

USSR

UDC 621.383.932

BYKH, A. I., KHUDENSKIY, YU. K., YEVSEYEV, F. YA.

"Representation Procedures with Digital Control of the Display Elements"

Pribory i sistemy avtomatiki. Resp. mezhved. temat. nauch.-tekhn. sb. (Automation Instruments and Systems. Republic Interdepartmental Thematic Scientific and Engineering Collection), 1971, vyp. 17, pp 128-133 (from RZh--Avtomatika, Telemekhanika i vychislitel'naya tekhnika, No 4, Apr 72, Abstract No 4A460)

Translation: A study was made of prospective methods of representation which can theoretically be used to build display units. A classification of them is proposed, and a detailed analysis of the representation procedures with digital control of the display elements is presented. Possible areas of application of the display units are isolated. There is 1 table and a 17-entry bibliography.

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"Representation Procedures with Digital Control of the Display Elements"

Priboiy i sistemy avtomatiki. Resp. mezhved. temat. nauch.-tekhn. sb. (Automation Instruments and Systems. Republic Interdepartmental Thematic Scientific and Engineering Collection), 1971, vyp. 17, pp 128-133 (from RZh--Avtomatika, Telemekhanika i vychislitel'naya tekhnika, No 4, Apr 72, Abstract No 4A460)

Translation: A study was made of prospective methods of representation which can theoretically be used to build display units. A classification of them is proposed, and a detailed analysis of the representation procedures with digital control of the display elements is presented. Possible areas of application of the display units are isolated. There is 1 table and a 17-entry bibliography.

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USSR

UDC 681.142.62

YEVSEYEV, G. T., MARCHUK, A. A., KHOMOVNENKO, M. G., CHIRKOV, M. K., Candidate of Physical and Mathematical Sciences, SHAUMAN, A. M., Candidate of Physical and Mathematical Sciences

"Keyboard Data Input Device for Computers"

Kiev, Mekhanizatsiya i Avtomatizatsiya Upravleniya, No 6, November-December, 1970, pp 57-59

Abstract: This article contains a description of a keyboard electronic digital data input device built from two ferrite cores with external magnetization. The device is designed for generating a single pulse which proceeds synchronously with the basic cycle frequency to the computer after each complete movement of one of the keys. The device was designed to satisfy requirements of high reliability and high speed. By using two different outputs from one key for entering the code and blocking, the effect of vibration and other mechanical effects are excluded, and all remaining keys are blocked effectively on pressing one of them. The input device is constructed as a closed automatic control system insuring uniqueness of the input data.

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UDC 539.3

USSR

YEVSEYEV, L. A., and PETROV, YU. P.

"Solution of a Plane Problem for a Rectangular Plate"

Samoletost. i Tekhn. Vozd. Flota, Resp. Mezhd. Temat. Nauchno-Tekhn. Sb. (Aircraft Construction and Air Force Equipment. Republic Interdepartmental Thematic Scientific and Technical Collection of Works), No 24, 1971, pp 43-49 (from Referativnyy Zhurnal, Mekhanika, No 2, Feb 72, Abstract No 2V65, Authors' abstract)

Translation: The article deals with a rectangular plate, which is in a two-dimensional stressed state. Arbitrary linear forces which, together with their derivatives, are continuous, are given on the longitudinal boundaries. On the transverse boundaries the load is given in terms of resultants. The solution is found in the form of a double series of products of the derivatives of certain functions $\Omega_{ik}(n)$ of the longitudinal coordinate, which depend upon the external load and on the function $H_{ik}(t)$ of the transverse coordinate. Summation is conducted according to the types of loads and stressed states (basic, self-balanced). The functions $H_{ik}(t)$ obtained in the work do not depend upon the geometric dimensions of the plate. A recurrent

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YEVSEEVA, L. F., and ENRIKES, O. M., *Farmakologiya i Toksikologiya*, Vol 36, No 4, Jul/Aug 73, pp 462-465

Fraction 1 demonstrated high stability during storage in a lyophilized state, maintaining activity for a month; fraction 2 was partially inactivated in that time. Dialysis did not affect fraction 1 activity but fraction 2 lost part of its activity during dialysis. Proteolytic enzyme inhibitors such as ϵ -amino caproic acid and trazilol did not inhibit kininogenase in fractions 1 or 2. Polyacrylamide gel electrophoresis of fraction 1 showed a slow migrating protein band and a minor fast moving band; fraction 2 showed 2 intense bands, one fast moving and one medium speed and a faint slow band. Kinetic studies showed fraction 1 to be very slow (40 minutes) in releasing kinin; fraction 2 released kinin in 10 minutes. It was concluded that the poison of *Echis carinatus* contains two fractions which possess kininogenase activity: fraction 1 is the kininogenase in a weak active form blocked by another protein; fraction 2 is the active form of kininogenase. Kininogenase activity and esterolytic activity were inhibited by the tryptic soy inhibitor and suggested a parallelism between kininogenase and protease activity. This kinin, released by kininogenase of poison of *Echis* from Kininogen 2, was identified as bradikinin.

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Pathology

USSR

UDC 616.988.25-022.395.42-036.8-07:616.12-073.97

STEPANOV, M. A., YEVSEYEV, N. F., and KUZINA, Z. V., Chair of Functional
Diagnosis and Chair of Medical Disability, Novokuznetsk Institute of Advanced
Training of Physicians

"Condition of the Cardiovascular System in Persons With Remote Aftereffects
of Tickborne Encephalitis"

Moscow, Terapevticheskiy Arkhiv, No 9, 1971, pp 95-98

Abstract: Clinical and EKG examination of 109 persons who had suffered from
tickborne encephalitis 2 to 40 years before revealed a relationship between
EKG shifts and severity of the neurologic sequelae of the disease. Most of
the individuals exhibited moderate EKG shifts, chiefly in the T wave, heart
rate (tachycardia, bradycardia, sinus arrhythmia), and conduction, but without
evident clinical manifestation. In those with severe neurologic disturbances,
pain of noncoronary character, and arterial hypertension, the EKG shifts were
more pronounced, including signs of interventricular heart-block, persistent
extrasystolic arrhythmia, and systolic overload of the left ventricle.

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Phytology

USSR

UDC 581.132

NAZAROVA, I. G. and YEVSTIGNEYEV, V. B., Institute of Biochemistry imeni A. N. Bakh, Academy of Sciences USSR, Moscow, and Institute of Photosynthesis, Academy of Sciences USSR, Pushchino-napOke

"Spectral Properties and Photosensitizing Capacity of Water-Soluble Analogs of Chlorophyll and Bound With a High-Polymer Substrate"

Moscow, Molekulyarnaya Biologiya, Vol 5, No 6, Nov/Dec 71, pp 826-833

Abstract: In photosynthesis it is not the free pigment chlorophyll that is photochemically active, but rather its proteinlipid complex. Hence the properties of the latter and the mechanisms by which it is formed are of considerable interest. It is in connection with this problem that the authors of the present article a) investigated the absorption spectra obtained during the interaction of water-soluble analogs of chlorophyll (chlorophyllin a and b, chlorin e, and rodin g) with the polymer polyvinylpyrrolidone (PVP); and b) attempted to determine the correlation between the degree of bonding of the pigment with the given polymer and its photosensitizing activity.

The authors found that when the chlorophyll analogs were bound with PVP, their absorption spectra showed obvious shifts in the positions of the red and blue maxima and changes in the intensity of absorption. With respect

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HAZAROVA, I. G., and YEVSTIGENEYEV, V. B., Molekulyarnaya Buologiya, Vol 5, No 6, Nov/Dec 71, pp 826-833

to point b) above, they definitely established the fact that the intensity of the reaction of photoreduction of methyl red by ascorbic acid is strongly increased, with the maximum photosensitizing action occurring approximately in the region of pH 4.5.

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USSR

UDC 621.317.616

ALEKSEYEVA, L. I., YEVSEYEV, V. I., YEGOROVA, N. P., FAYGENBLYUM, H. A.

"A Curve-Tracing Instrument"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 2, Jan 71, Author's Certificate No 290467, division H, filed 1 Mar 68, published 22 Dec 70, p 164

Translation: This Author's Certificate introduces a curve-tracing device for finding the frequency response of communications channels by direct comparison on the screen of a cathode ray tube. The device contains a stepped frequency response indicator, a wobulator, and a module for studying frequency responses. As a distinguishing feature of the patent, in order to automate the process of measuring frequency responses of communications channels and to obtain a stepped reference response, a fixed attenuator is connected between the wobulator and the channel to be measured, while the comparison circuit contains attenuators connected to the above-mentioned stepped frequency response indicator.

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YEVSEYEV, V. I.

DESIGN AND PRE-REACTOR TUNING OF CONTROL UNITS OF THE BN-350 REACTOR

Paper by V. I. Yevseyev, I. I. Zhukov, I. A. Potolochnikov, O. B. Smolov and V. I. Shklyavov, Dimitrovgrad, Prolishchayushchiye i razvivayushchiye nauki i tekhnologii, Reactor, Russia, International Working Group for Fast Reactors Specialists Meeting, Dimitrovgrad, 4-8 June 1973

In this paper, the basic principles of the design and testing of rods for a fast-neutron reactor with sodium coolant, of type BN-350, are explained. The basic requirements imposed upon the control units are formulated, their characteristics are given, and also attention is directed to the design features of the control units of the BN-350 reactor. The features of the designing of control units are considered, and data concerning materials applied for the absorbent and the rod jacket are reported. The design of the control units of the BN-350 reactor is given. Brief data on the test of the rods are reported. A list of test stands intended for the testing of control units and safety devices of the BN-350 reactor is given. A tentative volume of the work conducted at the test stand in the testing of the rods is indicated, and also the results of the experiments obtained. The role of tests of the BN-350 units on the stand is evaluated, in the selection of the optimum design of them for application in the BN-350 reactor.

1. Features of the designing of control units for the BN-350 fast reactor

The selection of the method of regulating reactivity of a fast power reactor is determined by the efficiency of this

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KOLOT, V. YA., TATUS, V. I., RYBALKO, V. F., FOGEL, YA. M., VODOLAZHCENKO, V. V., and YEVSEYEV, V. M., Engineering Physics Institute, Academy of Sciences Ukrainian SSR, Khar'kov

"Effect of Oxygen Pressure on the Initial Stage of Molybdenum Oxidation"

Leningrad, Fizika, Tverdogo Tela, Vol 13, No 6, 1971, pp 1521-1524

Abstract: The effect of oxygen pressure on the initial stage of oxidation of molybdenum was investigated using the technique of secondary ion-ion emission. Molybdenum strips were heated in vacuum up to a temperature of 1900°K , which completely cleaned their surfaces for the absorbed particles and particles of surface compounds. Each experiment began with the molybdenum surface brought to atomic purity. Then the molybdenum temperature was reduced from 1900°K to a temperature at which the experiment was conducted; namely, the range $300\text{--}1900^{\circ}\text{K}$. The kinetics of oxide accumulation on the surfaces of molybdenum strips was studied; the current I of a beam of secondary ions driven off from the oxide molecule under study was plotted as a function of time t . The oxygen pressure was varied within the limits $5 \cdot 10^{-8} - 1 \cdot 10^{-5}$ torr. The following ion species were investigated: MoO_2^{+} ,
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USSR

KOLOD, V. YA., et al., Fizika Tverdogo Tela, Vol 13, No 6, 1971, pp 1521-1524

MoO_3^- , Mo_2O_3^+ , Mo_2O_6^+ , and Mo_2O^+ . An increase in oxygen pressure leads to the following: 1) a shortening of the latency. (time interval between the onset of oxygen adsorption and the instant of oxide formation on molybdenum surfaces); 2) a shortening of the time interval required for an equilibrium oxide film to form on surfaces; and 3) increased oxide concentration. The condition of the surface film (composition and concentration of oxides) is reproducible and reversible with variation in temperature and oxygen pressure. This indicates that the oxide film consists of a layer of surface oxides.

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USSR

UDC 539.181.1

GOL'DANSKIY, V. I., Corresponding Member of the USSR Academy of Sciences,
DZHURAYEV, A. A., YEVSEYEV, V. S., OBUKHOV, Yu. V., ROGANOV, V. S.,
FRONTAS'YEVA, M. V., KHOLODOV, N. I., Institute of Chemical Physics,
USSR Academy of Sciences

"Atomic Capture of Negative Mesons in Compounds Containing Hydrogen"

Moscow, Doklady Akademii Nauk SSSR, Vol 211, No 2, 11 Jul 73, pp 316-318

Abstract: An attempt is made to find possible underlying regularities in the distribution of negative mesons between the individual groups $Z_m H_n$ and atoms Z' in substituted hydrogen-containing organic compounds and in hydrogen-containing compounds in general of the type $Z_m H_n Z'_k$ or $Z_m H_n Z'_k H_{n'}$. A table is given summarizing the relative probabilities of capture of μ^- -mesons by hydrocarbon and hydrogen-containing groups and by aromatic rings in compounds with ionic bonds, in alkyl chlorides, and in phenyl halides.

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USSR

UDC 621.317.32:621.374.35

YEVSEYEV, V. V., KOZLOV, V. D., Moscow

"Microcircuit Analog Memory"

Novosibirsk, Avtometriya, No 3, 1971, pp 103-104

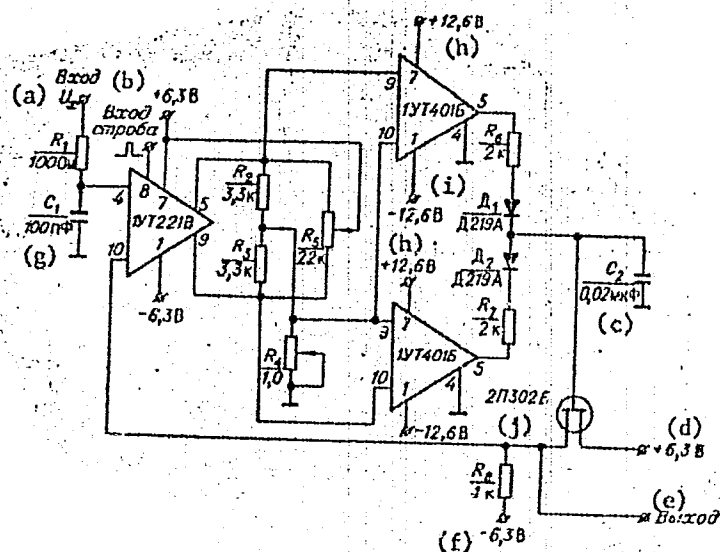
Abstract: A microcircuit analog memory is described which samples instantaneous voltages and stores them. The circuit diagram of the device follows:

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YEVSEYEV, V. V., et al., Avtometriya, No 3, 1971, pp 103-104



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YEVSEYEV, V. V., et al., Avtometriya, No 3, 1971, pp 103-104

Key: a. input, b. gate input, c. microfarads, d. +6.3 volts, e. output, f. -6.3 volts, g. picofarads, h. +12.6 volts, i. -12.6 volts, j. 2P302E

In the temperature range from +20 to +60° C, the described device had the following parameters: a direct current error of 3 millivolts, a storage time of 0.3 milliseconds, an input signal range of ± 1 volt, a sample time of 10 microseconds, an admissible rate of variation of the input voltage 0.2 volts/microsecond and an input impedance of 100 kilohms.

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USSR

UDC 539.385

SHABALIN, V. I., ABABKOV, G. V., YEVSEYEV, V. V., and TOMANOVA, R. A.

"Investigation of the Laws Governing the Fatigue Failure of Aviation Alloys"

Sb. Nauch. Tr. Kiyev. In-t Inzh. Crazhd. Aviatsii (Collection of Works of the Kiev Institute of Civil Aviation Engineers), No 4, 1971, pp 57-61 (from Referativnyy Zhurnal, Mekhanika, No 2, Feb 72, Abstract No 2V1360 by L. M. Shkol'nik)

Translation: A study was made of the influence of the width and length of the working part of a sample upon the rate of growth of fatigue cracks, as well as of scattering of the test results with respect to the moment of appearance of the first macroscopic cracks and the moment of total failure of the sample. The tests were conducted on flat samples of aluminum alloys D16T and V95 with a central aperture, for repeated cyclical elongation with a frequency of 435 cycles per minute. It was established that the length of the samples does not affect their longevity and rate of crack growth. With a width increase of the samples and a length increase of the crack, the growth rate of the cracks increases. Increasing the width of the samples also brings about a decrease of the fatigue-failure stage and of the relative crack length at the moment of failure. With an increase of sample width, the coefficient of stress concentration at the end of a fatigue crack increases. The greatest scattering is 1/2

1/2 009 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EXPERIMENTAL DETERMINATION OF (MU PRIME NEGATIVE, NU) REACTION
PROBABILITY ON ALUMINUM 27, SILICON 28, AND VANADIUM 51 NUCLEI -U-
AUTHOR-(05)-BUNATYAN, G.G., YEVSEYEV, V.S., NIKITYUK, L.N., POKORVSKIY,
V.N., RYBAKOV, V.N.
COUNTRY OF INFO--USSR
SOURCE--YAD. FIZ. 1970, 11(4), 795-9
DATE PUBLISHED-----70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, PHYSICS

TOPIC TAGS--PROBABILITY, ALUMINUM ISOTOPE, SILICON ISOTOPE, VANADIUM
ISOTOPE, NUCLEUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1027

STEP NO--UR/0367/70/011/004/0795/0799

CIRC ACCESSION NO--AP0124686

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0124686

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE ACTIVATION METHOD WAS USED TO MEASURE RELATIVE PROBABILITIES OF THE MU PRIME NEGATIVE, NU) REACTION ON PRIME27 AL, PRIME28 SI, AND PRIME51 V NUCLEI. THE PROBABILITY W OF THE PROCESS (MU PRIME NEGATIVE, NU) WAS CALCD. THE RESP. RESULTS WERE 10 PLUS OR MINUS 1, 28 PLUS OR MINUS 4, AND 10 PLUS OR MINUS 1PERCENT. EXPTL. DATA WERE COMPARED TO THEORETICAL VALUES WHICH WERE CALCD. ON THE BASIS OF THE THEORY OF FINITE FERMI SYSTEMS. DISCREPANCIES BETWEEN THE EXPTL. AND THEORETICAL VALUES ARE DISCUSSED. THE THEORETICAL VALUES OF W(MU PRIME NEGATIVE, NU) ARE DETD. BY THE CAPTURE FROM A SMALL NO. OF ENERGY LEVELS OF THE PRODUCT NUCLEUS DISCRETE SPECTRUM. THUS, SMALL ERRORS IN THE DETN. OF TRANSFER PROBABILITY AS WELL AS THE POSITION OF THE NUCLEUS SIGNIFICANTLY AFFECT THE THEORETICAL VALUES OF W(MU PRIME NEGATIVE, NU). FACILITY: DB'EDIN. INST. YAD. ISSLED., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.382.002

GERMAN, YU. I., YEVSEYEV, YU. A., KABAKOV, V.L., RABINERSON, A.A., CHESNCKOV, YU.A.

"Evaluation Of The Effectiveness Of Clamped Contact Connections For Semiconductor Power Devices During Operation In A Regime Of Pulse Overload By Forward Current"

Preobrazovatel'n. tekhnika. Inform. nauchno-tekhn. sb. (Converter Technology. Information Scientific-Technical Collection), 1970, No 3, pp 4-8 (from RZh--Elektronika i yeye primeneniye, No 11, November 1970, Abstract No 11B395)

Translation: In addition to the reduction of superheating, replacement of soldered contacts by clamped contacts relieves the silicon wafer from the thermoelectromotive forces, which makes it possible to increase its overload capacity. The effectiveness of Si-Cu and W-Cu clamped contacts of dissimilar fulfillment were evaluated in a regime of pulse overload by a comparison of the experimental and theoretical values of the temperature of superheating of a p-n junction in the process of cooling the structure after the action of an individual semisinusoidal pulse of forward current. The overload capacity of devices with clamped contacts for TT-2 thyristors was increased 1.4 times on the average in comparison with devices having soldered contacts and thermocompensators. 5 ref. G.I.

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USSR

UDC 621.382.333.34

YEVSEYEV, YU. A., CHESNOKOV, YU. A.

"Use Of Certain Indirect Parameters During Creation Of A Method Of Nondestructive Tests Of Thyristors"

Preobrazovatel'n. tekhnika. Inform. nauchno-tekhn. sb. (Converter Technology. Information Scientific-Technical Collection), 1970, No 3, pp 18-23 (from RZh--Elektronika i yeye primeneniye, No 11, November 1970, Abstract No 118431)

Translation: It is shown that as methods of evaluation of the temperature of local overheating of a thyristor structure during its turn-on because of the di/dt effect are absent an indirect method of determining the area of the initially turned-on zone and the average rate of propagation of the conductive state in the structure can be placed at the base of the method of nondestructive tests. L.K.

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USSR

UDC 621.382.3

DERENZHII, P.G., YEVSEYEV, YU. A.

"Concerning The Turn-On Transient Of A Triode Structure"

V sb. Poluprovodn. pribory i ikh primeneniye (Semiconductor Devices And Their Application--Collection Of Works), Issue 24, Moscow, "Sov.radio," 1970, pp 59-69 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4B240)

Translation: The paper considers the turn-on transient of a triode structure without an allowance for instantaneous determination of the distribution of the excess carriers with respect to the thickness of the base region. In the case of high injection levels in the base, analytical expressions are obtained for nonstationary distributions of the emitter and collector current densities with respect to the structure area and the concentration of excess carriers at the boundary of the emitter junction. 3 ill. 5 ref. Author's abstract.

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USSR

UDC: 669.725.472

YEVSEYEV, Yu. N., BUDON, V. D., ZAZUBIN, A. I., KUNAYEV, A. M.

"Cathode Polarization in a Melt of Lithium and Beryllium Fluorides"

Katodnaya Polyarizatsiya v Rasplave Ftoridov Litiya i Berilliya [English version above], Alma-Ata, 1972, 6 pp (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G193DEP, by the authors).

Translation: A study of the polarization of an Mo cathode in eutectic melts of Li and Be fluorides has shown that electric separation of Be occurs practically without an overvoltage. The Be ions discharge when the cathode potential is reached, equal to the equilibrium potential of a Be electrode in a fluoride melt. Calculation of limiting electrolysis currents according to Fick's law shows that the true D_c lags behind the geometrically calculated value by a factor of 5-8.

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Beryllium

USSR

UDC: 669.725.472

BYDON, V. D., YEVSEYEV, Yu. N., ZAZUBIN, A. I., KUNAYEV, A. M.

"Potentials of Beryllium Electrode in a Melt of Lithium and Beryllium Fluorides"

Potentsialy Berilliyevogo Elektroda v Rasplave Ftoridov Litiya i Berilliya [English version above], Alma-Ata, 1972, 6 pp (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1972, Abstract No 8G194DEP, by the authors).

Translation: The potentials of a Be electrode were measured in the system of Li and Be fluorides with a concentration of BeF_2 in the mixture of 30 to 60 mol. % in the 500-800° temperature interval. The temperature dependences of the Be electrode potentials were established for concentrations of 30, 40, 54 and 60 mol. % BeF_2 in a melt of $\text{LiF}-\text{BeF}_2$, which are described by equations for the ratio in a Cl-Ag comparison electrode: $\phi_{30\%} = 2.247 + 1.8 \cdot 10^{-4} \cdot T$, v, $\phi_{40\%} = -2.214 + 1.0 \cdot 10^{-4} \cdot T$, v, $\phi_{54\%} = -2.047 + 2.03 \cdot 10^{-4} \cdot T$, v., $\phi_{60\%} = -1.920 + 2.07 \cdot 10^{-4} \cdot T$, v.

1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--THE EFFECT OF ANTIHEPATIC SERUM AND OF THE SERUM AGAINST THE
TRANSPLANT OF GUEREN CARCINOMA ON THE EXCRETORY ABSORPTIVE FUNCTION OF
AUTHOR--YEVSEVYEVA, A.I.
COUNTRY OF INFO--USSR
SOURCE--PATOLOGICHESKAYA FIZIOLOGIYA I EKSPERIMENTAL'NAYA TERAPIYA, 1970,
VOL 14, NR 3, PP 25-28
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TUMOR, TISSUE TRANSPLANT, LIVER FUNCTION, BIOLOGIC STAIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3001/1931

STEP NO--UR/0396/70/014/003/0025/0028

CIRC ACCESSION NO--AP0127332

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127332

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

ABSTRACT. TUMOUR TRANSPLANT GROWING IN RAT ORGANISM DEPRESSED THE FUNCTIONAL CONDITION OF THE LIVER. WHEN THE ANTIHEPATIC SERUM WAS INJECTED, RETENTION OF BROMSULPHALEIN IN THE BLOOD OF RATS WITH GUEREN TUMOUR TRANSPLANT EXCEEDED THE ACCUMULATION OF THE STAIN THE BLOOD OF TUMOUR BEARING RATS BY ONLY 47PERCENT. THUS, THE CHANGES OCCURRING IN THE LIVER UNDER THE EFFECT OF TUMOUR TRANSPLANT GAVE NO OPPORTUNITY FOR HEPATOTOXINS TO MANIFEST THEIR CYTOTOXIC EFFECT COMPLETELY. FACILITY: LABORATORIYA IMMUNOLOGII OPUKHOLEY KIEVSKOGO INSTITUTA EKSPERIMENTAL'NOY I KLINICHESKOY ONKOLOGII.

UNCLASSIFIED

Heat Treatment

USSR

UDC 669.295.018.29.621.785

ZHIKHAREV, V. V., YEVSEYEVA, I. A., CHUPRIKOV, A. V., ROMANOVA, N. A., PAVLUSHINA, G. M., OSADCHIY, V. B.

"Influence of Heat Treatment on Special Properties of Titanium Foil"

Nauchn. Tr. N-i. i Proyechn. In-t Redkomet. Prom-sti [Scientific Works of Scientific Research and Planning Institute for the Rare Metals Industry], 1971, Vol. 32, pp. 83-87. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 I695 by the authors).

Translation: The influence of heat treatment on the special properties of Ti foil designed for the production of solid electrolytic condensers is studied. 3 figs; 1 table, 4 biblio refs.

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1/2 036 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EXPERIMENTAL AND THEORETICAL STUDY OF THE ABSOLUTE INTENSITIES OF
BANDS IN THE TETRAHYDROFURAN INFRARED SPECTRUM -U-
AUTHOR-(04)-YEVSEYEVA, L.A., FINKEL, A.G., SVERDLOV, L.M., PRONINA, L.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(2), 301-5

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--IR SPECTRUM, FURAN, CALCULATION, CHEMICAL PURITY, VIBRATION
FREQUENCY, DEUTERIUM COMPOUND, ELECTROOPTIC EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1244

STEP NO--UR/0368/70/012/002/0301/0305

CIRC ACCESSION NO--AP0116706

UNCLASSIFIED

2/2 036

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0116706

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ABS. INTENSITIES OF BANDS IN THE IR SPECTRUM OF TETRAHYDROFURAN (I) WERE CALCD. THEORETICALLY AND MEASURED EXPTL. THE PURITY OF I WAS SIMILAR TO 99PERCENT. BY USING THE DATA, A SYSTEM OF ELECTROOPTICAL PARAMETERS OF I AS WELL AS VIBRATION COORDINATES ARE PRESENTED. EXPTL. AND CALCD. FREQUENCIES AND CALCD. INTENSITIES FOR DEUTERATED I ARE ALSO GIVEN.

UNCLASSIFIED

172 011 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--EXPERIMENTAL AND THEORETICAL STUDY OF THE ABSOLUTE INTENSITIES OF
INFRARED BANDS FOR CYCLOPENTADIENE -U-
AUTHOR--YEVSEYEVA, E.A., FINKEL, A.G., SVERDLOV, L.M., PRONINA, L.V.
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., FIZ: 1970, 13(1), 42-6
DATE PUBLISHED--1970
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ABSORPTION BAND SPECTRUM, CYCLIC GROUP, DIENE, CONJUGATE BOND
SYSTEM, BUTADIENE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0173 STEP NO--UR/0139/70/013/001/0042/0046
CIRC ACCESSION NO--AT0105249

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AT0105249

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE VALUES OF INTEGRATED INTENSITIES OF THE IR ABSORPTION BANDS IN THE SPECTRA OF CYCLOPENTADIENE (I) WERE CALCD. BY MEANS OF ELECTROOPTICAL PARAMETERS; A GOOD AGREEMENT WITH EXPTL. VALUES WAS OBTAINED. POLAR PROPERTIES OF THE CH BONDS, NEIGHBORING THE C:C BOND, CHANGE LITTLE DURING THE TRANSITION FROM SIMPLE OLEFIN MOLS. TO THOSE POSSESSING CONJUGATE C:C BONDS EITHER OF THE 1,3,BUTADIENE OR I AND C SUB6 H SUB6 TYPES. OWING TO THE EFFECT OF HETEROATOM, THE DMUCH-DQCH VALUES CHANGE CONSIDERABLY AND THE STRETCHING BAND INTENSITIES DECREASE WHILE THE DIPOLE MOMENT OF THE CH BONDS AND BAND INTENSITIES OF THE OUT OF PLANE VIBRATIONS CHANGE LITTLE IN THE SERIES I, THIOPHENE, AND FURAN. THE CH BOND PROPERTIES OF THE CH SUB2 GROUPS IN I DIFFER SOMEWHAT FROM THOSE OF BOTH THE CH SUB2 AND :CH SUB2 GROUPS IN SATD. AND UNSATD. COMPS. RESP.; IT IS ATTRIBUTED TO THE EFFECT OF THE C:C BONDS. QUASI AROMATIC CHARACTER OF THE RING CAUSES INTENSITY DECREASE OF THE I V(C:C) BOND, IN COMPARISON WITH 1,3, BUTADIENE.

UNCLASSIFIED

USSR

UDC 621.92:41.185

LYSOBOBOV, O.S., YEVSEYEVA, L.I.

"Kinetics Of Absorption Of Hydrogen By Compacted Titanium Powder"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron SvCh (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, No 3, pp 86-95 (from REh--Elektronika i yeye primeneniye, No 7, July 1970, Abstract No 7432)

Translation: The kinetics are investigated of the sorption of hydrogen by compacted titanium powder in a region of reduced temperature and high concentration of absorbed gas (to $150 \text{ cm}^3 \cdot \text{atm/g}$). It is established that the rate of sorption in conditions distant from saturation of the specimen by gas, depends little on the temperature of the titanium. At room temperature the rate of absorption in the pressure range of 10^{-7} -- 10^{-5} mm of mercury is proportional to the pressure of the hydrogen. The activity of the porous titanium increases in proportion to its saturation by hydrogen. The possibility is shown of using porous titanium in high-performance vacuum sorption pumps for evacuation of hydrogen. A method of investigation is described which makes it possible over a long period of time to conduct measurements under conditions of an ultrahigh vacuum. Summary.

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- 60 -

USSR

UDC: 535.343

MYASNIKOVA, T. P. and YEVSEYEVA, R. Ya., Rostov-on-Don State University

"Effect of Light Dispersion on Infrared Spectra"

Tomsk, Izvestiya Vysshikh Uchebnykh Zavedeniy--Fizika, No 11, 1972, pp 155-157

Abstract: To clarify the question of how close the spectrum of a suspension in vaseline, the most often used immersion material, is to the true spectrum, the authors undertook experiments comparing the infrared spectra of such specimens as potassium nitrate, sodium nitrite, and sodium argentonitrite. The first was made as a suspension in vaseline, as a cooled melt on a metallic grating, and as a monocrystal; the second as a suspension and a melt; the third as a suspension and as a monocrystal. The absorption spectra of all three are plotted. The purpose of the experiments described in this brief communication was to help explain experimental results in infrared spectroscopy.

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Therapy

USSR

UDC 616.248-035.846-036.8

YEVSEYEVA, S. N., Central Institute of Biology and Physiotherapy, Moscow

"Effectiveness of Decimeter Wave Treatment of Patients with Bronchial Asthma"

Moscow, Voprosy Kurortologii Fizioterapii i Lechebnoy Fizicheskoy Kul'tury, No 6, 1972, pp 536-540

Abstract: A study was made of the effectiveness of decimeter wave treatment of patients with bronchial asthma and its effect on the primary elements in the pathogenesis of this disease -- the adrenal cortex and respiratory functions (by the external respiration indexes). In the experiments, 100 20-70-yr-old patients, 95 with a 2-8 yr and 5 with a 1-yr history of the disease, were examined. The treatment conditions are described and the changes in the mean content of 11-OXS in the blood plasma (the index used to judge the functional state of the adrenal cortex) and the changes in the mean values of the external respiration indexes of the bronchial asthma patients during decimeter wave treatment were tabulated as functions of the initial values and the course of the disease. The 11-OXS content in the blood plasma dropped in the majority of the bronchial asthma patients independently of the severity of the disease, and the external respiration function changed significantly. Decimeter wave therapy is quite effective for bronchial asthma patients. The

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USSR

YEVSEYEVA, S. N., Voprosy Kurortologii Fizioterapii i Lechebnoy Fizicheskoy Kul'tury, No 6, 1972, pp 536-540

asthma attacks stop, coughing and dyspnea disappear. The decimeter waves have a significant effect on the altered function of external respiration, improving bronchial transmission and increasing the ventilation of the lungs. Under the effect of decimeter wave therapy, the 11-OKS blood plasma level normalizes or approaches normal, which indicates improvement of adrenal cortex function. The improvement of adrenal cortex function and external respiration provide the basis for the treatment.

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- 91 -

USSR

UDC 546.26,546.45,543.226

YEVSEYEVA, T. I., CHERSTVENKOVA, YE. P., NIKOL'SKIY, V. A., and DENISOVA, V.I.

"Determination of Free Carbon In Metallic Beryllium"

Moscow, Zavodskaya Laboratoriya, No 4, 1973, pp 397-400

Abstract: A thermogravimetric study was made of the rate of burn out of metallic beryllium and its carbide. The analysis was done in air on a thermobalance with continuous weighing with slow warm-up of the furnace up to 1120° C. The beryllium carbide produced by caking of metal oxide with carbon black contained 7.4% O, 6.4% free C, and 33.3% bound C. The free C was found to oxidize more rapidly and at a lower temperature than carbon carbide. The suggested method of determining free C in metallic beryllium is based on burn up of a weighed sample of the material in a stream of oxygen with subsequent gas-chromatographic measurement of the separated carbon dioxide. The quantity of carbon carbide in any of residues after direct determination of free carbon was found to be equal to its initial content. Results of the activation analysis confirm the accuracy of the method. Three figures, three tables, eight bibliographic references,

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USSR

UDC 621.396.62.01

PODOL'SKIY, A. A., ABRAMOV, G. V., and YEVSEYEVA, Z. N.

"Directional Characteristic of a Linear Group of Antennas of Rectangular Shape in the Case of Wide-Band Reception"

Tr. Kuybyshev. aviats. in-ta (Works of the Kuybyshev Aviation Institute), 1970, vyp. 44, pp 27-34 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6B1)

Translation: The problem is solved by substituting for the actual antenna a series circuit comprised of an ideal antenna of the same geometric configuration but having frequency selectivity, together with a band filter whose amplitude-frequency characteristic coincides with that of the actual antenna and the entire reception channel. Calculations carried out for practical examples show that the width of the main lobe of the directional pattern does not change with an increase in the width of the passband, but an overall smoothing of the directional pattern takes place together with a reduction in the spatial selectivity of the antenna. Five illustrations, bibliography of three titles. N. S.

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Acc. No. **AP045004**

Abstracting Service: **5/70**
INTERNAT. AEROSPACE ABST.

Ref. Code:

URC109

A70-22413 # Photomultiplier TWT with a louvered secondary electron multiplier operating in the 600- to 900-MHz range (FEU-LBV s zhaliuznym vtorichno-elektronnym umnozhitel'm, rabotaiushchaya v diapazone 600-900 Mgt). V. A. Afanas'ev, V. G. Zubov, N. I. Ekamasov, A. V. Ievskiy and N. G. Lozovaia. *Radiotekhnika i Elektronika*, Vol. 15, Jan. 1970, p. 155-161. 13 refs. In Russian.

Description of the design and parameters of a high-sensitivity photomultiplier TWT microwave photodetector with an internal louvered secondary-electron multiplier and a spiral high-frequency getter. The device is capable of detecting light modulated at frequencies ranging from 600 to 900 MHz. The photocathode sensitivity in experimental specimens at a wavelength of 0.63 micron amounted to 10 to 20 microamp/mW, the multiplication per stage is about 3 to 4, and the equivalent output resistance is about 10 to 100 kilohms. A photomultiplier TWT with two or three multiplication stages is tens of times more sensitive than photo-TWT models of the same design but without a multiplier system. With its aid it is possible to receive light signals with a power of about 1 microwatt at a wavelength of 0.63 micron in a band of several tens of megahertz.

A.B.K.

REEL/FRAME
19771900

USSR

Aerospace Medicine

USSR

UDC 613.71:358.4

YEVSTAF'YEV, B. V., Major

"Special Physical Training of Pilots as a Means of Preventing Adiposis"

Moscow, Voenno-Meditsinskiy Zhurnal, No 3, 1973, pp 74-76

Abstract: A special experiment was run to study the effect of special physical training on the physical condition of pilots who are overweight and to increase their resistance to unfavorable factors of prolonged flight. The experiment included 22 people with an average age of 36. The examinations to which the pilots were subjected are outlined. The pilots were divided into three groups: 1) 8 people with an average age of 35 receiving 66% strength exercises in dynamic and isometric training modes and 34% exercises for general endurance (walking, running, swimming). The second group had 8 pilots with an average age of 36 who did 34% strength exercises and 66% sports, primarily volleyball and handball. The 6 pilots in the third group 37 years old were the control and received no physical training. All indexes changed in the positive direction in the first and second groups. Higher shifts were noted in the first group. There was a stable decrease in weight, an increase in strength and static endurance of the basic muscle groups, and improvement of the resistance of the cardiovascular system to various loads as well as positive shifts in other

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USSR

YEVSTAF'YEV, B. V., Voenno-Meditsinskiy Zhurnal, No 3, 1973, pp 74-76

indexes of physical development. The procedure for performing exercises with overweight people is outlined briefly.

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USSR

UDC 532.135.082

D'YACHENKO, B. P., YERFILOV, V. N., YEVSTAF'YEV, G. D.

"Device for Measurement of Viscoelastic Properties of Liquids at Pressures up to 6000 kg/cm²"

Kontaktno-Gidrodinamich. Teoriya Smazki i Ee Prakt. Primeneniye v Tekhn.
[The Contact-Hydrodynamic Theory of Lubrication and its Practical Application to Technology -- Collection of Works], Kuybyshev, 1972, pp 5-6
(Translated from Referativnyy Zhurnal Metrologiya i Izmeritel'naya Tekhnika, No 12, 1972, Abstract No 12.32.1184).

Translation: A vibration viscosimeter for simultaneous measurement of the attenuation decrement of the frequency of natural oscillations of a resonator loaded with a fluid in the frequency range from 10 to 300 KHz is briefly described. The sensor is a cylindrical torsional-oscillating quartz resonator, oscillations in which are excited by a series of rectangular pulses. The device measures the period of natural oscillations of the resonator up to the boundary of the oscillating mode with an error of less than 10⁻⁴.

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USSR

UDC 547.341

PUDOVIK, A. N., GAREYEV, R. D., STABROVSKAYA, L. A., YEVSTAF'YEV, G. I., and
REMIZOV, A. B., Kazan' State University Imeni V. I. Ul'yanov-Lenin

"Reactivity of Unsaturated Organophosphorus Compounds in the Reaction of
1,3-Dipolar Cycloaddition of Diaryldiazomethanes"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 8, Aug 73, pp 1674-1682

Abstract: The kinetics of the 1,3-dipolar cycloaddition reaction of diaryl-
diazomethanes with organophosphorus dipolarophiles at 60° in m-xylene was
investigated. The reaction mechanism is based on a single stage polycentric
process with a cyclic electron transfer. The established order of dipolaro-
philic activity of the unsaturated organophosphorus compounds agrees well
with current concepts of the effect of substituents at the phosphorus atom:
additive manifestation of the inductive effect and the ability of the sub-
stituents to conjugate with the main system.

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USSR

UDC 541.124

PUDOVIK, A. N., CHERKASOV, R. A., SUDAKOVA, T. M., and YEVSTAF'YEV, G. I.,
Kazan' State University Imeni V. I. Ul'yanov-Lenin

"Addition of Phosphorus Dithioacids to the C≡N Bond"

Moscow, Doklady Akademii Nauk SSSR, Vol 211, No 1, Jul-Aug 73, pp 113-115

Abstract: The reactions of diisopropyldithiophosphoric acid with benzonitrile and the reaction of diphenyldithiophosphinic acid with benzonitrile, cyanoacetic ester and diethyl cyanomethylphosphonate were investigated. Diisopropyldithiophosphoric acid adds to benzonitrile in an equimolar ratio, in the cold, and without any catalysts. Thiobenzamide precipitates after 10-12 days. Treating this mixture with pentane, followed by separation of solid thiobenzamide and cooling the pentane to -10° yields yellow crystalline 0,0-diisopropyl S-benzylimidoxyldithiophosphonate m.p. $58-59^{\circ}$. Diphenyldithiophosphinic acid reacts easily with benzonitrile at room temperature yielding thiobenzamide and tetraphenyltrithiopyrophosphinate regardless of the ratio of reagents taken. Analogous reaction course is observed in case of the other reagents mentioned. Thus it has been shown that phosphoric dithioacids add to the C≡N bond forming imidoxyldithiophosphates -- expressed thiophosphorylating agents.

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USSR

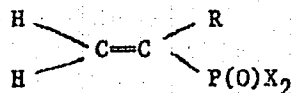
UDC 547.341

PUDOVIK, A. M., STABROVSKAYA, L. A., YEVSTAF'YEV, G. I., REMIZOV, A. B.,
and GAREYEV, R. D., Kazan State University imeni V. I. Ul'yanova-Lenina

"Kinetics of the 1,3-Bipolar Cycloaddition of Diphenyldiazomethane to
Unsaturated Organophosphorus Compounds"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 8, 1972, pp 1862-1863

Abstract: The title study was carried out for organophosphorus compounds
having the general form



for 12 combinations of R, usually H, and X -- usually alkyl, alkoxyl, aryl,
or phenol groups. Values of the velocity constant, ranging from 0.61 to 20.35
are compared with the P=O vibration, from 1190 to 1283 cm^{-1} in a 0.2M benzene
solution, and chemical shift of the P^{31} nucleus, from -10 to -33 m.d. in a
50% acetone solution. The reactivity of the studied compounds were closely
correlated with the indicators of the influence of substitutions on the
electronic behavior of the P atom. For this reaction the energy of activa-
tion $E_A = 12.5 \pm 0.4$ kcal/mole and the entropy $\Delta S = -35.2$, in good agreement
with the 1,3-bipolar cycloaddition mechanism.

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USSR

UDC 547.26'118

PUDOVIK, A. N., GAREYEV, R. D., REMIZOV, A. B., AGANOV, A. V., YEVSTAF'YEV, G. I., and SHTIL'MAN, S. Ye., Kazan' State University Imeni V. I. Ul'yanov-Lenin

"Aldol" Type Addition Products of Diazoacetic Acid Esters With α -Ketophosphonates"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 3, Mar 73, pp 559-567

Abstract: A mixture of diethoxyacetophosphonate and ethyldiazoacetate was kept two weeks in the dark at room temperature, poured into water, and decanted, the "aldol" type product -- diethoxy- α -hydroxy- α -carboethoxy-diazomethylethylphosphonate -- being isolated from the oily residue. A detailed structural analysis of the product has been carried out using PMR, IR and UV spectroscopical data.

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USSR

UDC 547.26'118

PUDOVIK, A. N., CHERKASOV, R. A., BYKOVA, I. V., YEVSTAF'YEV, G. I., ZEMSKAYA, Z. I., NAZYPOV, M. N.

"Interaction of Tetraalkyl(aryl)stannates with Phosphorus Dithio Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol XLII (CIV), No 1, 1972, pp 76-80

Abstract: The interaction of tetraethyl lead with dithio acids of phosphorus taking place with breaking of one, two or three Pb-C bonds and the formation of the corresponding organolead dithiophosphates has been described [A. N. Pudovik, ZhOKh, No 41, 1472, 1971]. As a continuation of this research, a study was made of the reaction of phosphorus dithio acids with the tetraalkyl derivatives of tin. The dealkylation of the tetraalkyl(aryl)stannates of phosphorus dithio acids takes place with breaking of the Sn-C bond and lead to the formation of trialkyl(aryl)stannyl derivatives of dithiophosphates and phosphonates. The methods of gas adsorption chromatography and differential-thermal analysis were used to study the relative reactivity of tetraalkyl(aryl)stannates. The ease of stripping off the radicals connected to the tin atom decreases in the following series C_6H_5 , C_2H_5 , C_3H_7 , C_4H_9 . Preliminary data are presented on the fungicidal and fungistatic activity of organotin dithiophosphates and phosphonates, their anthelmintic and insecticidal activities. High activities in all these areas were generally demonstrated.

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USSR

UDC 547.512+547.341+547.722.2

PUDOVIK, A. N., GAREYEV, R. D., STABROVSKAYA, L. A., YEVSTAF'YEV, G. I.,
REMIZOV, A. B.

"Cyclic Addition of Diazoalkanes to Isopropenylphosphonates"

Leningrad, Zhurnal Obshchey Khimii, Vol XLII (CIV), No 1, 1972, pp 80-87

Abstract: A study was made of the reactions of diazomethane with esters of isopropenylphosphonic acid. By the addition of diazomethane to isopropenylphosphonates, the corresponding phosphorylated Δ^1 -pyrazolines were obtained which quickly isomerized into Δ^2 -pyrazolines in the presence of bases. By ultraviolet spectroscopy it was established that the tetrahedral phosphorus atom interacts by its d-orbitals with the π -orbital of the C=N radical. With respect to capacity to enter into conjugation it is inferior to the ester carbonyl radical. The concentration and temperature infrared spectroscopy showed that the 3 and 5-phosphorylated Δ^2 -pyrazolines are associated at the expense of the intermolecular hydrogen bonds.

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USSR

UDC 547.341.07(088.8)

PUDOVIK, A. N., SUDOKHOVA, T. M., and YEVSTAF'YEV, G. I.

"Addition Reactions of Phosphinous Acid to Malonic Acid Dinitrile"

Doklady Akademii Nauk SSSR, Vol 208, No 1, 1973, pp 111-113

Abstract: The earlier work of the authors has shown the ease with which addition reactions proceed between dialkyl- and diarylphosphinous acids and nitriles at the nitrile group, when the reaction is activated by electro-negative groups. The current investigation is the continuation of the earlier work dealing with the elucidation of the effect of substituents of the phosphorus atom on the overall reaction rates. This article deals with gas-liquid chromatographic investigation of the reaction kinetics of a series of phosphinous acids with malononitrile. The reaction rate was monitored by the decrease of the concentration of nitrile in the reaction mixture. The investigated reactions were found to be of second order. The increase in the length of the hydrocarbon chain leads to a higher value of the energy of activation. Sodium ethoxide has a strong catalytic effect on the described reaction rates. Solvent effects are also significant.

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USSR

UDC: 621.319.4

KOVALEV, K. S., ZHIKHAREV, Yu. V., VINOGRADOV, V. V., YEVSEYEVA, I. A.,
ROMANOVA, P. A., PAVLUSHINA, G. M.

"Some Singularities of Heat Treatment in the Production of Capacitor Foil
From Tantalum"

Nauchn. tr. N.-i. i proyekt. in-t redkomet. prom-sti (Scientific Works of the
Scientific Research and Design Institute of the Rare Metals Industry), 1971,
32, pp 71-76 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V329)

Translation: An investigation is made into the heat treatment of thin foils
in connection with solution of the problem of making high-quality capacitor
foil from tantalum. Three illustrations, one table, bibliography of three
titles. Resumé.

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USSR

UDC: 577.1:615.7/9

YEVSTAFIEVA, M. M.

"Comparative Evaluation of the State of the Blood When Subjected to the Effect of Nitrocarbamoylacetoacetanilide Derivatives in Experiment"

V sb. Gigiysna primeneniya, toksikol. pestitsidov i klinika otravl. (Pesticides -- Sanitary Measures in Using, Toxicology, and the Poison Clinic--collection of works), vyp. 9, Kiev, 1971, pp 356-360 (from RZh-Biologicheskaya Khimiya, No 6, Mar 72, Abstract No 6F2167)

Translation: Data are given from a toxico-hygienic evaluation of 4-carbamoyl-acetoacetanilide derivatives (I); m-nitro-p-aniline-I (Ia; strong yellow pigment), o-nitro-aniline-I (II; strong yellow "3"), p-chloro-o-nitroaniline-I (Ic; strong yellow "2-3"). A study was made on mice of the morphological composition of the peripheral blood, the state of the liver, seroalbumin groups in the blood, the protein spectrum of the blood, and the activity of catalase and riboflavin of the blood. Ia induces positive leukopenia. These changes in the Hb concentration and the number of formal elements took place when mice were injected with Ia-Ic (500 mg/kg, 20 days, 96 injections). Changes in respiratory enzymes are indicative of the toxicity of the compounds. The authors [sic] assume that the toxicity of these chemicals is due to the presence of chloride and methyl radicals. M. Sh.

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USSR

UDC 513.015.2:513.011.3:513.5/.7

YEVSTIFEYEV, M. F.

"Polar Correspondence in Rays and Series of Conic Sections"

Prikl. geometriya i inzh. grafika. Mezhd. resp. nauchn. sb. (Applied Geometry and Engineering Graphics. Interdisciplinary Republican Scientific Collection), 1969, No 9, pp 120-122 (from RZh-Matematika, No 3, Mar 1970, Abstract 3A719)

Translation: The geometrical loci of the poles of a fixed straight line with respect to the conic sections of one ray and one series are examined. Several projective relationships emerging in the construction of these geometrical loci are introduced.

Author's summary

1/1

1/2 013 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--OSCILLOPolarographic DETERMINATION OF THE PRECIPITATION PH AND THE
ACTIVITY PRODUCT OF PRASEODYMIUM AND EUROPIUM HYDROXIDES -U-
AUTHOR--(04)--BUCHENKO, L.I., KOVALENKO, P.N., TSYGANKOV, YE.M.,
YEVSTIFEYEV, M.M.
COUNTRY OF INFO--USSR
SOURCE--Zh. NEORG. KHIM. 1970, 15(2) 358-61
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ISOBAR, HYDROGEN ION CONCENTRATION, HYDROXIDE, EUROPIUM
COMPOUND, PRASEODYMIUM COMPOUND, HYDROXIDE, POLAROGRAPHIC ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FKAME--1983/0906 STEP NO--UR/0078/TD/015/002/0358/0361
CIRC ACCESSION NO--AP0053830
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0053830

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

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--OSCILLOPolarographic DETERMINATION OF CERTAIN NONFERROUS METALS ON
A HANGING DROP MERCURY ELECTRODE -U-
AUTHOR--(03)-KOZIROD, I.D., KOVALENKO, P.N., YEVSTIFEYEV, N.M.
COUNTRY OF INFO--USSR
SOURCE--ZH. ANAL. KHIM. 1970, 25(1), 147-52
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, CHEMISTRY
TOPIC TAGS--NONFERROUS METAL, POLAROGRAPHIC ANALYSIS, DROPPING MERCURY
ELECTRODE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/1742 STEP NO--UR/0075/70/025/001/0147/0152
CIRC ACCESSION NO--AP0108109
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0108109

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE OSCILLOPOLAROGRAPHIC PROPERTIES OF CD, ZN, CO, NI, AND CU IN M NH SUB4 CL M NH SUB4 OH MEDIA AND OF PB IN M KNO SUB3 WERE STUDIED BY USING THE HG ELECTRODE. ZN, NI, AND CO ARE REDUCED NONREVERSIBLY ON A STD. HG ELECTRODE AND CD, CU, AND PB ARE REDUCED REVERSIBLY. THE EXPTL. DEPENDENCE OF I SUB MAX. ON CONC. FOR CU, PB, AND CD CORRELATE BEST WITH THEORETICAL CALCNS. OF THE I SUBMAX. VALUES BY USING THE EQUATION OF SEVCIK RANDES AND FOR NI, CO, AND ZN BY USING THE EQUATION OF DELEHAY.

UNCLASSIFIED

USSR

UDC: 621.391:519.27

YEVSTIFEYEV, Yu. S.

"Logic of Discrete Information Transmission Systems"

V sb. Radioelektron. v nar. kh-ve SSSR. Ch. 2 (Radioelectronics in the National Economy of the USSR, Part 2--collection of works) Kuybyshev, 1970, pp 354-361 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3A34)

Translation: The problem is considered of matching the operation algorithm of a discrete information transmission system with the random characteristics of the communication channel and the terminating devices; in this connection, a method for choosing the logic of a transmission system, i.e., of the combined and sequential actions of the terminating devices, is analyzed. Two illustrations, bibliography of two. H. S.

1/1

USSR

UDC 539.4

SULIMA, A. M., YEVSTIGNEYEV, M. I., SEREBRENNIKOV, G. Z., Moscow

"Study of Influence of Loading Frequency on Fatigue of Heat Resistant Steels and Alloys at Usage Temperatures"

Kiev, Problemy Prochnosti, No 5, May, 1971, pp 107-110.

Abstract: The influence of loading frequency on the fatigue strength of the alloys EI961, EI617, EI826, EI929, EI437B and titanium alloy VT9 was studied. The test data were statistically processed, constructing correlation equations and correlation dependences between σ and N and σ and T . These dependences were used to determine the mean probable values of fatigue resistance and cyclical durability at various loading frequencies. The results showed that as the loading frequency increases to a certain critical value, the fatigue resistance and cyclical durability of the steels and alloys studied increase, then further increases in loading frequency cause the fatigue strength of all steels and alloys studied to drop. The critical frequency depends on the test conditions, chemical composition and physical and mechanical properties of the steel or alloy. The results of testing thus showed that the repetition frequency of loading is an important parameter of cyclical loading, significantly influencing fatigue characteristics.

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- 100 -

YEVSIGNEYEV, R. N.

Eco

SYMPOSIUM ON GENERAL PRINCIPLES OF MANAGEMENT OF A SOCIALIST ECONOMY AND THEIR APPLICATION IN INDIVIDUAL COUNTRIES

Abstract by Candidate of Economic Sciences R. N. Yevsigenyev; Moscow, Vestnik Akademii Nauk SSSR, Russian, Vol. 4, No. 2, Feb. 1972, pp. 77-78.

An international scientific symposium of CEMA member-countries and Yugoslavia on the theme "General principles of administration of a socialist economy and special features of their application in individual countries" was held in Moscow in 1-3 November 1971. The symposium was convened by the Institute of Economics of the World Socialist System of the USSR. In his address of greeting the deputy Chairman of the Council of Ministers USSR, chairman of the Gosplan USSR N. K. Baybakov noted that in the course of the building of socialism in the Soviet Union and other fraternal countries the universal significance of the Leninist principles of management of an economy have been confirmed. Their systematic implementation with consideration for the specifics of each country is an important condition for the successful development of socialist economies. The acceleration of scientific and technical progress, elevation of the standard of living of the population and intensification of international socialist integration.

Reports on the conducting of economic reforms in individual countries were heard at the plenary session. In the sessions there were discussions of questions of planning, of service exchange relationships, of organizational structures of administration and of the interconnection of infranational economic systems with the mechanism of international integration. In all, 30 reports were presented.

Experience in the improvement of the system of planning and administration of the national economy of the USSR in the light of the decisions of the 24th Party Congress were analyzed in the reports of a number of eminent Soviet economists. R. P.

- 105 -

JPK 555726
13 6-11-1972

USSR

YEVSTIGNEYEV, V. A.

"One Modification of the Ford-Fulkerson Algorithm for Construction of an Optimal Flow"

Sb. tr. In-t mat. Sib. otd. AN SSSR [Collected Works of Mathematics Institute, Siberian Division Academy of Sciences USSR], No 8, 1971, pp 68-72, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract No 3 V400).

NO ABSTRACT.

1/1

1/2 016
UNCLASSIFIED
TITLE--ISOLATION OF CHLOROPHYLL D FROM THE ALGA GRATELOUPIA DICHOTOMA -U-
AUTHOR--YEVSTIGNEYEV, V.B.
COUNTRY OF INFO--USSR
SOURCE--BIOKIMIYA 1970, 35(1), 48-52
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--RED ALGAE, SOLVENT EXTRACTION, CHLOROPHYLL, CHEMICAL ANALYSIS,
CHROMATOGRAPHY, SPECTROPHOTOMETRY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/0638
CIRC ACCESSION NO--AP0117864
STEP NO--UR/0218/70/035/001/0048/0052
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0117864

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONTENT OF CHLOROPHYLL D (I) IN 10 SPECIES OF RED ALGAE FOUND IN THE BLACK SEA WAS STUDIED. THE RATIO OF ABSORBANCE OF A MEQH EXT. DETD. AT 665 M MU TO ABSORBANCE DETD. AT 700 M MU SHOWED THE PRESECE OF I. OF ALGAE INVESTIGATED, G. DICHOTOMA WAS THE MOST CONVENINET FOR ISOLATION OF I. THE PIGMENT WAS EXT. FROM DRIED ALGAE BY 80PERCENT MEQH. THE MEQH SOLN. WAS EXT. BY PETROLEUM ETHER TO REMOVE CHLOROPHYLL A. TO THE MEQH EXT., 10PERCENT NACL SOLN. PREPD. FROM DISTD. WATER SATD. WITH MGCO SUB3 AND ETHER WERE ADDED. ETHER EXTS. WERE CHROMATOGRAPHED ON A SUGAR COLUMN. PIGMENTS WERE ELUTED BY A MIXT. OF PETROLEUM ETHER-C SUB6 H SUB6 IN RATIOS OF 2:8: 4:6: 6:4; AND 8:2, AND THEN BY C SUB6 H SUB6. AFTER REPEATED RECHROMATOG. ON THE SAME COLUMN WITH C SUB6 H SUB6 CONTG. 1PERCENT ISOPKOPYL ALC., I WAS OBTAINED IN A PURE FORM. THE ABSORBANCE MAX. OF I IN MEQH WAS 696 M MU, IN ET SUB2 D 688 M MU, IN ME SUB2 CO 692 M MU. FACILITY: INST. PHOTOSYN., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 8.74

YEVSTIGNEYEV, V. G., GORSKAYA, V. V., FILIPPOVA, N. V.

"Some Scaling Problems when Solving Problems in the System of Remainder Classes in the Nonredundant Arithmetic Range"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on the Problems of Microelectronics of the Moscow Institute of Electronic Engineering), 1972, vyp. 9, Physics and Mathematics Series, pp 200-212 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V578)

No abstract

1/1

- 62 -

USSR

UDC 616.981.452-084.47

AGAFOV, V. I., BABKIN, Ye. I., VDOVIN, D. G., VOROBEYCHIKOV, V. M.,
VOROB'YEV, A. A., GAIKESHKO, Kh. P., GAPOCHKO, K. G., GEFEN, N. Ye., YEVSTIGNEYEV,
V. I., YEMEL'YANOVA, O. V., ZENSKOV, Ye. M., IMAMALIYEV, O. G., KAMALOV, I. I.,
KVIRIKADZE, V. V., KUTYREV, P. A., MISNIKOV, O. P., PUSHKAREV, V. P., and
ROZDESTVENSKIY, D. A., Military Medical Academy imeni S. M. Kirov, Leningrad

"A Comparative Efficiency Characteristic of Different Immunization Methods
Against Plague Infection"

Moscow, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 11, 1972,
pp 106-112

Abstract: Analysis of the available literature data led to the conclusion
that oral, aerogenic, and jet immunization methods are the most efficient
compared with subcutaneous and skin methods. The average number of patients
inoculated against plague infection was 517, 817 (419), and 937 per hr for jet
injectors, aerogenic method liquid and dry vaccine, and oral method (tablets),
respectively, compared with only 43 and 28 for the subcutaneous and skin
methods, respectively.

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- 23 -

USSR

UDC 620.179.15

KONONOV, B. A., DERGOBUZOV, K. A., YEVSTIGNEYEV, V. V., ZYKOV, V. M.,
RUDENKO, V. N., and STEPANOV, Yu. M., Scientific Research Institute of
Electron Introsopy, Tomsk Polytechnic Institute imeni S. M. Kirov

"Experimental Evaluation of the Possibilities of Electron Defectoscopy"
(Paper presented at the Sixth International Conference on Nondestructive
Control Methods, June 1-5 1970, Hannover, GFR)

Sverdlovsk, Defektoskopiya, No 2, 1971, pp 94-98

Abstract: The status and prospects for fast electron defectoscopy are discussed. An account is given of investigation results of the use of betatron electron beams for defectoscopy of layer materials. It is demonstrated that radiographic and radiometric (including spectrometric) methods of electron defectoscopy can be applied successfully for solutions of many tasks with a sensitivity of 0.5%. The experimentally derived dependence of the intensity of a reflected electron flux on the thickness of the aluminum coating on the backing of different materials shows that with increasing thickness of the coating the intensity of the flux decreases or increases, depending on whether the atomic number of the coating is smaller or greater than that of the backing. Three figures, 11 bibliographic references.

1/1

- 11 -

USSR

UDC 616.988.75-036.2(47+497.2)

ZAKSTEL'SKAYA, L. YA., MIKOLOVA, Z., ANTONOVA, I. V., KEBEDEMIYEV, G.,
YEVSTIGNEYEVA, N. A., and SEMENOVICH, S. F., Institute of Virology and
D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow, and Scientific
Research Institute of Epidemiology and Microbiology, Sofia

"A Comparative Study of the 1969 Influenza Epidemic in the Soviet Union
and in the People's Republic of Bulgaria"

Moscow, Voprosy Virusologii, No 6, Nov/Dec 71, pp 656-661

Abstract: The influenza epidemics which lasted from December 1968 to April 1969 in the USSR, afflicting 12.4% of the population, and from February to April 1969 in Bulgaria, afflicting 5.9% of the population, had several common characteristics: both were of foreign origin (brought in by travellers), both developed more gradually but lasted longer than previous epidemics, and the severity of the diseases was mild to moderate, so that no special disruptions occurred either in business or in schools. Over 2,000 strains of virus A2 were isolated in the USSR, of which 439 were investigated, while 226 strains of the same virus were isolated and investigated in Bulgaria. All these strains formed a homogeneous antigenic group, with variant A2 (Hong Kong)69 predominating. Virological, serological, and immunofluorescent tests revealed that this variant differed considerably from the
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ZAKSTEL'SKAYA, L. YA., et al., Voprosy Virusologii, No 6, Nov/Dec 71, pp 656-661

parent strain A2(Singapore)57 and from the subtype A2 which proliferated in 1964-1967 but was practically identical with the subtype A2/3. .

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Y
USSR

UDC 616.921.5-036.22(470.51)"1966-'967" 6

AKSENOV, V. A., ORLOVA, N. N., SELIDOVKIN, D. A., AKSENOV, L. A.,
ZORIN, V. S., VOLOCHKOV, A. D., GLADINA, YE. B., SAMUSEV, N. F.,
ZAKSTEL'SKAYA, L. YA., and YEVSTIGNEYEVA, N. N., Institute of Virology
imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Ministry
of Health USSR

"Some Features of the 1966-1967 Influenza Epidemic in Glazov"

Moscow, VoProsy Virusologii, No 1, 1970, pp 97-101

Abstract: This epidemic occurred in two waves: the first in November-December, 1966, when few cases of influenza or other acute respiratory diseases were reported in most of the USSR and localities adjacent to Glazov, and the second in February, 1967. The first wave affected mostly young children, while the second wave affected children and adults to almost the same degree, 10.6 and 9.8 per 100 persons. The course of the disease was severe among children, but relatively mild among adults. The high incidence of influenza in the first wave, characteristic dynamics of the curve with a sharp rise, quick attainment of a peak, and sharp drop, as well as the results of serological examinations, implicated the A₂ virus as the
1/2

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USSR

AKSENOV, V. A., et al., Moscow, Voprosy Virusologii, No 1, 1970, pp 97-101

causative agent. The second wave was attributed to the B virus. A peculiar virus - an atypical A₁ strain with altered antigenic structure - was also isolated during the epidemic. However, the absence of antibodies in both children and adults indicated that it did not play an etiological role in the outbreak.

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USSR

UDC 616.988.25-022.395.42-084(-21)

CHUDINOV, P. I., NETSKIY, G. I., CHERNUKHA, A. D., YEVSTIGNEYEVA, N. S.,
PASTUKHOVA, A. N., SHCHEGLOVA, Ye. Ye., and PRIGORODOV, V. I., Omsk Scientific Research Institute of Natural Focus Infections, Ministry of Health RSFSR, and Novosibirskaya Oblast Sanitary Epidemiological Station

"Prevention of Tickborne Encephalitis in a Large City"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, No 5, 1971, pp 588-591

Abstract: The rapid growth of industrial centers in Western Siberia near endemic regions of tickborne encephalitis has increased the incidence of this disease among some urban populations. For example, in Novosibirsk, a city of approximately half a million people located on the Ob River, four cases were reported in 1955, 108 in 1962, and 141 in 1966. The city is located close to a number of densely wooded, heavily tick-infested areas often visited by hikers, vacationers, etc. However, the number of cases was reduced to 74 in 1969 mainly as a result of systematically dusting the forests most frequented by Novosibirsk residents with DDT (30 to 50 kg of 10% dust per hectare) and by selective vaccination of groups most vulnerable to tickborne encephalitis (geologists, regular hikers, etc.). It was not deemed necessary to provide mass vaccinations.

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- 29 -

USSR

UDC 546.45(547.297:547.571):547.361

LARKIN, I. I., YEVSTAFIYEVA, N. Ye., and SINANI, S. V.

"Organoberyllium Compounds and Their Chemical Reactions. VII. Reaction of Berylliumacyl Halides With Aromatic Aldehydes"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 9, Sep 73, pp 1984-1986

Abstract: Studying the reactions of berylliumacyl bromide with variously substituted aromatic halides, it has been established that introduction of two or more substituents on the ring does not change the reaction course and leads to the formation of diacyl derivatives of stilbenes. Low yields obtained in some cases are caused by steric hindrance. On the basis of IR spectral data it was shown that all of the synthesized stilbenes have the trans-configuration.

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USSR

KALUGINA, G. N., MATSNEVA, N. M., IBRAGIMOVA, F. I., NOSKOVA, V. A., ARONOVA, Ye.R.
and YEVSTIGNEYEVA, O. F. Uzbek Scientific Research Institute of Hematology and
Blood Transfusion

"The Effect of Certain Solutions of Synthetic Polymers on Formed Elements in
Preserved Blood"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 6, 1970, pp 36-38

Abstract: The suitability of three synthetic polymers -- polyvinyl alcohol, carboxymethyl cellulose, and polyvinyl pyrrolidone -- for the preservation of donor blood was investigated. The results indicate that these substances prolong the life span and maintain a perfect physiological state of erythrocytes for up to 40-45 days, of leukocytes up to 20-25 days, and of thrombocytes up to 5-7 days. These synthetic colloids also speed up the sedimentation rate of blood and thus make it possible to separate formed elements from plasma without undue trauma.

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USSR

UDC: 573.953+547.917+547.593.261

KLYASHCHITSKIY, B. A., PIMENOVA, V. V., BASHKATOVA, A. I., ZHELVAKOVA, E. G.,
SOKOLOV, S. D., SHVETS, V. I., YEVSTIGMEYEVA, R. I., PREOBRAZHENSKIY, N. A.,
Deceased, Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov

"Research in the Area of Derivatives of Asymmetrically Substituted Myoinositol.
V. Complete Synthesis of sn-Myoinositol 1-Phosphate"

Leningrad, Zhurnal Obshchey Khimii, Vol 40 (102), No 11, Nov 70, pp 2482-2489

Abstract: A new method is used for synthesizing 1,2,4,5,6-penta-O-benzylmy-
oinositol. The compound is separated into antipodes through diastereomeric
orthoesters with D-mannose. Complete synthesis of the 1-phosphate of sn-myoin-
ositol identical to the natural compound is carried out on the basis of 2,3,4-
5,6-penta-O-benzyl-sn-myoinositol.

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USSR

UDC 547.426.2

KAPLUN, A. P., KABANOVA, M. A., SHVETS, V. I., and YEVSTIGNEYEVA, R. P.,
Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov

"Studies in the Area of Complex Lipids. Synthesis of the Phosphatide Acid
on the Basis of 1,2-Diglyceride and o-Phenylene Chlorophosphate"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 7, Jul 73, pp 1617-1619

Abstract: A synthetic method was developed for the phosphatide acids utilizing phosphorylation of 1,2-diglycerides with o-phenylenechlorophosphate followed by removal of the protective groups. The phosphorylation was carried out at 18-20° using equimolar quantities of 1,2-di-O-palmitoyl-sn-glycerine and o-phenylenechlorophosphate in presence of triethylamine. 1,2-Di-O-palmitoyl-3-O-(o-phenylene)-phosphoryl-sn-glycerine can be hydrolyzed to the ester.

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UDC 547.426.2

USSR

KAPLUN, A. P., KABANOVA, M. A., LYUTIK, A. I., SHVETS, V. I., and YEVSTIGNEYEVA, R. P., Moscow Institute of Fine Chemical Technology Imeni M. V. Lomonosov

"Study in the Area of Complex Lipids. Synthesis of Phospholidylethanamines Based on 1,2-di-O-Acyl-sn-Glycerines"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 8, Aug 73, pp 1839-1844

Abstract: The synthesis of O-(1,2-di-O-palmitoyl-sn-glyceryl-3-O-phosphoryl)-ethanolamine was carried out starting with a 1,2-diglyceride and using 2-phtalimidoethyldichlorophosphate and 2-chloromethyl-4-nitrophenyldichlorophosphate as the phosphorylation agent. An effective method was developed for the formation of phosphodiester structure based on the model of phosphatidylethanolamine obtained from phosphatidylacids and substituted ethanolamines or from ethanolamine phosphates and 1,2-diglycerides in presence of mesitylenesulfohyhchloride.

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UDC 547.953

USSR

VTOROV, I. B., SEREBRENNIKOVA, G. A., and YEVSTIGNEYEVA, R. P., Moscow
Institute of Fine Chemical Technology imeni M. V. Lomonosov

"Studies of Complex Lipids. Synthesis and Structural Studies of cis-1-0-(hexadecen-1-yl)-2-stearoyl-sn-glyceryl-3-N,N-dimethylaminoethyl phosphate, phosphatidaldimethylethanolamine"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 8, No 4, Apr 72, pp 721-725

Abstract: A synthesis is described for complex plasmalogens with natural stereochemical configuration and tailored composition of fatty acids and aldehydes. Condensation of cis-1-0-(hexadecen-1-yl)-2-stearoyl-3-bromo-3-desoxy-sn-glycerine with the silver salt of dibenzylphosphate by refluxing in xylene yields cis-1-0-(hexadecen-1-yl)-2-stearoyl-sn-glyceryl-3-dibenzyl phosphate. The latter is debenzylated by refluxing with NaI in acetone in presence of nitrogen bases; the sodium salt obtained is converted to the silver salt and reacted with 2-chloroethyl-N,N-dimethylamine, yielding cis-1-0-(hexadecen-1-yl)-2-stearoyl-sn-glyceryl-3-(N,N-dimethylaminoethyl)-benzyl phosphate after chromatographic purification. Debenzylation of the last product yields phosphatidaldimethylethanolamine. Infrared spectra of the products are reported. The materials are optically pure.

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- 22 -

1/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--FIRST SYNTHESIS OF NATURAL PHOSPHATIDYL-MYO-INO-SITOL -U-
AUTHOR--(05)-ZHELVAKOVA, E.G., KLVASHCHITSKIY, B.A., SHVETS, V.I.,
YEVSTIGNEYEVA, R.P., PREOBRAZHENSKIY, N.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. OSHCH. KHIM. 1970, 40(1) 248
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--CHEMICAL SYNTHESIS, GLYCEROL, PHOSPHORUS COMPOUND, SPECTRUM,
BIOCHEMISTRY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/1419 STEP NO--UR/0079/70/040/001/0248/0248
CIRC ACCESSION NO--AP0112413
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112413

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

2,3,4,5,6,PENTA,O,BENZYL,SYN,MYO,INOSITOL WITH PHOPOCL SUB2 AND

1,2,DI,PALMITOYL,SN,GLYCEROL IN C SUB5 H SUB5 N GAVE 32PERCENT

1,0,(1,2,DIPALMITOYL,SN,GLYCERYL,(PHENYL,PHOSPHORYL),2,3,4,5,

6,PENTA,O,BENZYL,SN,MYO,INOSITOL, M. 53-4PERCENT. HYDROGENOLYSIS OVER

ADAMS PT CATALYST AND PD BLACK GAVE THE PHOSPHORYL ANALOG, ISOLATED AS

NH SUB4 SALT, M. 169-72PERCENT. THIS GAVE SPECTRA VERY SIMILAR TO THOSE
OF NATURAL MONOPHOSPHOINOSITIDES.

UNCLASSIFIED

USSR

UDC: 573.953+574.917

KLYASHCHITSKIY, B. A., STAROSTINA, A. K., SHVETS, V. I., and YEVSTIGNEYEVA, R. P., Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov

"Study of the Synthetic Routes of Polyphosphoinositide"

Moscow, Doklady Akademii Nauk SSSR, Vol 195, No 4, Dec 70, pp 848-850

Abstract: Synthesis of polyphosphoinositides -- the most important representatives of inosite phosphatides -- is tied closely to the resolution of optically active di-O-cyclohexylidenemyoinosites into optical antipodes. One such possibility is described for the case of 1,2:5,6-di-O-cyclohexylidenemyoinosite which yielded optically active antipodes through diastereomeric ortho-acetates of D-mannose: 1,2:5,6-di-O-cyclohexylidene-sn-myoinosite, $[\alpha]_D^{20} -7.4^{\circ}$ and its enantiomer 2,3:4,5-di-O-cyclohexylidene-sn-myoinosite, $[\alpha]_D^{20} +7.5^{\circ}$, both melting at 130-140°C.

1/2 019 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--SYNTHESIS OF OPTICALLY ACTIVE PENTABENZYL ETHERS OF MYO INOSITOL
TOTAL SYNTHESIS OF PHOSPHATIDYLINOSITOL WITH NATURAL STRUCTURE -U-
AUTHOR--(05)--KLYASHCHITSKIY, B.A., ZHELVAKOVA, E.G., SHVETS, V.I.,
~~YEVSTIGNEEVA, R.P.~~, PREOBRAZHENSKIY, N.A.
COUNTRY OF INFO--USSR

SOURCE--TETRAHEDRON LETT. 1970, (8), 587-90

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--OPTIC ACTIVITY, POLYNUCLEAR HYDROCARBON, BENZENE DERIVATIVE,
ORGANIC PHOSPHORUS COMPOUND, ETHER, GLYCEROL, FATTY ACID, CHEMICAL
SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1985/1509

STEP NO--UK/0000/70/000/008/0587/0590

CIRC ACCESSION NO--AP0101593

UNCLASSIFIED

PROCESSING DATE--18SEP70

UNCLASSIFIED

2/2 019

CIRC ACCESSION NO--AP0101593

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS TREATED WITH PHOP(D)CL SUB2
AND 1,2 DIPALMITOYL SN GLYCEROL TO GIVE II. II IS HYDROGENATED OVER
ADAMS CATALYST AND PD BLACK TO GIVE 1,0, (MICROFICHE OF ABSTRACT
CONTAINS GRAPHIC INFORMATION) (1',2' DIPALMITOYL SN 3'
GLYCERYLPHOSPHORYL) SN MYO INOSITOL (III) WHICH HAS A NATURAL
STRUCTURE.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--RING CURRENTS AND NUCLEAR MAGNETIC RESONANCE IN PORPHYRINS -U-
AUTHOR--(04)-MAMAYEV, V.M., PONOMAREV, G.V., ZENIN, S.V., YEVSTIGNEYEVA,
R.P.
COUNTRY OF INFO--USSR
SOURCE--TEOR. EKSP. KHIM. 1970, 6(1), 40-6
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--NUCLEAR MAGNETIC RESONANCE, PORPHYRIN, PROTON, PYRROLES

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/2133

STEP NO--UR/0379/70/006/001/0040/0046

CIRC ACCESSION NO--AP0125717

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--04DEC70

2/2 010

CIRC ACCESSION NO--AP0125717

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

ABSTRACT. METHOD OF R. MC WEENY FOR CALCN.

OF PI ELECTRON CURRENT IN AROMATIC MOLECULES WAS MODIFIED FOR PORPHYRINS. DISTRIBUTION OF RING CURRENTS OF PI ELECTRONS AND THEIR CONTRIBUTIONS TO CHEM. SHIFTS OF NH, BETA H, MESO PROTONS, AND ME PROTONS OF PORPHYRINS WITH CO SUB2 ET AND ME GROUPS IN THE FORM OF DICATIONS AND FREE BASES WAS CALCD. ON FORMING THE DICATION, THE PI ELECTRON CURRENT ALONG THE INTERNAL CONJUGATION RING INVOLVING NITROGEN ATOMS IS LOWERED, THE OVERALL RING CURRENT BEING HIGHER BY 10PERCENT. INTRODUCING AN ELECTRON ACCEPTOR SUBSTITUTENT IN THE BETA POSITION ENHANCES PI ELECTRON CURRENT THROUGH C N BONDS OF THE CORRESP. PYRROLE RING AND SIMULTANEOUSLY LOWERS THE OVERALL PI ELECTRON CURRENT.

FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--SYNTHESIS OF A PROTECTED FRAGMENT, 24-27, OF THE AMINO ACID
SEQUENCE OF CYTOCHROME C -U-
AUTHOR--(04)-YEVSTIGNEYEVA, R.P., LVCVA, S.O., CHUPRIKOVA, O.S.,
PREOBKAZHENSKIY, N.A.
COUNTRY OF INFO--USSR
SOURCE--KHIM. PRIR. SOEDIN. 1970, 6(1), 114-16
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY
TOPIC TAGS--BIOLOGIC-PIGMENT, IRON COMPOUND, CHEMICAL SYNTHESIS, AMINO
ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/0554 STEP NO--UR/0393/70/006/001/0114/0116
CIRC ACCESSION NO--AP0131177
UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131177

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. CARBOBENZOXYGLYCYL-N
PRIMEEPSILON-TOSYL-L-LYSYL-N PRIMEIM-BENZYL-L-HISTIDINYL-N
PRIMEEPSILON-TOSYL-L-LYSINE METHYL ESTER WAS PREPD. BY CONDENSATION OF
TWO DIPEPTIDES. FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IM.
LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0107731

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TREATING 0.19 G GAMMA ME ESTER OF CARBOBENZOXY,L, GLUTAMIC ACID IN TETRAHYDROFURAN WITH 0.086 ML N,METHYLMORPHOLINE AND 0.164 ML ISO,BUD SUB2 CCL AT MINUS 15DEGREES, FOLLOWED IN 10 MIN BY 0.27 G BENZYL ESTER OF L,LEUCYL,S,BENZYL,L,CYSTEINE,HCL AND 0.086 ML N,METHYLMORPHOLINE, GAVE OVERNIGHT 97PERCENT BENZYL ESTER OF N,CARBObENZOXY,(GAMMA METHYL L GLUTAMYL),L,LEUCYL,S,BENZYL,L,CYSTEINE, M. 142-3DEGREES. SIMILARLY WERE PREPD. IN 50-80PERCENT YIELDS THE FOLLOWING PEPTIDE ESTERS; CARBOBENZOXY,L,LEUCYL,S,BENZYL,L,CYSTEINE BENZYL ESTER, M. 100-100.5DEGREES. (ME ESTER, M. 115-16DEGREES); CARBOBENZOXY,DL,LEUCYL,S,BENZYL,DL,CYSTEINE BENZYL ESTER, M. 89-9.5DEGREES. TERT,BUTOXY, CARBONYL,L,LEUCYL,S,BENZYL,L,CYSTEINE BENZYL ESTER, M. 86.5-7.5DEGREES. CARBOBENZOXY,DL,(METHYL GLUTAMYL),DL,LEUCYL,S,BENZYL,DL,CYSTEINE BENZYL ESTER, M. 140-1DEGREES. TERT,BUTOXYCARBONYL,L, GLUTAMYL, (BENZYL ESTER),L,LEUCYL,S,BENZYL,L,CYSTEINE ME ESTER, M. 129-9.5DEGREES. CARBOBENZOXY,S,BENZYL,L,CYSTEINYL,L, GLUTAMYL(METHYL ESTER),L, LEUCYL,S,BENZYL,L,CYSTEINYL BENZYL ESTER, M. 124-5DEGREES. CARBOBENZOXY, S,BENZYL,L,CYSTEINYL,L, GLUTAMYL(BENZYL ESTER),L,LEUCYL,S, BENZYL,L,CYSTEINYL ME ESTER, M. 160-60.5DEGREES. CARBOBENZOXY,S, BENZYL,DL,CYSTEINYL,DL, GLUTAMYL(ME ESTER),DL,LEUCYL,S,BENZYL, DL,CYSTEINE BENZYL ESTER, M. 145.5-6DEGREES.

UNCLASSIFIED

1/3: 009 UNCLASSIFIED PROCESSING DATE--23JCT70
TITLE--HEMOPROTEINS. SYNTHESIS OF TWO PEPTIDE FRAGMENTS OF CYTOCHROME C
-U-
AUTHOR--(05)-YEVSTIGNEYEVA, R.P., MIRONOV, A.F., VASILYEVA, G.A., SKIBENKO,
L.V., NIKITINA, I.S.
COUNTRY OF INFO--USSR
SOURCE--ZH. OBSHCH. KHIM. 1970, 40(3), 661-6
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--BIOLOGIC PIGMENT, IRON COMPOUND, PEPTIDE, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0398

STEP NO--UR/0079/70/040/003/0661/0666

CIRC ACCESSION NO--AP0121079

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2/3 009

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121079

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BOC EQUALS TERT, BUO SUB2 C,Z
EQUALS PHCH SUB2 O SUB2 C THROUGHOUT. BOC,L,ALA AND N,HYDROXY,
SUCCINIMIDE (HOSU) TREATED IN DIOXANE WITH DICYCLOHEXYLCARBODIIMIDE 12
HR GAVE 74PERCENT BOC,L,ALA,OSU, M. 158.3-59DEGREES; SIMILARLY WAS
PREPD. 80PERCENT BOC,O,BENZYL,L,SER,OSU (I) M. 104-5DEGREES. N,Z,L,GLN
IN DMF WAS TREATED WITH PYRIDINE AND ET SUB2 N, FOLLOWED BY PIVALOYL
CHLORIDE AT MINUS 15DEGREES, FOLLOWED IN 15 MIN BY S BENZYL,L, CYSTEINE
ME ESTER,HCL AND ET SUB3 N, AND THE MIXT. HELD 12 HR, FINALLY AT
ODEGREES, TO YIELD 86PERCENT N,Z,L,GLN,S,BENZYL,L,CYS,OME (II), M.
199-200DEGREES. SIMILARLY WAS PREPD. 82PERCENT BENZYL,ESTER ANALOG, M.
187-9DEGREES. N,Z,L,ALA,OSU AND II.HBR WITH N,METHYLMORPHOLINE IN DMF
GAVE IN 5 HR 85PERCENT N,Z,L,ALA,L,GLN,S,BENZYL,L, CYS,OME (III), M.
192.5-4.5DEGREES. SIMILARLY WAS PREPD. 8.5PERCENT
N,BOC,L,ALA,L,GLN,S,BENZYL,L,CYS,OCH SUB2 PH, M. 152-3DEGREES.
TREATING III WITH 36PERCENT HBR IN ACOH 0.5 HR, FOLLOWED BY THE
P,NITROPHENYL ESTER OF N,Z,X,BENZYL,L,CYS IN DMF IN THE PRESENCE OF
N,METHYLMORPHOLINE, GAVE IN 12 HR, 82.5PERCENT
N,Z,S,BENZYL,L,CYS,L,ALA,L,GLN,S,BENZYL,L,CYS, OME, M. 218-19.5DEGREES.
SIMILARLY WAS PREPD. 94PERCENT BENZYL ESTER ANALOG, M. 205-6.5DEGREES,
WHICH WITH N SUB2 H SUB4 IN ETOH,DIOXANE GAVE THE HYDRAZIDE, M.
234-6DEGREES, WHICH TREATED WITH HCL, FOLLOWED BY NANO SUB2, THEN IN 5
MIN BY BENZYL ESTER OF N PRIMEIM,BENZYL,L,HISTIDINE AND ET SUB3 N, GAVE
IN 2 DAYS 80PERCENT N,Z,S,BENZYL,L,CYS,L,ALA,L,GLN,S,BENZYL,L,CYS,N
PRIMEIM, BENZYL,L,HIS,OCH SUB2 PH, M. 188-9.5DEGREES.

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3/3 009

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PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121079

ABSTRACT/EXTRACT--I AND L, GLN, S, BENZYL, L, CYS, OME. HBR WITH

N, METHYLMORPHOLINE IN DMF 12 HR 80PERCENT

N, BOC, O, BENZYL, L, SER, L, GLN, S, BENZYL, L, CYS, OME, M. 131.5-3.5DEGREES,
WHOSE HCL SALT TREATED WITH THE NITROPHENYL ESTER OF CYSTEINE IN DMF
WITH N, METHYLMORPHOLINE, GAVE IN 12 HR 88PERCENT

N, Z, S, BENZYL, L, CYS, O, BENZYL, L, SER, L, GLN, S, BENZYL, L, CYS, OME, M.
192.5-4.5DEGREES. THIS SUSPENDED IN DIOXANE, ETOH AND TREATED WITH N
SUB2 H SUB4 1 DAY GAVE THE HYDRAZIDE, M. 200-2DEGREES, WHICH WITH HCL
AND NANO SUB2 GAVE THE AZIDE, WHICH TREATED IN SITU WITH N PRIMEIM,
BENZYLHISTIDINE BENZYL ESTER AND ET SUB3 N IN ETOAC 2 DAYS GAVE
N, Z, S, BENZYL, L, CYS, O, BENZYL, L, SER, L, GLN, S, BENZYL, L, CYS, N PRIMEIM,
BENZYL, HIS, OCH SUB2 PH, M. 184-6DEGREES. FACILITY: MOSK. INST.
TONKOI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

YEVS.TIGNEYEVA, Z. G.

MOLECULAR MECHANISMS OF ATMOSPHERIC NITROGEN FIXATION

UDC 576.85

Article by Member-Correspondent USSR Academy of Sciences V. L. Kozlovskiy,
Doctor of Biological Sciences Z. G. Yevstigneyeva, Candidates of Biological
Sciences N. P. Litov, S. S. Vityayeva, V. A. Vityayev, V. A. Vityayev, V. A. Vityayev,
SSSR, Russian, No 3, March 1972, pp 33-37

The atmosphere is a source of nitrogen, found in the composition of all life. The reserves of nitrogen in the atmosphere are almost unlimited: above each hectare of soil rises a column of air containing about 80,000 tons of nitrogen, i.e., approximately 10,000 times more than in one hectare of soil. Nevertheless, neither the human eat the animal organism, nor much of the world's vegetation is capable of assimilating molecular nitrogen from the atmosphere. Man and animal alike acquire nitrogen from food in the form of vegetable and animal proteins. As vegetative organisms, however, they have a remarkable capacity to synthesize proteins from carbon dioxide gas, water and inorganic sources of nitrogen -- ammonia and the salts of nitric acid, representing in the final analysis a primary source of protein on our planet. But even ammonia and nitric acid salts (nitrates), in turn, are formed from molecular atmospheric nitrogen by virtue of the vital activity of a special group of nitrogen-fixing microorganisms, living in the soil and in water bodies.

Thus, life on our planet depends on these microorganisms.

Natural nitrogen-fixing microorganisms can be classified in two groups: free-living and symbiotic, which live in symbiosis (companionship) with higher plants or fungi, supplying them with various nitrogen compounds formed in the process of fixation of atmospheric molecular nitrogen.

The history of analysis of nitrogen-fixing microorganisms goes back to 1803, when S. N. Vinnogradsky first extracted from soil the anaerobic nitrogen-fixing bacterium *Clostridium pasteurianum*. Later on, in 1901, N. B. Raveitch discovered the anaerobic nitrogen-fixing bacterium *Acetobacter*. For nearly a half century those two free-living bacteria were considered the only nitrogen-fixing microbes in the soil. Development of new, highly sensitive methods of detecting nitrogen-fixing activity by

USSR

UDC 681.325.65

STRIZHKOV, A. V., YEVSTITNEYEV, V. G.

"General Principle of Constructing Analog-Code Converters in a System of Residual Classes"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on Problems of Microelectronics. Moscow Institute of Electronic Technology), 1972, vyp. 9 (Physics and Mathematics Series), pp 180-185 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 72, abstract No 11B298).

Translation: The process of conversion comprises automatic measurement of an input quantity to find its numerical equivalent in a certain number system. The system of residual classes can also be used to represent a numerical equivalent. It can be seen from the presentation of numbers in this system that the figure is formed in each digital place independently of the other digital places. This means that the converter must be made up of several equally significant channels with conversion of the input signal taking place simultaneously and independently in each of them. The number of channels corresponds to the number of bases used for the given range of

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STRIZHKOV, A. V., YEVSTITNEYEV, V. G., Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn., 1972, vyp. 9, pp 180-185

variations in the input signal. Determination of the signal with respect to each base consists in finding the code value of the positive remainder by dividing the analog quantity by the value of the base p_i ($i=1, 2, \dots, n$ is the number of bases). The operation of division in each channel looks like continuous comparison of the input analog quantity with a set of master quantities selected in accordance with a definite law, these masters being proportional to the value of the base for the channel. The value of the base has the dimensionality of the input signal with regard to the assumed scale. The entire range of variation in the input quantity is divided into a number of intervals of the value in the base by means of a single set of discrete master values. By using another set of masters, this interval is divided into subintervals equal in magnitude to the quantization step. The number of subintervals in a single interval is equal to the number p_i . The process of coding in converters using the system of residual classes may be broken down into two stages -- preparatory and informational. In the preparatory stage, the interval in which the input quantity is located is found by comparing the input quantity with the first set of masters. In the informa-

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STRIZHKOV, A. V., YEVSTITNEYEV, V. G., Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn., 1972, vyp. 9, pp 180-185

tional stage, the number of subintervals contained in the analog input quantity is determined in the interval where it has been found. This number defines the remainder for the base and goes into the code combination which characterizes the input quantity. A block diagram is given for an analog-code converter which uses the system of residual classes. Two illustrations, three bibliographic entries. Yu. S.

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1/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--TENTH EUROPEAN SYMPOSIUM ON THE CHEMISTRY OF THE PEPTIDES -U-
AUTHOR--(02)--LIPKIN, V.M., YEVSTRATOV, A.V.
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, VESTNIK AKADEMII NAUK SSSR, RUSSIAN, VOL 40, NO 1, JANUARY
1970, PP 87-88
DATE PUBLISHED-----70

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SCIENCES
TOPIC TAGS--PEPTIDE, AMINO ACID, APPLIED CHEMISTRY CONFERENCE

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PROXY REEL/FRA--3003/0976

STEP NO--UR/0030/70/040/001/0087/0088

CIRC ACCESSION NO--AP0130025

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2/2 011

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PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0130025

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

ABSTRACT. THE TENTH EUROPEAN SYMPOSIUM ON THE CHEMISTRY OF THE PEPTIDES WAS HELD ON 7-13 SEPTEMBER 1969 IN ABANO TERMA, ITALY. ABOUT 120 SCIENTISTS FROM 18 COUNTRIES PARTICIPATED IN ITS WORK. ACCORDING TO THE ESTABLISHED TRADITION THE FIRST SECTION OF THE PROGRAM WAS DEVOTED TO PROBLEMS OF PROTECTIVE GROUPS AND THE FORMATION OF THE PEPTIDE BOND. ALTHOUGH IN THAT AREA NOTHING NEW IN PRINCIPLE HAD APPEARED SINCE THE PRECEDING SYMPOSIUM, A NUMBER OF REPORTS WERE OF DEFINITE INTEREST. THERE WERE REPORTS ON THE USE FOR THE PROTECTION OF THE AMINO GROUPS OF AMINO ACIDS AND PEPTIDES OF A NITROVERATRYLOXY GROUP, WHICH BE SELECTIVELY BE REMOVED IN THE PRESENCE OF BENZYLOXYCARBONYL AND TERT BUTYLOXYCARBONYL PROTECTIVE GROUPS DURING IRRADIATION OF THE PEPTIDE WITH LIGHT (M. FRIEDKIN, ISRAEL), AND ALSO ON A NEW THIO TERT BUTYL S PROTECTIVE GROUP FOR CYSTEINE (E. BUNSCH, WEST GERMANY) AND A METHOD OF OBTAINING N-PHTHALGYLAMINO ACIDS, BASED ON THE INTERACTION OF AMINO ACID ESTERS WITH O-METHOXYCARBONYLBENZOYLCHLORIDE (G. BEYERMAN, HOLLAND).

UNCLASSIFIED

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AP 0049790

Abstracting Service:

CHEMICAL ABST. 5-70

Ref. Code:

UR 0188

V. F.

YEVSTRATOV

101588q Compatibility of an ethylene-propylene-diene polymer with general-purpose rubbers. Boguslavskaya, K. V.; Kolobenin, V. N.; Boguslavskii, D. B.; Evstratov, V. F. (Dnepropetrovsk. Filial Nauch.-Issled. Inst. Shini. Prib. Dnepropetrovsk. USSR). *Kauch. Rezina* 1970, 29(1), 3-6 (Russ). The tensile strength of BSK, BSK + SKD, SKI-3 + SKD vulcanizates contg. ethylene-propylene-unconjugated diene copolymers (I) depended on the nature of the vulcanizing system. Vulcanizing agents contg. no S (e.g., alkylphenol-HCHO resins) brought about crosslinking with the double bonds left intact. The vulcanizates obtained were more compatible with I and exhibited good physicomech. properties. Addn. of 10-30 parts I to the foregoing vulcanizates improved their O₂ resistance and weatherability.

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UDC 669.7.018:620.178.3

STEPNOV, M. N., and YEVSTRATOVA, S. P., Moscow Aviation Technological Institute

"Indirect Evaluation of Aluminum Alloy Fatigue Strength"

Moscow, Zavodskaya Laboratoriya, No 10, Oct 72, pp 1253-1257

Abstract: The relationships are presented for the maximum amplitude of stress and coefficient, characterizing the sensitivity of a material to the asymmetry of the stress cycle, to the static tensile strength, and average cycle stress. These relationships, in conjunction with the equation of the generalized fatigue curve, make it possible to compute the fatigue curve for strained aluminum alloys in symmetrical and asymmetrical stress cycles for variable bend and axial tension-compression as well as to describe the nature of the diagram of maximum amplitudes. 4 figures, 6 bibliographic references.

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