

USSR

DYSSA, O. F., EPISHIN, V. V., POKROVSKIY, B. G., SEMENYUK, A. L.

"Use of the Method of Maximum Likelihood for Processing of Measurement Results"

Otbor i Peredacha Inform. Resp. Mezhved. sb. [Collection and Processing of Information, Republic Interdepartmental Collection], No 29, 1971, pp 33-37, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract No 3 V127 by the author's).

Translation: It is demonstrated that with a known form of distribution of the quantity measured, the optimal estimate of unknown parameters is provided by the method of maximum likelihood, using which the precise estimates of unknown parameters are determined and the position of the true and approximate regression curves are represented graphically within fixed confidence areas.

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USSR

UDC: 621.373.531

BELEN'KIY, Ya. Ye., DYSSA, O. F., TISHCHENKO, A. G.

"Statistical Scatter of the Duration of Pulses From a Relaxation Oscillator with Common Emitter Coupling"

Otbor i peredacha inform. Resp. mezhd. sb. (Selection and Transmission of Information. Republic Interdepartmental Collection), 1970, vyp. 25, pp 117-122 (from RZh-Radiotekhnika, No 2, Feb 71, Abstract No 2C233)

Translation: The authors consider the possibility for mass production of a relaxation oscillator circuit with common emitter coupling. The scatter of duration values for pulses from the relaxation oscillator is determined by using deterministic and probabilistic methods of calculation. The functional relationship for the relative change in the output parameter as a function of the relative changes in individual circuit elements and the statistical characteristics of the circuit elements within the field of tolerance are used for the scatter characteristic. The deviation of the output parameter is presented in the form of statistical characteristics of random errors in circuit elements related by the functional relationship. Tolerances are distributed among the parameters of the individual circuit elements with regard to the corresponding influence functions. Bibliography of five titles. Resumé.

1/1

USSR

UDC: 51

BRON, V. I., DYSYY, O. V.

"Optimum Conveyance of Freight Cars in a Branch of a Railway"

V sb. Mat. metody v ekon. issled. (Mathematical Methods in
Economic Research--collection of works), Ufa, 1971, pp 106-109
(from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V589)

[No abstract]

1/1

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USSR

UDC 532.71:66.066.6

DYMNERSKII, YU. I., ZAKHAROV, S. L., Moscow Chemical Technology Institute
imeni D. I. Mendeleeva

"Additivity of the Process of Separation of Two Aqueous Solutions of Salts
by Reverse Osmosis"

Leningrad, Russian, Zhurnal Prikladnoi Khimii, vol 46, No 7, July 73, pp 1455-
1458

Abstract: Experimental data obtained with cellulose acetate membranes and K, Na, and Ca chlorides and nitrates in aqueous solution showed that the selectivity of the membrane for each salt in a mixture is the same as for the individual salts alone. The constant porosity of the membrane was shown by determination, before each experiment, of its penetrability to pure water. The selectivity and lower penetrability of the membrane to the strongly hydrated Ca^{++} ion than to solutions containing the weakly hydrated Na^+ and K^+ ions can be explained by a capillary model. The additivity of processes for separating chlorides and nitrates by reverse osmosis makes it possible to calculate the expected separation from data on individual salts.

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USSR

UDC 523.71.66.066.6

~~DVTNERSKIY, VI. I.~~, POLYAKOV, G. V., and LUKAVYY, L. S., Moscow Chemical-
Technological Institute Imeni D. I. Mendeleev

"The Mechanism of the Separation of Aqueous Salt Solutions by Reverse Osmosis"

Moscow, Teoreticheskiye Osnovy Khimicheskoy Tekhnologii, Vol 6, No 4,
Jul-Aug 72, pp 628-631

Abstract: Results are reported explaining the selectivity of membranes based on the capillary model of semipermeability mechanism. The permeability of a membrane with respect to the solutions containing various ions is a linear function of a parameter representing the modified ion field energy in vacuum, and the selectivity -- a linear function of the inverse value. With increased strength of the hydrated ion membrane, the permeability of the membrane decreases while the selectivity increases. Furthermore, it has been shown that removal of the concentrational polarization by thorough stirring of the solution increased only slightly -- by 4-5% -- the selectivity of the membrane towards solutions containing strongly hydrated ions such as Zn^{++} , Cd^{++} , Mn^{++} or $SO_4^{=}$, their permeability being increased by a factor of 1.5-2, while the solutions containing poorly hydrated ions such as K^+ , Na^+ , Br^- , or Cl^- have their permeability increased by 20-25%, and the selectivity by 25-30%.

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Acc. Nr:

AP0047631

Abstracting Service:

CHEMICAL ABST. 5-70

Ref. Code:

4R0080

D

104122u Calculation of the acceleration factor for absorption accompanied by a chemical reaction illustrated by the absorption of sulfur dioxide by sodium hydroxide solutions. Dytnerkii.

Yu. I. Brekhovskikh, N. S. (Mosk. Khim.-Tekhnol. Inst. im. Mendeleeva, Moscow, USSR). Zh. Prikl. Khim. (Leningrad) 1970, 43(1), 174-6 (Russ). Rate of SO₂ absorption by 0.1-3.0N NaOH soln. was detd. by using the acceleration factor (1965) and known rate const. (120 m²/kmoie sec). HMJR

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REEL/FRAME
19791203

1/1 not

UNCLASSIFIED

PROCESSING DATE--13NOV70

1/2 017
TITLE--MECHANISM OF THE SEPARATION OF LIQUID SOLUTIONS DURING EVAPORATION
THROUGH POROUS MEMBRANES -U-

AUTHOR--(03)-VOLGIN, V.D., DYTNERSKIY, YU.I., PLANGVSKIY, A.N.

COUNTRY OF INFO--USSR

SOURCE--TEOR. OSN. KHIM. TEKHNOL. 1970, 4(2), 271-5

D

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POROSITY, CHEMICAL SEPARATION, EVAPORATION, ALIPHATIC ALCOHOL,
CELLULOSE RESIN, ACETATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--3001/0140

STEP NO--UR/0455/70/004/002/0271/0275

CIRC ACCESSION NO--AP0125956

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0125956

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONC. PROFILES FOR 3 MODELS OF MEMBRANE SEPN. WITH HIGH PORE, CAPILLARY PORE AND POLYMER MEMBRANES ARE DISCUSSED. THE SEPN. MECHANISM OF WATER SOLNS. OF ME, ET, PR, BU, ISO-BU ALCS. AND OF ACETONE BY MEANS OF 2 DIFFERENT CELLULOSE ACETATE MEMBRANES WAS INVESTIGATED. THE DEPENDENCE OF THE EVAPN. RATE, THE SELECTIVITY, AND THE SEPN. COEFFS. ON THE MEMBRANE PRESSURES ARE GRAPHICALLY PRESENTED. FACILITY: MOSK. INST. KHIM. MASHINOSTR., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.43:62.529

DYUBEK, K. L., LEVIN, I. A., and GAPOYAN, D. T., Candidates of Technical Sciences, Moscow Institute of Automotive Engineering; NAMI (Central Scientific Research Institute of Automobiles and Automobile Engines)

"Investigation and Elimination of High-Frequency Vibrations Originating During the Operation of Wheel Brake Mechanisms"

Moscow, Avtomobil'naya Promyshlennost', No 7, Jul 72, pp 16-18

Abstract: In an investigation of causes of the origination of high-frequency vibrations of brake-drum mechanisms, a study was made by NAMI, jointly with the Moscow Institute of Automotive Engineering, of the conditions of the transition of a statically and dynamically stable system, constituting the brake mechanism in the absence of vibrations, into a dynamically unstable system which predetermines the presence of vibrations. A research procedure by means of wire detectors was developed, which permits a quantitative analysis to be made of the character of the curve of specific pressures with respect to the arc length of the brake lining, with its subsequent evaluation by the graphoanalytic method. The obtained experimental data makes it possible to conduct a refined graphoanalytic calculation of the forces acting in the tested brake mechanisms in the presence, and in the absence, of
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DYUBEK, K. L., et al., Avtomobil'naya Promyshlennost', No 7, Jul 72, pp 16-18

high-frequency vibrations, and to determine the causes of origination of the vibrations. Such a calculation was conducted for the front-brake mechanism of the Moskvich automobile, the form of the curve of the specific pressures that were applied upon it (with and without vibrations) being studied experimentally. Means for the elimination of high-frequency vibrations of the brake mechanism are indicated. 3 figures.

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UDC 8-94

SHVEYKIN, G. P., ~~DYUBIMOV, V. D.~~

"Thirteenth Session of the Scientific Council of the Academy of Sciences USSR on the Problem of "Physical-Chemical Principles of Production of New Heat-Resistant Materials""

Moscow, Neorganicheskiye Materialy, Vol 8, No 11, Nov 72, pp 2,058-2,059.

Abstract: The session mentioned in the title was held in Pervoural'sk 23 through 27 May, 1972, discussing the theme "Refractories, High-Melting Materials and Coatings." Two-hundred seventy persons from 76 organizations of 31 cities from 7 union republics of the Soviet Union took part in the session. One-hundred seventy reports were read in the two plenary and two sectional sessions, covering the following topics: refractory materials; oxygen-free compounds; oxides and coatings. Subjects covered by the reports included: prediction of the production of refractories; physical-chemical principles of the use of zirconium dioxide as a refractory; new trends in the technology of densely sintered ceramics; methods of production of synthetic mullite; the properties of refractory materials based on electrically melted periclase and periclase-chromite materials; problems of production of
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USSR

UDC 8-94

SHVEIKIN, G. P., DYUBIMOV, V. D., Moscow, Neorganicheskiye Materialy, Vol 8, No 11, Nov 72, pp 2,058-2,059.

oxygen-free compounds of boron nitride and aluminum nitride; the interaction of refractories with metal slags; study of the kinetics and mechanism of solid-phase synthesis of oxide compounds; phase equilibria in oxide systems; new methods for synthesis of refractory materials based on zirconium and hafnium dioxide; the properties of individual and complex oxides. Certain shortcomings in the development of work on the problem of refractories were noted, including: insufficient utilization of modern methods of theoretical and experimental physics and solid state chemistry for determination of the general regularities of the structure, chemical bonding and properties of refractory materials; insufficient utilization of modern methods of physical and chemical investigations, methods of experimental planning and computers; slow transition from laboratory studies to practical utilization of results; insufficient prediction of properties of refractories considering developing trends in technology; and insufficient coordination of the activities of scientific research institutes and applied research organization.

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Acc. Nr.: AP0028761

Ref. Code: UR 0050

PRIMARY SOURCE: Meteorologiya i Gidrologiya, 1970, Nr 1,
pp 57-61

AUTHOR: Dyubkin, I. A.,

ON STABILITY OF MEAN MONTHLY VALUES OF AIR TEMPERATURE AND
PRESSURE FOR THE OBSERVATORY AT MIRNY

Estimates of variability of mean monthly temperature and air pressure values for months of the same name are represented in the paper for a 11-year period of observations in Antarctica. Ninety-five per cent confidence limits in general population are given both for individual and long-time annual mean monthly values of these elements. It is shown that sharp change of the atmospheric circulation may take place during any month of the year.

The confidence limits obtained in the paper for parameters being analysed can serve as a criterion for reliability of those values when constructing algorithms for both manual and machine checking.

REEL/FAME
19680198

12 dy

UDC 51:155.001.57:612.82

USSR

DYUBKO, G. F., TISHCHENKO, V. V.

"Mathematical Model of Statistical Conversion of Intensities of Vibration in Vibration Sensation"

Probl. Bioniki. Resp. Mezhd. Nauchno-tekhn. Sb. [Problems of Bionics, Republic Interdepartmental Scientific and Technical Collection], No 4, 1970, pp 50-54, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V678).

Translation: A mathematical model is studied, allowing the probability of fulfillment of an exponential rule for the vibration sensitivity of the skin to be tested.

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USSR

UDC 51:155.001.57:612.82

DYUBKO, G. F., YEREMIN, G. S.

"Mathematical Model of Conversion of Found Information in the Human Audio Analyzer"

Probl. Bioniki. Resp. Mezhd. Nauchno-tekhn. Sb. [Problems of Bionics, Republic Interdepartmental Scientific and Technical Collection], No 4, 1970, pp 114-116, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V677 by the authors).

Translation: A mathematical model is presented, constructed by the cybernetic "black box" method.

USSR

UDC: 621.375.82

DYUEKO, S. F., TOPKOV, A. N.

"Improving the Monochromaticity of Hydrogen Cyanide Laser Emission"

Moscow, Kvant. elektronika--sbornik (Quantum Electronics--collection of works), No 1(13), "Sov. radio", 1973, pp 103-105 (from RZh-Fizika, No 8, Aug 73, abstract No 8D1058 by the authors)

Translation: The authors study the operation of a hydrogen cyanide laser emitting on $336 \mu\text{m}$. When carbon monoxide is added to the working mixture, the discharge current is reduced to 0.18 amp. while efficiency is more than tripled. The width of the emission line in operation with added CO is decreased by more than an order of magnitude. The paper gives the assumed mechanism responsible for the effect of CO on improving the population inversion of hydrogen cyanide working levels. On the basis of experiments a hydrogen cyanide laser is developed which operates effectively with a high-frequency discharge. The short-term stability of the hydrogen cyanide laser working with a high-frequency does not exceed 10^{-10} .

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1/2 048 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--A SUBMILLIMETER RANGE LASER -U-
AUTHOR--(02)-DYUBKO, S.F., SVICH, V.A. *D*
COUNTRY OF INFO--USSR
SOURCE--PRIBORY I TEKHNIKA EKSPERIMENTA, JAN. FEB. 1970, P. 187-189
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--GAS LASER, HYDROGEN CYANIDE, LASER POWER OUTPUT, SINGLE MODE
LASER, SUBMILLIMETER WAVE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1557 STEP NO--UR/0120/70/000/000/0187/0189
CIRC ACCESSION NO--AP0106303
UNCLASSIFIED

2/2 048

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0106303

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESCRIPTION OF THE DESIGN AND MAIN CHARACTERISTICS OF A SUBMILLIMETER RANGE GAS LASER OPERATING ON HCN. THE OUTPUT POWER OF THE LASER AT THE 336 MICRO WAVELENGTH RANGES FROM 10 TO 15 MW. THE RADIATION IS SINGLE MODE AND IS LINEARLY POLARIZED. THE LASER LENGTH IS 1.6 M. FACILITY: KHAR'KOVSKII GOSUDARSTVENNYI UNIVERSITET, KHARKOV, UKRAINIAN SSR.

UNCLASSIFIED

USSR

UDC 621.396.963.3

DYUBURG, O. I., PEREVEZENTSEV, L. G.

"Perception of Color Marks of Radar Signals with Television Type Displays"

Sb. nauch. tr. Kiev. in-t inzh. grazhd. aviatsii (Collection of Scientific Works of the Kiev Institute of Civil Aviation Engineering), 1971, vyp. 6, pp 56-60 (from RZh-Radiotekhnika, No 6, Jun 72, Abstract No 6G70)

Translation: A study was made of the basic laws of color perception for the fine details of an image when the dispatcher is observing radar images on TV-type color display screens. The experiments were performed using a color video control device based on a masked kinescope. The effect of the additional information in the form of color variation of the target marks on the resolution of the display is established. There are 5 tables.

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1/2 010 UNCLASSIFIED PROCESSING DATE--2300170
TITLE--HYGIENIC STUDY OF PIREF DIETHYL PYROCARBONIC ETHER AND ITS POSSIBLE
USE IN THE FOOD INDUSTRY -U-
AUTHOR-(03)-ZAYTSEV, A.N.; RAKHMANINA, N.L., DYUBYUK, N.YE.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY PITANIYA, 1970, NR 3, PP 14-17

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FOOD PRESERVATION, ALIPHATIC ETHER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/2045

STEP NO--UR/0244/70/0007003/0014/0017

CIRC ACCESSION NO--AP0122274

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0122274

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DIETHYL PYROCARBONIC ETHER (DPE) IS UTILIZED IN MANY COUNTRIES AS A CONSERVING AGENT FOR WINES AND JUICES. PERTINENT CALCULATIONS SHOW DPE IN A DOSE OF 3.6 MG-KG BODY WEIGHT PER DAY CAPABLE OF AFFECTING THE HUMAN ORGANISM. IN THE PRESENT WORK EXPERIMENTAL EVIDENCE IS PRODUCED SHOWING THAT THE DOSE OF 3.6 MG-KG OF DPE PROPOSED BY THE CHEMICAL INSTITUTE OF THE ACADEMY OF SCIENCES OF THE MOLDAV SSR WITH THE TRADE NAME OF "PIREF", SHOULD BE REGARDED AS LIMINAL TOXICOLOGICALLY. PROCEEDING FROM THIS FACT, AND ALSO CONSIDERING THE RATE OF THE PREPARATIONS HYDROLYSIS IN BEVERAGES MAY DECREASE CONSIDERABLY, "PIREF", ACCORDING TO THE AUTHORS, CANNOT BE RECOMMENDED AS A PRESERVATIVE FOR WINES AND WINE PRODUCTS. FACILITY:
INSTITUT PITANIYA AMN SSSR, MOSCOW.

UNCLASSIFIED

USSR

UDC: 534-8

DYUDIN, B. V., KOTILEVSKIY, V. A.

"Investigation of the Acoustic Channel of a Waveguide-Type Level Indicator"

Tr. Taganrog. radiotekhn. in-ta (Works of Taganrog Radio Engineering Institute), 1973, vyp. 34, pp 218-227 (from RZh-Fizika, No 5, May 73, abstract No 5Zh600 by V. V. Semenov)

Translation: An investigation is made of the acoustic channel of sensors in level indicators in which this channel operates on normal waves. The radiating waveguide is a circular rod carrying on its surface a periodic structure comprised of truncated cones with their smaller bases turned toward a converter located on the upper face of the rod. The periodic structure can be used to change the direction of motion of the elastic wave in the receiving waveguide through 180 degrees relative to the radiating waveguide. The receiving waveguide through 180 degrees relative to the radiating waveguide. The receiving waveguide is a circular rod with a smooth surface. At short distances between waveguides immersed in a liquid an elastic wave is excited in the receiving waveguide by the fluid wedge method. By the selection of the oscillation frequency and waveguide diameter, elastic waves can be effectively radiated into the liquid and excited in the receiving waveguide. When the acoustic channel is tuned to the third mode, acoustic energy is most effectively

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USSR

DYUDIN, B. V., KOTILEVSKIY, V. A., Tr. Taganrog. radiotekhn. in-ta, 1973,
vyp. 34, pp 218-227

transmitted when the period of the structure on the radiating waveguide is equal to the wavelength. The diameter of the radiating waveguide was chosen with the condition that the diameter of the truncated cone in the periodic structure be equal to that of the receiving waveguide. An overall view of the radiating waveguide is given. The acoustic channel of the level indicator was studied on an installation which is schematically shown in the paper. For the investigated waveguide system the optimum resonance frequency is 252 kHz for a structure period $n = 1$. At this resonance frequency there is a dead zone of 0.1-0.15 m on the ends of the waveguide due to the existence of a zone of acoustic signal transmission. A wideband spherical pickup was used to measure the pressure amplitude along a waveguide immersed in water. The resolution of the level indicator is 1250 $\mu\text{s/m}$. The delay time of a pulse in the acoustic channel as a function of liquid level was close to linear.

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USSR

UDC: 681.121.842

KREMLEVSKIY, P. P., DYUDINA, I. A.

"Use of Standard Diaphragms for Measurement of Moist Steam Flow"

IV Vses. Nauch.-Tekhn. Seminar. Metody i Pribory Dlya Izmereniya Raskhodov i Kolichestv Zhidkosti, Gaza i Para [Fourth All-Union Scientific and Technical Seminar on Methods and Devices for Measurement of Flow Rates and Quantities of Fluid, Gas and Vapor -- Collection of Works], Tallin, 1972, pp 17-22 (Translated from Referativnyy Zhurnal Metrologiya i Izmeritel'naya Tekhnika, No 3, 1973, Abstract No 3.32.702)

Translation: As a result of theoretical and experimental studies, the following conclusions are drawn: 1. In measuring the flow of moist steam using a standard diaphragm, one can use the ordinary flow formula under the condition of application of correction factor K, the value of which is presented. 2. The formula for flow rate of moist steam yields, as a particular case, the generally known formula for measurement of flow rate of single-phase media. 3. As moist steam moves through a diaphragm, the particles of moisture, the density of which is several hundred times greater than that of the vapor, are not accelerated and pass through the aperture of the diaphragm at their initial velocity. 2 tables.

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1/2 023 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--DETERMINATION OF UPPER CRITICAL LOADS FOR CYLINDRICAL SHELLS ON THE
BASIS OF NONLINEAR THEORY -U-
AUTHOR-(02)-DYUGACH, M.I., STEPANENKO, A.S.

COUNTRY OF INFO--USSR

SOURCE--VSESDIUZNAIA KONFERENTSIIA PO PRIMENENIIU ETSVM V STROITEL'NOI
MEKhanIKE, 5TH, TIFLIS, GEORGIAN SSR, NOV. 25-29, 1968. PRIKLADNAIA
DATE PUBLISHED--APR70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--CYLINDRIC SHELL STRUCTURE, BIBLIOGRAPHY, SHELL THEORY,
COMPUTER APPLICATION, METAL STRESS, NONLINEAR EQUATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAme--2000/1971

STEP NO--UR/0198/70/006/000/0067/0073

CIRC ACCESSION NO--AP0125560

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0125560

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DEVELOPMENT OF A METHOD OF CALCULATING UPPER CRITICAL LOADS FOR CYLINDRICAL SHELLS, BASED ON THE LINEARIZATION OF THE NONLINEAR EQUATIONS IN SHELL THEORY UNDER THE ASSUMPTION OF ZERO MOMENT STRESS IN THE INITIAL STATE. THE NONLINEAR STRAIN EQUATIONS ARE SOLVED BY AN ITERATION TECHNIQUE WHICH REDUCES TO THE DETERMINATION OF CORRECTIONS TO THE VALUES OF THE RESOLVING FUNCTIONS OBTAINED IN THE PRECEDING APPROXIMATION. THE CORRECTIONS ARE COMPUTED ON THE BASIS OF THE LINEARIZED SYSTEM OF EQUATIONS. IN THE CASE OF ZERO CORRECTIONS, THIS SYSTEM REDUCES TO A HOMOGENEOUS SYSTEM WHICH CONSTITUTES A SYSTEM OF STABILITY EQUATIONS WHICH TAKE THE MOMENT STRESSES IN THE SUBCRITICAL STATE INTO ACCOUNT. AS AN EXAMPLE, STABILITY PROBLEMS FOR CYLINDRICAL SHELLS ARE SOLVED ON THE BASIS OF A CORRESPONDING COMPUTER PROGRAM, USING THE METHOD OF NETWORKS.
FACILITY: AKADEMIIA NAUK UKRAINSKOI SSR, INSTITUT MEKHANIKI, KIEV, UKRAINIAN SSR.

UNCLASSIFIED

USSR

UDC 547.834.4+541.634

MIKHLINA, YE. YE., YANINA, A. D., ALEKSEYEVA, L. M., TURCHIN, K. F., SHEYNKER, YU. N., YAKHONTOV, L. N., DYUK, R. F., RICHARD, A. YA., and KATRITSKIY, A. R., All-Union Scientific Research Pharmaceutical Chemical Institute imeni S. Ordzhonikidze, Moscow and Chemistry Department, University of East Anglia at Norwich, Great Britain

"Reaction of Benzo [b]quinuclidine with Electrophilic Reagents"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, Academy of Sciences Latvian SSR, No 3, 1971, pp 385-388

Abstract: Electrophilic substitution of benzo [b] quinuclidine (I) was studied: bromination, nitration, and sulfochlorination. These results are closely related to the absence of p- π electron interaction in I. When I is brominated in several different solvents (acetic acid, chloroform) at 0, 20, and 60° (with or without catalysts), only the perbromide of I and a molecular complex of I with bromine were obtained. The absence of the p- π mesomeric effect in I is shown by its pK. In contrast to bromination, nitration and sulfochlorination of I form products of electrophilic substitution. When I is treated with a nitrating mixture at temperatures from -4 to -7°, mononitrobenzo [b] quinuclidine is formed. When I is treated with chlorosulfonic acid, first at 0° and then at 50°, benzo [b]quinuclidine-sulfonyl chloride is formed.

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USSR

UDC 577.1:615.7/9

PUZIK, V. I., BERDYEVA, A. T., DYUKANOVA, M. YA.

"Activity of Succinate Dehydrogenase in Organs of White Rats During Intoxication With Vipera Lebetine Poison"

Byul. Eksperim. biol. i med. (Bulletin of Experimental Biology and Medicine), Vol 69, No 1, 1970, pp 93-94 (from Referativnyy Zhurnal - Biologicheskaya Khimiya, No 14, 25 Jul 70, Abstract No 14 F1944)

Translation: Studied were the effects of a toxic and a lethal dose of Vipera lebetina poison on the specific histochemical activity of succinate dehydrogenase (I) of the liver, kidneys, myocardium, lung tissue, and brain of white rats. The character of the changes in the activity of I depends on the duration and dose of the poison. As a rule, the drop in activity of I corresponds to the extent of diastrophic changes in the parenchymal organs.

Yu. Leykin

USSR

UDC 598.126:591.461.2

BERDYEVA, A. T., and DYUKANOVA, M. Ya., Institute of Physiology and Experimental Pathology of Arid Zones, Academy of Sciences Turkmen SSR, and Pathomorphological Department, Central Scientific Research Institute of Tuberculosis, Ministry of Health USSR

"Dynamics of the Change in Kidney Parenchyma and Vessel Walls Caused by Intoxication From Kufi and Cobra Venoms"

Ashkhabad, Izvestiya Akademii Nauk Turkmenskoy SSR, Seriya Biologicheskikh Nauk, No 5, 1970, pp 81-85

Abstract: The degenerative changes in the kidneys of white rats upon administration of toxic and lethal doses of Kufi and Cobra venoms were studied, with particular reference to morphological and histochemical reactions of the kidney parenchyma and the arterial walls. The changes observed were accompanied by a breakdown of the oxidation-reduction reactions and a change in the nucleic acid content. The character of the pathological changes and the dynamics of their course depend on the type of snake, the dose, and the time of action of the venom.

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USSR

D HD3 616.919:598.12-07:616-000.931:577.150-074

PUZIK, V. I., BERDYEVA, A. T., and DYUKANOVA, N. YA., Pathomorphology Department, Central Scientific Research Tuberculosis Institute, Ministry of Health USSR, and Institute of Regional Medicine, Academy of Sciences, Turkmen SSR

"Succinic Dehydrogenase Activity in Organs of White Rats Poisoned with Viper Venom"

Moscow, Bulletin' Eksperimental'noy Biologii i Meditsinoy, No 1, 1970, pp 93-94

Abstract: Injection of rats with viper venom markedly affected succinic dehydrogenase (SD) activity. The nature of the changes varied with the dose and duration of action of the poison. Toxic doses (8 mg/kg) produced degenerative changes in the liver, kidneys, then in the myocardium and brain. Toxic doses sharply lowered SD activity at the same time. Lethal doses (10 mg/kg) brought about degenerative changes within 10 minutes in organs, similar to those observed with toxic doses after 24 hours. Initially, SD activity was lowest in the myocardium and kidneys. At the time of respiratory arrest, there was a sharp decrease in SD activity in the liver 1/2

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USSR

RUZIK, V. I., et al., Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 1, 1970, pp 93-94

and lungs, but a slight increase in the kidneys, myocardium, etc. brain. The increase in activity of the enzyme is ascribed to the increased permeability of the blood vessels and cellular membranes due to poisoning by viper venom.

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Acc. Nr.: AP0031144

Ref. Code: UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i
Meditsiny, 1970, Vol 69, Nr 1, pp 93-94

ACTIVITY OF SUCCINIC DENYDROGENASE IN THE ORGANS OF WHITE RATS
AFTER INTOXICATION WITH THE TOXIN OF THE SNAKE "GUERZA"

V. I. Puzik, A. T. Berdyeva, M. Ya. Duukanova

Central Research Institute of Tuberculosis, Moscow, Institute of Regional Medicine
Ashkhabad

The authors report on results of histochemical study of the activity of succinate dehydrogenase after intoxication with the poison of the snake "guerza". Marked difference was found in the distribution and activity of the enzyme in various organs. Character of changes of the activity depended on the dose and the duration of action of the poison.

6 MK

REEL/FRAME

19691189

USSR

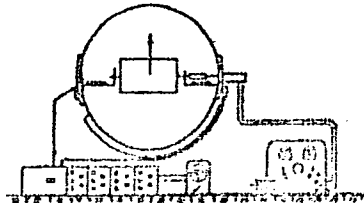
UDC: 533.69

DYUKOV, A. A., Dnepropetrovsk State University

"An Instrument for Demonstrating and Measuring Aerodynamic Lift"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 13, May 70, Author's Certificate No 335567, Division G, filed 14 Jul 70, published 11 Apr 72, p 175

Translation: This Author's Certificate introduces an instrument for demonstrating and measuring aerodynamic lift. The device contains a rotating cylinder located in an airstream with the axle supported by elastic hinges equipped with force-measuring instruments. As a distinguishing feature of the patent, provision is made for increasing the measurement range by displacement of the cylinder in a plane perpendicular to the velocity vector of the oncoming flow. The device is equipped with an electric motor whose shaft is connected to the axle of the cylinder through a flexible roller.



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- 120 -

1/3 011 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--BASIC PROBLEMS IN SOVIET EXPLORATION GEOPHYSICS -U-
AUTHOR-(03)-DYUKOV, A.I., NEVOLIN, N.V., FEDYNSKIY, V.V.
COUNTRY OF INFO--USSR **D**
SOURCE--MOSCOW, SOVETSKAYA GEOLOGIYA, NO 4, APRIL 1970, PP 41-53
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--GEOPHYSIC METHOD OF EXPLORATION, MAGNETIC SURVEY, GRAVITY
SURVEY, ELECTROMAGNETIC SOUNDING, MAGNETOTELLURIC SOUNDING,
ELECTROPROSPECTING, NUCLEAR GEOPHYSICS, EARTH CRUST, UPPER MANTLE,
PETROLEUM PROSPECTING, GEOLOGIC EXPLORATION, MARINE GEOLOGY, GEOLOGICAL
OCEANOGRAPHY, SEISMIC PROSPECTING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0947 STEP NO--UR/0215/70/000/004/0041/0053
CIRC ACCESSION NO--AP0126602
UNCLASSIFIED

2/3 011

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0126602

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AFTER A HISTORICAL REVIEW, THE FOLLOWING ASPECTS OF SOVIET EXPLORATION GEOPHYSICS ARE DISCUSSED: MAGNETIC PROSPECTING, GRAVIMETRIC PROSPECTING, ELECTRIC PROSPECTING, SEISMIC PROSPECTING, GEOPHYSICAL STUDIES IN BOREHOLES, NUCLEAR GEOPHYSICAL METHODS, COMPLEX INVESTIGATIONS OF THE EARTH'S CRUST AND UPPER MANTLE, REGIONAL GEOPHYSICAL INVESTIGATIONS, PROSPECTING FOR PETROLEUM AND GAS, AND MINERAL PROSPECTING. IN THE FUTURE THE GEOPHYSICISTS OF THE USSR MUST FOCUS ATTENTION ON THE FOLLOWING PROBLEMS: 1) COMBINING GEOPHYSICAL METHODS WITH DRILLING FOR INCREASING THE EFFECTIVE DEPTH AND ACCURACY OF GEOPHYSICAL INVESTIGATIONS IN STUDYING BASEMENT RELIEF IN PLATFORM AREAS AND DETERMINING THE LOWER STRUCTURAL STAGES OF THE SEDIMENTARY COVER, AS WELL AS FINDING LOW AMPLITUDE STRUCTURES IN LOWER PALEOZOIC AND UPPER PROTEROZOIC DEPOSITS OF THE RUSSIAN AND SIBERIAN PLATFORMS, DEVONIAN AND MORE ANCIENT DEPOSITS OF THE TIMANO-PECHORA PROVINCE, MESOZOIC-CENOZOIC DEPOSITS OF THE NORTHERN CAUCASUS, JURASSIC AND PERMIAN-TRIASSIC DEPOSITS OF CENTRAL ASIA, THE CASPIAN DEPRESSION, USTYURT, AND ELSEWHERE. 2) METHODS MUST BE IMPROVED FOR STUDYING SUBSALT DEPOSITS ON THE RUSSIAN AND SIBERIAN PLATFORMS AND IN CENTRAL ASIA. 3) THERE MUST BE A RADICAL TECHNICAL REEQUIPPING OF MARINE GEOPHYSICS TO BRING ABOUT IMPROVEMENTS IN THE EXPLORATION FOR PETROLEUM AND GAS ALONG THE SEA AND OCEAN SHORES OF THE USSR AND TO DISCOVER OFFSHORE DEPOSITS OF SOLID MINERALS.

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3/3 011

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0126602

ABSTRACT/EXTRACT--4) DEVELOPMENT OF A METHOD OF GEOPHYSICAL RESEARCH FOR DETAILED STUDY OF THE TECTONICS OF COALBEARING STRATA IN COAL FIELDS TO MAKE POSSIBLE PLANNING OF A COMPLETELY MECHANIZED SYSTEM FOR THEIR EXPLOITATION. 6) MUCH MORE EXTENSIVE USE MUST BE MADE OF SUCH METHODS AS INDUCED POLARIZATION AND TRANSIENT PROCESSES, HIGHLY PRECISE GRAVIMETRIC PROSPECTING AND ADVANCED TYPES OF SEISMIC PROSPECTING, TOGETHER WITH GEOCHEMICAL METHODS AT ALL STAGES OF MINERAL PROSPECTING AND EXPLORATION. 7) DEVELOPMENT OF METHODS FOR TAKING INTO ACCOUNT THE INHOMOGENEITY OF ROCKS AND OTHER FORMS OF INTERFERENCE WHICH REDUCE THE RELIABILITY OF DISCRIMINATION AND INTERPRETATION OF WEAK ANOMALIES CAUSED BY DEEPLY SEATED ORE BODIES; THIS WORK MUST BE DONE USING PETROPHYSICAL METHODS, MATHEMATICAL STATISTICS, THE THEORY OF GAMES AND ELECTRONIC COMPUTERS. EACH FORM OF GEOPHYSICAL PROSPECTING AND EXPLORATION IS EXAMINED RELATIVE TO ITS NEEDS DURING THE NEXT FEW YEARS.
FACILITY: ALL UNION SCIENTIFIC RESEARCH INSTITUTE OF GEOPHYSICS.
FACILITY: MARINE GEOLOGICAL PROSPECTING INSTITUTE.

UNCLASSIFIED

USSR

UDC: 621.374.5(088.8)

DYUKOV, L. V., TABAKOV, G. A., BARANOV, A. N., TIKHONOVICH, V. V.

"A Device for Correcting the Flat Section of a Pulse"

USSR Author's Certificate No 266829, filed 3 June 69, published 2 July 70
(from RZh-Radiotekhnika, No 5, May 71, Abstract No 5G302 P)

Translation: This Author's Certificate introduces a device for correcting the flat section of a power modulator pulse. The device consists of a controllable resistance (e. g. a lamp) connected in series or parallel with the load, an amplifier in a feedback circuit, a comparison element, and a reference voltage source. To reduce losses in the regulator and ensure zero-lag action of the device, the comparison element and reference voltage source are made in the form of a capacitor and electronic switch in a series circuit which is connected in parallel with the load resistance. The common point between capacitor and switch is connected to the high-resistance input of the feedback amplifier.

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- 111 -

Acc. Nr: AP0047350

D

Ref. Code: UR0589

PRIMARY SOURCE: Vestnik Khirurgii imeni I. I. Grekova, 1970,
Vol 104, Nr / , pp 65-68

ACUTE ULCERS OF THE GASTROINTESTINAL TRACT

By L. A. Smolnikov and V. S. Dyukov

Thirteen patients with acute ulcers were investigated. Single ulcers were observed in 4 patients, multiple — in 9. Acute ulcers were mostly located in the stomach (in 9 patients) and more rare in the intestine. The course of acute ulcers was complicated by perforation in 10 cases, hemorrhage — in 3 cases. The clinical picture of ulcer perforation depends on its localization and frequently does not show a classic picture of peritoneal shock. The diagnosis of such a complication is very difficult. Hemorrhage, as a complication of acute ulcer promptly leads to grave anemia and often results in patients' death.

1/1

REEL/FRAME
19790876

Yhh

2

USSR

UDC: 8.74

DYUKOVA, L. G., MATVEYEV, B. V.

"Layer-by-Layer Interpretation of the Function $R_{1,n}$ "

Uch. zap. Perm. un-t (Scientific Notes of Perm University), 1971, No 259,
pp 36-41 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V1033)

Translation: The authors consider a method of layer-by-layer interpretation of the function $R_{1,n}$, and generalize the results of realization of this method on the "Aragats" computer.

1/1

USSR

UDC 541.62:547.819:543.422.4.6

ZAYTSEV, B. YE., SHEBAN, G. V., DYUMAYEV, K. M., and SMIRNOV, L. D.,
Scientific Research Institute of Organic Intermediates and Dyes, Moscow

"The Structure of 2-Methoxy-3-hydroxy-6-phenylazopyridine"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 2, Feb 73, pp 224-229

Abstract: On the basis of IR and electron spectroscopy it was established that 2-methoxy-3-hydroxy-6-phenylazopyridine exists in azo and hydrazo forms. Switching from aprotic solvents to the protonated ones results in a shift in the equilibrium of tautomers toward the hydrazone form. The relationship of the tautomeric forms in different solvents was studied. The stability of both form was established by the MO method, the azo form appearing to be more stable.

1/1

- 67 -

Acc. Nr:

AP 0100357

Abstracting Service:

CHEMICAL ABST. 6/70

Ref. Code:

UR 0062

116523p Effect of the pH of the medium on chemical shifts in the PMR of 3-hydroxypyridine derivatives. Lezina, V. P.; Smirnov, L. D.; Dymov, K. M.; Bystrov, V. F. (Inst. Khim. Fiz., Moscow, USSR). *Izv. Akad. Nauk SSSR, Ser. Khim.* 1970, (1), 25-31 (Russ). The NMR chem. shifts were tabulated for 3-methoxy-2-methylpyridine, 3-hydroxy analog, its 2-nitro and 2-dimethylaminomethyl analogs, as well as 2-methyl-6-diethylaminomethyl-3-hydroxypyridine, its 6-nitro analog and 4-nitro analog as well as selected methiodides. From the chem. shift data the electron distribution in such compds. was estd. for acid, basic and neutral media. The spectra of 2-methyl-3-hydroxypyridine and its *N*-Me deriv. showed the presence of the bipolar structure component in aq. soln. The Hueckel method of LCAO MO calcn. gave satisfactory values for the bipolar form in comparison with the results of NMR study. Passing from acid to basic medium causes a change in the sequential position of proton signals from 4- and 5-positions of the ring. The internal H bond in 2-dimethylaminomethyl-3-hydroxypyridine affects the chem. shift relation to pH and the dependence of this shift on pH indicates that distinct protonation at the ring N and the sidechain N occurs in such compds.

G. M. Kosolapoff

REEL/FRA
19841777

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USSR

UDC 8.74


TYRSA, V. YE., DYUNYASHEV, V. V., KIRICHENKO, N. P., LEVYKIN, V. M., ROMANOVA, A. G.

"Analysis of the Accuracy of Analog-to-Digital Transformation with Automatic Exclusion of Systematic Errors"

Pribery i sistemy avtomatiki. Resp. mezhved. temat. nauch.-tekhn. sb. (Automation Instruments and Systems. Republic Interdepartmental Thematic Scientific and Technical Collection), 1972, vyp. 24, pp 103-107 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V452)

Translation: A study was made of the method of analog-to-digital transformation which can be realized in information-measuring devices. For a significant reduction (exclusion) of systematic measurement errors, an information channel is introduced into the block diagram of the converter which permits the code of a standard value in its physical essence an adequate unknown, to be received. On the basis of the analysis of the accuracy of the proposed method of analog-digital transformation, recommendations are made for selection of the optimal ratio of the unknown and the standard variables.

1/1

1/2 015 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--HIGH SHRINKAGE FIBERS BASED ON POLY(ETHYLENE GLYCOL TEREPHTHALATE
5, HYDROXYISOPHTHALATE -U-
AUTHOR--(02)-DYURNBAUM, V.S., BOGDANOV, M.N. 
COUNTRY OF INFO--USSR
SOURCE--KHIM. VOLOKNA 1970, (1), 63
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, CHEMISTRY
TOPIC TAGS--POLYETHYLENE TEREPHTHALATE, SYNTHETIC FIBER, HYDROXYL
RADICAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1984/1812 STEP NO--UR/0183/70/000/001/0063/0063
CIRC ACCESSION NO--AP0100386
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0100386

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STAPLE OR FIBERS SPUN FROM POLY(ETHYLENE TEREPHTHALATE, 5, HYDROXYISOPHTHALATE), (TEREPHTHALIC, 5, HYDROXYISOPHTHALIC ACID WT. RATIO 98-98.5:2-1.5), MELT AT 280 TO 292 DEGREES OR 292 TO 304 DEGREES AND AFTER DRAWING 240 TO 50 PERCENT OR 330 TO 60 PERCENT, RESP., AT 70 TO 80 DEGREES SHRINK 50 TO 60 PERCENT WHEN HEATED TO 60 DEGREES. SUCH FIBERS ARE USED IN THE MANUF. OF ARTIFICIAL FUR, TRICOTS, AND KNITTED FABRICS. THEY SHOULD BE PROCESSED AT LESS THAN 80 DEGREES AFTER SPINNING TO PRESERVE THEIR SHRINKING ABILITY.

UNCLASSIFIED

1/2 028 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--PROPERTIES OF FIBERS BASED ON COPOLYMERS OF ETHYLENE TEREPHTHALATE
WITH ETHYLENE HYDROXYISOPHTHALATE -U-
AUTHOR--(04)-GORBACHEVA, V.O., DYURNBAUM, V.S., IYEVLEVA, N.K., KHOKHLOVA,
N.S.
COUNTRY OF INFO--USSR **D**
SOURCE--KHIM. VOLOKNA 1970, (1), 9-11
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--COPOLYMER, POLYETHYLENE TEREPHTHALATE, HYDROXYL RADICAL,
SYNTHETIC FIBER, THERMAL ANALYSIS, DILATOMETRY, MICROSCOPY, THERMAL
EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/1826

STEP NO--UR/0183/70/000/001/0009/0011

CIRC ACCESSION NO--AP0100400

UNCLASSIFIED

2/2 028 UNCLASSIFIED PROCESSING DATE--18SEP70
CIRC ACCESSION NO--AP0100400
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE AND PHYSICOMECH.
PROPERTIES OF ETHYLENE TEREPHTHALATE, (1

UNCLASSIFIED

89

USSR

UDC 632.954



SHCHEGLOV, YU. V., KOZINA, L. S., YAKOVETS, V. I., NIKISHIN, G. I., and
DYUSENOV, M. I., All Union Scientific Research Institute of Phytopathology,
Golitsyn-Moscow Region, Institute of Organic Chemistry, Academy of Sciences
USSR, Moscow

"Herbicidal Activity of Substances Containing Trichloroallyl Group. I
Communication. 1,1,2-Trichloropropene-1-ol-3 (Trichloroallyl Alcohol),
Some of its Analogues and Derivatives"

Moscow, Agrokhimiya, No 5, May 73, pp 129-135

Abstract: The highest herbicidal activity among the chloro derivatives of allyl alcohol is exhibited by 1,1,2-trichloropropene-1-ol-3 (I) and its simple alkyl ethers. These compounds are systemic herbicides penetrating into the plants through the roots. Replacement of the hydroxyl group in trichloroallyl alcohol by various radicals and other groupings leads to the loss or to a drastic change of herbicidal activity. As a rule, the materials loose their ability to penetrate through the roots of the plants. In contrast to (I), trichlorovinylacetic acid exhibits properties of an active systemic herbicide capable of penetrating through the leaves. The parent compound (I) is about 5-10 times as active as allyl alcohol. In a field trial on buckwheat, (I) lowered by 45-55% the total weeds without any undesirable action against the buckwheat. 1/1

USSR

UDC 632.95

SHCHEGLOV, YU. V., NIKISHIN, G. I., DYUSENOV, M. I., VOL'KENSHTEYN, YU. B., SALAMANDRA, L. K., and KOZINA, L. S., All-Union Research Institute of Plant Pathology and Institute of Organic Chemistry, Academy of Sciences USSR

"A Herbicide"

USSR Author's Certificate No 252757, filed 11 June 68, published 25 Feb 70 (From RZh-Khimiya, No 22, 25 Nov 70, Abstract No 22 N708 P by L. Shchelestenko)

Translation: It is suggested that bis-trichlorallyl esters of dicarboxylic acids be used as a herbicide. They have the general formula: $\text{Cl}_2\text{C} = \text{CClCH}_2\text{OOC}(\text{CH}_2)_n\text{COOCH}_2\text{CCI} = \text{CCl}_2$ where N = an

integer from 0 to 2.

1/1

1/2 040 UNCLASSIFIED PROCESSING DATE 12/10/77
TITLE--EFFECT OF AQUEOUS MEDIA AND ADDITIVES OF SURFACE ACTIVE AGENTS ON
THE CONTACT FATIGUE STRENGTH OF CHISEL STEEL ZOKHN3A -U-
AUTHOR--(05)-KATSOV, K.B., KUSLITSKIY, A.B., KARPENKO, G.V., SENTSEV,
E.P., ~~LYUSUSCHE~~, M.ZH. D
COUNTRY OF INFO--USSR

SOURCE--FIZ.-KHM. MEKH. MATER. 1970, 5(6), 757-8

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--SURFACE-ACTIVE AGENT, ALLOY DESIGNATION, CHROMIUM NICKEL
STEEL, ELECTROSLAG MELTING, METAL CORROSION, HYDROGEN, FATIGUE STRENGTH,
METALWORKING, CUTTING TOOL/(U)ZOKHN3A CHROMIUM NICKEL STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0636

STEP NO--UR/0369/70/005/006/0757/0752

CIRC ACCESSION NO--AP0105615

UNCLASSIFIED

2/2 040 UNCLASSIFIED PROCESSING DATE--10JAN70
CIRC. ACCESSION NO--AP0105615
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE STUDY WAS CARRIED OUT WITH STEEL 20KH3A MELTED ACCORDING TO 2 ALTERNATIVES: ELECTROSLAG AND ELECTROSLAG REMELTED. THE LATTER STEEL HAD MUCH LESS IMPURITIES THAN THE FORMER. AFTER MECH. WORKING SPECIMENS WERE SUBJECTED TO CEMENTATION IN SOLID CARBURIZER TO THE DEPTH OF CARBURIZED LAYER 1.0-2.0 MM WITH HARDNESS OF SURFACE LAYER HRC 57 AND 58 (CORE HARDNESS 36-8 HRC), C CONCN. AT A DISTANCE 0.2 MM FROM THE SURFACE WAS 0.8PERCENT; THE MICROSTRUCTURE OF CEMENTED LAYER WAS FINE ACICULAR MARTENSITE, WHILE THAT OF THE CORE WAS TROOSTITESORBITE. TESTING WAS DONE ON A SPECIAL APP. WITH AND WITHOUT ADDN. OF SURFACE ACTIVE SUBSTANCES (S.A.S.) TO THE WATER AND BY USING TAP WATER, STRATAL WATER WITH AND WITHOUT H₂O₂ SO THE VERY SHARP DECREASE OF CONTACT ENOURANCE OF STEEL UNDER STUDY IN RUNNING (WASH) WATER WHOULD BE EXPLAINED NOT ONLY BY ADSORPTION EFFECT BUT ALSO BY THE CORROSION IN COMBINATION WITH HYDROGENATION OF STEEL SURFACE IN CONTACT WITH WATER. IN THIS CONNECTION, THE FAVORABLE EFFECT OF S.A.S. IS EXPLAINED BY THE FORMATION ON THE METAL SURFACE OF A POLYMOL. PROTECTIVE FILM.

UNCLASSIFIED

USSR

UDC 576.851.71.097.2.083.3

DYUISALIYEVA, R. G., TARASEVICH, I. V., and PLOTNIKOVA, L. F., Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR, Moscow

"Preparation of Antigen from Rickettsia tsutsugamushi Grown in Tissue Cultures"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 7, Jul 70, pp 101-103

Abstract: Soluble antigen was obtained from R. tsutsugamushi (Gilliam and B-15 strains) cultured in a monolayer of L cells and primary trypsinized chick fibroblasts. Three days after formation of the monolayer, the medium was removed and the culture inoculated with a suspension of egg yolk infected with rickettsia. The culture was then left for 2 hours or overnight at 37°C. The suspension containing rickettsia was removed and the culture covered with medium 199. As soon as the first signs of degeneration of the monolayer appeared, the cells were removed mechanically and centrifuged for 1 hour until all rickettsia and cells settled. The supernatant was removed, and the precipitate was used as starting material to prepare the antigen. The specificity of this antigen was determined from the results of a complement-fixation test.

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1/2 021 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--STIMULATION OF INTERFEROGENESIS IN PRODUCING CELLS BY THEIR
PRETREATMENT WITH INTERFERON -U-
AUTHOR--(05)-SOLOVYEV, V.D., MARCHENKO, V.I., DYUYSALIYEVA, R.G.,
BABAYANTS, A.A., POKIDYSHEVA, L.N.
COUNTRY OF INFO--USSR

SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 2, PP 150-155

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--INTERFERON, LEUKOCYTE, MUSCLE TISSUE, NEWCASTLE DISEASE VIRUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1990/0745 STEP NO--UR/0402/70/000/002/0150/0155

CIRC ACCESSION NO--AP0108951
UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--19SEP70

CIRC ACCESSION NO--AP0108951

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PRETREATMENT WITH INTERFERON OF HUMAN AND CHICKEN LEUKOCYTES, FIBROBLASTS OF SKIN MUSCLE TISSUE OF HUMAN AND CHICK EMBRYO, HUMAN AMNION AND CHORIO ALLANTOIC MEMBRANE OF CHICK EMBRYO RESULTS IN STIMULATION AND EARLIER START OF SUBSEQUENT INTERFERON PRODUCTION IN THESE TISSUES. TREATMENT OF TISSUES SUPPORTING MULTIPLICATION OF THE VIRUS INDUCER (NEWCASTLE DISEASE VIRUS) WITH LARGE DOSES OF INTERFERON CAUSED INHIBITION OF INTERFEROGENESIS IN THEM, WHILE SMALL DOSES RESULTED IN STIMULATION OF INTERFEROGENESIS. CELLS NOT SUPPORTING VIRUS MULTIPLICATION RESPONDED BY STIMULATION OF INTERFERON PRODUCTION TO TREATMENT WITH BOTH LARGE AND SMALL DOSES OF INTERFERON. THE STIMULATING EFFECT REACHED MAXIMUM AT 2 HOURS AND DISAPPEARED AT 24 HOURS. THE PROCESS OF STIMULATION AND INHIBITION OF INTERFERON AND PRODUCTION IS SPECIES SPECIFIC. ENHANCEMENT OF INTERFEROGENESIS WAS ALSO OBSERVED AFTER PRETREATMENT OF THE TISSUES WITH SMALL DOSES OF THE VIRUS INDUCER.

UNCLASSIFIED

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USSR

UDC 576.858.095.333

SOLOV'YEV, V. D., MARCHENKO, V. I., DYUYSALIYEVA, R. G., BABAYANTS, A. A., and
POKIDYSHEVA, L. N., Institute of Epidemiology and Microbiology imeni N. F.
Gamaleya, Academy of Medical Sciences USSR, Moscow

"Stimulation of Interferon Formation in Producing Cells by Pretreating them with
Interferon"

Moscow, Voprosy Virusologii, No 2, Mar/Apr 70, pp 150-155

Abstract: Pretreating human and chicken leukocytes, fibroblasts of skin muscle tissue of human and chick embryos, human amnion and chorioallantoic membrane of chick embryo with interferon results in stimulation of subsequent interferon production in these tissues. Tissues supporting multiplication of the virus-inducer (Newcastle disease virus) treated with large doses of interferon showed inhibited interferon formation while those treated with small doses exhibited stimulated interferon formation. Either large or small doses of interferon stimulated interferon production of cells not supporting virus multiplication. The stimulating effect reached a maximum after 2 hours, and disappeared after 24 hours. The stimulation and inhibition process of interferon production is species-specific. Stimulation of interferon formation was also observed after pretreatment of the tissues with small doses of the virus inducer.

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USSR

UDC: 537.525.5

DYUZHEV, G. A., KAPLAN, V. B., MOYZHES, B. Ya., and YUR'YEV, V. G.

"Arc Discharge With a Strongly Ionized Cesium Plasma"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, vol. 41, No. 2, 1971,
pp 453-456

Abstract: A description is given of experimentation involving an arc discharge in cesium vapor at a pressure of 0.1 to 2 mm Hg, with a potential difference between electrodes of from 5 to 100 volts, and at high current densities of from 10 to 100 a/cm². The purpose of the experimentation was to study the characteristics of plasmas of short, low-voltage arcs with high current densities and to investigate the possibility of getting high discharge current densities with distributed thermoelectronic emission from a cathode without transition to discharges with a cathode spot. The volt-ampere characteristics of the arc are plotted, and the current saturation they evince are discussed. The authors of this brief communication express their gratitude to B. I. Tsirkel' for developing the electric circuit, to V. P. Sachkov for preparing the experimental equipment, to S. N. Shkol'nik for assistance with the measurements, and to A. G. Baksht for his comments. They are connected with the Leningrad Semiconductor Institute.

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1/2 040

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--RADIAL DISTRIBUTION OF THE PARAMETERS OF THE PLASMA IN A PLANE
THERMIONIC ENERGY CONVERTER -U-

AUTHOR--(03)-DYUZHEV, G.A., STARTSEV, YE.A., YURYEY, V.G.

COUNTRY OF INFO--USSR

D

SOURCE--ZHURNAL TEKHNICHESKOI FIZIKI, VOL 40, FEB 1970, P 426-428

DATE PUBLISHED--FEB70

SUBJECT AREAS--PHYSICS, ENERGY CONVERSION (NON-PROPULSIVE)

TOPIC TAGS--DISTRIBUTION THEORY, THERMIONIC ENERGY CONVERSION, RADICAL
FLOW, PLASMA DYNAMICS, ELECTRONIC SHIELDING, CURRENT DENSITY, CATHODE,
CESIUM PLASMA

CONTRCL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1979/1555

STEP NO--UR/0057/70/040/000/0426/0428

CIRC ACCESSION NO--AP0047883

UNCLASSIFIED

2/2 040

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0047883

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF THE RADIAL DISTRIBUTION OF PLASMA PARAMETERS FOR THERMIONIC CONVERTERS WITH AND WITHOUT ELECTRODE (CATHODE AND ANODE) SHIELDING BY PLANE SAPPHIRE RINGS. IT IS SHOWN THAT FOR CURRENTS RANGING FROM 2 TO 15 A-SQ CM, THE BOLTZMANN FORMULA HOLDS FOR LOW AND HIGH CESIUM PRESSURES. ELECTRODE SHIELDING DOES NOT EFFECT THE RADIAL DISTRIBUTION OF THE PLASMA PARAMETERS, AND DOES NOT DIMINISH THE EDGE EFFECT ASSOCIATED WITH THE RADIAL DIFFUSION OF CARRIERS FROM THE GAP. HOWEVER, SHIELDING HAS THE EFFECT OF APPRECIABLY REDUCING THE INFLUENCE OF THE LATERAL SURFACE OF THE CATHODE, WHICH OTHERWISE WOULD EMIT ELECTRONS INTO THE PLASMA. THIS MEANS THAT THE TRUE ELECTRON CURRENT DENSITY CANNOT BE RELIABLY DETERMINED WITHOUT ELECTRODE SHIELDING.

UNCLASSIFIED

USSR

UDC 661.666-494.001.5

FIALKOV, A. S., SIDOROV, N. M., SMIRNOV, B. N., and DYUZHNIKOV, B. I.

"Specific Features of the Structure and Growth of Threadlike Pyrocarbon Formations"

Moscow, Doklady Akademii Nauk SSSR, Vol 211, No 1, Jul-Aug 73, pp 158-160

Abstract: The initial period of the growth of thread-like pyrocarbon formations -- the so-called "whiskers" -- has been investigated. The "whiskers" were obtained at a temperature 900-1000° in 10-40 mm Hg vacuum from benzene vapors without any gas diluent, over graphite supports, using metallic catalyst. It has been shown that the actual carbon whisker consists of a central core shooting out of the surface of the activated support in form of a band 100-200 Å thick, rolled into a cylindrical spiral. The formation process of these whiskers goes through several stages: activation of the support, radical-chain type reaction occurring during the cracking of the hydrocarbon followed by chain polymerization of the products. The thickening of the cores is due to the deposition of sooty and pyrocarbon films on its surface.

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1/2 012

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--ALL UNION CONFERENCE OF METROLOGISTS -U-

AUTHOR--DYUZHINA, M.T.

D

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, IZMERITEL'NAYA TEKHNIKA, NO 2, PP 75-77

DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, METHODS AND EQUIPMENT,
BEHAVIORAL AND SOCIAL SCIENCES
TOPIC TAGS--METROLOGY, CONFERENCE, QUALITY CONTROL, PRODUCTION EFFICIENCY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/1550

STEP NO--UR/0115/70/000/002/0075/0077

CIRC ACCESSION NO--AP0114142

UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0114142

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

ABSTRACT. THE ALL UNION CONFERENCE ON THE SUBJECT, THE ROLE AND TASKS OF METROLOGY IN IMPROVING PRODUCTION QUALITY" WAS HELD IN MOSCOW FROM 15 SEPTEMBER THROUGH 18 SEPTEMBER 1969 AT THE EXHIBITION OF ACHIEVEMENTS OF THE NATIONAL ECONOMY OF THE USSR. PART OF TAKEN IN THIS CONFERENCE BY 256 SPECIALISTS, REPRESENTING 80 ENTERPRISES AND ORGANIZATIONS OF 30 MINISTRIES AND DEPARTMENTS OF MOSCOW, LENINGRAD, KIEV, MINSK, AND OTHER CITIES. AMONG THE PARTICIPANTS WERE CHIEF METROLOGISTS AND CHIEFS OF THE METROLOGICAL SERVICES OF MINISTRIES AND DEPARTMENTS, DIRECTORS OF MEASUREMENT EQUIPMENT LABORATORIES, CHIEFS OF TECHNICAL CONTROL SECTIONS, CHIEFS OF DESIGN AND TECHNOLOGICAL UNITS, AND STAFF MEMBERS OF METROLOGICAL INSTITUTES AND LABORATORIES OF STATE SUPERVISION OF STANDARDS AND MEASUREMENT EQUIPMENT.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--LIGHT PRESSURE EXERTED BY STARS ON SPHERICAL DUST PARTICLES IN
INTERSTELLAR SPACE -U-
AUTHOR-(02)-DYVARY, N.B., REZNOVA, L.V. *D* /
COUNTRY OF INFO--USSR *D*
SOURCE--ASTRONOMICHESKII ZHURNAL, VOL. 47, NO1, 1970, P 166-171
DATE PUBLISHED-----70

SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS
TOPIC TAGS--INTERSTELLAR MATTER, HOT STAR, PRESSURE, DUST, GRAVITATION,
COSMIC DUST

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/1734 STEP NO--UR/0033/70/047/001/0166/0171
CIRC ACCESSION NO--AP0115563
UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0115563

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DETERMINATION OF THE RATIOS OF THE LIGHT PRESSURE TO THE GRAVITATIONAL FORCE OF STARS OF VARIOUS SPECTRAL CLASSES FOR SPHERICAL WATER, QUARTZ, AND GRAPHITE PARTICLES. THE RATIOS ARE CALCULATED ON THE BASIS OF EXACT FORMULAS IN THE MIE THEORY FOR COMPLEX REFRACTIVE INDICES DEPENDING ON THE WAVELENGTH. IT IS SHOWN THAT FOR STARS OF EARLY SPECTRAL CLASSES, THE LIGHT PRESSURE EXCEEDS THE GRAVITATIONAL FORCE BY SEVERAL ORDERS OF MAGNITUDE. THIS MEANS THAT THE PARTICLES WILL BE EXPELLED FROM HOT STARS. FACILITY: ODESSKII POLITEKHNICHESKII INSTITUT, ODESSA, UKRAINIAN SSR.

UNCLASSIFIED

1/2 007 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--A STUDY OF THE CHEMICAL COMPOSITION OF D. SIBIRICUS -U-
AUTHOR--(021)-SOMOV, G.P., DZADZIYEVA, M.F. D
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 4,
PP 21-24
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--CHEMICAL COMPOSITION, LIPID, MICROORGANISM

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1523 STEP NO--UR/0016/70/000/004/0021/0024
CIRC ACCESSION NO--AP0109583
UNCLASSIFIED

2/2 007
CIRC ACCESSION NO--AP0109583

UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER IS CONCERNED WITH THE INVESTIGATION OF THE CHEMICAL COMPOSITION OF TWO STRAINS OF D. SIBIRICUS ISOLATE IN PRIMORIE TERRITORY (POKHODZILO'S STRAIN) AND IN ALTAI "NETSVETAEV'S STRAIN). THE FOLLOWING WAS ESTABLISHED: LIPIDS, 46.9 AND 32.6PERCENT RESPECTIVELY, REDUCING SUBSTANCES, 5.6 AND 4.0PERCENT, PHOSPHORUS, 1.4 AND 1.33PERCENT, AMIDE NITROGEN, 4.38 AND 4.48PERCENT, PROTEIN, 27.38 AND 28.4PERCENT, AS WELL AS THE CONTENT OF 17 MOST FREQUENTLY ENCOUNTERED AMINO ACIDS. THE BIOLOGICAL AND ANTIGENIC PECULARITIES OF THE REFERRED TO STRAINS MAY BE ASSOCIATED WITH DIFFERENCES IN THE QUANTITATIVE CONTENT THERIN OF CERTAIN CHEMICAL SUBSTANCES.

UNCLASSIFIED

USSR

UDC 619:576.858.5:636.22/.28

SHICHKINA, V. P., PILLE, E. R., and DZAGUROV, S. G., State Control Institute of Medical Biological Preparations imeni A. L. Tarasevich

"Susceptibility of Cattle to Adenoviruses"

Moscow, Veterinariya, No 11, 1971, pp 39-40

Abstract: A study was carried out of the susceptibility to adenoviruses of healthy cattle brought to a meat-packing plant where sera are prepared for use in culture media. Complement-fixing antibodies were found in the sera of 12.3% of the animals investigated. Most of the sera reacted to type-2 adenovirus. Cytopathic agents were found in 21 of 201 sera. In 13 strains a complement-fixing antigen common to human type-6 adenovirus was detected, and 10 of the 13 strains isolated were classified as type-1, 2, and 3 adenoviruses. The susceptibility of such a significant number of healthy cattle to serum viruses indicates a need to exercise careful control of animals intended for use in virological practice.

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USSR

DZAGUROV, S. G., SHCHEKOCHIKHINA, Ye. A., and OMEL'CHENKO, T. N., State Control Institute for Biomedical Preparations imeni L. A. Tarasevich, Ministry of Health USSR

"Principles of Lyophilization of Enteroviruses. I."

Moscow, Voprosy Virusologii, No 5, 1971, p 622

Abstract: The stability of attenuated poliomyelitis type 1 virus (LSc2ab strain) was studied. The use of mixtures of peptone and glucose or cow's milk and glucose proved to be ideal for lyophilizing poliomyelitis virus, although other stabilizers were somewhat effective in this respect. These stabilizers can be useful in obtaining a lyophilized preparation with an adequate titer capable of surviving exposure to a broad range of temperatures (4 to 50°C).

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D

Veterinary Medicine

USSR

UDC 576.858.095.38:598.2

VORONIN, Ye. S., DZAGUROV, S. G., SMIRNOVA, N. Ye., MOROZOV, K. V., and YELEKOYEV, K. A., State Center Institute of Medical Biological Preparations imeni L. A. Tarasevich, Moscow

"Serological Examination of Some Species of Wild and Domestic Birds in Regard to the Spread of Infectious and Oncogenic Avian Viruses"

Moscow, Voprosy Virusologii, No 2, Mar/Apr 70, pp 213-217

Abstract: Serological examination of serum specimens from some species of domestic and wild birds was carried out in order to determine the presence of antibodies to some oncogenic and infectious avian viruses. A wide prevalence to the leukemia group of viruses was found in all strains and breeds of fowl examined. Examination of sera from Japanese quail from Khosta and Maykop farms revealed no antibodies either to infectious or to oncogenic avian viruses. Survey of Japanese quail farms in close proximity to chicken farms established the circulation of agents from the avian leukemia group.

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1/2 029 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--SEROLOGICAL EXAMINATIONS OF SOME SPECIES OF WILD AND DOMESTIC BIRDS
FOR PREVALENCE OF INFECTIOUS AND ONCOGENIC AVIAN VIRUSES -U-
AUTHOR--(05)-VORONIN, YE.S., ~~DZAGUROV, S.G.~~ SMIRNOVA, N.YE., MOROZOV,
K.V., YELEKOVYEV, K.A.
COUNTRY OF INFO--USSR

SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 2, PP 213-217

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BIRD, SEROLOGIC TEST, VIRUS, ANTIBODY, LEUKEMIA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0736

STEP NO--UR/0402/70/000/002/0213/0217

CIRC ACCESSION NO--AP0108942

UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0108942

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SEROLOGICAL EXAMINATION OF SERUM SPECIMENTS FROM SOME SPECIES OF DOMESTIC AND WILD BIRDS WAS CARRIED OUT IN ORDER TO DETERMINE THE PRESENCE OF ANTIBODY FOR SOME ONCOGENIC AND INFECTIOUS AVIAN VIRUSES. WIDE PREVALENCE OF LEUKEMIA GROUP OF VIRUSES WAS ESTABLISHED IN ALL THE STRAINS AND BREEDS OF CHICKEN EXAMINED. EXAMINATION OF SERA FROM JAPANESE QUAIL FROM KHOSTA AND MAIKOP FARMS REVEALED NO ANTIBODY EITHER TO INFECTIOUS OR TO ONCOGENIC VIRUSES OF BIRDS. SURVEY OF JAPANESE QUAIL FARMS CLOSELY CONTACTING WITH CHICKEN FARMS ESTABLISHED CIRCULATION OF AGENTS FROM AVIAN LEUKEMIA GROUP.

UNCLASSIFIED

DZAMPAYEV, K.K. S.

SPRS 59208
4-73

VII-8. OBTAINING EPITAXIAL FILMS OF INP ON GaAs SUBSTRATES

Article by Ya.A. Usov, V. S. Kuvshinsky, Kh. S. Dzampayev, N. G. Yatsenko, Voronezh: Novaya fizika, 11, 5 (Soviet Union for Progresses in Science and Technology), Moscow, 1972, p. 95

Epitaxial films of InP were obtained on gallium arsenide substrates oriented along the (111) and (100) planes.

The growth was realized by the method of transport chemical reactions in an open system using In, PCl₃ and H₂ as the gas carrier.

A study was made of the effect of the substrate temperature and the indium source temperature, the phosphorus trichloride velocity and the spacing between the indium source and the substrate on the structure, the growth rate and the electrophysical properties of the films.

The structure of the films was investigated by the electron diffraction and x-ray diffraction methods and the method of optical microscope.

It was discovered that at substrate temperatures of 400-500°C polycrystalline films are grown, at 500-600°C, textured films, and at 600-750°C, mono-crystalline films.

Nuclear Science and Technology

USSR

UDC 541.15+621.039.05

DZANTIYEV, B. G., KRASIN, A. K., NICHIPOR, G. V., KAZAZYAN, V. T., and SAVUSHKIN, I. A.

"Calculation of Efficiency and the Optimization of Parameters of Chemonuclear Plants"

Moscow, Atomnaya Energiya, Vol 33, No 4, Oct 72, pp 803-808

Abstract: The calculation of the efficiency and the optimization of channel parameters on a loop-like chemonuclear plant are carried out on the basis of a generalized model. The approximate solution of the function characterizing in general the efficiency of any chemoradiative apparatus is reduced to a numerical summation of the efficiencies of individual chemonuclear channels. This method, in combination with physico-neutron calculations makes possible the efficiency determination of various types of chemonuclear plants taking into account the dosage rate, temperature, reagent density, and other factors characterizing the actual conditions of experimental and industrial chemonuclear plants. The use of this method for the indicated calculations of the KhYaU-5 chemonuclear plant resulted in optimization of its parameters. The possibility of the organization of an industrial synthesis of hydrazine on the basis of a chemonuclear reactor is analyzed on the example of a

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USSR

DZANTIYEV, B. G., et al., Atomnaya Energiya, Vol 33, No 4, Oct 72, pp 803-808

reactor using chemonuclear fuel in the form of a 4μ thick UO_2 layer built up on an aluminum base. The plotted caloric power dependence of the channel efficiency shows a linear character. The efficiency of other active zones of chemonuclear reactors can be calculated on the basis of this dependence. Four figures, two tables, nine formulas, twelve bibliographic references.

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Radiation Chemistry

USSR

UDC 541.15

ASATOV, KH., ~~DZANTIYEV, B. G.~~, SHISHKOV, A. V., Institute of Chemical Physics of the USSR Academy of Sciences, Order of the Red Banner of Labor Institute of Cybernetics with the Computation Center of the Uzbek SSR Academy of Sciences

"Radiolysis of the Nitrogen-Propylene System. Formation of Nitrogen-Containing Products"

Tashkent, Uzbekskiy Khimicheskii Zhurnal, No 3, 1972, pp 50-53

Abstract: A study was made of the gamma-radiolysis of the binary nitrogen-propylene system at a pressure of 760 mm Hg, for a dosage of $\approx 10^{13}$ electron volts/cm³.sec and variation of the system composition (1-90% C₃H₆), the temperature (20-285°) and the absorbed dose within broad limits. HCN and CH₃CN were identified among the nitrogen-containing products. The radiation chemical yields of HCN and CH₃CN depend extremely on the composition of the N₂C₃H₆ system, reaching a peak at 1-5 and 20% C₃H₆ respectively. The generation rate of N atoms during radiolysis of molecular nitrogen in the presence of C₃H₆ is 0.9-1.0 1/100 electron volts.

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USSR

UDC: 539.92.04

GOL'DANSKIY, V. I., DZANTIYEV, B. G., POPOV, V. N., and GAVRILOV, K. A.

"Chemical-Radiation Action of Accelerated Multicharge Ions on Gaseous Nitrogen-Containing Systems"

Moscow, Atomnaya Energiya, No. 3, 1971, pp 262-266

Abstract: The purpose of this paper is to help clarify the effect of changes in the linear energy transmission on the chemical-radiation output in chemiconuclear synthesis. An experiment designed to fulfill this purpose is explained in the article; it involves heavy accelerated multicharge ions such as C^{+6} , N^{+7} , and O^{+8} with a full energy in the range of 84-280 Mev, acting on such gases as NO_2 in a system of $N_2 + O_2$, N_2H_4 in ammonia, and HCN in a system of $N_2 + CH_4$. The gases were in motion, flowing at a rate of 100-500 liters per hour. The volume of the ion beam was substantially smaller than the volume of the reactor. Details of the experiment are given, together with drawings of the entire apparatus in schematic form and a cross-section of the reactor. The ions were ac-

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- 117 -

GOL'DANSKIY, V. I., et al, Atomnaya Energiya, No. 3, 1971, pp 262-266

celerated in the cyclotron of the Joint Institute of Nuclear Research laboratory, and curves of the chemical-radiation output as a function of the ion charge, the temperature, and the gas flow velocity are given. The authors express their gratitude to G. N. Flerov for his interest in the work.

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Acc. No.:

AP0041350

Abstracting Service:
CHEMICAL ABST.

4-70

Ref. Code:

UR 0456

84863f Radiation-chemical synthesis of prussic acid under flow conditions. Dzantsev, B. G.; Popov, V. N.; Smelova, Yu. N. (Inst. Khim. Fiz., Moscow, USSR). *Khim. Vys. Energ.* 1970, 4(1), 50-7. (Russ). Gaseous mixts. of $\text{NH}_3 + \text{CH}_4$, $\text{N}_2 + \text{CH}_4$, $\text{NH}_3 + \text{C}_2\text{H}_4$, $\text{N}_2 + \text{C}_2\text{H}_4$, and $\text{N}_2 + \text{C}_2\text{H}_2$ were purified, dried, heated at 20-250° and passed at a rate of 400-900 l./hr through a reactor (vol. = 9.2 l.), irradiated using an electron accelerator ($E_e = 600 \text{ keV}$, $\sim 10^{18} \text{ eV cm}^{-2} \text{ sec}^{-1}$, time of the contact of gas with irradiation zone 82-36 sec). Yields are given for the reaction products.

J. Panchartek

LD

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REEL/FRA
19751212

1/2 015

UNCLASSIFIED

PROCESSING DATE--115670

TITLE--REACTIONS OF EXCITED PROPYL RADICALS DURING GAS PHASE PROPYL IODIDE
PHOTOLYSIS -U-

AUTHOR--DZANTLIYEV, B.G., DEGREV, I.A., SHVEDCHIKOV, A.P.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VYS. ENERG. 1970, 4(2), 188-90

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL DECOMPOSITION, FREE RADICAL, IODINATED ORGANIC
COMPOUND, PROPANE, PHOTOLYSIS, ETHYLENE, CHEMICAL REACTION RATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1051

STEP NO--UR/0456/70/004/002/0133/0190

CIRC ACCESSION NO--AP0104449

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--115-P70

CIRC ACCESSION NO--AP0104449

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF H SPLITTING BY
 EXCITED PR RADICALS AND THEIR DECOMP. IN THE GASEOUS PHASE WAS STUDIED
 BY PHOTOLYSIS OF VAPORS OF PRI USING A HG LAMP OF THE PRK TYPE. THE
 PRINCIPAL PRODUCTS OF PHOTOLYSIS OF PRI IN THE GASEOUS PHASE WERE C SUB3
 H SUB6 AND C SUB2 H SUB4. THE C SUB3 H SUB8 YIELD IS LESS THAN OR EQUAL
 TO 10PERCENT OF THE OLEFINS. WITH INCREASING PRESSURE THE OLEFIN YIELDS
 INCREASE LINEARLY BUT ABOVE 4 MM THEY DEPEND LITTLE ON PRESSURE. IN THE
 PRESENCE OF HCL AND HI THE C SUB3 H SUB8 YIELD INCREASES BY FACTORS OF
 10 AND 20, RESP. WITH ADDN. OF N THE YIELDS OF C SUB3 H SUB8 AND C SUB2
 H SUB4 DECREASE. THE INCREASE IN THE C SUB3 H SUB8 YIELD IN THE
 PHOTOLYSIS OF THE MIXTS. OF PRI WITH HI AND HCL IS DUE TO THE FACT THAT
 THE SPLITTING OF H FROM HX BY THE REACTION C SUB3 H SUB7 PLUS HX YIELDS
 C SUB3 H SUB8 PLUS X IS EASIER THAN BY THE REACTION C SUB3 H SYB7 PLUS
 PRI YIELDS C SUB3 H SUB8 PLUS C SUB3 H SUB6 I.

UNCLASSIFIED

1/3 029

TITLE--STATE DISTRIBUTION OF ELECTRONS IN HOMOGENEITY REGIONS FOR SOME REFRACTORY CARBIDES -U-
UNCLASSIFIED PROCESSING DATE--16OCT70

AUTHOR--(03)-ZHURAKOVSKIY, E.A., NESHPOR, V.S., DZEGANOVSKIY, V.P.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2), 207-13

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--REFRACTORY COMPOUND, CARBIDE, VANADIUM COMPOUND, CHEMICAL BONDING, METAL BONDING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/1663

STEP NO--UR/0363/70/006/002/0207/0213

CIRC ACCESSION NO--AP0118642

UNCLASSIFIED

2/3 029

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118642
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE 2 KNOWN CARBIDES IN THE V-C SYSTEM, VC SUB1-X AND V SUB2 C SUB1-X, WERE INVESTIGATED. THE BACKGROUND, THE PROPERTIES, AND THE BONDING IN THESE CARBIDES ARE DISCUSSED AND COMPARED WITH SIMILAR PROPERTIES AND THE BONDING IN OTHER TRANSITION METAL CARBIDES. THE EMISSION L SUB1,III BANDS, IN WHICH THE TRANSITION FROM THE D STATES (D YIELDS P) IS A DIPOLE ONE AND STRONG, WERE STUDIED IN ADDN. TO THE K BETA AND THE K ALPHA EMISSION BANDS OF C IN HOMOGENEOUS VC SUB1-X AND V SUB2 C SUB1-X, WITH THE SIMULTANEOUS INVESTIGATION OF THESE SAMPLES OF ELEC. COND., HALL COEFF., AND THERMAL EMF. IDENTICAL CONDITIONS FOR THE EXCITATION OF THE L ALPHA SUB1.2 BANDS WERE PRODUCED BY NORMALIZING THEIR INTENSITY RELATIVE TO THE INTENSITY OF THE L SUB1 LINE. IN BOTH V CARBIDES THERE TAKES PLACE A 3 LAYER STRUCTURE OF THE ENERGY SPECTRUM, WHICH CONSISTS OF: (A) A RELATIVELY NARROW HYBRID 3D GAMMA 2P SIGMA BAND, THE STATES OF WHICH ARE LOCALIZED ON THE POLARIZED COVALENT M-C BONDS; (B) A DIFFUSED 4S, 3D EPSILON, 2P PI CONDUCTION BAND (THE M-M BONDS); AND (C) A LOW ENERGY 2S BAND LOCALIZED PRIMARILY AROUND THE IONIC CORES OF THE CARBON (C PRIME POSITIVE) ATOMS AND, TO THE LESSER DEGREE, AT THE V PRIME NEGATIVE IONS. UPON THE TRANSITION FROM THE LOWER TO THE HIGHER CARBIDE THERE TAKES PLACE A REDISTRIBUTION OF THE ELECTRON D., ACCOMPANIED BY A CHANGE IN THE NATURE OF THE BOND FROM THE PREDOMINANTLY METALLIC BONDING IN V SUB2 C TO THE COVALENT METALLIC BONDING IN VC SUB1-X, ALSO INSIDE THE HOMOGENEITY REGIONS OF BOTH CARBIDES IN PROPORTION TO THE FILLING UP BY THE C VACANCIES.

UNCLASSIFIED

3/3 029

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118642

ABSTRACT/EXTRACT--WITH INCREASING C CONCN. THE CONTRIBUTION OF THE 3D ELECTRONS TO THE M-M BONDS GRADUALLY DIMINISHES AND THEIR PARTICIPATION IN THE M-C BONDS INCREASES. THE SHORTWAVE DISPLACEMENT OF THE C K ALPHA BAND AND THE LONGWAVE DISPLACEMENT OF THE V K BETA SUB5 AND THE V L ALPHA SUB1.2 BANDS INDICATES, ACCORDING TO PREVIOUS CALCNS., THAT THE CHARGE D. DECREASES IN CASE OF THE C ATOM, WHEREAS IT INCREASES IN CASE OF THE V ATOM. THE CLOSENESS BETWEEN THE POSITION OF THE C K ALPHA BAND IN THE CARBIDE VC SUB1-X AND THAT IN DIAMOND (THE DIFFERENCE BEEN 0.35 EV) MAKES IT POSSIBLE TO PRESUME A CERTAIN SIMILARITY OF THE ENERGY STATES FOR THE C ATOM IN THESE PHASES. WITH INCREASING NO. OF C VACANCIES PRESENT IN THE CARBIDES THE SHAPE OF THE FERMI SURFACE EXPERIENCES A CERTAIN SIMPLIFICATION. FACILITY: INST. PROBL. MATERIALOVED., KIEV, USSR.

UNCLASSIFIED

USSR

UDC: 8.74

DZEGELENOK, I. I., DOROSHENKO, A. N., SHIGIN, A. G.

"Diagnostic Program (Problems of Predicting Myocardial Infarct by Using Digital Computers)"

Moscow, Izbr. tr. Vses. mezhvuz. simpoz. po prikl. mat. i kibernet., Gor'kiy, 1967 (Selected Works of the All-Union Intercollegiate Symposium on Applied Mathematics and Cybernetics, Gor'kiy, 1967), "Nauka", 1973, pp 254-258 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V693 by the authors)

Translation: A recognition system of the perceptron type is considered which is based on minimizing the mean-square error arising when the characteristic function of separable classes is approximated by a system of associative elements. The effectiveness of operation with different types of associative elements in recognition of graphic patterns is verified.

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- 60 -

USSR

UDC 576.858.75

DZEGUZE, D. R. AND INDULEN, M. K., Institute of Microbiology, Latvian Academy of Sciences

"Fluorescent Antibody Study of the Inhibitory Effect of 1-Aminoadamantane on Influenza A₂ Virus"

Riga, Izvestiya Akademii Nauk Latviyskoy SSR, No 7, 1973, pp 70-73

Abstract: The inhibitory effect of 1-aminoadamantane hydrochloride on the replication of influenza A₂/Frunze virus was studied in a culture of chick embryonic kidney cells by the fluorescent antibodies method. 20 g/ml of the compound was added to the culture 30 minutes before it was infected with virus. After 24 hours incubation at 37° only 2.6% of the cells fluoresced compared to 34% of the controls and after 48 hours specific fluorescence was observed in 8.1 and 55%, respectively. The absence of virus-specific antigen in cells treated with aminoamantadane suggests that the latter blocks one of the stages of virus replication preceding the formation of virus antigen.

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USSR

UDC 576.858.75

KANEL', I. A., INDULEN, M. K., RYAZANTSEVA, G. M., DZEGUZE, D. R., and
POLIS, YA. Yu., Institute of Microbiology imeni A. Kirkhenshteyn, Academy of
Sciences, Latvian SSR, Riga

"Antiviral Activity of 2-Aminoadamantane"

Riga, Izvestiya Akademii Nauk Latviyskoy SSR, No 11, 1972, pp 42-47

Abstract: Studies were undertaken on the antiviral effectiveness of 2-amino-
adamantane (2-AA) on the following viruses: influenza types AO, A1, A2, and B,
Sindbis virus, and smallpox virus. Comparison with 1-aminoadamantane (1-AA)
showed that 2-AA was less toxic for KhaO tissue culture and cultures of chick
embryo fibroblasts, equally toxic for the chick embryo, and evidenced greater
toxicity than 1-AA for white mice. The TD_{50} of 2-AA for a monolayer of chick
fibroblasts was $250 \mu\text{g/ml}$, and $100-150 \mu\text{g/ml}$ for a suspension of these cells.
Evaluation of 2-AA in terms of inhibition of multiplication of the different
viruses in KhaO tissue culture showed that the greatest decrease in the
 $\lg ID_{50}$ was obtained with influenza types A2/Frunze and A2/Hong Kong; 2-AA
was less effective against AO/WSN and A1/Pan, and showed no significant
inhibition of B/Amakuza and B/Sofia viruses. A2 hemagglutinin titers were also
depressed, and the effects were dependent on 2-AA concentration and the dose
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USSR

KANEL', I. A., et al., Izvestiya Akademii Nauk Latviyskoy SSR, No 11, 1972, pp 42-47

of the infecting virus. For chick embryo studies the eggs were injected with 500 μ g of 2-AA and the results evaluated in terms of the fall of lg EID₅₀. The most pronounced effects were obtained with A2/Frunze and A2/Hong Kong, but antiviral activity against A0/WSN, A1/Pan, B/Tokyo, and B/Amakuza was also significant. Again, the viral hemagglutinating activity was found to be decreased and the effects of 2-AA were dependent on the size of the viral inoculum. Further in vivo studies showed that 2-AA protected white mice against death as a result of infection with A2/Frunze or B/Tokyo: the mortality rate among the untreated controls was about 50% greater. Furthermore, 2-AA decreased the lung titers of mice infected with A2/Hong Kong and B/Amakuza by about 1.5 lg ID₅₀ in both instances. Thus, 2-AA was shown to be an effective agent against influenza viruses and its therapeutic index in white mice was 21. 2-AA also inhibited influenza B virus. 2-AA was ineffective with respect to Sindbis and smallpox viruses.

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USSR

UDC 576.858.85


DZEGUZE, D. R. and INDULEN, M. K., Institute of Microbiology Im. August
Kirknenshteyn, Academy of Sciences, Latvian SSR

"Inhibitory Effect of Some Adamantane Derivatives on Sendai Virus"

Riga, Izvestiya Akademii Nauk Latvian SSR, No 3, 1973, pp 39-43

Abstract: Study of the effect of some adamantane derivatives, known to be active against influenza viruses, on the reproduction of Sendai virus in developing chick embryos showed that N-(adamantyl-1)-N¹-phenylpiperazine, N-propylaminoadamantane, and 3-aminohomoadamantane inhibited Sendai virus but less than they did influenza A₂ virus. N-(adamantyl-1)-N¹-cyclohexylpiperazine, active against influenza A, A₁, A₂, and B viruses, had no effect on Sendai virus. This study confirms the authors' earlier finding that the various myxoviruses differ in sensitivity to antiviral preparations.

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 Semiconductors and Transistors

USSR

UDC 621.376

DZEKHTSER, G. B., ORLOV, O. S.

"PIN Diodes in Wide-Band SHF Devices"

p-i-n diody v shirokopolosnykh ustroystvakh SVCh (cf. English above), Moscow, "Sov. radio," 1970, 200 pp, ill. 47 k. (from RZh-Radiotekhnika, No 10, Oct 70, ABSTRACT No 10D355)

Translation: This book deals with one of the divisions of the rapidly growing field of SHF technology -- wide-band devices for controlling SHF power based on PIN diodes. SHF devices based on PIN diodes appeared in the early sixties and found extensive application in various fields of SHF technology: in radar and radio astronomy, radio measurements and automatic monitoring systems. Over the ensuing years, considerable theoretical and experimental material has been accumulated, and methods have been developed for designing and building wide-band devices based on PIN diodes. This material is the basis of the book. Consideration is given to the physical properties of PIN diodes, electrically controlled wide-band attenuators and modulators are analyzed and calculated, and a survey is given of the principal applications of wide-band SHF devices based on PIN diodes. Particular attention is devoted to nonstationary processes, and to the amplitude and phase-frequency characteristics of devices based on PIN diodes.

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USSR

DZEKHTSER, G. B., ORLOV, O. S., p-i-n diody v shirokopolosnykh ustroystvakh SVCh (cf. English above), Moscow, "Sov. radio," 1970, 200 pp, ill. 47 k. (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10D355)

In addition to generalizing the results obtained by Soviet and non-Soviet researchers and developers, the book contains a number of works on wide-band devices based on PIN diodes and on the PIN diodes themselves. The book is written for engineers involved in the investigation, development and application of semiconductor devices in the SHF band, and also for scientific workers and students of colleges and universities in the corresponding fields. 109 illustrations, bibliography of 79 titles. Abstract

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USSR

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KALNIN', M. M., et al., *Plasticheskiye Massy*, No 10, 1972, pp 31-33

the ability of producing colored surface coatings, it could also be used in automobile, airplane or ship building industry as well as for construction of furniture or specialized equipment.

2/2

USSR

UDC 678.06:678 029.5:669:678.742.2]01:53

4

KALNIN', M. M., KARLIVAN, V. P., METRA, A. YA., SOBOLEVSKIY, CH. A., MALERS, L.
~~APPROVED FOR RELEASE: 07/20/2001~~ CIA-RDP86-00513R002200720012-5"

"Metalloplastics Based on Modified Polyethylene"

Moscow, *Plasticheskiye Massy*, No 10, 1972, pp 31-33

Abstract: The technological process of the production of metalloplastics is based on thermal contact [plating] between a pretreated metal base and a film of modified polyethylene. Optimal ranges of the important parameters influencing the properties of metalloplastics are as follows: temperature of thermal contact -- 200-250°C; duration of the contact -- 30-60 sec; filler content -- 8-10 vol-%. The surface of the metal base is cleaned, preheated and passed through a set of rollers where the initial contact with modified polyethylene is made. Final bonding occurs in an induction heating chamber. The material obtained -- the unilateral or bilateral metalloplastic -- shows high anticorrosive properties. It can be processed by several methods such as bending, folding, or die stamping. Surfaces can be joined together by welding or folding and other methods. This material is ideally suited for production of equipment resistant to chemical agents, such as storage or sedimentation tanks. It could be used for production of special pipe lines, ventilation systems, etc. Due to

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Acc. Nr:

APC054373

Abstracting Service:
CHEMICAL ABST. 6-76

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Ref. Code:

UR0032

114665n Ultrasonic method for studying the surface corrosion of solids. Dzenis, V.; Grabis, L.; Ratinov, V. B. (Mosk. Avto.-Dorozh. Inst., Moscow, USSR). Zashch. Lab. 1970, 36(1), 36-9 (Russ). Piezoconverters contacting the edges of a sample were used to measure the propagation velocity of surface ultrasonic waves. At the same time, the propagation velocities of the longitudinal, C_L , and transverse, C_T , waves were also measured. These measurements, to obtain the desired accuracy, had to be made over a sample ≥ 10 cm. All samples used were $4 \times 4 \times 16$ cm. in size and utilized the same ultrasonic generator and piezoconverters. For all the materials studied, cellulose acetate, hardened cement, plaster and aerated concrete, and various mortars, C_L and C_T were essentially unchanged from their initial values (prior to exposure to the corrosive environment) in comparison to the values found on the corroded sample. For isotropic surfaces, the depth to which the surface waves penetrate a body is $\lambda_R \leq h_R \leq 2\lambda_L$, where λ_R is the wavelength and h_R is the penetration depth. Since these values can be correlated to the depth of corrosive attack, all the required measurements can be made on a single sample without any need for control detns.

Herman Koretzky ✓ mic

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UDC: 537.312.62

SALLI, I. V., SHVETS, V. S., DZENZERSKIY, V. A.

"Influence of Superfast Cooling on the Superconductivity of Lead-Bismuth Alloy"

Moscow, Sverkhprovodyashchiye splavy i sovedin.--skornik (Superconductive Alloys and Compounds--collection of works), "Nauka", 1972, pp 147-150 (from RZh-Radiotekhnika, No 12, Dec 72, abstract No 12D567 [résumé])

Translation: The paper presents experimental data found in studying [the effect of] superfast cooling (10^5 - 10^6 °C/s) on the conductivity of an alloy of lead with additions of bismuth -- 15, 20, 25, 30, 35, 40 and 56.5 at.%. Normally cooled specimens (cooled in air) confirm the data known from the literature on the superconductive critical transition temperature as a function of the bismuth concentration in the alloy. In rapidly cooled alloys, T_c depends on the time of holding the specimens at room temperature between the processes of manufacture and measurement. Two illustrations, bibliography of ten titles.

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Acc. Nr.: AP0042631

Ref. Code: UR9067
JPRS 50162

Fourth Conference on Carpathian Meteorology

(Abstract: "Fourth International Conference on Carpathian Meteorology and Some Problems in Mountain Meteorology," by B. L. Dzerdzeyevskiy, Geography Institute Academy of Sciences USSR; Moscow, Izvestiya Akademii Nauk SSSR, Seriya Geograficheskaya, No 1, 1970, pp 148-150)

The Fourth International Conference on Carpathian Meteorology and Some Problems in Mountain Meteorology was held during the period 15-20 September 1969 at Cracow, Poland, at the Geography Institute of the Jagiellonian University. These conferences have been held since 1959. Dr. M. Hess, head of the Department of Climatology and Hydrology of the Geography Institute, was chairman of the fourth conference. Such conferences are essential because of the nature of political boundaries in the area; opposite slopes are in different countries and analysis of the effect of the entire mountain system on atmospheric processes requires the integrated efforts of all countries involved. Whereas only 10 reports were presented at the first conference, 48 were presented at the fourth. At present Polish and Slovak meteorologists are completing a major monography entitled "Climate of the Tatra Mountains." It is noted that similar conferences are devoted to study of other mountain systems, such as the Alps and Caucasus.

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Many of the theoretical problems discussed at these conferences are applicable to all mountain systems, but regional conferences are also necessary or local peculiarities would be neglected. Thus, many would like to join all the conferences on meteorology of mountainous regions into one large international assembly, but this is countered by the feeling that practical, local problems would be neglected in favor of theoretical, global studies. The conference was attended by more than 100 persons from Bulgaria, Hungary, East Germany, Poland, Rumania, USSR, Czechoslovakia, Jugoslavia, Austria and West Berlin. A total of 43 papers were presented at six sessions (one 30-minute report and six to eight 10-minute communications at each session). The papers largely dealt with four subjects: 1) Meteorological conditions for the formation of high water, particularly in the Carpathian, Balkan and Sudetan Mountains; 2) Effect of the Carpathians, Balkans and Sudetans on atmospheric circulation; 3) Methods for processing detailed climatic maps for mountainous regions; 4) Common climatic conditions in the Carpathians, Balkans and Sudetans. The summaries of all papers have been published and a monograph giving the texts of all the papers is soon to be published.

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1/2 022 UNCLASSIFIED PROCESSING DATE--02OCT70
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AUTHOR--DZERDZEYEVSKIY, B.L.

COUNTRY OF INFO--USSR

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SOURCE--ZENLIA I VSELENNAYA, JAN.-FEB. 1970, P 2-8

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF FUNDAMENTAL CAUSES OF THE CYCLIC BEHAVIOR OF CERTAIN CLIMATIC PHENOMENA FROM THE VIEWPOINT OF POSSIBLE CLIMATIC FORECASTS. THE RELATION BETWEEN SOLAR ACTIVITY AND THE UPPER ATMOSPHERIC AND GEOMAGNETIC EFFECTS IS EXPLAINED. THE ROLE OF ATMOSPHERIC CIRCULATION IS SHOWN TO BE EXTREMELY IMPORTANT, AND FACTORS AFFECTING THE LONG TERMS FLUCTUATION OF ATMOSPHERIC DYNAMICS ARE DESCRIBED.

UNCLASSIFIED

USSR

UDC 8.74

VEREZHENSKIY, A. R., DZERO, O. I., KOZHOKARU, N. YA.

"Some Experimental Data Processing Programs on the Nairi Computer"

Tr. Kishinev. s.-kh. in-ta (Works of the Kishinev Agricultural Institute), 1972, No 86, pp 57-68, 75 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V495)

Translation: A study was made of the programs and their block diagrams for certain problems frequently encountered for processing on the Nairi computer: 1) the equation for a straight line of the type $y = ax + b$; 2) the equation of a hyperbola of the type $y = a + b/x$; 3) the equation of a parabola of the type $y = a_0 + a_1x + a_2x^2$; 4) the correlation coefficient for two variables; 5) the method of variation series; 6) the solution of polynomials.

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USSR

UDC 615.332 (Rifampicinum).015.44.1576.851.252+576.851.42

BOBROVSKIY, M., DZERZHANOVSKAYA, D., YAKUBICH, P., and BOROVSKIY, YE., Chair of Microbiology, University Medical School, Bialystok, Poland

"Rifampicin Activity Against Clinical Strains of Staphylococci and Gram-Negative Bacilli"

Moscow, Antibiotiki, No 12, 1971, pp 1072-1077

Abstract: Study of 282 bacterial strains isolated from pus, sputum, urine, and feces showed that all 120 Staphylococcus aureus strains were highly sensitive to rifampicin in concentrations ranging from 0.005 to 0.05 μ g/ml. Among the gram-negative bacteria, E. coli and Proteus were the most sensitive to the antibiotic. Salmonella and Shigella were somewhat less sensitive, while Klebsiella and Ps. aeruginosa proved to be resistant. The minimum inhibitory concentration of rifampicin varied with the amount of bacteria tested and the pH of the medium. Resistant variants growing in the presence of high concentrations of the antibiotic appeared at the rate of 1 per 10^7 cells. The sensitivity of many of the gram-negative strains was intensified by increasing the acidity of the medium. It is suggested that the therapy of urological infections can be made more effective by acidifying the patient's urine.

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Acc. Nr: **0034393**

Ref. Code: UR 0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 2, pp 102-107

! PENICILLINASE-PRODUCING GRAMNEGATIVE BACILLI AS ETIOLOGICAL FACTORS OF THE URINARY TRACT INFECTIONS

Bobrovskiy, M.; Dzerzhanovskaya, D.; Filipchuk, Ya.

Microbiological Chair of Medical Academy of Belostock, Poland

Penicillinase activity of 73 strains of E. coli, Klebsiella and Proteus isolated from urine was determined. No correlation between the enzymatic activity of a particular strain and its ability to cause severe infections of the urinary tract was found. It has been demonstrated that β -lactamase formation is not the only mechanism of the insensibility of gramnegative bacteria to penicillins and the intrinsic resistance, as well as penicillinase production should also be regarded. It has also been observed that some considerable differences occur in substrate specificity and affinity of penicillinases from different bacterial species.

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UDC 623.983:621.395

DZEREHINSKIY, I.V., ZHAROVA, N.A., PRIKHOD'KO, V.P., FOMINA, I.P., FURDUYEV,
A.V.

"Deep-Water Nine-Channel System Of Hydrophones"

Tr. Akust. in-ta (Works Of The Institute Of Acoustics), 1971, No 16, pp 5-15
(from RZh:Elektronika i yeye primeneniye, No 1, Jan 72, Abstract No 1A641)

Translation: A deep-water system of hydrophones is described which assures simultaneous reception of acoustic signals at nine levels at depths up to 1.5 km in the frequency range from 2 hz to 6 khz with a dynamic range of 50 db. With the object of increasing the reliability and simplifying the transmitting device, a system of frequency modulation is used with an uncontrolled center band. Automatic frequency control of the oscillators is incorporated in the receiving device. The lowering devices are distinguished only by the central frequencies and the frequencies of the remote control of the attenuators. A nondirectional cylindrical hydrophone of barium titanate with self-capacitance of 680 picofarad and a sensitivity of 80 microvolt/bar is used as the signal source. Connection of the signal sources is accomplished by a generator circuit. The noise level in the line because of discontinuities does not exceed that permissible. In the system of hydrophones a type LMI-7 cable-hawser is used which has three high-frequency coaxial cores with a wave impedance of 50 ohm and four insulated steel hawsers. 6 ill. 4 ref. L.R.

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USSR

UDC 669.71.053.4

DZHABAGINOV, K., and NURKEYEV, S. S.

"Investigation of the Agitation Leaching of a Fine Fraction of Slurry Sinter at the Pavlodar Aluminum Plant"

Tr. Kazakhsk. politekhn. in-ta (Works of the Kazakh Polytechnical Institute), 1970, sb. 31, pp 254-255 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 G212 by G. SVODTSEVA)

Translation: On the basis of experimental data on the agitation leaching of various fine fractions of slurry sinter over a wide range of duration, temperature, and caustic modulus, the following was established: 1) extraction of Al_2O_3 and alkali > 90% from sinter fines is attained under the following leaching conditions: solution $\alpha_k = 22-26$ and Al_2O_3 38-50 g/l; sinter size 1.8 mm; temperature 70-75°; liquid:solid = 2:3; and duration 15 minutes; 2) individual leaching of fine sinter fractions makes possible a reduction in the solid content of the discharge from the tubular apparatus and a 10- to 12-percent rise in the chemical yield of Al_2O_3 . Agitation leaching of sinter fines decreases secondary loss of Al_2O_3 and alkali.

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