

USSR

UDC: 621.396.677

KAUCHOR, R. (German Democratic Republic)

"Directional Diagram of an Antenna Grating With a Long Feeder Line"

Moscow, Radiotekhnika, No 2, 1972, pp 52-55

Abstract: The antenna grid considered in this paper consists of a number of parallel radiators, set at equal distances from each other, with the currents in each having the same phase and amplitude. The mutual coupling of the radiators is neglected. It is assumed that the distance between radiators is equal to one-half the average wavelength of the range the antenna is required to service. An antenna grid of this type can be excited by a symmetrical feed line loaded with a Hertz dipole. On the basis of this assumption, an expression is obtained for the voltage at the input terminals of the i -th radiator, and the directional diagram of the radiators as a whole is computed with the distortions introduced by the feeder line taken into account.

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1/2 013 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--CALCULATION OF ELECTROMAGNETIC FIELDS APPLIED BY THE SOUNDING ON
THE METHOD OF GROWING IN THE NEAREST ZONE -U-
AUTHOR--KAUFMAN, A.A., KURILLO, V.N., MOROZOVA, G.M.
COUNTRY OF INFO--USSR
SOURCE--GEOLOGIYA I GEOFIZIKA, 1970, NR 1 (121) PP 92-101
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--ELECTROMAGNETIC FIELD, MAGNETIC DIPOLE, PROSPECTING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/1289 STEP NO--UR/0210/70/000/001/0092/0101
CIRC ACCESSION NO--AP0103171
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103171

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METHOD OF COMPUTATION OF NONSTATIONARY ELECTROMAGNETIC FIELDS IN THE HORIZONTALLY LAYERED MEDIA IS DESCRIBED. THE FURYE TRANSFORMATION AND THE KNOWN PRINCIPLES FOR QUAZISTATIONARY, SINUSOIDAL FIELD DEPENDED ON TIME ARE USED IN THIS METHOD. THE MAIN FEATURES OF THE COMPUTATION METHOD ARE SHOWN EXAMPLIFIED BY ELECTROMAGNETIC FIELD COMPONENTS OF VERTICAL MAGNETIC DIPOLE COMPUTATION WITHIN THE CONDUCTING MEDIUM WITH THREE HORIZONTAL DIVISION SURFACE.

UNCLASSIFIED

USSR

JDC 621.385.623.4

BCRISCV, L.M., ZAFHAROVA, A.N., YEVTUSHENKO, O.V., EHARYI, YE. V., KAUFMAN, G.M.,
PETROV, D.M., SAMCRCDCVA, G.A.

"Experimental Television Klyatron With High Efficiency"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, No 7, pp 160-162 (from RZh--Elektronika i yeya priznanaye, No 11, November 1970, Abstract No 11A126)

Translation: The development is reported of an experimental klyatron, the parameters of which were optimized for a specified current and voltage with the aid of an electronic computer. The electronic efficiency of the klyatron produced amounts to 70 percent. With an amplification band of 1.3 percent and a shift of the maximum amplitude-frequency characteristic to the low-frequency side, the maximum efficiency (with respect to power in the load) exceeds 60 percent with an amplification factor of 40 db. Summary.

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USSR

UDC 621.385.623.4

BORISOV, L.M., ZAKHAROVA, A.N., YEVTUSHENKO, O.V., ZHARYY, YE. V., KAUFMAN, G.M.,
PETROV, D.M., SAMCRCDCVA, G.A.

"Experimental Television Klystron With High Efficiency"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology.
Scientific-Technical Collection. Microwave Electronics), 1970, No 7, pp 160-162
(from RZh--Elektronika i yeye primeneniye, No 11, November 1970, Abstract No 11A126)

Translation: The development is reported of an experimental klystron, the parameters of which were optimized for a specified current and voltage with the aid of an electronic computer. The electronic efficiency of the klystron produced amounts to 70 percent. With an amplification band of 1.3 percent and a shift of the maximum amplitude-frequency characteristic to the low-frequency side, the maximum efficiency (with respect to power in the load) exceeds 60 percent with an amplification factor of 40 db. Summary.

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USSR

UDC 621.385(075.8)

KAUFMAN, M.S., PALATOV, K.I.

"Electron Devices. 3rd Edition, Revised. School Equipment For Technicians"

Elektronnyye pribory. Izd. 3-ye, pererab. Uchebn. posobiye dlya tekhnikov (cf English above), Moscow, "Energiya," 1970, 480 pp, ill. 1 r. 32 k (from RZh--Elektronika i yeye primeneniye, No 10, October 1970, Abstract No 10A5K)

Translation: The book considers the theory of operation, construction, and basic computations of electrovacuum devices, and also the connections between the parameters and construction of the devices and the most important circuits and conditions for their use. The book is school equipment for the course "Electrovacuum Devices And Principles Of Their Design" for students of technicians. It can also be useful for students for appropriate special higher educational institutions. Annotation.

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USSR

UDC 612.172.015.348.017.2-06:612.373.2

AYNOKENOVA, R. R., and KAUFMAN, O. YA.

"Dynamics of Protein Synthesis in the Contractile Myocardium and Smooth Muscles on Intramural Branches of Coronary Arteries During Adaptation to Continuous and Interrupted Hypoxia"

Moscow, Kardiologiya, No 4, 1973, Vol 13, pp 128-130

Abstract: Sets of white male Wistar rats were used to investigate protein synthesis in the walls of coronary vessels during adaptation to hypoxia. A barochamber with 6-hour exposures to increasingly rarefied air was used to test for interrupted hypoxia, while some of the rats were sent to a mountain laboratory (3,200 m) for testing for continuous hypoxia. The method of radioactive tracers was employed in all cases. The number of tracers in the smooth muscle cells of the coronary arteries and myocardium increased sharply for both continuous (high-altitude) and interrupted hypoxia. Adaptation to high-altitude hypoxia showed comparatively slight activation of protein synthesis in the contractile myocardium, while in adaptation to interrupted hypoxia results were basically the same. So a high degree of activation of protein synthesis was shown to exist in the smooth muscle cells as compared to the contractile myocardium for these types of hypoxia adaptation.

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USSR

UDC 511

KAUFMAN, E. M.

"Asymptotic Formula for the Number of Integers Representable by Binary Quadratic Forms"

Uch. zap. Vladimir. gos. ped. in-t (Scientific Notes of Vladimir State Pedagogical Institute), 1971, 38, pp 46-56 (from RZh-Matematika, No 2, Feb 72, Abstract No 2A159 by A. MALYSHEV)

Translation: The asymptotic series $A(x) = \sum_{k=0}^n A_k \frac{x}{(\ln x)^{k+1/2}} + O\left(\frac{x}{(\ln x)^{n+3/2}}\right)$

is obtained for the number $A(x)$ of integers $m \leq x$ which are representable by a given positive, integral, binary quadratic form.

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USSR

UDC: 533.951

KAUFMAN, R. N.

"Propagation of Surface Waves Along a Plane Interface Between Two Magnetically Active Plasmas"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, No 4, April 1972, pp 746-751

Abstract: The propagation of surface waves across a magnetic field and along the interface between two plasma regions of arbitrary plasma frequencies is considered. Ion motion and collisions are neglected, and the boundary conditions at the interface surface are established under that stipulation. Curves are given for the existence of surface waves at various regions of the interface under particular conditions. The author finds that in some of these regions the surface waves are in one direction only. Expressions are obtained for the index of refraction of the waves with and without the magnetic field. A member of the Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation in Moscow, he expresses his gratitude to Ya. L. Al'pert and V. I. Karpman for their discussions and comments.

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USSR

UDC 621.357.1.035.2:669.781(033.8)

GUTMAN, M. B., KAUFMAN, V. G., GURSKIY, V. F., GORODINSKIY, M. S.,
SHAKHRES, YU. A., KALOSHIN, YU. G., RABIN'KIY, B. YA., and MEZERUYEVA, L. S.

"Apparatus for Electrolytic Boronization"

USSR Author's Certificate kl. [expansion unknown] C 23 c 9/00 No 337446,
Filed 23 Jan 70, Published 31 May 72 (from Referativnyy Zhurnal -- Khimiya,
No 7, 1973, Abstract No 71431P)

Translation: An apparatus is patented for the electrolytic boronization, composed of a nonmetallic crucible inside of which is located a partition and electrodes. It is distinctive in that in order to increase efficiency the electrodes are arranged in a circular space formed by the cylindrically coaxial arrangement of the crucible and partition filled with the molten salt.

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USSR

UDC 621.396.6.002.72(088.8)

KAUFMAN, V. I.

"A Device for Straightening the Axial Leads of Radio Components"

USSR Author's Certificate No 254606, Filed 18 Apr 68, Published 3 Apr 70 (from REh-Radiotekhnika, No 10, Oct 70, Abstract No 10V304 P)

Translation: This Author's Certificate introduces a device for straightening the axial leads of radio components. The unit contains a vibration hopper with a trough, straightening discs mounted on a drive shaft, and a grooved pulley. As a distinguishing feature of the patent, the operational reliability of the device is improved by mounting a batching separator equipped with a toothed rim on the collars of the straightening discs. This separator is coupled to the drive shaft by planetary gearing.

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- 103 -

1/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--THE EFFECT OF THE METHOD OF EDGE TREATMENT ON THE FATIGUE
RESISTANCE OF THE COMPONENTS OF METALLIC STRUCTURES -U-
AUTHOR--(02)-SHISHKIN, V.YU., KAUGAN, V.A.
COUNTRY OF INFO--USSR *K*
SOURCE--MOSCOW, SVARUCHNOYE PROIZVODSTVO, NO 3, 1970, PP 25-26
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--FATIGUE-STRENGTH, METAL ROLLING, BIBLIOGRAPHY, BRIDGE, OXYGEN
GAS CUTTING, STRUCTURAL STEEL, CONSTRUCTION MATERIAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1999/1308 STEP NO--UR/0135/70/000/003/0025/0026
CIRC ACCESSION NO--AP0123267
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123267

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

ABSTRACT. RESULTS ARE PRESENTED OF
COMPARATIVE FATIGUE TESTS OF THE ROLLED STEEL PLATES WITH VARIOUS
METHODS OF EDGE TREATMENT (AFTER ROLLING, OXYGEN CUTTING, PLANING) WITH
REGARD TO BRIDGE STRUCTURES.

UNCLASSIFIED

AACO41801

KAKHCHESTVILI E.I.
UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

243904 MEASURING GAS HUMIDITY in a vacuum is achieved by having the working chamber in the form of three coaxial cylinders. The measuring device contains a supporting base 1, a coulometric humidity recorder 2, an internal stationary cylinder 3, middle moving cylinder 4 and external stationary housing 5. Cylinder 4 and toothed wheel 6 are in one piece. The coulometric recorder 2 is fixed by nut 7 with rubber washer 8. The cylinder is driven by an electric motor 9 via gear wheel 10. The humidity is measured as follows. Steam and air mixture of the tested gas fills the volume of the cell 13 of the moving cylinder 4 by passing through slot 14 of the stationary cylinder 5. After starting the motor 9, the rotating cylinder 4 cuts off a dose of the gas mixture moves to the slot 12 of the cylinder 3 and is connected with the volume of the coulometric recorder 2.

2/70

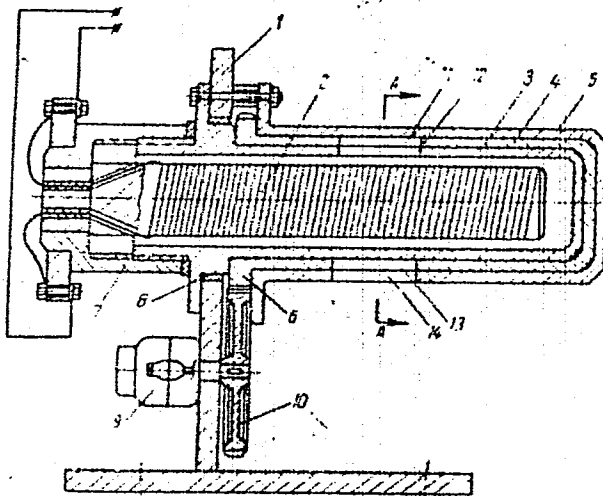
25.11.66 as 1115503/18-10. V.A. BOSKOBONIKOV et al.
(26.9.69) Bul 17/14.5.69. Class 42L. Int.Cl.G 01b.

21

1/2

19771633

AA0044801.



AUTHORS: Voskoboynikov, V. A.; Kaukhcheshvili, E. I.;
Prished'ko, N. A.

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gc

19771634

USSR

UDC: 621.372.5

KAULAKIS, L. I., NARGELAS, A. A., PAUKHA, V. V.

"Characteristics of a Transistorized Quadripole Gyrator"

V sb. Elektrotehnika (Electrical Engineering--collection of works), Kaunas, 1970, pp 241-244 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 126196)

Translation: The authors analyze a gyrator circuit which consists of two voltage-controlled current generators. Parallel networks are introduced into the gyrator to ensure operation for any input voltage polarity. Special circuits based on multiple transistors are used to increase the input and output impedances. Two operating modes are possible: the compensation mode and the balanced mode. Analysis shows certain advantages of the balanced mode. Curves are given for the temperature dependence of the output current, and an expression is presented for the relative error as a function of the gyrator impedance. Five illustrations, bibliography of one title. N. S.

1/1

1/2 034

UNCLASSIFIED

PROCESSING DATE--02OCT70

TITLE--THE EFFECT OF ANTISPLENIC SERUM ON THE STEM CELLS OF THE

HEMOPOTETIC TISSUE -U-

AUTHOR--(02)-KAULEN, D.R., GOLOVANOV, T.A.

K

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69,

NR 4, PP 85-88

DATE PUBLISHED-----70

110108

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RABBIT, MOUSE, HEMATOPOIESIS, SPLEEN, RADIATION CELLULAR
EFFECT, TISSUE TRANSPLANT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY KEEL/FRAE--1938/1578

STEP NO--UR/0219/70/069/004/0085/0083

CIRC ACCESSION NO--AP0106324

UNCLASSIFIED

2/2 034

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0106324

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF THE RABBIT ANTISPLENIC SERUM (ASS AGAINST MURINE CELLS) ON THE STEM CELLS OF THE HEMODIETIC TISSUE WAS STUDIED. THE ASS IS SHOWN TO INHIBIT THE DEVELOPMENT OF FOCI IN THE SPLEEN OF THE IRRADIATED (830 R) RECIPIENT (SYNGENIC OR SEMI SYNGENIC) AFTER IN VITRO TREATMENT OF THE SPLENIC CELLS TO BE TRANSPLANTED. THE ASS ACTS IN DILUTIONS WHICH SURPASS BY TWO ORDERS THE CYTOTOXIC TITRES FIXED IN VITRO. THE ASS IS HIGHLY EFFECTIVE BOTH AGAINST THE CELLS OF THE IMMUNIZING AND ALLOGENIC LINES OF MICE. THE DURATION OF THE ASS CONTACT WITH THE CELLS (5-60 MINUTES) DOES NOT PRACTICALLY AFFECT THE INHIBITING INFLUENCE.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--23GCT7
TITLE--POLARIZED FLUORESCENCE OF STAINED MUSCLE FIBERS. IV. CHANGE IN THE
ORIENTATION OF ACRIDINE ORANGE IN GLYCERINATED FIBERS AFTER ATP ACTION
AUTHOR--(02)-KAULIN, A.B., GOLFAND, K.A.

COUNTRY OF INFO--USSR *R.*

SOURCE--TSITOLOGIYA 1970, 12(2), 172-7

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ADENOSINE TRIPHOSPHATE, GLYCEROL, MUSCLE TISSUE, BIOLOGIC
STAIN, FLUORESCENCE, BIOLOGIC PIGMENT, IRON COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1997/2020

STEP NO--UR/9053/70/012/002/0172/0177

CIRC ACCESSION NO--AP0120663

UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--23OCT7

CIRC ACCESSION NO--AP0120663

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AZIMUTHAL CHARACTERISTICS OF THE POLARIZED FLUORESCENT OF THE ACRIDINE ORANGE ABSORBED ON THE GLYCERINIZED RABBIT, MUSCLE FIBERS WERE STUDIED UNDER INFLUENCE OF ATP IN CONCNS. EVOKING MUSCLE CONTRACTION. THE CHANGES OF THE AZIMUTHAL CHARACTERISTICS SHOWED THAT SOME PART OF THE DYE MOL. WAS BOUND TO MYOSIN IN THE CENTER OF ATPASE ACTIVITY. HOWEVER, THE MAIN PART OF THE DYE WAS BOUND TO THE PART OF THE MYOSIN MOL. WITH NO ENZYMIC ACTIVITY.

FACILITY: LAB. CELL PHYSIOL., INST. CYTOL., LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC: 621.373.4(088.8)

2

DEKCHENKO, K. N., SKRIPKA, L. M., AMONOV, Ye. V., KAULIN, Ye. F.,
ROGOV, P. V., and NAUMOV, A. M.

"Test Signal Formation Device for Tuning Electronic Equipment"

Avt. sv. SSSR (Author's Certificate USSR) Class 21a⁴, 8/01, (H 03
b 23/00), No. 270825, Application 27.01.69, Publication 1.09.70
(from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3A406P)

Translation: A device is proposed for forming a test signal for tuning electronic equipment, containing a frequency wobulator, a modulator, fixed stable frequency oscillators, an automatic gain control circuit, a marker generator, and a control device. The device is distinguished in that, for the purpose of simplifying the equipment for formation of powerful undistorted signals consisting of pulses of FM oscillations at low resistance loads, the fixed frequency oscillators mentioned above are connected through a summing circuit to the frequency wobulator. E. L.

1/1

USSR

UDC: 621.372

KAVALYUNAS, S. Yu., KAUPELIS, R. R.

"Dynamic Conditions of a Frequency AFC System With Mechanical and Electrical Controlling Elements in Two-Channel Wobblers"

Tr. Nauchn.-tekhn. konferentsii "Radioelektronika". T. 6 (Works of the Scientific and Technical Conference on Radio Electronics. Vol. 6), Kaunas, 1970, pp 179-183 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5A64)

Translation: The authors analyze dynamic errors of the difference frequency in a two-channel wobbulator which utilizes a so-called frequency AFC system with mechanical and electrical controlling elements. It is shown that dynamic errors may be appreciably reduced when two separate frequency AFC systems are used together with an auxiliary wobbulator. Resumé.

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Acc. Nr: AP0037234

K

Ref. Code: UR 0301

PRIMARY SOURCE: Voprosy Meditsinskoy Khimii, 1970, Vol 16,
Nr 1, pp 23-29

SEPARATION OF SUBSTRATE AND KININOGENASE ACTIVITIES OF HORSE
BLOOD PLASMA

Kauricheva, N. I.; Kuznetsova, V. M.; Bogomolets-Enrikes, O. M.

N. F. Gamaleya Institute of Microbiology and Epidemiology USSR Academy
of Medical Sciences, Moscow

Horse plasma kininogens and kallikrein were separated by precipitation with polyethylene glycol with mol. wt. 6000 at 6.7% of saturation. 60% of kininogen which releases kinin when incubated with plasma kallikrein and venom enzyme was obtained in the supernatant. Kallikrein was concentrated in the precipitate.

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D. N.

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REEL/FRAME
19730159

2

USSR

UDC 576.8.093

KAUROV, B. S., PLATONENKOVA, L. S., ZHARIKOVA, G. G., and RUBIN, A. B.,
Moscow State University

"Study of Low-Intensity Luminescence of Some Microorganisms"

Moscow, Biologicheskiye Nauki, No 7, 1971, pp 102-105

Abstract: Luminescence was studied in a wide variety of bacteria: those capable of growing through fermentation or respiration, obligate and facultative aerobes and anaerobes, containing and not containing cytochromes, e.g., *Clostridium butyricum*, *Pseudomonas aeruginosa*, *Ps. fluorescens*, *Bacillus subtilis*, and others. Spontaneous luminescence was observed only in *B. brevis* var. G. B. R, S, P⁺, and P⁻ forms, *B. subtilis*, *B. cereus*, *B. mycoides*, *B. mesentericus*, *B. megatherium*, and *E. coli*, i.e., aerobes that contain cytochromes and are ammonifiers. The intensity of luminescence is 110 imp/sec. The luminescence lies in the region of 420 to 520 nit with a peak at 480 nit. The culture fluid (centrifugate) is responsible for the phenomenon rather than the cells.

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- 11 -

1/2 010

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--AMINO ACIDS AND PEPTIDES. V. SYNTHESIS OF PEPTIDES OF AN OXYTOCIN
SEQUENCY USING HYDROXYPHTHALIC ESTERS OF BENZYLOXYCARBONYLAMINO ACIDS

AUTHOR--(03)-KAUROV, O.A., MARTYNOV, V.F., MOROZOV, V.B.

COUNTRY OF INFO--USSR

R

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 908-11

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--AMINO ACID, PEPTIDE, ORGANIC SYNTESIS, HYDROXYL RADICAL,
PHTHALIC ACID, IMIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3006/1509

STEP NO--UR/0079/70/040/004/0908/0911

CIRC ACCESSION NO--AP0135170

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135170

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TREATING DICARBOBENZOXYTYROSINE AND N, HYDROXYPHTHALIMIDE IN DMF, DIOXANE WITH DICYCLOHEXYLCARBOOIMIDE OVERNIGHT GAVE 70PERCENT DICARBOBENZOXY, L, TYROSINE HYDROXYPHTHALIMIDE ESTER, M. 68-9DEGREES; SIMILARLY WAS PREPD. 90PERCENT HYDROXYPHTHALIMIDE ESTER OF CARBOBENZOXY, L, ISOLEUCINE, M. 122DEGREES, 60PERCENT HYDROXYPHTHALIMIDE ESTER OF CARBOBENZOXY, L, ASPARAGINE, M. 153-5DEGREES, AND 80PERCENT HYDROXYPHTHALIMIDE ESTER OF CARBOBENZOXY, L, GLUTAMINE, M. 132-4DEGREES. THESE ESTERS TREATED WITH APPROPRIATE AMINO COMPONENTS AND ET SUB3 N AT MINUS 10DEGREES IN DMF, CHCL SUB3, OR DIOXANE GAVE THE FOLLOWING L, AMINO ACIDE PEPTIDES (Z EQUALS CARBOBENZOXY):

Z, ASN, CYS(PHCH SUB2), OME M. 192-5DEGREES; Z, GLN, ASYN, CYS(PHCH SUB2), OME M. 238-9DEGREES; Z, LEU, GLY, OET, M. 104-6DEGREES; Z, PRO, LEU, GLY, OET, M. 148-51DEGREES; Z, CYS(PHCH SUB2), PRO, ELU, GLY, NY SUB2, M. 170-1DEGREES; Z, ASN, CYS(PHCH SUB2), PRO, ELU, GLY, NH SUB2, M. 213-14DEGREES; Z, GLN, ASN, CYS(PHCH SUB2), PRO, LEU, GLY, NH SUB2 M. 232-3DEGREES; Z, ILL, GLYN, ASN, CYS(PHCH SUB2), PRO, LEU, GLY, NH SUB2, M. 233-5DEGREES; Z, CYS(PHCH SUB2), TYR, OME, M. 95-6DEGREES; AND Z, TYR(Z), ILE, OME, M. 148-50DEGREES.

FACILITY: Leningrad. Gos. Univ., Leningrad, USSR.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--AMINO ACIDS AND PEPTIDES. III. SYNTHESIS OF PEPTIDES WITH
PHENYLALANINE CONTAINING FLUORINE IN THE AROMATIC RING --U-
AUTHOR--(03)--KAUROV, O.A., MARTYNOV, V.F., SMIRNOVA, M.P.
COUNTRY OF INFO--USSR
SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 903-4
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PEPTIDE, CHEMICAL SYNTHESIS, PHENYLALANINE, FLUORINATED
AROMATIC COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3001/1986 STEP NO--UR/0079/70/040/004/0903/0904
CIRC ACCESSION NO--AP0127381
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--30DCT70

CIRC ACCESSION NO--AP0127381

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. L-PHENYLALANINE AND
N-CARBOBENZOXY-S BENZYL-L-CYSTEINE P-NITROPHENYL ESTER (I) IN DIOXANE
(FOLLOWED BY ELECTROPHORESIS) GAVE 85PERCENT
N-CARBOBENZOXY-S-BENZYL-L-CYSTEINYL L-PHENYLALANINE, M. 156-80DEGREES,
(ALPHA) PRIME₂₀ SUBD 85DEGREES, AFTER ACIDIFICATION WITH HCL. SIMILARLY
WAS PREPD. 80PERCENT N-CARBOBENZOXY-S-BENZYL-L
CYSTEINYL-DL-P-FLUROPHENYLALANINE, M. 174.5-5.5DEGREES. DL-PENTA
FLUROPHENYLALANINE-HBR ADJUSTED TO PH 8 WITH NA SUB₂ CO SUB₃, THEN
TREATED WITH I OVERNIGHT, EVAPD., AND KEPT 6 HR IN AW. DMF GAVE
72PERCENT
N-CARBOBENZOXY-S-BENZYL-L-CYSTEINYL-DL-PENTAFLUROPHENYLALANINE, M.
167-8.5DEGREES. FACILITY: LENINGRAD. GOS. UNIV., LENINGRAD,
USSR.

UNCLASSIFIED

1/2 019

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--AMINO ACIDS AND PEPTIDES. IV. SYNTHESIS OF THE HEXAPEPTIDE AMIDE OF THE 1-6 SEQUENCE OF OXYTOCIN -U-
AUTHOR--(03)--KAUROV, D.A., MARTYNOV, V.F., POPERNATSKIY, D.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 904-8

DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HORMONE, PEPTIDE, AMIDE, CHEMICAL SYNTHESIS, MOLECULAR STRUCTURE, PITUITARY GLAND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3001/1963

STEP NO--UR/0079/70/040/004/0904/0908

CIRC ACCESSION NO--AP0127362

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--A0127362

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

ABSTRACT. THE BY PRODUCT FORMED IN THE AZIDE SYNTHESIS OF OXYTOCIN FROM CONDENSATION OF HEXA AND TRIPEPTIDES WAS SHOWN TO BE THE AMIDE (I) OF THE HEXAPEPTIDE OF 1-6 ACID SEQUENCE OF OXYTOCIN. SHOWN ON MICROFICHE. FACILITY: LENINGRAD. GOS. UNIV., LENINGRAD, USSR.

UNCLASSIFIED

USSR

BARABANOV, V. I., et al, Zhurnal Obshechey Khimii, Vol 40 (102), No 11, Nov 70, pp 2464-2466

(XI -- N-methyltrichloroacetoamidodimethylthiophosphate, XIII -- N-butyltrichloroacetoamidodimethylthiophosphate). Also synthesized were N-butylbis(trichloroaceto)amide (X), N-methyl-N-dipropylphosphite-amidodimethylthiophosphate (XII) and N-butyl-N-dipropyl-phosphite-amidodimethylthiophosphate (XIV). The synthesized amides of dimethylthiophosphoric acid were reacted with chloral to produce N-alkyl-N- α -hydroxy(β, β, β -trichloroethyl)-amides of dimethylthiophosphoric acid (XVI, XVII). N-Butyl-(α -hydroxy- β, β, β -trichloroethyl)trichloroacetoamide $\text{CCl}_3\text{CON}(\text{CHOCCl}_3)_2\text{C}_4\text{H}_9$ (XV) was synthesized by interacting (IV) with chloral. It was found that compounds (I) and (V) may be used for sexual sterilization of flies, and that compounds (II) and (VI) are antihelminthic. The products of interaction of amides with chloral have insecticidal properties equal to those of chlorophos, but they are considerably more toxic.

2/2

USSR

UDC: 542.91+661.718.1+661.731

APPROVED FOR RELEASE: 07/20/2001
 BAUBER, V. I. and V. I. SHANIN, V. S. Kaban, State Veterinary Institute imeni N. E. Bauman

"Biologically Active Amides of Trichloroacetic and Dimethylthiophosphoric Acids"

Leningrad, Zhurnal Obshechey Khimii, Vol 40 (102), No 11, Nov 70, pp 2464-2466

Abstract: A series of amides of trichloroacetic (I-IV (I -- trichloroacetylenamide, II -- trichloroacetyl piperidylamide, III -- trichloroacetyldiethylamide, IV -- trichloroacetylbutylamide) and dimethylthiophosphoric acids (V-IX) (V -- ethylenamide, VI -- piperidylamide, VII -- methyl amide, VIII -- diethyl amide, IX -- butyl amide of dimethylthiophosphoric acid) were synthesized by interacting the corresponding acid chlorides with ethylenimine, piperidine, methyl amine, diethyl amine and butyl amine in ether in the presence of triethyl amine. In the reaction with methyl amine and butyl amine, the individual product was isolated after action of the acid chloride, and another acid chloride was then reacted with the remaining hydrogen atom. The result was mixed amides of trichloroacetic and dimethylthiophosphoric acids (XI, XIII)

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AA0040756 KAUSHANSKIY A. S. UR 0482

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3/70

Soviet Inventions Illustrated, Section I Chemical, Derwent,

234624 MOULD LUBRICATOR FOR CONTINUOUS CASTING PLANTS uses feed channels which issue above the collector so as to ensure even distribution of lubricant round the mould perimeter, Lubricant is pumped etc. from tank 1 to the frame 2 on the mould 3 and via a feedline 4 with choke 5. It thus reaches the collector 7 and as this fills so the lubricant fills all the channels 8. When there is excess lubricant pressure in the collector, the lubricant is fed in identical portions into all these channels and thus flows out at the mould perimeter in identical portions. 7.10.65. as 1031423/22-2. EVTEEV D.P et al. Metallurgical Plant Design Inst. (26.6.69.) Bul.4/10.1.69. Class 31c. Int.Cl. B22d.

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AA0040756

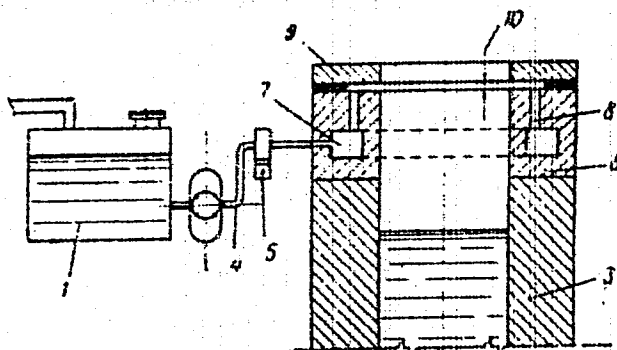


Fig. 1

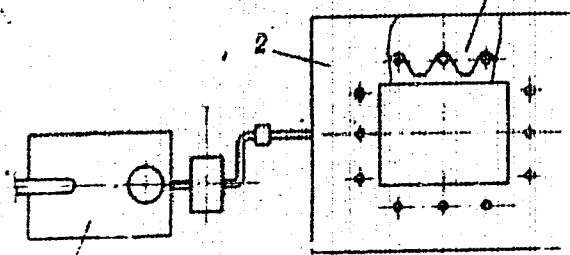


Fig. 2

19750440

AA0040756

AUTHORS: Yevteyev, D. P.; Zhidovinova, M. M.; Karpeka, V. A.;
Kaushanskiy, A. S.; Krulevetskiy, S. A.; Pravdin, V. S.;
Satanovskiy, Ya. Ye.; Ful'makht, V. V.; Shabanov, A. N.

Gosudarstvennyy Soyuznyy Institut po Proyektirovaniyu
Metallurgicheskikh Zavodov

19750441

3/3

UDC 621.316.825.4:678.76

3

USSR

PAUSHKIN, YA. M., PANCHENKOV, G. M., CHERNYKH, V. G., LUNIN, A. F.,
KAUSHANSKIY, D. A., DMITRIYEV, V. A., and MARKOVICH, V. B., Moscow
Institute of the Petrochemical and Gas Industry imeni I. M. Gubkin,
Moscow, Ministry of Higher Education USSR

"Effect During the Process of Irradiation of Ionizing Radiation on
Polymers With Conjugated Bonds"

Moscow, Doklady Akademii Nauk SSSR, Vol 192, No 4, 1970, pp 835-837

Abstract: The effects of gamma-rays from ^{60}Co at a dosage rate of
1.2-1.3 Mrad/hr on the electrophysical properties of the organic
semiconductors polyacetonitrile (I), paracyanogen (II), polyphenyl-
cyanamide (III), polydiacetyl (IV), polybutylcyanamide (V), and
polybutylcyanate (VI), specifically on their electrical resistance,
were studied during the process of irradiation. For I, II, IV, and
VI with a low ohmic resistance that were prepared at 450-500°,
irradiation at doses $\leq 5 \times 10^9$ rad did not result in any changes
of resistance. Irradiation of V, which also had a low ohmic resist-
ance, produced a slow rise in resistance in the dose range of 0-110

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USSR

PAUSHKIN, YA. M., et al, Doklady Akademii Nauk SSSR, Vol 192, No 4, 1970, pp 835-837

Mrad and an abrupt rise at 110-140 Mrad. In the case of VI with a high ohmic resistance, which was prepared at 350°, ionizing radiation in the dose range from 0 to 170-200 Mrad produced further polymerization and cross-linking, which were reflected in a decrease of the resistance, while doses > 200 Mrad decomposed the polymer. The results showed that irradiation at doses up to 5×10^9 rad of I, II, IV, and VI with a low ohmic resistance did not change the physico-chemical and electrophysical properties of these polymers - i.e., they are suitable for use in radioelectronic devices operating under conditions of exposure to ionizing radiation.

2/2

- 94 -

UDC 669.715'782'243'74'721:669.018.2

USSR

KISIN, I. L., BUZAYEVA, I. N., KAUSHANSKIY, D. Ya., and FEDOROV, G. A.

"Modification of Aluminum-Silicon Alloy for the Production of Piston Alloy"

V sb. Modifitsir. siluminov (Modification of Silumins -- Collection of Works), Kiev, 1970, pp 158-159 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 1748 by I. NABATOVA)

Translation: The authors developed and introduced a technology of modifying hypereutectic Silumin for pistons. An investigation was conducted on the alloy containing (in %) Si 17.0, Ni 1.1, Mn 0.66, Cu 1.87, Mg \leq 0.3, Zn $<$ 0.3, Fe $<$ 1.0. Of the modifiers tried (PCl₅, AlP, Cu₃P), Cu₃P was found technologically most effective, convenient in production, and economical. Modification raised the mechanical properties of the alloy (breaking point by \sim 5 kg/mm²) and the purity of the piston surface after machining, as well as reducing wear on the cutting tool. One illustration. Bibliography of one title.

1/1

USSR

UDC 621.382.2.029.64

KAUSOV, S.F., PIL'DON, V.I.

"Microwave Band Planar-Epitaxial Varactors"

V sb. Poluprovodn. pribory i ikh primeneniye (Semiconductor Devices And Their Application--Collection Of Works), No 23, Moscow, "Sov. radio," 1970, pp 133-144 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12B149)

Translation: The paper considers the technology of the manufacture and design of silicon planar-epitaxial varactors intended for operation of frequency multipliers in a wide range of operating powers and frequencies. The characteristics of the devices are presented as well as the basic technological characteristics, and the results of a test of varactors which confirm the prospective use for frequency multiplication of diodes which have been developed. 7 ill. 4 tab. 5 ref. Summary.

1/1

USSR

K UDC: 621.374.4:621.382.2

TABACHNIKOV, I. Ya., FRID, I. R., KAUSOV, S. F., VIZEL', A. A.

"Calculation of the State of a Varactor in a Parallel Frequency Multiplication Circuit"

V sb. Poluprovodn. pribory i ikh primeneniye (Semiconductor Devices and Their Application--collection of works), Vyp. 23, Moscow, "Sov. radio", 1970, pp 172-191 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10D25)

Translation: Formulas are derived which can be used to determine the efficiency, input and output impedance, and also the external bias voltage across the semiconductor diode, in a varactor with gradual and sharp junction from the breakdown voltage, maximum frequency and capacitance for doubling, tripling and quadrupling the frequency in a parallel circuit. A theoretical comparison is made of the effectiveness of a semiconductor diode with sharp and gradual junction in a frequency doubler. Experimental investigations of semiconductor diodes with abrupt junction in a frequency tripler up to 10 GHz, and semiconductor diodes with gradual junction in a doubler in the decimeter wavelength range showed agreement with the proposed computational formulas. Bibliography of nine titles. Authors' abstract.

1/1

1/2 021 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--METASTABILITY OF CALCIUM SILICATE HYDRATES DURING INCREASE OF THE
AUTOCLAVE TEMPERATURE -U-
AUTHOR-(03)-BOZHENOV, P.I., KAVALEROVA, V.I., GRIGORYEV, B.A.

COUNTRY OF INFO--USSR

SOURCE--STROIT. MATER. 1970, (5), 31-2 *K*

DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, CHEMISTRY

TOPIC TAGS--MINERAL FORMATION ANALYSIS, SILICATE MINERAL, CALCIUM MINERAL,
AMORPHOUS SILICON, QUARTZ, CALCIUM OXIDE, CRYSTAL HYDRATE, X RAY
DIFFRACTION PATTERN, THERMAL ANALYSIS, TEMPERATURE DEPENDENCE,
METASTABLE STATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1282

STEP NO--UR/0228/70/000/005/0031/0032

CIRC ACCESSION NO--AP0136688

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136688

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CA SILICATE HYDRATES WERE PREPD. BY MIXING CAO WITH AMORPHOUS SILICA OR FINELY GROUND QUARTZ IN THE MOL. RATIO OF 1:1 AND PRESSING SMALL CUBES (EDGE LENGTH 1.4 CM) FROM THE MIXT. THE CUBES WERE AUTOCLAVE CURED AT TEMPS. 448-637DEGREE SK, APPLYING A HIGH HEATING RATE. AFTER CURING THE SAMPLES WERE QUENCHED, AND THEIR STRENGTH AND MINERAL. COMPN. (BY X RAY DIFFRACTION AND DTA) DETD. THE SEQUENCE OF MINERAL FORMATION IN SAMPLES MADE WITH AMORPHOUS SILICA; BELOW 498DEGREE SK 1.25CAO.SIO SUB2.H SUB2 O (I) AND 2 CAO.SIO SUB2.NH SUB2 O (II) ARE FORMED. AT 498-583DEGREE SK, I IS TRANSFORMED INTO 0.8CAO.SIO SUB2.NH SUB2 O (III) AND CAO.SIO SUB2.O.18H SUB2 O (XONOTLITE), AND II INTO C TYPE 2CAO.SIO SUB2.-H SUB2 O. BETWEEN 537 AND 583DEGREE SK III IS TRANSFORMED INTO XONOTLITE, ALSO. AT STILL HIGHER TEMPS. SOME X RAY DIFFRACTION PEAKS OF GYROLITE OCCUR, BUT GYROLITE WAS NOT DETECTED BY DTA. IN QUARTZ BEARING SAMPLES THE FORMATION SEQUENCE IS SIMILAR, BUT THE AMT. OF COMPS. FORMED IS LOWER (CONSEQUENTLY THE AMTS. OF UNCOMBINED LIME AND SILICA HIGHER) AND THE TRANSFORMATIONS TAKE PLACE AT HIGHER TEMPS. AT TOP TEMPS. THE FORMATION OF AN UNIDENTIFIED LOW LIME COMPD. WAS OBSD. IN THIS CASE; ITS VERY INTENSIVE X RAY PEAK OCCURS AT 3.01ANGSTROM. THE STRENGTHS OF SAMPLES MADE OF QUARTZ BEARING BATCHES IS ALWAYS HIGHER THAN THOSE MADE WITH AMORPHOUS SILICA.

UNCLASSIFIED

USSR

UDC: 621.373.53(088.8)

BAYCHYUS, R.-Kh. P., KAVALYUNAS, S.-I. Yu.

"A Device for Shaping Sawtooth-Stepped Voltage"

USSR Author's Certificate No 263655, filed 5 Apr 67, published 21 Sep 70
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6A320 P)

Translation: A device is proposed for shaping a sawtooth-stepped voltage. The device contains a flip-flop connected to the base of a transistor in an oscillator with capacitive feedback, and an emitter follower. As a distinguishing feature of the patent, the device is designed for shaping a "step" on any section of the linear part of the sawtooth voltage. For this purpose, a two-stage DC amplifier and discharge capacitor are added, the base of the transistor in one stage of the DC amplifier being connected to the output of the emitter follower, while the collector of the transistor in the other stage is connected through the discharge capacitor to the base of the oscillator transistor.

1/1

USSR

UDC: 621.372

KAVALYUNAS, S. Yu., KAUPELIS, R. R.

"Dynamic Conditions of a Frequency AFC System With Mechanical and Electrical Controlling Elements in Two-Channel Wobblers"

Tr. Nauchn.-tekhn. konferentsii "Radioelektronika". T. 6 (Works of the Scientific and Technical Conference on Radio Electronics. Vol. 6), Kaunas, 1970, pp 179-183 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5A64)

Translation: The authors analyze dynamic errors of the difference frequency in a two-channel wobbulator which utilizes a so-called frequency AFC system with mechanical and electrical controlling elements. It is shown that dynamic errors may be appreciably reduced when two separate frequency AFC systems are used together with an auxiliary wobbulator. Resumé.

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25

USSR

UDC 575.24+576.312.3

KAVATS, G. E., and DISHLER, V. YA., Institute of Biology, Latvian Academy of Sciences

"Effect of Fractional Doses of Fast Neutrons on the Cytogenetic Effect in the Meristem of *Crepis capillaris* Roots"

Riga, *Izvestiya Akademii Nauk Latvyskoy SSR*, No 7, 1973, pp 37-41

Abstract: *Crepis capillaris* seedlings were irradiated at 10+15, 10+35 and 10+55 rad with 1, 2, 3, 4, and 5 hour intervals between the fractions of fast neutrons. The number of chromosome aberrations began to decrease beginning with the 2-hour interval between the fractions. The effect of fractionation varied with the total dose used. It was manifested after total doses of 25 and 45 rad but absent after a total dose of 65 rad. The number of two-hit aberrations was slight (about 10% of the one-hit aberrations and chromatid breaks) and independent of fractionation. The presence of such inhibitors of protein and nucleic acid synthesis as chloramphenicol, 5- fluorouracil, 2,4-dinitrophenol, and aurantin did not block the effect of fractionation, suggesting that the latter was due to neutralization by endogenous protective systems of the mutagenic and toxic substances produced in the seedlings by the fast neutrons.
1/1

- 80 -

USSR

UDC 577.391:58.03

KAVATS, G. E., Institute of Biology, Latvian Academy of Sciences

"Sensitivity of Barley and Oat Varieties to Fast Neutrons"

Riga, Izvestiya Akademii Latvyskoy SSR, No 7, 1973, pp 29-31

Abstract: The dried weeds of 3 barley (Maya, Vayroga, Priyekului-1) and 3 oats (Priyekul'skiy belyy, Stenskiy zhelytyy, strain 325) varieties were irradiated with 500, 1000, 1500, 2000, and 3000 rad at a dose rate of 2000 rad/hour. Distant varietal differences in radiosensitivity were detected from the T index, survival rate, and plant fertility. The extent to which the difference in sensitivity were manifested varied with the severity of the lesions. The greater the lesions, the sharper the differences in varietal and specific sensitivity. The oat seeds proved to be twice as resistant as the barley seeds and the higher the radiation dose, the greater the difference in sensitivity between the two species.

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Acc. Nr: **AP0045005**

Abstracting Service: **5170**
INTERNAT. AEROSPACE ABST.

Ref. Code: **UR0109**

K

A70-22415 # Deceleration of electromagnetic waves in an open waveguide (O zamedlenii elektromagnitnykh voln v otkrytom volnovode). G. Sh. Kevanishvili and V. L. Kekeliia. *Radiotekhnika i Elektronika*, vol. 15, Jan. 1970, p. 173-175. In Russian.

Study of the deceleration of electromagnetic waves in an open cylindrical waveguide formed by two concentric, infinitely thin, ideally conducting circular disks in a free space. Taking into account only symmetrical electromagnetic waves, the expressions for the fields in three different regions of the waveguide are written in the form of a sum of spatial harmonics. It is shown that the investigated waveguide, like other slow-wave systems, is a bandpass filter—i.e., deceleration is achieved in the case of waves with wavelengths lying in a certain band.

A.B.K.

ALS

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REEL / FRAME
19771901

USSR

UDC 621.372.851

KEVANISHVILI, G. Sh., KEKELIYA, V. L.

"Delay of Electromagnetic Waves in an Open Rectangular Wave Guide"

Tr. 15-y Nauchno-tekhn. konferentsii professorsko-prepodavatel'sk. sostava nauchn. rabotnikov, problemn. i otraslev, labor. Gruz. politekhn. in-t Vyp. 7
(Works of the 15th Scientific and Technical Conference of the Professorial and Teaching Staff of Scientific Workers of the Problem and Branch Laboratories of the Georgian Polytechnical Institute. Vyp. 7), Tbilisi, 1970, pp 62-66 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8B135)

Translation: This article contains an investigation of waves propagated along a system of infinitely thin ideally conducting disks with square holes; the disks are arranged periodically and symmetrically with respect to a common axis perpendicular to their planes.

1/1

1/2 011 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--NEW STAR ASSOCIATIONS DISCOVERED BY GEORGIAN ASTROPHYSICIST -U-
AUTHOR--KEVANISHVILI, G. K
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, PRAVDA, 10 APRIL 1970, P 6
DATE PUBLISHED--10APR70
SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS
TOPIC TAGS--ASTRONOMIC PERSONNEL, STELLAR SYSTEM, STAR
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1989/0974 STEP NO--UR/9012/70/000/000/0006/0006
CIRC ACCESSION NO--AN0107495
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AN0107495

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. GEORGIAN ASTROPHYSICIST G. KEVANISHVILI HAS DISCOVERED A NEW GROUP OF STAR ASSOCIATIONS, CLUSTERS OF COMPARATIVELY COOL HEAVELY BODIES WHOSE TEMPERATURE REACHES APPROXIMATELY 10,000 DEGREES. IT WAS FOUND THAT THE STAR ASSOCIATIONS COMPRISE NOT ONLY HOT STARS (WITH TEMPERATURES OF 15,000 DEGREES OR MORE), BUT ALSO RELATIVELY COOLER STARS AS WELL. THE ASTROPHYSICIST MADE A DETAILED STUDY OF CONDENSATIONS LOCATED IN THE CONSTELLATIONS CYGNUS, LACERTA AND PERSEUS. HE DETERMINED THE SIZE OF THESE ASSOCIATIONS AND THEIR DISTANCE FROM THE EARTH AND THE SURFACE AND SPATIAL DISTRIBUTION OF STARS WITHIN THE CLUSTERS. BY INVESTIGATING THE SPEED OF THEIR LIGHT RAYS IN THE CONSTELLATIONS CYGNUS AND LACERTA, THE SCIENTIST ESTABLISHED THAT THESE STAR CLUSTERS ARE EXPANDING AT AN AVERAGE RATE OF 16 KILOMETERS PER SECOND. THIS RATE OF EXPANSION PROVIDES EVIDENCE THAT THESE HEAVENLY BODIES WERE FORMED RATHER RECENTLY.

UNCLASSIFIED

USSR

UDC 537.226.33:534.286

POSTNIKOV, V. S., KAVERIN, L. D., PAVLOV, V. S., and TURKOV, S. K.

"Internal Friction in Single Crystals of Lithium Niobate at Hertz Frequencies"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 9,
Sep 71, pp 1918-1920

Abstract: The authors cite the results of investigating low-frequency internal friction and shift modulus of monocrystalline LiNbO_3 in the temperature range of 4.2-400° K. They found two relaxation peaks at temperatures of 300° K (peak A) and 130° K (peak B) on the temperature curve of the internal friction of polydomain samples. The A peak does not exist in the monodomain samples. The activation energy of peaks A and B is 0.7 and 0.14 eV respectively. The authors conclude that peak B is the result of point defects generated in the annealing process. Peak A is explained by the interaction of point defects with 180°-domain boundaries. The experimental results agree quite well with the theoretical ones. The authors use three graphs to illustrate their findings. The article contains 3 illustrations and 5 bibliographic entries.

1/1

USSR

UDC 576.858.73.093.396

KAVERIN, N. V., Institute of Virology imeni D. I. Ivanovskiy, Academy of
Medical Sciences USSR, Moscow

"The Rate of Protein Incorporation Into Virus Nucleocapsid in Cells Infected
With Newcastle Disease Virus"

Moscow, Voprosy Virusologii, No 5, Sep/Oct 72, pp 537-540

Abstract: Chick embryo cells were inoculated with Newcastle disease virus and, after suitable periods of incubation, C^{14} labeled protein precursors were added, and the samples were again incubated for various periods. Cell extracts treated with cesoxycholate-EDTA yielded a C^{14} -tagged structure which, because of its sedimentation constant of 200S and a buoyant density of 1.31-1.32 g/ml of cesium chloride, was identified as paramyxovirus nucleocapsid. In pulse-chase experiments performed with a 100-fold excess of nontagged leucine, the amount of radioactive leucine- C^{14} in the nucleocapsid increased during the first 40-45 min and remained constant thereafter. It is concluded that every newly synthesized nucleocapsid protein molecule is incorporated into the nucleocapsid in 40-45 min, with the average synthesis-incorporation interval being about 30 min. Since this interval is considerably shorter than that reported by others, it is pointed out that, unlike the previous experiments, these were conducted without synthesis inhibitors being present in the samples.

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USSR

UDC 576.858.73.094.85

KAVERIN, N. V., and ZASLAVSKIY, V. G., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Subcellular Localization of Nucleocapsid Produced by Newcastle Disease Virus"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 72, pp 394-397

Abstract: Extracts of cells infected with the Beadette strain of Newcastle disease virus were analyzed for the presence of nucleocapsid. Virus-specific H^3 -RNA was detected in structures similar to nucleocapsid (sedimentation constant 200S, buoyant density 1.31 gm/ml in CsCl) in the mitochondrial and microsome fractions, but not in the postmitochondrial supernatant. The same distribution pattern was observed for 200S structures produced in infected cells in the presence of *Chlorella* protein C^{14} -hydrolysate. Such distribution of structures containing both virus-specific H^3 -RNA and radioactive protein indicates that newly-synthesized viral nucleocapsid is localized in the mitochondrial-microsome fraction.

1/1

USSR

UDC 576.858.73.098.396.332

KAVERIN, N. V., and VARICH, H. L., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Synthesis of Complementary Virus-Induced RNA in Two Strains of Newcastle Disease Virus"

Moscow, Voprosy Virusologii, No 6, Nov/Dec 71, pp 693-697

Abstract: In chick embryo cell cultures inoculated with the Beaudette strain of Newcastle disease virus, virus-induced RNA accumulates about twice as fast as in cells infected with the Tomilinskiy strain. The distribution of RNA into sedimentation strata and the ratio of "plus" to "minus" chains are similar in both strains. Upon fractionation of the cell extract, the virus-induced RNA is distributed between the polyribosome and the postribosome zones of the sucrose density gradient in an almost identical manner for both strains. After simultaneous inoculation of one culture with both strains, the rate of RNA synthesis is close to that observed in infection with the Tomilinskiy strain. The results indicate that a regulatory mechanism exists at the level of RNA transcription. Possibly, a regulating factor is present in cells infected with the Tomilinskiy strain. In double infection, this factor inhibits RNA synthesis induced by the Beaudette strain.

1/1

USSR

UDC 576.858

ZAYDES, V. M., ZASLAVSKIY, V. G., KAVERIN, N. V., BUKRINSKAYA, A. G., and VOLKOVA, M. Ya. Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Virus-Specific Informosome-Like Component in Cell Extracts Infected With Newcastle Disease Virus"

Moscow, Molekulyarnaya Biologiya, Vol 4, No 4, Jul/Aug 70, pp 607-611

Abstract: Slowly sedimenting structures in cytoplasmatic extracts of a culture of chick embryo cells infected with Newcastle disease virus were detected and characterized. These structures (an informosome-like component) contain a virus-induced RNA with a sedimentation coefficient of 45S; they separate in the density gradient of cesium chloride in the $\rho=1.43\text{g/ml}$ zone. The RNA of the informosome-like component is complementary to the RNA of the mature virus whose sedimentation coefficient is 18S. The data obtained are discussed in relation to the possible role of the informosome-like component in parainfluenza virus reproduction.

1/1

USSR

KAVERIN, N. V., ZAYDES, V. M., et al, Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Sedimentation Analysis of Virus-Specific Informosome-Like Structures in Cell Extracts Infected With Newcastle Disease Virus"

Moscow, Voprosy Virusologii, No 2, Mar/Apr 71, pp 138-143

Abstract: In cell extracts infected with Newcastle disease virus, virus-induced RNA is distributed in the polyribosome zone and the postribosome (-45S) area. Extracts were centrifuged in a sucrose density gradient. Polyribosome material contains RNA of 18A, 35S and 57S classes, whereas the postribosome material, representing the informosome-like 45-S component, yielded only 18S RNA. When nonfractionated extracts were centrifuged in a cesium chloride density gradient, a considerable portion of the radioactivity was detected in the zone corresponding to the buoyant density of the informosome-like component (1.43 g/ml). Analysis of material of this zone in a sucrose density gradient revealed the presence of a 90S-component in addition to the 45-S structures. A hypothesis about the existence of sedimentation classes of informosome-like structures, corresponding to classes of virus-specific RNA, was suggested.

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1/2 014 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--COMPARATIVE STUDY OF THE EFFECTIVENESS OF PURIFICATION OF NEWCASTLE
DISEASE VIRUS BY CHROMATOGRAPHY ON DEAE CELLULOSE AND
AUTHOR--(03)-VARICH, N.L., LIPKIND, M.A., KAVERIN, N.V.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY VIRUSOLOGII, 1970, NR. 1, PP 27-31 *K*

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--NEWCASTLE DISEASE VIRUS, CHROMATOGRAPHY, CELLULOSE,
HEMAGGLUTINATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/0070

STEP NO--UR/0402/70/000/001/0027/0031

CIRC ACCESSION NO--AP0103750

UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0103750

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TWO METHODS OF PURIFICATION OF NEWCASTLE DISEASE VIRUS: CHROMATOGRAPHY ON DEAE CELLULOSE AND ULTRACENTRIFUGATION IN POTASSIUM TARTRATE SOLUTIONS WERE COMPARED. BOTH METHODS PRODUCE A HIGHLY PURIFIED PREPARATION, WHICH IS INDICATED BOTH BY CLOSE CORRELATION OF A NUMBER OF PARAMETERS IN PREPARATIONS PURIFIED BY BOTH METHODS AND BY RESULTS OF CENTRIFUGATION OF CHROMATOGRAPHICALLY PURIFIED VIRUS IN SUCROSE DENSITY GRADIENT. TOTAL LOSSES OF THE VIRUS IN PURIFICATION CONSTITUTE 61-65PERCENT USING POTASSIUM TARTRATE SOLUTIONS AND 80PERCENT IN CHROMATOGRAPHIC PURIFICATION. INACTIVATION OF THE VIRUS DETERMINED BY RATIO OF INFECTIOUS AND HEMAGGLUTINATING PROPERTIES IS INSIGNIFICANT IN BOTH METHODS OF PURIFICATION.

UNCLASSIFIED

USSR

UDC: 534-8

PIROGOV, B. N., SIROTIN, G. F., SMIRNOV, Yu. G., KAVERINA, G. M.

"Excitation, Reception, and Propagation of Ultrasonic Surface Waves in Lithium Niobate Plates"

Leningrad, Tr. Leningr. in-t aviats. priborostr. (Works. Leningrad Institute of Aviation Instrument Building), 1972, vyp. 76, pp 44-49 (from RZh-Fizika, No 5, May 73, abstract No 5Zh612 [résumé]).

Translation: The paper gives the results of experimental studies of excitation and reception of ultrasonic surface waves in Y-cut lithium niobate plates on space harmonics of multielement converters. During propagation of the surface wave, a reflection was observed under the multielement converter due to electrical and mechanical loading of the free surface. An investigation was made of the coefficient of reflection as a function of the number of electrodes and their geometry. The propagation of surface waves over the free and metallized surface of X, Y, Y₄₅, and Z-cut lithium niobate was examined. Experimental velocity diagrams are compared with theoretical diagrams published by Campbell and Jones.

1/1

USSR

UDC: 621.374.55:666.593.5

KAVERINA, G. M., SIROTINA, YE. F., PIROGOV, B. N., and SIROTIN, G. F.

"Using Piezoceramic Materials for Ultrasonic Delay Lines Based on Surface Waves"

Tr. Leningr. in-t aviats. priborostr. (Works of the Leningrad Institute of Aviation Instrument Building), Leningrad, 1972, vyp. 76, pp 66-70 (from RZh-32. Metrologiya i Izmeritel'naya Tekhnika, No 5, 1973, Abstract No 5.32.468)

Translation: The authors study experimentally the excitation, reception, and propagation of ultrasonic surface waves in piezoceramic materials. It is shown that the attenuation of surface waves in the 1-10 Mc frequency range for the studied types of piezoceramics primarily depends on the granularity of the structure. Dispersion and nondispersion type delay line models are made on a piezoceramic soundguide from barium titanate and calcium with an admixture of cobalt. The frequency-amplitude and dispersion characteristics are given. Original article: three illustrations, four bibliographic entries, and one table.

1/1

USSR

UDC: 620.18.539.4.019.3:621.791

MALAN'IN, Yu. M., KAVERINA, S. N., RZHEVSKAYA, I. Ya., SHULEPOV, V. I.,
YUDKOVSKIY, S. I., Moscow

"Study of Various Zones in a Welded Joint in Molybdenum by Methods of Internal Friction and Electron Microscopy"

Moscow, Fizika i Khimiya Obrabotki Materialov [The Physics and Chemistry of Materials Processing], No 6, Nov-Dec 73, pp 123-126.

Abstract: It is demonstrated that the high probability of formation of cracks in the zone around a welded seam in molybdenum results from the disappearance of the cellular structure of the metal during welding, the sharp drop in solubility of interstitial impurities and the separation of carbide particles, around which significant local phase hardening occurs.

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USSR

UDC 669.018.45-122.4

KAVERINA, S. N., LIZUNOV, V. A., MINAKOV, V. N., and TREFILOV, V. I.,
Institute of Metal Physics, Academy of Sciences Ukr SSR

"Structural Changes in the Deformation of Molybdenum Alloys"

Kiev, Metallofizika, No 39, 1972, pp 57-65

Abstract: Molybdenum alloys are examined after different modes of thermo-mechanical treatment: high-temperature rolling plus intermediate heatings, and low-temperature rolling plus intermediate anneals. Data are presented for the change in structure which were obtained by methods of optic and electron microscopy, from lattice parameters and mechanical properties of alloys in the deformed state and after annealing in the 1100-2000°C interval. It was shown that the use of low-temperature rolling significantly lowers the ductile-brittle transition temperature, increases the number of bends, and increases the recrystallization temperature. 7 figures, 1 table, 14 bibliographic references.

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USSR

UDC 669.285'295'296;784.018.44:620.186

GRISHOV, V. L., DRACHINSKIY, A. S., KAVERINA, S. N., PISARENSKO, V. A., and
TREFILOV, V. I., Institute of the Physics of Metals, Academy of Sciences
Ukrainian SSR

"Change in the Structure and Properties of Molybdenum After Heating in the
High-Temperature Range"

Metallofizika. Resp. mezhved. sb. (The Physics of Metals. Republic Inter-
departmental Collection of Works), 1970, vyp. 30, pp 42-49 (from RZh-Metallur-
giya, No 3, Mar 71, Abstract No 3I732 by Authors)

Translation: The following two types of heat treatment were used to obtain
different structural states of Mo alloy with 0.39% Ti, 0.19% Zr, and 0.007% C:
annealing in a TVV-4 furnace in a vacuum of $5 \cdot 10^{-4}$ mm Hg with four-hour
holding and a cooling rate of ~ 1 deg/sec; heating by passing alternating
current through a specimen at a heating rate of ~ 150 deg/sec and a cooling rate
of 200 deg/sec. Specimens annealed at different temperatures under these
conditions underwent mechanical tensile tests and microhardness measurements.
The influence of structure on the strength characteristics of the alloy was
studied. A significant increase was found in the strength and ductility values
of specimens electric-heat-treated to 2000° as compared with annealing heat-
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USSR

GRISHOV, V. L., et al., Metallofizika. Resp. mezhved. sb., 1970, vyp. 30,
pp 42-49

treated specimens. Aging processes were observed in the Mo alloy in some cases after heat treatment. Eleven illustrations. Bibliography with four titles.

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- 14 -

USSR

UDC 669.28'295:620.17

VITORSKIY, Ya. M., GAL'CHINSKIY, F. K., KAVERINA, S. N., KUZNETSOVA, A. S., MAT'YASH, V. A., SOGRISHIN, Yu. P., and TKACHENKO, V. G., Institute of Metal Physics, Academy of Sciences Ukr SSR

"Effects of the Rate and Temperature of Straining on the Structure and Properties of the Alloy Mo-0.5% Ti"

Moscow, Metallovedeniye, No 6, 1971, pp 50-53

Abstract: Effects of the rate and temperature of straining on the structure and properties of the molybdenum alloy Mo-0.5% Ti were investigated on specimens strained at speeds of 0.2, 5.0, and 20 m/sec on the K862S hot stamping press (630 tons), the M211 exhaust stamping hammer, and the IM-39 high-frequency unit, respectively. The investigation results demonstrate a high plasticity of the alloy Mo-0.5% Ti both in the recrystallized and strained conditions. A high-rate straining significantly increases the plasticity in the working process. Macrostructures of specimens upset at 600-1200°C at high and low speeds show deadlocks. Sectional hardness changes of specimens upset with 70% of strain by 900°C were by 0.2 m/sec strain rate HV 195-266 and by 20 m/sec strain rate HV 212-333. For an optimum strength and plasticity correlation, a cellular structure must be produced in the ingot with not less than 70% of strain at a temperature which is lower than the recrystallization temperature under conditions excluding a heat effect. Six figures, one table, six bibliographic references.

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- 65 -

1/2 030 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--CONDUCTING AEROSOL IMMUNIZATION UNDER FIELD CONDITIONS -U-

AUTHOR--(05)-VIKULOV, I.M., VORONTSOV, I.V., KREYNIN, L.S., SEVERTSOVA,
M.K., KAVERINAFIRGANG, K.G.
COUNTRY OF INFO--USSR

SOURCE--VOYENNO-MEDITSINSKIY ZHURNAL, 1970, NR 1, PP 54-56

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--AEROSOL IMMUNIZATION, TYPHOID FEVER, MILITARY MEDICINE,
BIOMEDICAL CHAMBER/(U)UST56 CHAMBER, (U)USB56 CHAMBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1314

STEP NO--UR/0177/70/000/001/0054/0056

CIRC ACCESSION NO--AP0136705

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136705

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION. AEROSOL IMMUNIZATION AGAINST TYPHOID WAS CONDUCTED IN THE UST-56 CHAMBER (VOLUME 48.5 M PRIME3, AREA 22 M PRIME2) AND THE USB-56 CHAMBER (VOLUME 138.3 M PRIME3, AREA 58.5 M PRIME2). PEOPLE WERE EXPOSED TO AEROSOL TYPHOID VACCINES OF SERIES 21-65 AND 1-67 FOR 12-15 MIN. THE TEMPERATURE IN BOTH CHAMBERS BEGAN TO RISE IMMEDIATELY AFTER ENTRANCE OF PEOPLE (SEE TABLE 1), AND REACHED 28-30 C IN SPRING AND SUMMER AND 22-24 C IN FALL AND WINTER. RELATIVE HUMIDITY DID NOT INCREASE, BUT DROPPED SLIGHTLY THREE MINUTES AFTER THE START OF IMMUNIZATION AND REMAINED FAIRLY CONSTANT AT 64-72PERCENT. THE CONCENTRATION OF AEROSOL IN CHAMBERS IS SHOWN IN TABLE 3. THE DISTRIBUTION OF AEROSOL IN CHAMBERS IS SHOWN IN TABLE 4. SINGLE AEROSOL IMMUNIZATION WITH BOTH VACCINES IN THE UST-56 CHAMBER PRODUCED A STATISTICALLY RELIABLE INCREASE IN ANTIBODY TITERS. THE SAME RESULTS WERE OBTAINED AFTER IMMUNIZATION IN AN ORDINARY ROOM. THE FREQUENCY OF FEVER REACTIONS IN IMMUNIZED PEOPLE WAS TWO TO THREEPERCENT IN 12 HRS AND ONE TO TWOPERCENT IN 24 HRS, BOTH IN GROUPS INOCULATED IN CHAMBERS AND IN A ROOM. THERE WERE NO STRONG REACTIONS. A GROUP OF 2166 PEOPLE WAS INOCULATED IN THE UST-56 WITH VACCINES OF SERIES 21-65, AND A GROUP OF 1248 WITH SERIES 1-67. TWO PEOPLE (A PHYSICIAN AND HELPER) WERE ABLE TO INOCULATE 1248 PEOPLE IN A UST-56 CHAMBER IN 2 HRS, 40 MIN, AS COMPARED WITH THE NORM OF 150 STANDARD INOCULATIONS IN THE SAME PERIOD CONDUCTED BY SIX MEN. FACILITY: MEDITSINSKAYA SLUZHBA.

UNCLASSIFIED

Acc. Nr: AP0036822

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Ref. Code: UR 0016

PRIMARY SOURCE: Zhurnal Mikrobiologii, Epidemiologii, i
Immunobiologii, 1970, Nr 1, pp 81-84

CONCERNING THE FORMATION OF HEMAGGLUTININS
IN THE BLOOD OF GUINEA PIGS IMMUNIZED
WITH ANTIGENIC COMPLEXES OF PASTEURILLA PESTIS

K. G. Kaverina-Firgang

It was established that antigenic complexes isolated from the supersonic lyzate of Pasteurella pestis of the EV strain by alum adsorption possessed a marked capacity to provoke formation of antibodies in guinea pigs. The highest hemagglutinin titres were found in immunization with a complex of alum preparation and the live vaccine, as well as after revaccination with the alum preparation alone.

D.n.

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REEL/FRAME

19771739

USSR

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USSR 616.981.452-092.9-085.37-07:616.15-097.94-078

KAVERINA-FIROBANG, K. G., Military-Medical Academy Imeni Kirov

"Formation of Hemagglutinins in the Blood of Guinea Pigs Immunized with Antigenic Complexes of Pasteurella pestis"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 1, 1970, pp 81-84

Abstract: The dynamics of antibody formation in the blood of guinea pigs immunized with a preparation from the ultrasonic lysate of Pasteurella pestis (EV strain) precipitated with alum were studied. Antibody titers were proportional to the size of the immunizing dose. A single injection of 2.3-2.5 mg of antigen resulted in a maximum rise of antibody titer, to 1:355-1:514 on the 15th day. A decrease in the dose to 0.5 mg and especially a decrease to 0.1 mg reduced the hemagglutinin titer sharply. The highest titers were obtained by immunization with live vaccine plus the alum preparation. A dose of 2.5 mg resulted in a sharp rise in the hemagglutinin titer in 15-25 days (1:1280-1:1790). Revaccination of guinea pigs 3 months after the initial inoculation also caused a sharp rise in the antibody titer. It was found that 2.5 mg of either the live vaccine, the alum preparation, or both produced the same increase (1:1330-1:2194).

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Immunology

K

USSR

UDC 615.47:615.835.5

BIKULOV, I. M., Maj Med Serv, VORONTSOV, I. V., Lt-Col Med Serv, KREYNIN, M. K., Lt-Col Med Serv, SEVERTSOVA, M. K., and KAVERINA-FIRGANG, K. G.

"Conducting Aerosol Immunization Under Field Conditions"

Moscow, Voenno-Meditsinskiy zhurnal, No 1, 1970, pp 54-56

Abstract: Experiments were conducted to determine the possibility and advantages of conducting aerosol immunization against typhoid fever under field conditions in a tent. Dry aerosol typhoid-fever vaccines of series 21-65 and 1-67 were used. The preparations were atomized and dispersed with the help of a special device placed in the center of the tent. For comparative purposes, parallel dispersion of the dry vaccines was conducted under normal conditions in a room. Immunological shifts in people immunized were determined by titration of O-agglutinins and Vi-hemagglutinins before to and a month after immunization. Data obtained by both methods of immunization indicated that a considerable increase in the titer of protective antibodies was produced, and that there was practically no difference in the results obtained after immunization under normal

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USSR

BIKULOV, I. M., et al., Moscow, Voenno-Meditsinskiy Zhurnal, No 1, 1970, pp 54-56

conditions in a room and under field conditions in a tent. The number of average temperature reactions was about the same, and no strong reactions were observed. Further investigations established that a brigade consisting of only two people -- a physician and registrar -- working in a tent and using the aerosol method, immunized an average of 1,248 people in a period of two hours and 40 minutes. A brigade of six people -- a physician, registrar, and four sanitary instructors, working continuously with a hypodermic could vaccinate only 150 people in the same period.

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USSR

UDC 678.029+661.66

ANDRIANOV, K. A., SCSEDOV, V. P., FATALAKH, I. I., KROTOV, A. I., RAZUMOV,
L. L., and KAVEEVOV, A. T.

"Some Features of the Formation of Novel Thermally Stable Reinforced Plastics"

Moscow, Doklady Akademii Nauk SSSR, Vol200, No 6, Oct 71, pp 1343-1344

Abstract: One of the most important problems in the area of chemistry and physics of solid bodies concerns development of mechanically strong thermally stable materials. The reinforced materials currently available are either not sufficiently strong or thermally instable. With this in mind, experiments were carried out in which glass fiber KV-11 and a hydrocarbon fiber were treated with siliconorganic polymer (polymethyloxydiphenylpropanesiloxane) followed by thermal activation in a reducing medium and in hydrocarbon medium. In this fashion materials with high specific strength at elevated temperatures were obtained, exceeding considerably the properties of known construction materials.

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USSR

UDC 577.3

KAVERZNEVA, Ye. D., MAKSIMOV, V. I., and OSIPOV, V. I., Institute of Organic Chemistry imeni N. D. Zelinskiy, Academy of Sciences USSR, Moscow

"Structural Disturbances in Lysozyme and Ribonuclease A After Gamma Irradiation in a Dry State"

Moscow, Biofizika, Vol 16, Vyp 4, Jul/Aug 71, pp 581-588

Abstract: Dry lysozyme and ribonuclease A were irradiated with 30 Mrad. Subsequent analyses of the structure and chemical properties of these substances revealed that while dry ribonuclease exhibited signs of an overall disturbance of its conformation, the tertiary structure of dry lysozyme was disturbed to a much smaller degree: its tryptophan content was reduced, but the changes were local. The severity of the deviations from the initial state was increased after dissolution and fractionation. It is concluded that ionizing irradiation of proteins in the dry state always induces certain small, primary, localized changes in the molecules, even though these changes may be difficult to detect. When the irradiated proteins are subsequently dissolved, a chain of secondary structural rearrangements takes place in the protein molecules.

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1/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ISOLATION OF ENZYMES SPLITTING A CARBOHYDRATE PEPTIDE BOND OF THE
AMIDE TYPE FROM AN EXTRACT OF LYMNAEA STAGNALIS -U-
AUTHOR-(03)-CHUKHROVA, A.I., KAVERZNEVA, YE.D., TYUTRINA, G.V.

COUNTRY OF INFO--USSR

SOURCE--BIOKHEMIYA 1970, 35(1), 95-101

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PROCESSED PLANT PRODUCT, ENZYME ACTIVITY, CHEMICAL SEPARATION,
CARBOHYDRATE, PEPTIDE, AMIDE, ELECTROPHORESIS, ULTRACENTRIFUGE,
PROTEOLYTIC ENZYME, SNAIL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0636

STEP NO--UR/0218/70/035/001/0095/0101

CIRC ACCESSION NO--AP0117862

UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0117862

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A THERMOSTABLE ENZYME PREPN. SPLITTING THE GLUCOSE DIAMINE LINKAGE IN GLYCOPEPTIDES WAS ISOLATED FROM THE OVO-MUCOID OF POND SNAIL (L. STAGNALIS) AFTER FRACTIONAL SALTING OUT, HEAT INACTIVATION OF PART OF THE ACCOMPANYING ENZYMES, AND PURIFICATION ON SEPHADEX. FURTHER SEPN. ON SEPHADEX YIELDED A PREPN. HOMOGENEOUS ON ELECTROPHORESIS AND ULTRACENTRIFUGATION, AND WHICH DID NOT ACT ON BETA-O-GLUCOSIDES AND PEPTIDES. COMPARISON OF THE GLUCOSIDE AMIDASE ACTIVITY AT VARIOUS STAGES OF PURIFICATION INDICATED THAT THE ISOLATED ENZYME SPLITS THE POLYSACCHARIDE ASPARAGINE LINKAGE IN GLYCOPEPTIDES ONLY WHEN THE AMINO AND CARBOXYL GROUPS OF THE AMINO ACID ARE FREE. IN COMPS. WITH LONGER PEPTIDE CHAINS THIS SPLITTING OCCURRED ONLY AFTER PRELIMINARY ACTION OF PEPTIDASES PRESENT IN THE SNAIL EXT. THESE ENZYMES PROBABLY FORM A COORDINATED ENZYME SYSTEM. FACILITY: INST. ORG. CHEM., MOSCOW, USSR.

UNCLASSIFIED

Hematology

USSR

UDC 615.381.011.3:532.13

~~KAVESHNIKOV~~, A. I., SETT, A. V., URATKOV, Ye. F., ORLOV, Ye. S.,
STRUCHKOVA, K. I., POLUSHINA, T. V., and SUSOVA, G. M.,
Department of Experimental Traumatology and Orthopedics, Central
Institute of Traumatology and Orthopedics, Ministry of Health
USSR, and Laboratory of Blood Substitutes and Fractionation of
Blood Proteins, Central Institute of Hematology and Blood
Transfusion, Moscow

"Changes in the Viscosity of Blood After Dilution with Different
Blood Substitutes Under Hypothermia Conditions"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya
Terapiya, No 1, 1971, pp 70-75

Abstract: Changes in the viscosity of blood were studied after
dilution at different temperatures with the following solutions:
Ringer Locke, glucose, polyglucine [form of dextran],
rheopolyglucine, low-molecular weight dextran, and polyvinyl-
pyrrolidone. The tabulated results can be used as a basis for
selecting a blood substitute and degree of blood dilution in
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USSR

KAVESHNIKOV, A. I., et al., Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 1, 1971, pp 70-75

relation to perfusion temperature. A mathematical formula is proposed for calculating the viscosity of the solution in blood dilution in relation to the hematocrit index, temperature and viscosity of the blood substitute. It is concluded that in case of normothermal perfusion or slight chilling, any of the solutions studied can be used. But under low-temperature conditions, when water moves from the interstitial and intracellular spaces, it is preferable to use rheopolyglucine, low-molecular-weight dextran, or low-molecular-weight polyvinylpyrrolidone because they decrease the viscosity of the perfusate more than the others.

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1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--DOSE DISTRIBUTIONS IN ECCENTRIC ROTATION GAMMA IRRADIATION -U-

AUTHOR--(04)-BELOV, S.A., ~~KAVESHNIKOVA, S.V.~~, SIZOV, P.P., RATNER, T.G.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 5, PP 86-93

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--GAMMA IRRADIATION, RADIOTHERAPY, RADIATION DOSAGE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0370

STEP NO--UR/0241/70/015/005/0086/0093

CIRC ACCESSION NO--AP0121058

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121058

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

ABSTRACT. THE ARTICLE CONTAINS A METHOD OF CALCULATION OF DOSE FIELDS IN ECCENTRIC ROTATION GAMMA IRRADIATION ON ROTATION GAMMA APPARATUS WITH A 75 CM RADIUS OF ROTATION IN A HOMOGENOUS CYLINDRICAL PHANTOM 30 CM IN DIAMETER. THE REGULARITIES OF ALTERATION OF THE POSITION OF THE MAXIMAL DOSE REGION DEPENDING UPON THE ANGLE OF ROTATION, WIDTH OF STATIC FIELD AND ECCENTRICITY. FACILITY: DOZIMETRICHESKAYA LABORATORIYA MOSKOVSKOY GORODSKOY BOL'NITSY NO2 AND SEKTOR ISTOCHNIKOV IZLUCHENIYA I DOZIMETRII INSTITUTA OBSHCHEY GENETIKI AN SSSR.

UNCLASSIFIED

Therapy

USSR

KAVETSKY, R., Academician, Academy of Sciences Ukrainian SSR and GAMALEYA, N., Chief, Division of the Biological Action of Lasers, Institute of Problems of Oncology, Academy of Sciences Ukrainian SSR

"A Beam Instead of a Scalpel"

Moscow, Pravda, 19 Mar 72, p 3

Abstract: Soviet medical scientists are just beginning to exploit the possibilities of using lasers in medical treatment. The Odessa Institute of Eye Disease and Tissue Therapy imeni V. P. Filatov and certain others have employed lasers in treating an exfoliated retina and destroying tumors inside the eye, while the Institute of Surgery imeni Academician A. V. Vishnevskiy uses lasers to remove spots and tatoos from the skin. One of the most interesting and significant developments in the medical use of lasers has taken place at the Ukrainian Institute of Problems of Oncology. Research work was begun in 1965 on removing surface tumors by destroying the contaminated tissue with laser light. Research was favorable, so in 1969 the country's first clinical division for laser treatment of surface benign and malignant tumors was opened at the Institute. The laser operating room is striking in its simplicity -- just the table and a metal mechanism with a tubular projection hanging over it; no scalpel, no anesthetics, no racks of surgical tools, and even no surgeon. By now 250 operations have been performed here and,
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USSR

KAVETSKIY, R., and GAMALEYA, N., Pravda, 19 Mar 72, p 3

although it is early to draw conclusions (especially for malignant tumors), the general outlook is good and laser treatment appears to be better for certain surface tumors. It might be noted in conclusion that numerous other promising applications of the laser beam, for example affecting individual parts of a cell through the subcellular action of the microray device designed by N. D. Devyatkov or using a continuous-beam laser to cut tissue (which has already been tested experimentally in Moscow, Leningrad, and Kiev), are now being developed and there is every reason to suppose that lasers will have an important place in the medicine and biomedical science of the future.

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Oncology

USSR

UDC 615.849.19.03:616-006-092.9

KAVETSKIY, R. Ye., SIDORIK, Ye. P., LIKHTENSHTEYN, V. Ye., and BYALIK, V. V.
Kiev Institute of Experimental and Clinical Oncology

"Intensification of the Antitumor Effect of Laser Radiation"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 3, May/Jun
70, pp 12-17

Abstract: Laser radiation has a necrotizing effect on tumor tissue. In order to study the possible intensification of the antitumor effect of lasers by simultaneous administration of dyes or chemicals, tests were run on Guerin rat carcinoma. The research showed that the greatest retardation in tumor growth could be achieved by combined action of a neodymium laser and intraperitoneal or intravenous administration of Trypan blue. For instance, tumor growth was depressed 91%, instead of 65% when the two agents were used separately. The most active combination for injection into tumors was laser radiation and Janus green. Histological study of tumors after introduction of various dyes showed that changes were similar, and differed from those observed in controls only by a more pronounced tissue edema. Combined application of laser radiation and TIOTEF or fluorouracil was effective in a case of Harding-Passy melanoma. The data obtained confirmed that with either combined application or only the laser the focus of necrosis in the ganglia of the erythromyelosis is comparatively slight, whereas along the

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USSR

KAVETSKIY, R. Ye., et al., Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 3, May/June 70, pp 12-17

periphery the tumor tissue retained its usual structure. After combined application, only an insignificant proliferation of connective tissue was noticed. The character of the changes due to combined application of laser radiation with dyes or chemicals was the same as if only the laser had been used; however, the spatial restriction of the disease was greater when the laser was combined with either dyes or chemicals. The specific advantages of using a laser in the impulse mode are shortness of the irradiation period, and the monochromatic character and coherence of the radiation itself.

1/2 032 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--INTENSIFICATION OF ANTIBLASTIC ACTION OF EMISSIONS OF THE OPTIC
QUANTUM GENERATORS LASERS -U-
AUTHOR--(04)--KAVETSKY, R.YE., SIDORIK, YE.P., LIKHTENSHTEYN, V.YE., BYALIK,
V.V.
COUNTRY OF INFO--USSR
SOURCE--PATOLOGICHESKAYA FIZIOLOGIYA I EKSPERIMENTAL'NAYA TERAPIYA, 1970,
VOL 14, NR 3, PP 12-17
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--TUMOR, CHEMOTHERAPY, BIOLOGIC STAIN, IRON COMPOUND, LASER
RADIATION BIOLOGIC EFFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/1922 STEP NO--UR/0396/70/014/003/0012/0017
CIRC ACCESSION NO--AP0127323
UNCLASSIFIED

2/2 032

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127323

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS STUDIED THE POSSIBILITIES OF ENHANCEMENT OF THE ANTIBLASTIC EFFECT OF LASER RADIATION BY COMBINING THE ACTION OF THE LATTER WITH ADMINISTRATION OF DYES, CHEMOPREPARATIONS AND IRON IDNOPHORESIS UPON THE TUMOUR. INHIBITION OF THE GROWTH OF GUERREN TUMOUR OF RATS WAS THE GREATEST WHEN THE ACTION OF NEODYMIUM LASER AND ADMINISTRATION OF TRYPANE BLUE AND JANUS GREEN WAS COMBINED. A COMBINATION OF LASER RADIATION WITH THIOTEPA OF FLUOROURACIL PROVED TO BE EFFECTIVE IN CASE OF GARDING PASSI MELANOMA. THE RESULTS OBTAINED POINTED TO A DEFINITELY SPECIFIC ACTION OF OPTIC QUANTUM GENERATORS WORKING IN PULSE REGIMEN, THIS BEING CONDITIONED BY THE BRIEFNESS OF RADIATION, IT MONOCHROMATIC CHARACTER AND COHERENCE. FACILITY: KIYEVSKIY INSTITUT EKSPERIMENTAL'NOY I KLINICHESKOY ONKOLOGII.

UNCLASSIFIED

USSR

UDC 632.95.012

KOSMATYY, YE. S., KAVETENKIY, V. N.

"Half-Life of Chlorophos in Plants"

Moscow, Khimiya v Sel'skoi Khozyaystve, No 1, 1972, pp.27-31

Abstract: A study of the reaction kinetics of chlorophos showed that the decay of chlorophos in plants follows first order kinetics. Data are tabulated on the decay of chlorophos in winter wheat plants and the duration of chlorophos residue in the harvest products. The half-life of chlorophos in plants is 23.1 hours. A procedure is presented for using the half-life figure to calculate the "waiting time" for the harvest products.

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SPAS 57208
6-73

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

[Article by YA.A. UREY, V. S. KAVETSKIY, Kh. S. DZAMPAYEV, R. G. YATSENO, Voronezh; Novomikhailov, III Simeonov to Professor N. G. Nikolaev, Uchenye Zapiski Kazanskogo Universiteta, 1972, p. 90]

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 Ga 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 microscopy.

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, monocrystalline films.

KAVETSKIY, V.S.

USSR

UDC 669.712.1.05

AGRANOVSKIY, A. A., BERKH, V. I., ~~KAVINA, V. A.~~ LEVIN, M. V., LYAPUNOV, A. N.,
MONTVID, A. E., MUNITS, I. N., and CHERNIN, V. N.

"Spravochnik metallurga po tsvetnym metallam" (Metallurgist's Handbook of
Non-Ferrous Metals), Moscow, Izd-vo "Metallurgiya," 1970, 320 pp

Translation of Annotation: Data on the physico-chemical properties of the
most important aluminum compounds and aluminum solutions are presented,
phase diagrams of chemical systems determining the processes of alumina
production by alkali methods are given, and standards and technical con-
ditions are reviewed.

Various alumina production methods and reference data on the technology and
equipment of alumina production are described.

The handbook is intended for engineers and technicians engaged in the alum-
inum industry. Ninety-one figures, 116 tables, 176 references.

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AGRANOVSKIY, A. A., et al., "Spravochnik metallurga po tsvetnym metallam" (Metallurgist's Handbook of Non-Ferrous Metals), Moscow, Izd-vo "Metallurgiya," 1970, 320 pp

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USSR

AGRANOVSKIY, A. A., et al., "Spravochnik metallurga po tsvetnym metallam" (Metallurgist's Handbook of Non-Ferrous Metals), Moscow, Izd-vo "Metallurgiya," 1970, 320 pp

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Hydraulic & Pneumatic

USSR

UDC 533.6.013.42

KAMINER, A. A., KAVITSKIY, B. M., CHEMERIS, A. N.

"Experimental Study of Vibrations of Rod Systems in a Water Flow"

V sb. Rasseyaniye energii pri kolebaniyakh mekh. sistem (Energy Scattering in the Oscillations of Mechanical Systems -- Collection of Works), Kiev, "Nauk. dumka", 1972, pp 310-316 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V405)

Translation: A device is described for studying the hydrodynamic damping and excitation of rod systems (blades, supports) in a water flow that was developed at the Institute of Strength Problems of the Academy of Sciences UkrSSR. A closed wind tunnel with a closed working chamber of cross section 300 x 155 mm and a transparent wall for observing the model was used in producing the flow. The flow rate is regulated within limits up to 20 m/sec by a smooth change in the number of revolutions of the drive. Systems for the excitation and recording of plane-parallel oscillations of the model in the flow are described. The model is put into motion with a given frequency with the aid of electromagnets placed under the working area of the tunnel.

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USSR

KAMINER, A. A., et al, Rasseyaniye energii pri kolebaniyakh mekh. sistem, Kiev, "Nauk. dumka", 1972, pp 310-316

The design of the fastening elements of the model makes it possible to obtain the desired angles of attack. The change in natural frequencies and decrements with a change in the flow velocity is investigated in modes of resonance and damping of the oscillations. The results of the study are not given in the paper. K. G. Kravtsov.

2/2

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USSR

UDC 541.127+547.242+547.224

CHERNOKAL'SKIY, B. D., YENIKEYEV, Sh. G., BAYRAMOV, R. B., KAVIYEV, A. K.,
and KAMAY, GIL'M, Kazan' Chemical-Technological Institute imeni S. M. Kirov

"Electrical Conductivity of the Reaction Mixture and Rates of the Elementary Stages of the Reaction of Triphenylarsine Oxide with Butyl Iodide"

Leningrad, Zhurnal Obshchey Khimii, Vol XL, No 12, Dec 70, pp 2648-2653

Abstract: It was demonstrated that in the reaction between triphenylarsine oxide and butyl iodide, there is an intermediate stage in which triphenylbutoxyarsonium iodide is formed; the variation in the concentration of this intermediate product during the course of the reaction was approximately determined.

The reaction constants were then determined by solution of the variation problem with use of electronic computers, for the elementary stages of the reaction.

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USSR

UDC 612.821.7+612.822.3

ONIANI, T. N., KORIDZE, M. G., and KAVKASIDZE, M. G., Laboratory of Comparative Neurophysiology, Institute of Physiology, Academy of Sciences Georgian SSR, Tbilisi

"On the Character and Significance of the Dynamics of the Electrical Activity of the Neocortex and the Hippocampus During the Paradoxical Phase of Sleep"

Leningrad, Fiziologicheskij Zhurnal SSSR imeni I. M. Sechenov, Vol 59, No 8, Aug 73, pp 1168-1175

Abstract: The dynamics of the electrical activity of various regions of the neocortex and hippocampus were studied in cats during the paradoxical phase of sleep, using spectral analysis and integration of the EEG, EKG and electrical activity of optical and jugular muscles. Changes in the electroneocorticogram, electrohippogram, and somatic and vegetative patterns are said to imply a division of paradoxical sleep into two stages. The first stage is characterized by desynchronization of neocortical activity, occurrence of pontogenicule-occipital spikes in the visual cortex and some association and projection areas, abrupt augmentation of hippocampal theta activity with depression of other slow waves, and somatic and vegetative signs of emotional stress.

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USSR

ONIANI, T. N., et al., Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenov, Vol 59, No 8, Aug 73, pp 1168-1175

In the second stage the hippocampal theta rhythm is depressed simultaneously with either a suppression of slow waves or an increase in the delta rhythm. Neocortical synchronization of slow waves develops, as shown by the predominance of alpha activity and concomitant reduction of stress signs. These findings are said to suggest that the reciprocally interrelated midbrain and mesencephalic structures must be responsible for the regulation of the two stages of paradoxical sleep. In addition the first stage is considered to correlate with emotional tension, and the second stage with its relief.

2/2

USSR

UDC 612.821.7

KAVKASIDZE, M. G., Institute of Physiology, Georgian Academy of Sciences

"Effect of Emotional Stress on the Correlation of Phases of Sleep"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSSR, No 1, 1973, pp 193-195

Abstract: Electrical stimulation of the posterior hypothalamus in alert cats with implanted electrodes produced a fear reaction accompanied by intensification of the hippocampal theta rhythm. Similar stimulation of sleeping cats decreased the duration of the paradoxical phase of sleep and lengthened slow sleep. The shortening of the paradoxical phase of sleep also resulted in derangement of its structure. Prevalence of the hippocampal theta rhythm was followed by its suppression.

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- 48 -

1/2 010 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--PREPARATION OF SODIUM FLUORIDE SOLUTIONS FROM FLUOROSILICIC ACID
AND A SODA SOLUTION -U-
AUTHOR--KAVNATSKAYA, B.S., PRIVEN, E.M., GNEZOILOVA, L.M., SHKOLNIK, N.M.
COUNTRY OF INFO--USSR
SOURCE--KHIM. PROM. UKR. 1970, (1) 59-60 K
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, CHEMISTRY
TOPIC TAGS--SODIUM FLUORIDE, INORGANIC ACID, SILICON COMPOUND, CRYOLITE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1335 STEP NO--UR/0436/70/000/001/0052/0050
CIRC ACCESSION NO--AP0106112
UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0105112

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE OPTIMAL CONDITIONS FOR THE CONVERSION OF H SUB2 SIF SUB6 BY PRODUCT IN SUPERPHOSPHATE PLANTS INTO NAF SOLNS. BY REACTION WITH NA SUB2 CO SUB3 WERE OBTAINED EXPTL. THE NAF SOLN. IS USED FOR THE PRODUCTION OF NA SUB3 ALF SUB6. IT IS RECOMMENDED THAT A 10-12PERCENT ACID SOLN. AND A 5.5-6.5PERCENT NA SUB2 CO SUB3 SOLN. BE USED AT 85-90DEGREES. THE REACTION IS COMPLETED IN 45 MIN AND THE FILTRATE CONTAINS 3.5-3.8PERCENT NAF. PH HAS TO BE KEPT BETWEEN 6.8 AND 8. THE FILTER RESIDUE IS USED FOR PRODUCTION OF NA SILICATE. FOR THE PREPN. OF NA SUB2 CO SUB3 SOLNS.. THE MOTHER LIQUORS OF THE CRYOLITE PRODUCTION ARE USED.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--CATALYTIC ACTIVITY OF PLATINUM METALS AND REACTIVITY OF SURFACE
CARBONYLS -U-
AUTHOR--(02)-KAVTARADZE, N.N., SKOLOVA, N.P.
COUNTRY OF INFO--USSR
SOURCE--ZHUR. FIZ. KHIM. JA. 1970, 44, (1), 171-176
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--METAL CATALYST, CATALYST ACTIVITY, PLATINUM, HYDROGEN, CARBON
MONOXIDE, ETHYLENE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0246 STEP NO--UR/0076/70/044/001/0171/0176
CIRC ACCESSION NO--AP0124008

UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0124008

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RELATION BETWEEN THE ADSORPTION CHARACTERISTICS OF PT GROUP METALS WITH RESPECT TO H₂, CO, C₂H₄, AND SIMILAR GASES, AND THE CATALYTIC ACTIVITY IN RELATION TO PROCESSES OF ISOMERIZATION, HYDROGENATION, AND DEHYDROGENATION WERE STUDIED. CATALYTIC ACTIVITY WAS ONLY EVIDENT WHEN CHEMISORPTION OF THE GASES TOOK PLACE ON THE SURFACE OF THE METAL. THE CATALYTIC ACTIVITY AND CHEMISORPTION CAPACITY OF THE METALS WERE DIRECTLY RELATED TO THEIR POSITIONS IN THE PERIODIC TABLE.

UNCLASSIFIED

Acc. Nr: **AP0043934**

Ref. Code: UR 0016

PRIMARY SOURCE: Zhurnal Mikrobiologii, Epidemiologii, i
Immunobiologii, 1970, Nr 2, pp 22-27

CONCERNING THE SPECIFIC PROPHYLAXIS OF DYSENTERY.
REPORT VI. THE EFFICACY OF ENTERAL IMMUNIZATION
WITH LIVE DYSENTERY VACCINE IN EXPERIMENTS
ON MONKEYS

Yk. A. Belaya, K. M. Kavitratze, V. D. Gekker, E. K. Dzhikidze

Immunogenic properties of live lyophilized dysentery vaccine prepared of attenuated strain Flexner 2a were studied on 45 monkeys, macaca rhesus. Of this number 25 monkeys were immunized enterally, 5 times, at intervals of 3 to 4 days with live vaccine in doses of 15-50 milliard live microbial cells. Two weeks after the immunization they were infected with 75 milliard live microbial cells of a virulent strain Flexner 2a. The incidence of the disease in the experimental group was 7.6 less than among the nonimmunized 18 monkeys. A rise of agglutinins (3-11-fold) was noted in the process of immunization; preventive properties of the sera in testing on chick embryos showed no significant changes. Bacteria of vaccine strain were isolated for 1 to 4 days from the monkeys after immunization. There occurred no restoration of the virulence.

Thus, live Flexner dysentery vaccine was shown to be areactogenic, harmless and to possess immunological efficacy in experiments on monkeys.

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19770360

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