen equations, one table, and a bibliography of 8 titles.

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