

REEL # 5
BRINBERG, S.L.

BRINBERG, S.L.

medicine

A STUDY OF THE RESPIRATION OF THE PRODUCER OF ERYTHROMYCIN

Article by V. Y. Lopanova and S. L. Brinberg, Sverdlovsk Institute of Medical Preparations and All Union Scientific Research Institute of Antibiotics, Moscow, Antibiotiki, Russian, No 8, August 1971, pp 697-701

JPRS-54675

10 DECEMBER 1971
DWC 576, 852, 18, 085, 2

JPRS 54675
10 December 1971

Respiration of the Actin. erythromycin IAK-1 of the strain was studied in flask and in 45 and 100 ml of fermenters. It was established that the respiration intensity of the culture depends on the age, aeration, stirring, and composition of the medium. Six tables, two figures, and eight references.

Information on the respiration of a culture during its growth and development may be useful for establishing the rate of aeration and stirring which is of basic importance in the biosynthesis of antibiotics.

The effects of aeration and stirring on the biosynthesis of erythromycin and on the respiration intensity of the producer, Actinomyces erythromycin, were studied by several investigators [1,2].

The objective of this investigation was to study the respiration of the producer of erythromycin and the biosynthesis of the antibiotic, depending on aeration and stirring under various conditions of culturing.

Materials and Methods

The Act. erythromycin IAK-1 strain was used in this investigation. The mycelium for the flask tests was grown in

The study was conducted with the participation of L. A. Malysheva, N. P. Zhukova, and N. P. Teranova.

1/2 018 UNCLASSIFIED PROCESSING DATE--30JCT70
TITLE--STUDIES ON RESPIRATION OF KANAMYCIN PRODUCING ORGANISM DURING
BIOSYNTHESIS -U-
AUTHOR-(05)-BRINBERG, S.L., GRABOVSKAYA, O.Z., SMIRNOVA, L.V., PAPATSENKO,
V.P., KALMYKOVA, G.V.
COUNTRY OF INFO--USSR
SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 6, PP 500-505
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BIOSYNTHESIS, KANAMYCIN, MICROORGANISM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/1832 STEP NO--UR/02977/70/J15/006/0500/0505
CIRC ACCESSION NO--AP0125443
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125443

ABSTRACT/EXTRACT--(U) OP-0- ABSTRACT. THE EFFECT OF CHANGES IN AERATION AND MIXING CONDITIONS ON RESPIRATION OF THE KANAMYCIN PRODUCING ORGANISM AND BIOSYNTHESIS OF THE ANTIBIOTIC WAS STUDIED. DURING INTENSIVE MIXING AN INCREASE IN THE AMOUNT OF AIR SUPPLIED WITHIN 1 TO 3 VOL-VOL DID NOT AFFECT THE ANTIBIOTIC BIOSYNTHESIS. AT LOW LEVELS OF MIXING IT SLIGHTLY INCREASED. A DECREASE IN THE INTENSITY OF MIXING MARKEDLY SUPPRESSED THE ANTIBIOTIC BIOSYNTHESIS. NATURAL CHANGES IN THE RESPIRATION LEVELS DEPENDANT ON THE MIXING CONDITIONS WERE PROBABLY ABSENT. THE MODE OF ACTION OF THE MIXING INTENSITY ON THE ANTIBIOTIC BIOSYNTHESIS MUST BE ATTACHED TO THE LEVELS OF THE CONCENTRATIONS OF THE NUTRIENTS AND METABOLITES AND THE CELL RATES, AND NOT TO IMPROVEMENT OF THE AERATION CONDITIONS. FACILITY: ALL UNION INSTITUTE FOR ANTIBIOTICS, MOSCOW,

UNCLASSIFIED

373 011 UNCLASSIFIED PROCESSING AND...
 CIRC ADDRESS...
 ABSTRACT/EXTRACT--THE PRIMARY WINDING OF A TRANSFORMER IS CONNECTED THROUGH A HIGH PASS FILTER AND A RESISTOR TO THE SECONDARY WINDING OF THE TRANSFORMER. THE SECONDARY WINDING IS CONNECTED TO THE PRIMARY WINDING OF A TRANSISTOR WHICH HAS ITS EMITTER JUNCTION CONNECTED TO THE COMMON WINDING OF A TRANSISTOR. THE END OF THE WINDING IS ALSO CONNECTED TO THE BASE OF THE TRANSISTOR. THE SECONDARY WINDING IS A SOURCE OF THE SIGNAL.

373 011 UNCLASSIFIED PROCESSING AND...
 CIRC ADDRESS...
 ABSTRACT/EXTRACT--THE PRIMARY WINDING OF A TRANSFORMER IS CONNECTED THROUGH A HIGH PASS FILTER AND A RESISTOR TO THE SECONDARY WINDING OF THE TRANSFORMER. THE SECONDARY WINDING IS CONNECTED TO THE PRIMARY WINDING OF A TRANSISTOR WHICH HAS ITS EMITTER JUNCTION CONNECTED TO THE COMMON WINDING OF A TRANSISTOR. THE END OF THE WINDING IS ALSO CONNECTED TO THE BASE OF THE TRANSISTOR. THE SECONDARY WINDING IS A SOURCE OF THE SIGNAL.

USSR

BRINKIS, K. A., et al., Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki, No 8, 10 Feb 70, pp 49-50, Patent No 263721, Filed 23 Aug 68

the collector circuit of a blocking triode controlled from the current modules and from the ultrashort-wave receiver. The comparator is connected in turn to the output unit which takes the form of a kipp oscillator with positive feedback. 2. A modification of this device which differs because the effect of transient processes in the primary circuit and in the secondary circuits of the current transformers is reduced by incorporating a saturable transformer in the current modules of the measurement unit. The primary winding of a transreactor is connected through a high-harmonic filter and a resistor to the secondary winding of the saturable transformer, while the secondary winding of the transreactor is connected at one end through a diode to the primary winding of the shaper transformer, and at the other end to the collector of a transistor which has its emitter junction connected to the above-mentioned resistor. This end of the winding is also connected to the base of the resolving transistor whose collector is connected through a follower.

2/2

USSR

UDC 621.316.925

BRINKIS, K. A., EYGUS, L. Ye., PAPERNO, L. B., Riga Polytechnical Institute

"A Device for Differential Directional Protection with an Ultrashort-Wave Communications Channel"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki, No 8, 10 Feb 70, pp 49-50, Patent No 263721, Filed 23 Aug 68

Translation: This Author's Certificate introduces: 1. A device for differential directional protection with an ultrashort-wave communications channel for electrical transmission lines including those with branches. The unit contains a combination trigger which distinguishes symmetric and asymmetric short circuits, a measurement unit with keying module, and a comparator with output unit. The unit differs because to increase speed and reliability as well as selectivity in incomplete phase conditions, the measurement unit consists of current modules of forward and reverse sequence, and a common pulse shaper transformer whose primary winding is connected through the trigger outputs to the current modules, while the secondaries are connected to the ultrashort-wave transmitter and the comparator. The comparator takes the form of an AND gate based on dynistors connected in

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2/2 025

UNCLASSIFIED

PROCESSING DATE--0900170

CIRC ACCESSION NO--AP0115744

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF THE THICKNESS OF HOT ROLLED SHEET AND THE DEFORMATION RATIOS APPLIED IN SUBSEQUENT COLD ROLLING OPERATIONS ON THE DEGREE OF PERFECTION OF THE SECONDARY RECRYSTN. TEXTURE AND THE MAGNETIC PROPERTIES OF FINISHED TRANSFORMER STEEL SHEET (CONTG. 3.18PERCENT SI) WERE STUDIED ON SPECIMENS 50 TIMES 500 MM, COLD ROLLED IN SEQUENTIAL OPERATIONS ON A LAB. ROLLING STAND (ROLLING SPEED 0.1M-SEC) FROM INITIAL THICKNESSES OF 2.2, 2.5, AND 3.0 MM TO A FINAL THICKNESS OF 0.33 MM. STD. ANNEALING PROCEDURES WERE USED. THE DISTRIBUTION OF TEXTURE DEVIATIONS, THE SP. CORE LOSSES, AND THE MAGNETIC INDUCTION WERE DETD. AND RELATED TO THE DISLOCATION STRUCTURE IN THE DEFORMED METAL. WHEN THE THICKNESS OF THE INTERMEDIATE SHEET (BEFORE THE 2ND COLD ROLLING) WAS 0.85 OR 1.0 MM, THE TEXTURE DEVELOPED BY SECONDARY RECRYSTN. WAS INDEPENDENT OF THE THICKNESS OF THE HOT ROLLED SHEET. WHEN THE INTERMEDIATE SHEET THICKNESS WAS 0.7 MM THE EFFECT OF THE THICKNESS OF THE HOT ROLLED SHEET WAS SUBSTANTIAL; LESS PERFECT TEXTURES WERE OBTAINED FROM SHEET 2.2 AND 3.0 MM THICK. THE SECONDARY RECRYSTN. TEXTURE WAS IMPAIRED AND THE SP. CORE LOSSES WERE INCREASED WHEN THE HIGHEST DEFORMATION WAS APPLIED IN INTERMEDIATE ROLLING. MORE PERFECT TEXTURES WERE ATTAINED WHEN THE DEFORMATION WAS GRADUALLY DECREASED OR WAS UNIFORM PER PASS, OR WHEN THE MIN. DEFORMATION WAS APPLIED IN THE INTERMEDIATE ROLLING. FACILITY: MUSK. INST. STALI SPLAVOV, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 550.834

BRISKIN, S. N., VANDER, S. S., DOLINSKIY, Yu. D., KUZNETSOV, L. Sh., POLYAKOV, K. K., Special Design Office of the Ministry of Geology of the USSR

"Nuclear-Precession Magnetometer"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzy, Tovarnyye Znaki, No 13, May 72, Author's Certificate No 335649, Division G, filed 23 Mar 70, published 11 Apr 72, p 195

Translation: This Author's Certificate introduces: 1. A nuclear-precession magnetometer with digital registration. The instrument contains a magnetically sensitive pickup, coincidence gates, a master frequency oscillator, a count time shaper and a counter. As a distinguishing feature of the patent, the operational reliability of the device is improved by connecting the coincidence gate to the set terminals of the least significant digit counter, and by connecting the input of the least significant digit counter through a second coincidence gate to the count time shaper and to a counter with variable scaling factor, which is connected to the master frequency oscillator and to the most significant digits of a standard frequency period counter which is connected through a third coincidence gate to the standard

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1/2 020

UNCLASSIFIED

PROCESSING DATE--20NOV70

TITLE--PARTIAL NEPHRITIS IN CHILDREN -U-

AUTHOR--(04)-IGNATOV, P.S., ONISKINA, M.M., FCKEYEVA, V.V., ARTEMKINA, L.A.

COUNTRY OF INFO--USSR

B

SOURCE--PEDIATRIYA 49(2): 5-13. ILLUS. 1970

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PEDIATRICS, NEPHRITIS, AUDITION, HEREDITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FNAME--3007/0092

STEP NO--UR/0546/70/049/002/0008/0013

CIRC ACCESSION NO--AP0155458

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UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0135835

ABSTRACT/EXTRACT--(U) OP-C- ABSTRACT. A TOTAL OF 29 CHILDREN OUT OF 18 WITH FAMILIAL NATURE OF NEPHRITIS WERE OBSERVED. ALL THE PATIENTS WERE DIVIDED INTO THE FOLLOWING GROUPS: THE 1ST GROUP INCLUDED 7 CHILDREN OUT OF 4 FAMILIES IN WHOM THE DISEASE WAS CHARACTERIZED BY A DIFFERENT DEGREE OF THE NEPHROTIC SYNDROME MARKEDNESS; THE 2ND GROUP INCLUDED 22 CHILDREN FROM 15 FAMILIES IN WHOM STABLE HEMATURIA WAS ONE OF THE MAIN CLINICAL MANIFESTATIONS. IN 4 CHILDREN HEMATURIA WAS COMBINED WITH DEFECTIVE EPURING, I.E. ALPORT'S SYNDROME WAS MARKED. THE DISEASE RAN A MORE SEVERE COURSE IN MALE PATIENTS, THE SEVERITY GREW WITH AGE AND WAS APPARENTLY DUE TO THE DEVELOPMENT OF ENPHROSCLEROSIS. THE DATA ARE GIVEN OF THE CLINICO GENETIC ANALYSIS REVEALING NUMEROUS CASES OF NEPHROPATHY IN SOME FAMILIES. POSSIBLE MECHANISMS OF GENETIC HEREDITY OF FAMILIAL NEPHROPATHY ARE DISCUSSED. FACILITY: DEP. PEDIAT., CENT. INST. POSTGRAD. MED., MOSCOW, USSR.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--COMPARISON OF WELDING VARIANTS FOR STEEL KH18N10T USED IN WEAK
SULFURIC ACID SOLUTIONS -U-
AUTHOR--BRISKMAN, A.N., MASLOV, V.A.

B

COUNTRY OF INFO--USSR

SOURCE--SVAR, PROIZVOD. 1970, (2), 25-7

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--WELDING ELECTRODE, CORROSION RESISTANT STEEL, ACID CORROSION,
STEEL WELDING, NICKEL STEEL, TITANIUM STEEL/ (U)KH18N10T STEEL, (U)140N
ELECTRODE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1989/1379

STEP NO--UP/0135/79/000/002/0025/0027

CIRC ACCESSION NO--A90107852

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2/2 025 UNCLASSIFIED PROCESSING DATE--11SEP70
CIRC ACCESSION NO--AP0107852
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ELECTRODES L40M AND WIRE
SV-05KH19F3S2 ARE RECOMMENDED FOR WELDING STEEL KH18N10T, USED IN WEAK H
SUR2 SO SUB4 SOLNS.

UNCLASSIFIED

USSR

UDC 678.7:66.018.86.01:536.2

BONDAREV, V. D., BRISKMAN, B. A., and SABINA, V. P.

"Influence of γ -Radiation on the Thermal Conductivity and Density of Some Polymers"

Moscow, *Plasticheskiye Massy*, 7, 1973, pp 7-10

Abstract: A study was made of the relationship of the thermal conductivity coefficient λ and the density ρ to temperature and γ -radiation for both crystalline polymers (polyethylene and fluorlon-4) and amorphous polymers (polystyrene and polymethylmetacrylate). For polyethylene at 30°C λ decreased by 40% and at 150°C it increased by 36% for rather low levels of radiation; it did not change for doses in the range 2000-3100 millirads. The density increased only 1.2%. For fluorlon-4 λ did not change significantly with temperature. The value of λ decreased slightly with irradiation. The behavior of ρ was a function of the crystallinity. For polystyrene λ increased by 24% in the temperature range 16-85°C and practically did not change with irradiation. For polymethylmetacrylate, λ increased by about 25% in the temperature range 18-98°C and practically did not change with irradiation. Possible reasons and implications of these values are discussed.

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BRISKMAN, V. A.

NUMERICAL STUDY OF THE FLOW OF A LIQUID-METAL IN MAGNETOHYDRAULIC PUMPS
Abstract of a Paper by R. V. Briskh, V. A. Briskman, G. I. Burde, R. K. Gorn,
S. P. Kollshchuk, V. I. Yakushin given at a Magnetohydrodynamic Conference,
pp 121-127

(10)
JPRS 60634
29 NOVEMBER 1973

In order to determine the optimal parameters of the structural design of a magnetohydrodynamic pump, it is necessary to have a concept of the nature of movement of the liquid-metal in the zone of effect of the electromagnetic forces. This movement is described by the system of equations of magnetic hydrodynamics. The solution of this system for regions of complex configuration even by numerical methods presents significant difficulties. However, in a number of cases of interest for practical applications, it is possible to introduce some simplifying assumptions.

If the distributions of the magnetic and electric fields are caused only by external sources and do not depend on the movement of the liquid (the inductionless approximation), then the problem can be reduced to the solution of the equations of ordinary hydrodynamics in the given nonuniform force field.

In this approximation a study has been made of the two-dimensional movement of a viscous incompressible liquid in a cross core with a linear decrease in magnitude of the force with respect to both coordinates. The finite-difference equations written for the current and vorticity functions were solved by the iteration method with a successive lower relaxation on a computer.

The nonuniform force distribution in the lateral channel (pocket) leads to the occurrence of turbulence in it. Depending on the force distribution in the core and also the parameters characterizing its configuration, the turbulence in the pocket will to a greater or lesser degree affect the movement of the liquid in the central channel, that is, the pump parameters.

A study was made of the dependence of these parameters (the magnitude of the head H and the drag G) on the flow rate of the liquid through the transverse cross section of the central channel (the Reynolds number Re) and the force distribution in the core.

USSR

UDC 621.397.132:621.382:621.375.4

BRITANISHSKIY, R. G., SOLOVEY, V. F., and KHANOVICH, I. G.

"SEKAM Chromaticity Block With Integrated Circuits"

Moscow, Tekhnika kino i televideniya, No. 11, 1971, pp 48-52

Abstract: Stressing the advantages and usefulness of integrated circuits, this article offers as an example of those advantages the experimental model of a printed circuit for decoding chromaticity signals in the SEKAM system of color television. This circuit contains two integrated circuit units: one, type K2TS241, is a bistable flip-flop; the other, type K2KT241 is an electronic switch. Both can be used either in the SEKAM or the PAL systems. The schematics of both are given together with a schematic of the ensemble, and their operation is explained. The schematic of an alternative switching circuit that can be used in the chromaticity block is also provided. Among the new components in this block is a delay line, external photographs and an internal drawing of which are shown. Other illustrations are a block diagram of the chromaticity circuits and oscillograms of the signals at various points in the block diagram. The authors are associated with the M. A. Bonch-Bruyevich Electrical Engineering Communications Institute of Leningrad.

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USSR

UDC: 8.74

BRITAVSKIY, G. M.

"Some Problems of Modeling of Multichannel, Multiphase Queueing Systems"

Prom. Kibernetika [Industrial Cybernetics--Collection of Works], Kiev, 1971, pp 239-247 (Translated from Referativnyy Zhurnal Kibernetika, No 11, 1972, Abstract No 11V588, by V. Ostrovskiy)

Translation: Problems of statistical modeling of complex technological systems (changing their form during servicing of a request) are studied. A system of this type is approximated by a multiphase, multichannel queueing system with finite limiting line length between phases and blocking of phases when there are no requests or when the line exceeds its maximum length. The information recorded during functioning of the modeling algorithm allows determination of the usage factors of subsystems and of the system as a whole, the intensity of the output flow, as well as effectiveness factors of the parts of the system with fixed limitations of intermediate storage capacity. The model produced was used to study the functioning of automatic lines for production of electronic parts.

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USSR

UDC: 519.2

BRITAVSKIY, G. M.

"Problem of Evaluating the Maximum Length of a Queue and its Application"

Kiev, Teor. kibernetika--sbornik (Theoretical Cybernetics--collection of works), 1971, pp 114-133 (from RZh-Kibernetika, No 10, Oct 72, abstract No 10V95 [author's abstract])

Translation: A single-channel queuing system with unlimited line is considered. Let t_1, t_2, \dots be sequential times of arrival of customers for service. Let us use the notation $\theta_i = t_i - t_{i-1}$, $i \geq 1$, $t_0 = 0$, and let these intervals between the times of arrival of customers have an exponential distribution with parameter λ , while the time for serving customers has arbitrary distribution with distribution function $F(t)$. Let τ_n be the time when the length of the queue is first equal to n . In this paper an expression is found for $Me^{-s\tau_n}$, and a study is made of the quantity $M\tau_n$ for large n . Problems are also considered in application of the resultant estimates for studying blocking time in a system with waiting and a finite queue.
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USSR

UDC: 621.373.544(088.8)

KHRUSHCHEV, A. P., BRITKOV, N. A.

"A Flip-Flop Based on Transistors With Controlled Hysteresis"

USSR Author's Certificate No 259142, filed 29 Jul 68, published 5 Jan 70
(from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12G255 P)

Translation: This Author's Certificate introduces a transistorized flip-flop with controllable hysteresis. The device contains a circuit for setting the flip-flop in the initial state, a divider for regulating the amplitude of hysteresis connected to the collector of one of the transistors, and trigger circuits with a semiconductor block diode connected in one of them. To improve resistance to interference in triggering the flip-flop, the collector of the other transistor is connected through a semiconductor diode and a resistor to the common point of a circuit comprised of a resistor and capacitor connected in series to the supply circuit, the semiconductor blocking diode also being connected to the common point of the above-mentioned circuit through a resistor.

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Nitrogen Compounds

USSR

UDC 547.854.9.07

BRITKOVA, N. YE., BELOVA, L. A., CHKHIKVADZE, K. A., and MAGIDSON, O. YU.,
(DECEASED), All Union Scientific Chemical-Pharmaceutical Research Institute
imeni S. Ordzhonikidze, Moscow

"Synthesis of 5-Phenylamino Derivatives of Orotic Acid"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 2, Feb 73, pp 273-275

Abstract: Heating 5-bromoorotic acid with anizidine, aniline or p-chloro-aniline in ethylene glycol at high temperature leads to a nucleophilic replacement of bromine and decarboxylation, yielding 5-phenylamino derivatives of uracyl. 5-Bromoorotic acid reacted with aromatic amines by the Ullman reaction in ethylene glycol, to give 5-phenylamino derivatives of orotic acid.

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USSR

UDC 547.853.7'854.9'867.2.01

BRITIKOVA, N. YE., BELOVA, L. A., CHKHIKVADZE, K. A., and MAGIDZON, O. YU.,
(DECEASED), All Union Scientific Chemical-Pharmaceutical Research Institute
imeni S. Orzhonikidze, Moscow

"Derivatives of 5-Aminoorotic Acid"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 2, Feb 73, pp 270-272

Abstract: 2,4,8-Trioxoderivatives of pyrimido-[5,4-d][1,3]oxazine
have been synthesized and converted to esters and amides of 5-acetylaminoorotic
acid. The acetyl group of 5-acetylaminoorotic esters hydrolyzes easily in
acid medium yielding 5-aminoorotic esters; in contrast, the acetyl group of
the 5-acetylaminoorotic amides does not hydrolyze easily.

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USSR

UDC: 621.372.061

BRITNER, L. P., DRAGAN, A. B.

"A Method of Calculating Pulse Reactions of Communications Channels"

V sb. Vopr. elektrosvyazi (Problems of Electrical Communications--collection of works), Kiev, "Tekhnika", 1970, pp 42-48 (from RZh-Radictekhnika, No 11, Nov 70, Abstract No 11A92)

Translation: In order to solve a number of problems associated with the development of correcting devices for high-speed transmission of discrete information, it is necessary to know the relationships between the reference values of the pulse reaction in the uncorrected channel. This problem can not be solved by direct measurements at the present time. In this connection the authors discuss a method of determining the reference values of the pulse reaction in the channel from readings of its amplitude-frequency and phase-frequency characteristics. Formulas are derived which can be used to determine the unknown quantities from readings of the complex transmission factor of the channel. Application of these formulas is illustrated by calculation of practical correcting devices. Two tables, bibliography of five titles. N. S.

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1/2 010
TITLE--POLYACRYLATES -U-

UNCLASSIFIED

PROCESSING DATE--04DEC70

AUTHOR--(05)-BODNARYUK, F.N., KORSHUNOV, M.A., BRITNEVA, T.P., VARSHAVSKIY,
S.L., VIKHANSKIY, K.N.
COUNTRY OF INFO--USSR

B

SOURCE--U.S.S.R. 265,441
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--09MAR70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--POLYACRYLATE RESIN, CHEMICAL PATENT, ESTERIFICATION,
CARBOXYLIC ACID ESTER, ORGANIC SULFUR COMPOUND, GLYCOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1754

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

CIRC ACCESSION NO--AA0136994

UNCLASSIFIED

272 010 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AA0136994
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLYACRYLATES ARE PREPD. BY
CONVENTIONAL INTERESTERIFICATION OF ALKYL ESTERS OF MONO AND
DICARBOXYLIC ACIDS WITH THIOGLYCOLS IN INERT SOLVENTS AND IN THE
PRESENCE OF A CATALYST AND AN INHIBITOR.

UNCLASSIFIED

USSR

UDC 621.375.82

KURBATOV, L. N., BRITOV, A. D., DIROCHKA, A. I., KOZIHA, G. S., MOCHALKIN, N. N.,
AVER'YANOV, I. S., STARIK, P. M.

"Stimulated Radiation of Solid Solutions of Tin and Lead Chalcogenides in the
10-Micron Band"

V sb. Kvant. elektronika (Quantum Electronics--collection of works), No 3, Mos-
cow, Soviet Radio, 1972, pp 97-99 (from RZh-Fizika, No 12, Dec 72, Abstract No
12D982)

Translation: A study was made of recombination radiation in the presence of
electron excitation, and induced emission was obtained in $Pb_{1-x}Sn_xSe$ crystals
grown by the Bridgman method with $x = 0.04, 0.05, \text{ and } 0.07$ and in $Pb_{1-x}Sn_xTe$
crystals grown from the gas phase with $x = 0.17$ and 0.18 . The radiation wave-
length at $90^\circ K$ is within the 8-11-micron band. The pulse power is 1-10 mil-
liwatts. A study was made of the temperature functions. The maximum operating
temperature does not exceed $140^\circ K$. The bibliography has 5 entries.

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Acc. Nr.

AP0048458

Abstracting Service:
CHEMICAL ABST. 5/70

Ref. Code

UR 0449

B

105549a Temperature dependences of lead sulfide radiation.
 Kurbatov, L. N.; Britov, A. D.; Mochalkin, N. N. (USSR).
 Fiz. Tekh. Poluprov. 1970, 4(1), 120-4 (Russ). The temp.
 dependences of the spectral and integral characteristics of the
 radiation of PbS were investigated at 10-160°K. The energy
 gap depends nonlinearly on the temp. The level appearing after
 activation "follows" the zone. The energy is 4×10^{-3} eV. A
 correlation was established between the spectral distribution of
 the radiation and absorption and the appearance of the photo-
 elec. effect. Alexandre Fucs

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REEL/FRAME

19800166

18 N

USSR

BRITOV, G. S., TORGASHEV, V. A.

"Use of Functional Coding and Systems of Residual Classes to Increase the Reliability of Computers"

Informatsionnye Materialy. Nauch. Sovet po Kompleks. Probl. "Kibernetika" AN SSSR [Information Materials Scientific Council on the Complex Problem "Cybernetics" Academy of Sciences USSR], No 3(50), 1971, pp 75-78, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract No 3 V501 by V. Mikheyev).

Translation: A method is described for using functional coding and systems of residual classes (SRC) to increase the reliability of a digital computer, consisting of the following. Suppose a problem of the form

$$\begin{aligned}
 y_1 &= f_1(x_1, \dots, x_m) \\
 &\dots \dots \dots \\
 y_n &= f_n(x_1, \dots, x_m)
 \end{aligned}$$

is solved on a digital computer in SRC p_1, \dots, p_k . The probability of correct operation of the machine in solution time T is evaluated as $p_c(T) =$
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USSR

BRITOV, G. S., TORGASHEV, V. A., Informatsionnye Materialy. Nauch. Sovet po Kompleks. Probl. "Kibernetika" AN SSSR, No 3(50), 1971, pp 75-78.

$=p^k(T)$, where $p(T)$ is the probability of correct operation of an individual module in time T ; k is the number of modules. By introduction of an addi-

tional function according to a code with the test condition $\sum_{i=1}^{n+1} y_i = 0$ and

one addition module p_{k+1} , the problem is reduced to the form

$$\begin{aligned}
y_1 &= f_1(x_1, \dots, x_m) \\
&\dots \dots \dots \\
y_n &= f_n(x_1, \dots, x_m) \\
y_{n+1} &= f_{n+1}(x_1, \dots, x_m) \\
&\sum_{i=1}^{n+1} y_i = 0.
\end{aligned}$$

When errors appear, the test condition of the functional code is disrupted and the solution is repeated with the modules successively switched out. As soon as the defective module is switched out, the test condition of the functional code is fulfilled and the solution is output with less accuracy.

USSR

UDC: 621.396.6-181.5

~~BRITSIS, A. B.~~, GOTLIB, D. S., KRUCHAN, Ya. Ya., OZOLS, K. K., and SHARLOVSKIY, B. V.

"Investigating the Characteristics of Thin Film Contact Areas for Hybrid Integrated Circuits"

Elektron. tekhnika. Nauchno-tekhn. sb. Mikroelektronika (Electronic Engineering, Scientific-Technical Collection, Microelectronics) 1970, No. 2(23), pp 20-27 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3V330)

Translation: It is shown that copper films can be used instead of gold as the conducting layer of contact areas for hybrid microcircuits when the assembly is sealed. Resume

1/1

ELECTRONICS

USSR

Microelectronics

UDC: 534.232.082.73-8

BRITSYN, K. I., DEMIDOV, V. P., MARTYNOV, V. P., MOCHALOV, B. F., SMIRNOV, A. A.,
and IVANOV, L. A.

"Studying Thin-Film CdS-Piezo-Converters"

Moscow. Radiotekhnika i Elektronika, Vol. 15, No 9, 1970, pp 1937-1944

Abstract: The authors present the results of the study of CdS-piezo-converter test specimens vaporized onto Al_2O_3 . Basic converter characteristics are calculated and it is shown that the frequency characteristic depends as much on the relationships between the electrical impedances of a converter and the measuring tract as it does on the relationships between the mechanical impedances of cadmium sulfide and the material of an acoustic line. A shift in the least loss point is predicted for CdS on Al_2O_3 with respect to mechanical resonance frequency. This shift makes it possible to vary the band width and the position of the least loss point completely by electrical methods. A simple equivalent converter circuit proposed by the authors makes it readily possible to estimate its harmonization with the measuring tract and to determine the aspect of the frequency characteristic for various methods of excitation. The experimental converter specimens yielded a loss in the order of 30 db for a double conversion with a band of approximately 35 percent. The minimal loss point shifts toward the lower frequency region in comparison with the acoustic resonance point. The experimental and theoretical data are in good agreement. The loss values presented are not minimal and can be reduced more using

1/2

USSR

BRITSYN, K. I. et al., Radiotekhnika i Elektronika, Vol. 15, No 9, 1970, pp 1937-1944

supplementary matching equipment. The original article has six figures, 12 formulas, and nine bibliographic entries.

2/2

BRITVAN, I. I.

CHANGES IN THE MORPHOLOGICAL COMPOSITION OF THE BLOOD AND BONE MARROW DURING HYPOKINESIA AND PRESSURE CHAMBER TRAINING

Article by I. I. Britvan and N. A. Posenko; Moscow, Aktual'nye Voprosy Kosmicheskoy Biologii i Meditsiny (Current Problems in Space Biology and Medicine), Russian, 1971, pp 32-35

Prolonged hypokinesia and weightlessness cause changes in physiologic systems, including the blood-forming system, in the human and animal body. According to data published by P. A. Korzhuyev (1954), as interpreted by Lamb and Borry (1966), it is postulated that under weightlessness conditions of bone marrow will have no stimulating effect on the behavior of bone marrow which would lead to a suppression of its function. Conditioning to hypoxic hypoxia increases the activity of cells in the cytinoblastic series and depresses the activity of cells in the myeloid series (I. P. Rukovustova, Ye. V. Logshova, 1968).

On this basis the objective of our study was a determination of the effect of preliminary adaptation to hypoxic hypoxia on tolerance of the hypokinetic effect using data on the morphological composition of the peripheral blood and bone marrow.

The study was made on common male rats. Stepped acclimatization to hypoxic hypoxia was created by ascent of the animals in a pressure chamber for ten days each to altitudes of 3,000, 5,000 and 7,000 m with their presence at each altitude for six hours each day. Thirty-day hypokinesia was created by placing the animals in special hypokinetic cages.

All the animals were divided into three groups. The first group included animals which had undergone preliminary acclimatization to hypoxic hypoxia and which were then subjected to hypokinesia; the second group consisted of animals without preliminary acclimatization which were exposed to 30

SPRS 56, 455
14 JULY 72

USSR

UDC 621.181.001.5

GRISHIN, A. D., GUTSALO, G. I., SHTAL'MAN, S. G., ABRYUTIN, A. A., DRONOV, L. A., SOLOMONOV, V. M., KROL', A. Ya. and BRITVIN, O. V., (all engineers); and Candidate of Technical Sciences VIKHREV, Yu. V., ORGRES-VTI-Kostromskaya GRES

"Results of a Study of the Combustion and Temperature Regime of the Lower Radiation Section of the TGMP-114 Boiler"

Moscow, Teploenergetika, No 3, 1973, pp 43-46

Abstract: Earlier gas-mazut boilers of this general type were not completely satisfactory on account of the low reliability of the heating surfaces (mainly the lower radiation section) and the great heat flow in the combustion chamber.

This difficulty has been corrected in the new main-series supercritical pressure TGMP-114 boiler by reducing the number of boilers (from 8 to 6), securing maximal removal of the extreme burners from the side walls, and use of recirculation of cold smoke gases into the lower part of the furnace chamber.

The direct-flow TGMP-114 boiler has an output of 950 t/hr, with steam parameters of 255 kg/cm² and 565/570°C. Analysis of operational data on chemical control
1/2

USSR

GRISHIN, A. D., et al., Teploenergetika, No 3, 1973, pp.43-46

shows that in 1971 iron content of feed water was 10-15 $\mu\text{g}/\text{kg}$, 15-20 $\mu\text{g}/\text{kg}$ the previous year, and 20-50 $\mu\text{g}/\text{kg}$ during the start-up period in 1969, with high content of 100-150 $\mu\text{g}/\text{kg}$ in individual cases. These facts point up the formation of iron oxide deposits as a basic cause of the external corrosion of the screening pipes of the lower radiation section, and emphasize the necessity of water control and chemical cleansing.

2/2

AM0037796

NUCLEAR SCI. ABST. /-70

B WR0000

1682 (CERN-Trans-69-13) BIOLOGICAL SHIELDING AND
 TECHNIQUE OF RAPID EJECTION AT 70 GeV. Britvich, G. I.;
 Golovachik, V. T.; Krupnii, G. I.; Lebedev, V. N.; Mal'kov, V. V.;
 Bushuev, N. I. (Gosudarstvennyi Komitet po Ispol'zovaniyu
 Atomnoi Energii SSSR, Serpukhov. Institut Fiziki Vysokikh En-
 ergii). Translated by A. Golovanoff (CERN, Geneva, Switzer-
 land), from report IFVE-ORZ-69-5. 44p. (In French). Dep.

The biological shielding for a proton fast-ejection system was
 calculated for an ejected proton beam with energy of 70 and 85
 GeV and intensity of 10^{12} protons/cycle for a repetition rate of
 8 cycles/min and proton efficiency of 100%. The shielding against
 the nuclear activity, the μ mesons, and residual activity of the
 target station were calculated. The arrangement of the biological
 shielding of the target station was discussed. (J.S.R.)

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BRIYED, I.

E. Biology

BRIYED, I.

JPRS 61124
30 MAY 72

Plant Cultivation in Space
by Mikhail M. Il'In
manifest protective properties even when they are used after the plants have
been subjected to irradiation. The fact that the tolerance of plants to
ionizing radiation can be substantially increased by changing the percentage
of mineral substances in the nutrient solution, established by our radio-
biologists, is of great practical importance. These results were highly
approved at a field session of the Section of Space Radiology of Plants of
the Scientific Council on Radiobiology USSR Academy of Sciences which was
held early in this year at Riga. The course of that session convincingly
demonstrated that plants are playing an increasingly important role in
space research. There are hopes that the space radiation barrier will be
eliminated as successfully as a whole series of obstacles in the mastery of
space.

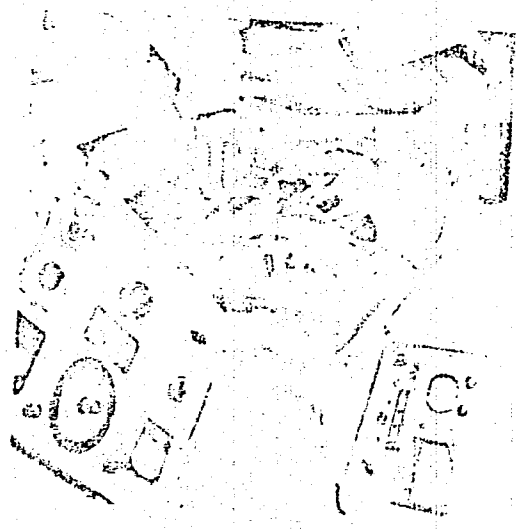


Fig. 3. I. Briyede, scientific specialist at the Biology Institute Academy
of Sciences Latvian SSR, prepares a plant for irradiation.

Хруда: Техника, Россия, № 2, 1972, pp. 10-23

USSR

UDC 577.3

GONCHARENKO, YE. N., and BRIYEDIS, I.

"Mechanisms by Which Histamine Concentration in Tissues Increases in the Presence of Radio-Protective Compounds"

Moscow, Biologicheskiye Nauki, No 10, 1971, pp 48-50

Abstract: One of the protective reactions which radio-protective compounds or exposure to hypoxic hypoxia induce in the body -- a rise in the concentration of histamine -- was investigated on white rats which were administered aqueous solutions of beta-mercaptoethylamine (MEA) or kept in a barochamber at an atmospheric pressure of 215 mm Hg for 2 minutes. Determinations performed on tissue samples 10-15 minutes later revealed a two- to four-fold increase in decarboxylase activity in the skin, stomach, and kidneys after administration of MEA and in the skin and stomach after exposure to hypoxia, as well as a significant though less pronounced decrease in the activity of diaminoxidase in the skin, stomach, and kidneys. It is concluded that the increase in histamine concentration is due mainly to an accelerated formation of new histamine through enhanced decarboxylation of histidine and, in a lesser degree, to decelerated destruction of histamine by diaminoxidase.

1/1

USSR

UDC 577.391

GONCHARENKO, YE. N., KUDRYASHOV, YU. B., and BRIYEDIS, I., Moscow State University
imeni M. V. Lomonosov

"Role of Endogenous Histamine in the Radioprotective Action of Radioprotectors"

Moscow, Doklady Akademii Nauk, USSR, Vol 191, No 4, 1970, pp 948-950

Translation: It was proposed earlier (1, 2) that one possible mechanism of the action of radioprotectors is based on their ability to lower the content of toxic lipids in the cells, and to liberate "endogenous radioprotectors".

Experimental data are reported showing that aminothiols are capable of increasing the levels of one such "endogenous radioprotector" -- serotonin⁽²⁾. This paper describes an investigation of changes in the levels of another biologically active compound -- histamine -- under the influence of administered radioprotectors. White male rats were used in the experiment (body weight 120-150g). The animals were injected intraperitoneally with aqueous solutions of the radioprotectors, and after 10-20 min the content of free and total histamine in tissues was determined⁽³⁾.

The so-called f.d.d. at LD_{50/30} (i.e., factor of decreased irradiation dose resulting in 50% animal deaths in 30 days) was taken as the criterion of the protective action of the compounds studied. The radioprotective compounds (AET -- 1/3

USSR

GONCHARENKO, YE. N., et al., Doklady Akademii Nauk, USSR, Vol 191, No 4, 1970, pp 948-950

aminoethyl isothiuronium, MEA -- mercaptoethylamine, cystamine, cysteine, serotonin, and snake venom) and control materials (serine and 0.85% NaCl solution) were injected intraperitoneally 10-15 min prior to a single total irradiation of animals (dose range -- 400-1400 rads) on a GUBE-800 apparatus (dose rate was 50 rad/min). Another criterion of the effectiveness of radioprotectors was ΔEh -- lowering of the oxidation-reduction potential level, registered on a platinum needle electrode inserted subcutaneously into the rats (4,5).

Table 1 shows that injecting the rats with highly effective radioprotectors (f.d.d. 1.5; $\Delta Eh = -150$ mv and larger drop) results in considerable increase of histamine in tissues. This is especially noticeable in the case of "total" histamine. The tissues containing higher amounts of histamine in control groups (skin, stomach) are capable of accumulating large quantities of histamine (in absolute figures).

Snake venom has little protective effect (f.d.d. 1.2). Rats injected with snake venom showed increased histamine levels in skin and stomach, and significant decrease in liver and kidneys. It is interesting that serine (control), which is not radioprotective, but whose structure is similar to the active aminothiols studied, caused no significant change in the content of free and total histamine.

2/3

USSR

GONCHARENKO, YE. N., et al., Doklady Akademii N . . . , USSR, Vol 191, No 4, 1970, pp 948-950

Increase in the free and total histamine in the tissues indicates liberation of endogenous histamine under the influence of radioprophylactic compounds, and also synthesis of histamine.

Thus the data obtained support the proposal that "endogenous radioprotectors" may be accumulated in the organism under the influence of radioprotectors which may be capable of increasing radioresistance of the animals (2).

3/3

BRIYEDIS, Ya. V.

10,845
CSO: 8046/0653-M

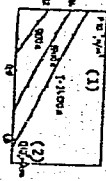


Figure 1.

Key: 1. n/m^2
2. m^2/sec

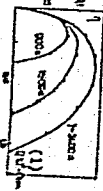


Figure 2.

Key: 1. m^2/sec

EXPERIMENTAL STUDY OF AN AC CONDUCTION PUMP USING A LIQUID-METAL SODIUM LOOP

(Abstract of a Paper by Yu. A. Bizukal, Ya. V. Briyedis, N. N. Undershtilov given at the Magneto-hydrodynamic Conference, p. 143)

An experimental study was made of a laboratory model of a single-phase ac conduction pump with the following parameters:

Rated head

$$p_n = 0.4 \cdot 10^3 \text{ n/m}^2$$

Rated output capacity

$$Q_n = 3 \cdot 10^{-3} \text{ m}^3/sec.$$

Metal -- liquid sodium for r_0

$$= 400^\circ C$$

Dimensions of the channel core

$$10 \times 50 \times 60 \text{ mm}^3$$

The experiment was performed on a liquid-metal Du-40 circuit of the Physics Institute of the Latvian SSR Academy of Sciences.

The external characteristics $p = p(Q)$, the volt-ampere characteristics $U = U(I)$ under the condition of $p/Q^2 = \text{const}$ and the characteristics $n = n(Q)$ were determined. A study was also made of the distribution of the electric and magnetic fields.

The basic experimental results are depicted in Figures 1 and 2.

(3)

JPKS 6065V
07 November 1973

USSR

UDC 615.28:547.7517.012

SALDABOL, N. O., ALEKSEYEVA, L. N., BRIZGA, B. A., KRUZMETRA, L. V.,
and GILLER, S. A., Institute of Organic Synthesis, Riga, Academy
of Sciences Latvian SSR

"Synthesis and Antimicrobial Action of Furyl-Substituted Indolizine,
Imidazo (1,2-a)pyrimidine, and Imidazo(2,1-b)thiazole"

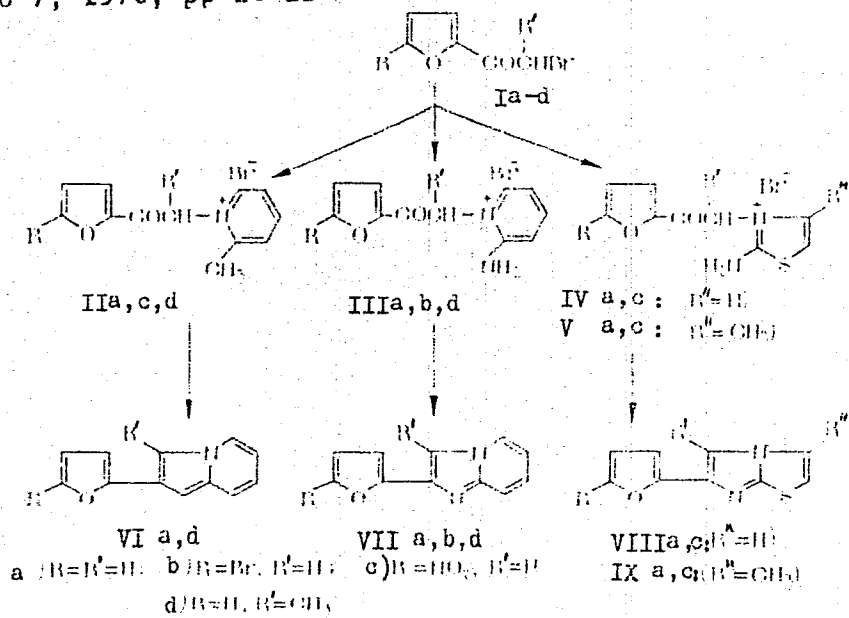
Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 4, No 7, 1970,
pp 20-22

Abstract: Continuing work on the synthesis and study of antimicro-
bial properties of furyl-substituted heterocyclic condensed systems
with apcial nitrogen atoms, the authors obtained (5-R-furyl-2)sub-
stituted indolizine (VIa, VIId), imidazo(1,2-a)pyridine (VIIa, VIIb,
and VIId), and imidazo(2,1-b)thiazole (VIIIa-VIIIc and IXa, IXc)
(R = H, Br, and NO₂) and described their antimicrobial action.

1/3

USSR

SALDABOL, N. O., et al., Khimiko-Farmatsevticheskiy Zhurnal,
Vol 4, No 7, 1970, pp 20-22



2/3

USSR

SALDABOL, N. O., et al., Khimiko-Farmatsevticheskiy Zhurnal, Vol 4, No 7, 1970, pp 20-22

The minimum concentration of furylazabicycles inhibiting micro-organismic growth is 100 mcg/ml, while for phenyl analogs it rises sharply. For example, for 6-phenylimidazo(2,1-b)thiazole and its n-nitroderivative the minimum concentration inhibiting growth of Staphylococcus aureus, Salmonella typhi, and Escherichia coli is 7800 mcg/ml. Thus, replacement of the phenyl with the furyl group leads to an abrupt intensification of antimicrobial action, which is intensified still further in the case of the nitrofurylazabicycles (VIIc, VIIIc and IXc). The strongest bacteriostatic action is shown by nitrofurylimidazopyridine (VIIc), but its aromatic analog 2-p-nitrophenylimidazo/1,2-a/pyridine is only slightly active.

3/3

ACC NR: AP9001072

SOURCE CODE: UR/0450/68/002/011/0011/0013

AUTHOR: Kalnberg, R. Yu.; Giller, S. A.; Lidak, M. Yu.; Alekseyeva,
L. N.; Kruzmetra, L. V.; Brizga, B. A.; Zile, A. Ya.; Petersone, I. O.

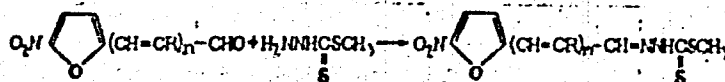
ORG: Institute of Organic Synthesis, AN LatSSR, Riga (Institut organi-
cheskogo sinteza, AN LatSSR)

TITLE: Synthesis and biological activity of methylthiocarbazonates
of unsaturated aldehydes of the 5-nitrofurane series

SOURCE: Khimiko-farmatsevticheskiy zhurnal, v. 2, no. 11, 1968, 11-13

TOPIC TAGS: furan compound, organic sulfur compound, organic nitrogen
compound, bactericide, fungicide, *chemical synthesis*

ABSTRACT: In a search for new bactericides and fungicides and to study
their toxicity, a series of dithiocarbazonates of 5-nitrofurane series
was synthesized for the first time by the reaction:



Card 1/5

UDC: 612.433.544.121:454.321.112

ACC NR: AP9001072

IIIa n=0
IIIb R=H, n=1
IIIc R=CH₃, n=1
IIId R=C₂H₅, n=1
IIIe R=CH₂OCH₃, n=1
IIIf R=CH₂OC₂H₅, n=1
IIIg R=H, n=1

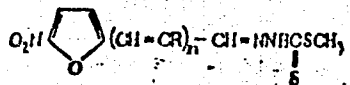
Compounds IIIa, IIIb, and IIIg were obtained by the reaction of the appropriate compounds I and II at room temperature in ethanol with subsequent cooling to 5—10°C and removal of final product by filtration. Compound IIIc is formed when a mixture of sulfuric acid and propanol is heated to 70°C and then treated with α-methyl[β-(5-nitro-furyl)]acrolein diacetate at 75—79°C. After cooling to 50°C, the reaction mixture is treated with methyl ester of dithiocarbamic acid in isopropanol. Compounds IIId, IIIe, and IIIf were obtained by a similar procedure. The new compounds are characterized in Table 1.

Card 2/5

192A 1002

ACC NR: AP9001072

Table 1



Compd	R	n	Mp, °C	% Yield
III	H	0	162	92
III	CH ₃	1	177	84
III	C ₂ H ₅	1	177	73
III	C ₆ H ₅	1	176,5	86
III	CH ₂ OC ₂ H ₅	1	161,5	78
III	CH ₂ OC ₆ H ₅	1	137	32
III	H	2	169	84

Data on the bactericidal and fungicidal activity of the new dithio-carbazonates are reported in Table 2. The acute toxicity of the new compounds was studied on white mice and was found to be moderate. The

Card 3/5

ACC NR: AP9001072

Table 2. Antibacterial and fungistatic activity of dithiocarbazonates

Test microbe	Strain No.	Minimum concentration (in micrograms/ml) of compounds retarding the bacteria growth				
		IIIa	IIIb	IIIg	IIIc	IIId
Escherichia coli	675	4,16	8,33	1,56	100	100
E. coli	M17	3,12	3,12	2,08		
•	353	1,04	4,16	3,12		
Aerobacter serogenes	354	3,12	0,56	0,78		
Bac. collis citrovorum	361	2,08	3,12	1,56		
Klebsiella pneumoniae тип 1	5054	0,39	0,39	0,097		
• озаепае→тип 6	5052	0,78	6,25	0,097		
• тип 7	4140	12,5	100	1,56		
Proteus vulgaris	1	16,6	100	25	100	100
Bac. pyocyaneus	165	100	100	100	100	100
Shigella sonnei	5065	0,78	0,52	1,04		
• stuzeri-schmitzli	128	1,04	0,78	0,19		
• boydii тип 1	196	0,52	0,52	0,52		
• flexneri тип 2a	170	1,04	1,04	0,39		
Salm. paratyphi A	290	2,08	3,12	0,52		
• paratyphi→B	493	2,08	12,5	0,78		
• typhi	4446	1,04	3,12	0,52		
• typhimurium	5591	6,25	12,5	0,04		
Staphylococcus aureus haemo!	209	—	0,83	0,21	0,42	16,6
Bac. mycoides	837	—	1,66	0,83	—	33,3

Card 4/5

ACC NR: AP9001072

Table 2. (Cont.)

Candida albicans	67/846	83,3	83,3	83,3	83,3	83,3
Epidermophyton Kaufman-Wolf	41	83,3	83,3	83,3	83,3	83,3
Trichophyton gypseum	43	83,3	83,3	83,3	83,3	83,3

unbranched chain dithiocarbazonates are more toxic than those with alkyl and alkoxy radicals in the α -position. The following LD₅₀ values for IIIa, IIIb, IIIg, and IIIe were obtained 223, 116, 510, and 1870 mg/kg, respectively. Compounds IIIc and IIId were nontoxic even in doses of 6000 mg/kg. Orig. art. has: 2 tables.

[WA-50; CBE No. 39][PS]

SUB CODE: 06, 07/ SUEM DATE: 30Apr68/ ORIG REF: 002/ OTH REF: 004

Card 5/5

USSR

UDC 621.43.011:533;621.5:533

BRIZHENYUK, N. I., POZNANSKIY, V. I., RYBAKOV, V. S., SELEZNEV, Yu. V.,
KHOKHLOV, Yu. G.

"On the Problem of Determining the Rate of Combustion of Fuel in Diesels"

V sb. 11-ya Vses. konf. po vopr. ispareniya, goreniya i gaz. dinamike dispersn. sistem. 1972 (11th All-Union Conference on Problems of Evaporation, Combustion and Gasdynamics of Disperse Systems, 1972 -- Collection of Works), Odessa, 1972, p 44 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B421)

Translation: A formula for determining the rate of combustion of fuel in diesels that was proposed by one of the authors of the article is analyzed. It is shown that one of the factors determining the rate of combustion is the rate of evaporation of the fuel, which depends in turn on the thermodynamic parameters of the medium, the surface and the volume of the fuel jet. The rate of heat release was investigated as a function of the basic physicochemical parameters. Yu. F. Dityakin.

1/1

Acc. Nr: AA0101006

B

Abstracting Service: 3-70

Ref. Code:
UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General,
Derwent,

244824 COMPENSATING COUPLING permits angular and axial displacement of shafts. It consists of halfcouplings 1 and 2. The fingers 3 and 4 with spherical heads are fixed to a shaft 5 which rotates in a sleeve 6. The finger heads fit into a groove made in the face of half coupling 1. The clipped (8,9) flexible jacket 7 prevents entry of dirt and contains grease. The shafts misalignment is compensated by the movement of fingers with the shaft 5 and displacement of spherical heads in the grooves.
6.10.67. as 1189852/25-27, GRIN, Yu. A. and BRIZINOV.
I.E. (14.10.69) Bul. 18/28.5.69. Class 47c, Int. Cl. F 16d.

1/2

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18

REEL/FAME
19850557

USSR

BRODER, D. L., PLATOVSKIKH, Yu. A., POPKOV, K. K., SERGEYEV, I. V.

"Use of Jacobi Polynomials to Describe Propagation of Gamma Radiation"

Minsk, Vestsi Akademii Navuk BSSR: Seryya Fizika-Energetychnykh Navuk, No 1, 1973, pp 13-18

Abstract: It is shown to be possible to obtain an approximating kinetic equation in cylindrical geometry by Jacobi polynomial expansion of the angular relation containing two arbitrary parameters. The distribution function and scattering kernel are expanded by polynomials having different parameter values. A multigroup system of equations is obtained. By using Jacobi polynomials for the approximate solution of the kinetic equation written in a modified coordinate system it is possible to describe satisfactorily the space-energy relation of the radiation flux even in the first approximation.

1/1

USSR

UDC 621.039.512.4

BRODER, D. L., ZHILKIN, A. S., KUTUZOV, A. A., POPKOV, K. K.,
SHESTOPALOV, Ye. V.

"Reactor Neutron Spectra in Water and Iron"

V sb. Vopr. fiz. zashchity reaktorov (Problems in Reactor Safety Physics --
Collection of Works), No. 5, Moscow: Atomizdat, 1972, pp 79-90 (from
RZh-50. Yadernyye reaktory, No 5, May 72, Abstract No 5.50.59)

Translation: The change in the spectrum of the scalar flux of neutrons with
energies above 0.1 Mev in water and iron shields is of interest from the
viewpoint of establishing quantitative characteristics of the attenuation of the
flux by the shielding substance and determining the accuracy of certain
methods for calculating the passage of neutrons, particularly the semi-
empirical method based on calculations of fluxes of intermediate neutrons
in lower approximations of the spherical harmonics method and the assignment
of a group of fast neutrons in accordance with experimental data. 12 ill.,
11 ref.

1/1

USSR

UDC 621.039.512.45

BASS, L. P., BRODER, D. L., ZHILKIN, A. S., KUTUZOV, A. A., SMETANIN, A. A., SUVOROV, A. P., SHESTOPALOV, Ye. V., SHIPILOV, A. Ye.

"Reactor Neutron Spectra in a Cylindrical Neutron Duct Surrounded by Water"

V sb. Vopr. fiz. zashchity reaktorov (Problems in Reactor Safety Physics -- Collection of Works), No. 5, Moscow, Atomizdat, 1972, pp 123-129 (from RZh-50. Yadernyye reaktory, No 5, May 72, Abstract No 5.50.61)

Translation: The energy and spatial distributions of neutrons with energies above 200 kev in an iron cylindrical neutron duct at distances up to 66 cm from its origin are discussed. The experimental data are compared with computational results made by two-dimensional programs using the P_1 -approximation of the spherical harmonics method and the $2D_{10,5}$ -approximation of the characteristic method. The presence of experimental data on the neutron energy spectra makes possible a corrective check on the methods for calculating the parameters of shields of limited transverse dimensions.

7 ill., 8 ref.

1/1

- 46 -

USSR

BRODER, D. L., GAMALIY, A. F., ZEMISEV, B. V., NESTEROV, B. V., and KHAM'YANOV, B. P. (Institute of Physics and Power Engineering)

"Gamma Radiation Upon Capture of Thermal Neutrons by Isotopes of Cr"

Moscow, Yadernaya Fizika, Vol 13, No 2, 1971, pp 233-239

Abstract: This work is devoted to the study of the spectra of gamma radiation arising upon capture of thermal neutrons by Cr isotopes, by means of a Ge-Li gamma spectrometer. The isotopes of chromium studied are Cr⁵⁰, Cr⁵², and Cr⁵³. The yield of gamma lines per 100 captures of neutrons in each isotope are determined. Diagrams of the energy levels of Cr⁵¹, Cr⁵³, and Cr⁵⁴ nuclei are presented. The results are compared with the data of other authors. In general the data agree well with the data of recent works concerning the energy of individual gamma lines, but not as well concerning their yield. A number of new gamma lines are observed, particularly for Cr⁵⁰ and Cr⁵².

1/1

~~EAST GERMANY~~ / SOVIET UNION

Paul

~~BRODER, D. L., GUREEV, V. I., and KOZLOVSKII, S. A., Institute for Physics and Power Engineering, G. Obninsk, Kaluzhskaya Oblast), Obninsk, USSR.~~

"On the Passage of Gamma Rays Through Heterogeneous Media"

East Berlin, Kernenergie, Vol 14, No 4, Apr 1971, pp 121-124.

Abstract: [Russian article] [Authors' English summary, modified] Calculations of gamma rays flowing through heterogeneous media imply knowledge of effective absorption coefficients and buildup factors for all types of shielding. ^{137}Cs and ^{60}Co gamma-ray attenuation functions were studied experimentally in water shields containing insertions of variable-diameter rods. The spacing between rods was varied also. Semiempirical relations were proposed on the basis of the gamma-ray doses measured. These relations are useful for calculating the topography of radiation fields in the case of point or line sources. Eight references, including 1 German, 1 Western, and 6 Russian. (Manuscript received 26 Oct 1970).

1/1

AP0035500

NUCLEAR SCI. ABST.

1/70 UR0089

B

1982 TRANSPORT OF THE NUCLEAR RADIATION IN SHIELD IRREGULARITY. Broder, D. L.; Mashkovich, V. P.; Mironov, V. N.; Popkov, K. K.; Tsypln, S. G. At. Energ. (USSR), 27: 313-23 (Oct. 1969). (In Russian).

Methods of calculating radiation transport in ducts and slots of the nuclear reactor shielding are analyzed. The calculation results are compared with the experimental data. The experimental facilities for investigating neutron and gamma transport in ducts and slots are described. 54 references. (auth)

MT

1/1

19

19720210

1/2 007 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--PREPARATION OF SIPHON AND LADLE CERAMICS USING ARKALYK CLAYS -U-
AUTHOR--(03)-BRUDETSKIY, G.G., KARPOVA, N.D., VASILTSOV, V.M.
COUNTRY OF INFO--USSR **B**
SOURCE--"OGNEUPORY" 1970, 35(2), 1-3
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--CLAY, TECHNICAL STANDARD, REFRACTORY MATERIAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1980 STEP NO--UR/0131/70/035/002/0001/0003
CIRC ACCESSION NO--AP0112944
UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0112944

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ARKALYK CLAYS ARE HETEROGENOUS AL
SUB2 O SUB3 CONTENT AVS. 42-50PERCENT. THE CLAYS, USED IN THE AMT. OF
33PERCENT FOR PRODUCTION OF SIPHON TUBES, ENSURES REQUIREMENTS OF SOVIET
STD. GUST. AT CONCURRENT BURNING OF SKEWBACK BRICKS IT IS POSSIBLE TO
INCREASE TEMP. 50DEGREES, THUS LOWERING POROSITY OF THE BRICKS 1PERCENT.
FACILITY: CHELYAVINSK MET. ZAVOD, CHELYABINSK, USSR.

UNCLASSIFIED

89

USSR

BRODI, S. M. and POGOSYAN, I. A.

"Imbedded Stochastic Processes in Queueing Theory"

Vlozhennyye Stokhasticheskiye Protsessy v Teorii Massovogo Obsluzhivaniya [English version above], Kiev, Nauk. Dumka Press, 1973, 127 pp (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V67K)

Translation: The specifics of queueing theory problems have made it necessary to construct new classes of Markov processes and various modifications of the processes, allowing them to be solved by the most effective means. These processes include embedded Markov chains, line processes, semi-Markov processes, processes with semi-Markov case interference, embedded semi-Markov processes, etc. This book studies a class of problems of queueing theory which can be studied by methods of embedded random processes. Since many processes encountered in queueing theory are not Markov processes by nature, in many cases their investigation can be simplified by application of embedded processes. The possibility of using embedded processes for the solution of queueing theory problems was first demonstrated by A. YA. Khinchin, and was later developed in the works of D. Kendall and L. Takach. In these works, the authors studied the behavior of systems at specially selected moments in time when the states of the systems form a homogeneous Markov chain, which Kendall calls an embedded Markov chain. Thus, by using the well-

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USSR

BRODI, S. M. and FOGOSYAN, I. A., Vlozhennye Stokhasticheskiye Protsessy v Teorii Massovogo Obsluzhivaniya, Kiev, Nauk. Dumka Press, 1973, 127 pp

developed apparatus of Markov chains, many problems of queueing theory can be solved without the application of multidimensional Markov processes. Embedded processes also include semi-Markov processes defined by P. Levi, using which a number of important indicators of the operation of queueing systems can be determined.

The transition from the initial processes to embedded processes leads to a certain loss of information, but in many cases the characteristics of the embedded processes are sufficient for determination of the required parameters of the processes studied. The possibility of solution of queueing models by methods of embedded Markov chains and semi-Markov processes has dictated the expediency of development of new classes of embedded processes for analysis of a broader range of problems. This book presents methods of construction of embedded semi-Markov processes which are used to study processes with discrete case interference. Particular attention is given to the application of such processes to the description of systems with variable operating modes, systems whose behavior is controlled by a semi-Markov process. The introduction of a random process, virtual waiting time, is used to find solutions for queueing models with limitations. This approach allows the authors to study priority systems.

From the foreward

1/2 047 UNCLASSIFIED PROCESSING DATE 2012/11/10
TITLE--CHANGE IN THE DISPERSION AND EXCITON ABSORPTION OF A CADMIUM
SULFIDE CRYSTAL UNDER THE INFLUENCE OF INTENSE RUBY LASER RADIATION --U--
AUTHOR--(02)--~~BRODIA~~ M.S., KAMUZ, A.M. **B**
COUNTRY OF INFO--USSR
SOURCE--FIZ. TVERD. TELA 1970, 12(4), 1251-3
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--CADMIUM SULFIDE, RUBY LASER, LASER RADIATION, LIGHT
DISPERSION, EXCITON ABSORPTION, OPTIC PROPERTY, ABSORPTION SPECTRUM,
CRYSTAL PROPERTY
CENTRAL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/1301 STEP NO--UR/0181/70/012/004/1251/1253
CIRC ACCESSION NO--AP0124952
UNCLASSIFIED

2/2 047

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0124952

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VARIATION OF OPTICAL PROPERTIES WAS STUDIED OF CDS CRYSTAL UNDER THE ACTION OF POWERFUL RUBY LASER RADIATION (1.78 EV). SPECTRA WERE OBTAINED OF EXCITON ABSORPTION AND MEASUREMENTS WERE CARRIED OUT OF THE SPECTRAL DEPENDENCE OF THE MAGNITUDE OF BIREFRINGENCE OF CDS DURING THE ACTION OF LASER RADIATION AND IN ITS ABSENCE. THE LINES OF FREE EXCITONS ARE SHIFTED TOWARD THE LONG WAVELENGTH SIDE BY APPROX. 60 CM NEGATIVE PRIME1. TIME DEPENDENCE OF THE CRYSTAL TRANSPARENCY WAS MEASURED ON THE FREQUENCY OF 20,360 CM NEGATIVE PRIME1. LASER PULSE DARKENING OF THE CRYSTAL DISAPPEARS WHEN THE PULSE CEASES. IT FOLLOWS THAT UNDER THE ACTION OF A POWERFUL LASER RADIATION, NOTICEABLE CHANGES CAN TAKE PLACE IN THE DISPERSION OF CDS CRYSTALS DUE TO VARIATIONS IN THE ABSORPTION SPECTRUM. THE LATTER ARE MAINLY DUE TO THE FIELD ACTION OF THE RADIATION. FACILITY: INST. FIZ., KIEV, USSR.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--ENERGETIC STRUCTURE OF CdS CRYSTAL AND FORM OF ITS EXCITON BANDS
-U-
AUTHOR--(02)-BRODIN, M.S., STRASHNIKOVA, M.I. **B**
COUNTRY OF INFO--USSR
SOURCE--UKRAYIN. FIZ. ZH. (USSR), VOL. 15, NO. 5, P. 705-11 (MAY 1970)
DATE PUBLISHED----MAY 70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--EXCITON, CADMIUM SULFIDE, ABSORPTION SPECTRUM, LINE SPLITTING,
ENERGY BAND STRUCTURE, SINGLE CRYSTAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/1806 STEP NO--UR/0185/70/015/005/0705/0711
CIRC ACCESSION NO--AP0133711
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133711

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. OPTICAL DENSITIES WERE MEASURED BY ABSORPTION SPECTRA OF FINE CDS SINGLE CRYSTALS IN A 'FREE STATE'. THE OBSERVABLE DOUBLET STRUCTURE OF EXCITON BANDS A AND B IS ASSOCIATED WITH MANIFESTATION OF THE SO CALLED LOOP OF EXTREMA IN THE ZONES OF SYMMETRY GAMMA SUB7. B BAND IN THE COMPONENT OF THE SPECTRUM E PARALLEL TO C REMAINS UNSPLIT AND IS DESCRIBED BY THE ASYMMETRIC LORENTZ CURVE WITH NEGATIVE ASYMMETRY. PECULIARITIES OF FORM OF THE EXCITON BANDS ARE UNDER DISCUSSION. (16 REFS.).

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--TEMPERATURE DEPENDENCE OF STIMULATED RADIATION FROM ZNS SUBX,CDS
SUBI-X CRYSTALS DURING TWO PHOTON EXCITATION -U-
AUTHOR-(04)-BRODIN, M.S., BUDNIK, P.I., VITRIKHOVSKIY, N.I., ZAKREVSKIY,
S.V.
COUNTRY OF INFO--USSR **B**
SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(3), 522-6
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ZINC SULFIDE, CADMIUM SULFIDE, LUMINESCENCE, PHONON, MIXED
CRYSTAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1994/0989

STEP NO--UR/0449/70/004/003/0522/0526

CIRC ACCESSION NO--AP0115010

UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0115010

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STIMULATED AND SPONTANEOUS LUMINESCENCE OF MIXED CRYSTALS OF ZNS (9PERCENT) AND CDS (91PERCENT) AT 4DEGREESK ARE STUDIED; ALSO, THE TEMP. DEPENDENCE OF FREQUENCY AND THE MECHANISM OF STIMULATED RADIATION IN THE 4-120DEGREESK RANGE ARE DISCUSSED. AT COMPARATIVELY LOW TEMPS. (4-66DEGREESK) LASING OF THE CRYSTAL OCCURS VIA BOUND OR RECOMBINED EXCITONS. BETWEEN 66 AND 120DEGREESK, LASING ARISES THROUGH FREE EXCITONS WITH LINEAR OPTICAL PHONON PARTICIPATION. FACILITY: INST. FIZ., KIEV, USSR.

UNCLASSIFIED

1/2 046 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ROLE OF PHONONS IN THE STIMULATED EMISSION OF CDS SUBX NEGATIVE SE
SUBI MINUS X CRYSTALS DURING TWO PHOTON EXCITATION -U-
AUTHOR-(03)-BRODIN, M.S., BUDNIK, P.I., REZNICHENKO, V.YA.
COUNTRY OF INFO--USSR *B*
SOURCE--FIZ. TVERD. TELA 1970, 12(3), 710-15
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--LASER RADIATION, STIMULATED EMISSION, EMISSION SPECTRUM,
CADMIUM SULFIDE, SELENIDE, EXITON, PHONON SPECTRUM, CRYOGENIC PROPERTY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FAME--1987/1984 STEP NO--UR/0181/70/012/003/0710/0715
CIRC ACCESSION NO--AP0105058
UNCLASSIFIED

2/2 046

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105058

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT 4 AND 77DEGREE SK,
INVESTIGATIONS WERE CARRIED OUT OF THE SPECTRA OF STIMULATED RADIATION
OF THE SOLID SOLN. CDS SUBX SE SUBNEGATIVEX OF VARIOUS COMPNS. IN 2
PHOTON EXCITATION BY A RUBY LASER, AND THE CONDITIONS WERE ANALYZED FOR
THE APPEARANCE IN THE PROCESS OF GENERATION OF A COMPLEX PHONON SPECTRUM
FOR FREE AS WELL AS FOR BOUND EXCITONS. FOR CRYSTALS WITH A PREDOMINANT
CONTENT OF 1 OF THE COMPONENTS AT 77DEGREE SK, GENERATION TAKES PLACE ON
FREE EXCITATIONS WITH PARTICIPATION OF 1 LONGITUDINAL OPTICAL PHONON (LO
SUB1 OR LO SUB2). FOR CRYSTALS WITH COMPARABLE CONCNS., BOTH LO SUB1
AND LO SUB2 PARTICIPATE IN THE PROCESS OF GENERATION (2 PHONON
TRANSITIONS). WHEN TEMP. DECREASES TO 4DEGREE SK, WHEN GENERATION TAKES
PLACE ON BOUND EXCITATIONS DEPENDING ON THE MAGNITUDE AND SPECTRAL
DISTRIBUTION OF LOSSES, FOR SOME CRYSTALS, TRANSITIONS CAN BE REALIZED
WITH RADIATION OF LONGITUDINAL OPTICAL PHONONS AND WITHOUT THE
RADIATION. FACILITY: INST. FIZ., KIEV, USSR.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--ELIMINATION OF MULTIPLE DRUG RESISTANCE IN COLI BACTERIA BY
AURANTIN AND ULTRAVIOLET LIGHT -U-
AUTHOR-(03)-BRODINOVA, N.S., MOROZ, A.F., GLATMAN, L.I. **B**
COUNTRY OF INFO--USSR
SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 3, PP 244-249
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ESCHERICHIA COLI, DRUG RESISTANCE, ACTINOMYCES, STREPTOMYCIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1985/0472 STEP NO--UR/0297/70/015/003/0244/0249
CIRC ACCESSION NO--AP0100950
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0100950

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT WAS SHOWN THAT AURANTIN, AN ANTICANER ANTIBIOTIC FROM THE GROUP OF ACTINOMYCINS ELIMINATED MULTIPLE DRUG RESISTANCE IN ONE OF THE TWO STRAINS OF E. COLI STUDIED AT A RATE OF 0.5PERCENT. IN CULTURES OF E. COLI (R PRIME PLUS) TREATED WITH AURANTIN, SEGREGATION OF THE RESISTANCE MARKERS FROM R FACTOR WAS ALSO OBSERVED AND SEGREGANT CLONES WITH ELIMINATED RESISTANCE MARKERS (TC PRIMECH) LM PRIMEP SM PRIMEP, (LM PRIMECH SM PRIMECH), TC PRIMEP SU PRIMEP (SM PRIMECH) TC PRIMEP NEGATIVE LM PRIMEP SU AND R COLONIES (TC PRIMECH LM PRIMECH SM PRIMECH SU PRIMECH) WERE FORMED. ON COMBINED TREATMENT WITH AURANTIN AND ULTRAVIOLET LIGHT THE NUMBER OF R COLONIE AND SEGREGANT CLONES (TC PRIMECH) LM PRIMEP SM PRIMEP SU PRIMEP SENSITIVE TO TETRACYCLINE SIGNIFICANTLY INCREASED (UP TO 30.4PERCENT). AT THE SAME TIME ADDITIONAL COLONIES WITH SEGREGATED RESISTANCE MARKERS (SM PRIMECH SU PRIMECH) TC PRIMEP SU PRIMEP SENSITIVE TO STREPTOMYCIN AND SULFADIMEZINE WERE DETECTED. COLONIES WITH LOST R FACTOR ACQUIRED IT UNDER THE EFFECT OF AURANTIN AND ULTRAVIOLET LIGHT AT A RATE OF 10 PRIME NEGATIVE3. NO TRANSFERANCE OF TETRACYCLINE AND SULFADIMEZINE RESISTANCE MARKERS NOT ELIMINATED BY AURANTIN AND ULTRAVIOLET LIGHT WAS OBSERVED ON CONJUGATION WITH THE RECIPIENT CELLS SENSITIVE TO THESE ANTIBIOTICS. SENSITIVITY TO AURANTIN OF E. COLI STRAINS, CARRYING R FACTORS, AND SEGREGANT CLONES WITH ELIMINATED RESISTANCE MARKERS DID NOT CHANGE.

UNCLASSIFIED

BRODOLIN, L. I.

@ computers

GLORIA

TECHNICAL TRANSLATION

FSIC-RF-23-1162-71

ENGLISH TITLE: Long-term Optical Memory Unit

FOREIGN TITLE: Dolgovremennoye opticheskoye zapominayushcheye ustroystvo

AUTHOR: (inventors) *VC* *SSOS/193* *VC*
VC *(all copies)*
A. Z. Janj, L. A. Dugchev, L. I. Brodolin, and
P. L. Vilienskiy

SOURCE: Opublikovaniye Izobreteniya k Avtor'skemu Svidetel'stvu
No. 220315, filed 20 June 1966 (No 1084435/26-24)
and published 16 Sep 1968

Translated for FSIC by Leo Kanner Associates, Redwood City, Ca. 94061

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USSR

UDC 681.327.67'12

BRODOLIN, L. I., VAYNSHTEYN, V. D., DRACHEV, L. A., KAN, A. Z., KUZNETSOV,
B. A., MININ, Yu. P., and PETRUNICHEV, V. N.

"Long-Term Photoscopic Memory"

USSR Author's Certificate No 260926, filed 7 Oct 68, published 10 Jun 70
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 6,
Jun 71, Abstract No 6 B325 P)

Translation: A long-term photoscopic memory designed for storing, retrieving, and selecting a symbol image is proposed. The memory contains a light spot commutator -- for example, a cathode ray tube -- a projection objective with telecentric behavior of the beams in the image space, a lense raster information unit, a fast collective, a transmitting cathode ray tube with storage -- for example, the superorthicon type and digital and analog tracking systems for setting the spot on a given address. The memory is distinguished by the fact that to prevent charging the target when retrieving the required microframe, the device contains an electronic image modulator in the transfer section of the transmitting TV-tube. In order to insure a broad range of variation of the capacity of the TV frame and the selection rate, the target of the transmitting TV tube is executed in the form of a metal fiber disc with a coefficient of secondary emission 1/2

USSR

BRODOLIN, L. I., et al., USSR Author's Certificate No 260926, filed 7 Oct 68, published 10 Jun 70 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika , No 6, Jun 71, Abstract No 6 B325 P)

of the side turned toward the photocathode equal to one. In order to simplify the design and insure the possibility of recording the service information used during operation of the tracking systems in the microframe, the device contains a fiber, vacuum-tight coherent light guide with a cross section equal to the size of the symbol in the focal plane of the collective. The photocathode of the transmitting TV tube is applied to the output end of the light guide, and the input ends of the light guides connected with the photomultipliers of the tracking address system are arranged around the perimeter of the input end. In order to insure the required levels of light flux from the standing light spot, the light spot commutator executed in the form of a cathode ray tube contains a built-in screen which vibrates in its own plane. There is 1 illustration.

2/2

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1/2 018 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--REGULATION OF CONTINUOUS SOLUTION POLYMERIZATION -U-
AUTHOR--BRODOV, D.YU. **B**
COUNTRY OF INFO--USSR
SOURCE--U.S.S.R. 276,072
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--01APR70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHEMICAL-PATENT, CONJUGATE BOND SYSTEM, SOLUTION
POLYMERIZATION, CATALYST, ORGANOMETALLIC COMPOUND, DIENE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3004/1779 STEP NO--UR/0482/70/000/000/0000/0000
CIRC ACCESSION NO--AA0132045
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0132045

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONTINUOUS SOLN. POLYMN. OF CONJUGATED DIENES OVER A COMPLEX ORGANOMETALLIC CATALYST WAS REGULATED BY STABILIZING THE TEMP. IN THE REACTION ZONE BY VARYING THE INPUT OF CATALYST DURING THE STABILIZED INPUT OF MONOMERS. TO STABILIZE THE CONVERSION OF THE MONOMERS AND IMPROVE THE QUALITY OF THE POLYMERS, THE HEAT LOWERED BY A COOLANT AND THE HEAT INTRODUCED INTO THE REACTOR BY THE CHARGE WERE MEASURED. THESE VALUES WERE ADDED UP, AND THE TEMP. OF THE CHARGE OR THE CONSUMPTION OF COOLANT WAS CHANGED IN RELATION TO THE DIFFERENCE BETWEEN THE ACTUAL AND INTENDED HEAT REMOVAL. FACILITY: LEBEDEV, S. V., ALL UNION SCIENTIFIC RESEARCH INSTITUTE OF SYNTHETIC RUBBER.

UNCLASSIFIED

USSR

UDC 616.981.718-036

BRODOV, L. Ye., First Municipal Hospital, Dzheskazgan (Kazakhstan)

"A Case of Q Fever With a Peculiar Course"

Moscow, Klinicheskaya Meditsina, No 2, 1973, pp 144-145

Abstract: Description of a case of Q fever simulating acute abdomen. A 30-year-old male was hospitalized with a tentative diagnosis of typhoid; the symptoms included elevated temperature, headache, chills. A week later sharp pain appeared in the right hypogastrium. X-rays and blood tests presented a picture of acute abdomen probably caused by destructive cholecystitis. An emergency laparotomy failed to reveal any pathology in the abdominal cavity. A gradual improvement the next few days was followed by the reappearance of headaches, elevated temperature, chills, slight jaundice of the sclera. Administration of tetracycline and levomycetin resulted in normalization of the temperature and subsidence of pain in the abdomen, thorax, and lumbar region. On day 28 the complement-fixation test with *Coxiella burnetii* as antigen was positive for the first time.

1/1

- 50 -

USSR

UDC 616.988.73

BRODOV, L. YE., Candidate of Medical Sciences

"Ornithosis"

Moscow, Meditsinskaya Sestra, No 6, 1971, pp 20-24

Abstract: Ornithosis is an acute infectious disease of viral origin that is transmitted to man by infected wild birds and poultry. Some 38 species of birds in the USSR are susceptible to the agent of ornithosis. This general account of the disease touches on the characteristics of the virus, mode of transmission from bird to bird and from bird to man, incubation period, pathogenesis, main symptoms, usual course, x-ray picture, organs involved, hematologic effects, complications, laboratory techniques of diagnosis, treatment, and prevention.

1/1

USSR

UDC: 616.981.718

BRODCV, L. Ye., Candidate of Medical Sciences, Second Moscow Clinical Hospital
of Infectious Diseases

"Q Fever"

Moscow, Meditsinskaya Sestra, No 11, Nov 70, pp 17-20

Abstract: A general description of Q-fever is presented. The following aspects are covered: the agent; the ticks that serve as reservoirs of the agent; various modes of transmission of the disease (in the city, by eating infected food; in rural areas, by handling diseased animals); polymorphic symptoms of the disease; nature of involvement of the lungs, gastrointestinal tract, and nervous system; possibility of recurrences; differential diagnosis; laboratory tests, therapy; and control methods.

1/1

- 45 -

USSR

UDC: 550.834

BRODOV, L. Yu., VEDERNIKOV, G. V., KOCHUGOV, N. A., LUKASHENKO, V. F.,
MUKHUTDINOV, R. A., "Tatneftegeofizika" Trust

"A Device for Automatic Processing of Seismic Recordings"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,
No 11, Apr 72, Author's Certificate No 333511, Division G, filed 25 Jan 71,
published 21 Mar 72, pp 183-184

Translation: This Author's Certificate introduces a device for automatic processing of seismic recordings. The device contains operational drums with the primary information media, readout units, a computer unit, a correction unit and a registration unit. As a distinguishing feature of the patent, in order to suppress regular interference waves and retain the shape of the primary signal, the outputs of the readout units are connected through adders and subtractors, the computer unit and a discriminator to a switching element connected in the registration circuit to connect the output of the subtractor to the correction unit and the registration unit.

1/1

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USSR

PISKAREVA, N. A., KUZNETSOVA, E. Ye., POPOVA, R. P., BRODOVA, M. D.,
TRUSHINSKAYA, E. P., and YAKIMANSKAYA, K. I., Leningrad Scientific Research
Institute of Childrens Infections

"Virological, Clinical and Immunological Characterization of Hong Kong A2
Influenza in Children"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 71, p 492

Translation: The 1969 influenza outbreak in Leningrad was caused by a new antigenic strain of influenza virus of sero type A2 (Hong Kong). During the outbreak, tests were performed on chick embryos infected with materials collected from 53 patients with sporadic forms of the disease, with eight samples collected from foci, and with 10 samples collected from children who had died of influenza. Twenty-three hemagglutinating agents were isolated and identified as A2 Hong Kong influenza viruses. All strains were sensitive to inhibitors. Serological investigation of paired sera of 388 persons revealed that specific immunological shifts took place in children fairly early. Positive shifts occurred in 40.2% of children aged up to 1 year, which considerably exceeded analogous shifts in a similar group of children in previous years. The express method of immunofluorescent analysis of nose and throat smears yielded positive 1/2

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USSR

PISKAREVA, N. A., et al, Voprosy Virusologii, No 4, Jul/Aug 71, p 492

results in 104 out of 165 ill children (63%). Combined positive results by the express method and by the serological method were obtained in about 83% of the total number of individuals examined during the influenza outbreak.

2/2

USSR

UDC 669.15.018.8:620.196.2

POSYLAYEVA, L. I., SMIRNOVA, A. V., and BRODOVA, V. N.

"The Nature of Intercrystalline Corrosion in Low-Carbon Fe-Cr-Ni-Mo-Austenitic Steel"

Sb. tr. TsNII chern. metallurgii (Collection of Works of Central Scientific Research Institute of Ferrous Metallurgy), 1970, vyp. 77, pp 86-92 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 3I595 by authors)

Translation: Austenitic steel of the type 00OKh20N20M4 with varying degree of niobium stabilization was studied. The principal excess phases in steel without Nb are chromium carbides; in understabilized steel, the sigma phase, NbC, and dispersed chromium carbides of the type $Me_{23}C_6$; in stabilized steel, the sigma phase and NbC. It was found that steel without Nb and understabilized steel are susceptible to intercrystalline corrosion in wet-process phosphoric acid. The reason for the appearance of intercrystalline corrosion is the formation of finely dispersed eutectic-type chromium carbides of the type $Me_{23}C_6$, which, precipitating out on the grain boundaries and in the boundary zones, cause sharp chromium depletion of solid-solution regions directly adjacent to the carbide particles. Two illustrations. One table. Bibliography with two titles.

1/1

USSR

UDC 620.196.2.001.5

POSYSAYEVA, L. I., SMIRNOVA, A. V., and BRODOVA, V. N.

"The Nature of Intercrystalline Corrosion in Low-Carbon Fe-Cr-Ni-Mo Austenitic Steel"

Spetsial'nyye Stali i Splavy (Special Steels and Alloys -- Collection of Works), No 77, Metallurgiya Press, 1970, pp 86-92

Translation: A study is made of type 000Kh20N20M4 austenitic steel with various degrees of stabilization by niobium. The primary excess phases in the steel without niobium are chromium carbides; in the incompletely stabilized steel -- the σ phase, NbC and dispersion chromium carbides such as $Me_{23}C_6$; in the stabilized steel -- the σ phase and NbC.

It is established that the steel without niobium and the incompletely stabilized steel are inclined to intercrystalline corrosion (ICC) in extraction phosphoric acid.

The reason for the appearance of ICC is the formation of finely dispersed eutectic-type chromium carbides such as $Me_{23}C_6$ which, separating on the grain boundaries and in the boundary zones, cause a sharp chromium impoverishment of sectors of the solid solution immediately adjacent to the carbide particles. 2 figures; 1 table; 2 biblio. refs.

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BRODOVICH, N. A.

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TECHNICAL TRANSLATION

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87, 216 1/2

ENGLISH TITLE: PROBLEMS OF LASER BEAM DATA TRANSMISSION
PROCEEDINGS OF THE FIRST ALL-UKRAIN CONGRESS, KIEV,
SEPTEMBER 1960

FOREIGN TITLE: PROBLEMY PEREDACII INFORMATSII LAZERNYH IZLUCHENIYEN

AUTHOR: I. A. DERJUGIN, ET AL.

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

Translated for FSTC by ACS1

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- Final Page -

USSR

UDC 621.315.592

BRODOVOY, V. A., DERIKOT, N. Z.

"Properties of GaAs: Cu in Strong Electric Fields"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 6, No 2, 1972, pp 276-280

Abstract: In phenomena for which the deviations of the current carrier concentrations from equilibrium are observed, the capture processes in the traps can play a significant role. If the formation of nonequilibrium current carriers is the result of internal ionization in the semiconductor as a result of an external electric field, it is possible to expect that the capture of the carriers by deep traps leads to characteristic features of the volt-ampere characteristics of the samples. A study was made of the behavior of semiinsulating GaAs: Cu in strong electric fields at $T = 77^\circ \text{K}$. The parallel effect of two mechanisms -- generation of nonequilibrium current carriers as a result of a strong field mechanism and capture of them by deep traps -- leads to switching of the sample to the state with high currents. A study was made of the effect of infrared radiation from the photocurrent extinguishing region on the dark current through the sample. Negative photoconductivity was detected in the same spectral region as extinguishing of the photocurrent. Graphs are presented showing that the extinguishing and negative photocurrent spectra have a boundary

1/2

USSR

BRODOVOY, V. A., et al., Fizika i Tekhnika Poluprovodnikov, Vol 6, No 2, 1972, pp 276-280

at $E_v = 0.41$ electron volts which agrees with $E_v = 0.39-0.45$ electron volts for the energy position of the centers of sensitivity in GaAs: Cu. The step form of the growth of the photocurrent is connected with capture of the holes by deep traps.

2/2

- 135 -

Acc. Nr: 1190044619

Ref. Code: VR 0497

PRIMARY SOURCE: Klinicheskaya Meditsina, 1970, Vol 48,
Nr 1, pp 61-66

B

HIATUS HERNIA AND PEPTIC ULCER

A. S. Stepenko, A. L. Grebenev, M. M. Salman, A. A. Brodskaya

Summary

The results of studies of 50 patients suffering from gastroduodenal peptic ulcer are presented. For the detection of hiatus hernia the authors conducted complex studies including roentgenological investigation and esophagotomokymography. Hiatal hernia was revealed in 20 per cent of patients, this giving grounds to consider it as one of the complications of ulcer. The concomitance of hiatus hernia changes somewhat the clinical picture and requires certain corrections in the treatment of patients with peptic ulcer.

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50/02

REEL/FRAME
19771286

1/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--RAPID METHOD FOR DETERMINING SUGAR IN THE BLOOD -U-

AUTHOR--BRODSKAYA, N.I.

COUNTRY OF INFO--USSR

SOURCE--LAB. DELO 1970, (2), 118-19

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BLOOD CHEMISTRY, SACCHARIDE, CHEMICAL ANALYSIS,
SPECTROPHOTOMETRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0205

STEP NO--UR/9099/70/000/002/0118/0119

CIRC ACCESSION NO--AP0119201

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UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119201

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A RAPID METHOD FOR THE SUGAR DETN. IN BLOOD WAS DESCRIBED. TO 0.8 ML OF 1.5PERCENT 3,5-DINITROSALICYLIC ACID, 0.1 ML OF BLOOD AND 0.1 ML OF PHYSIOL. SOLN. WERE ADDED AND THE MIXT. WAS CENTRIFUGED. TO 0.5 ML OF THE SUPERNATANT, 0.5 ML OF A SOLN. CONTG. 13,8 G PHENOL IN 350 ML OF 10PERCENT NAOH PLUS 510 G SEIGNETT SALT IN 800 ML WATER WAS ADDED AND HEATED FOR 3 MIN ON A BOILING WATER BATH. AFTER DILN., ABSORBANCE WAS MEASURED WITH THE USE OF A GREEN FILTER. THE VALUES OBTAINED BY THE DESCRIBED METHOD WERE 10.3PERCENT LOWER THAN THE VALUES OBTAINED BY THE HAGEDORN JENSEN METHOD AND A LITTLE HIGHER THAN THE VALUES OBTAINED BY THE HEXOKINASE METHOD. FACILITY: LENINGRAD. NAUCH ISSLED. NEIROKHIR. INST. IM. POLENOVA, LENINGRAD, USSR.

UNCLASSIFIED

USSR

Aluminum and Its Alloys

USSR

UDC 669.715'3'721

BRODSKAYA, R. M., and KOLACHEV, B. A., Moscow Aviation Technological Institute, Chair of the Science of Metals and of the Heat Treatment of Metals

"Morphology of Al_9FeNi Phase in Ternary Alloy of Al - Fe - Ni System and in AK4-1 Alloy"

Ordzhonikidze, Izvestiya Vysshikh Uchebaykh Zavedeniy, Tsvetnaya Metallurgiya, No 6, 1973, pp 111-113

Abstract: The alloying Fe and Ni elements, when introduced into AK4-1 alloy, each from 0.8 and 1.3%, are distributed between the solid solution on Al base and the Al_9FeNi phase. Ni does not change the recrystallization temperature of Al alloys; apparently its role is to bond Fe into the Al_9FeNi phase and to prevent the development of the brittle compound Al_7CuFe . Form and dimensions of separations of the Al_9FeNi phase have been studied on the ternary model-alloy containing Al and 1% Fe and 1% Ni and on the AK4-1 alloy with the same Fe and Ni contents. Eutectic separations of lamellar type observed in the structure of cast Al alloys and the different character of phase separations
1/2

USSR

BRODSKAYA, R. M., and KOLACHEV, B. A., *Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya*, No 6, 1973, pp 111-113

in the AK4-1 alloy are discussed by reference to photographs. A supposition is given for the mechanism of the observed development of small-dispersed particles. Two figures, six bibliographic references.

2/2

- 1 -

USSR

UDC 612.45+612.766.1

MATLINA, E. Sh., VASIL'YEV, V. N., and BRODSKAYA, T. V., Laboratory for Problems in Control of Functions in Animals and Man, Academy of Sciences USSR imeni, N. I. Grashchenkov, and Division of the Physiology Labor All-Union Scientific Research Institute of Railroad Hygiene, Ministry of Railroads USSR

"Excretion of Catecholamines and Their Precursors in Night and Day Workers"

Leningrad, Fiziologicheskii Zhurnal SSSR, No 7, 1971, pp 1,027-1,031

Abstract: Study of the activity of the sympatheticoadrenal system in railroad employees working a succession of night and day shifts. The amount of epinephrine and (E) and norepinephrine (NE) on a work day was found to be the same as on a rest day, but there was an increase in the ratio of E, NE, DA (dopamine) to D (dopa) that did not return to normal on the first day of rest. There was an increase in the excretion of NE and increase in the ratio of E and NE to DA and decrease in the ratio of E, NE, and DA to D the night after day work compared with night rest. In general, on the day of rest the amount of catecholamines secreted by the shift workers was lower than that excreted by the control. The blood cholesterol level was higher during a work day than on a rest day.

1/1

- 60 -

1/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--DISTRIBUTION FUNCTIONS IN SURFACE LAYERS. IX. DISTRIBUTION
FUNCTIONS IN A MULTICOMPONENT LIQUID MIXTURE -U-
AUTHOR--(03)-RUSANOV, A.I., KUNI, F.M., BRODSKAYA, YE.N.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 756-65 **B**
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--DISTRIBUTION FUNCTION, FLUID SURFACE, VAN DER WAALS FORCE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/2000 STEP NO--UR/0076/70/044/003/0756/0765
CIRC ACCESSION NO--AP0120643
UNCLASSIFIED

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PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0120643

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON THE BASIS OF THE RESULTS OF RECENT THEORETICAL STUDIES ON THE DISTRIBUTION FUNCTIONS IN THE SURFACE LAYERS OF SIMPLE LIQS. (K. AND RL, 1969), ASYMPTOTIC FORMULAS WERE OBTAINED FOR THE DISTRIBUTION FUNCTIONS OF COMPONENTS IN MULTICOMPONENT LIQ. SURFACE LAYERS AT LARGE DISTANCES FROM THE BOUNDARY SURFACE. THE PARTICULAR CASE FOR VAN DER WAALS FORCES AND FORCES WHICH TAKEN INTO ACCOUNT THE RETARDATION EFFECTS OF ELECTROMAGNETIC INTERACTIONS OF MOL. IS CONSIDERED. FACILITY: LNINGRAD. GOS. UNIV. IM. ZHDANOVA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--PARTITION FUNCTIONS IN SURFACE LAYERS. XI. ASYMPTOTICS OF SINGLE
PARTICLE PARTITION FUNCTIONS IN THE SURFACE LAYER OF A LIQUID MIXTURE
AUTHOR--(03)--KUNI, F.M., RUSANOV, A.I., BRODSKAYA, YE.N.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 553-9 **B**
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--PARTITION COEFFICIENT, FLUID STATE, FLUID SURFACE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1379 STEP NO--UR/0076/70/044/003/0553/0559
CIRC ACCESSION NO--AP0128779
UNCLASSIFIED

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PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0128779

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON THE BASIS OF THEORETICAL
CONSIDERATIONS, THE ASYMPTOTICS OF SINGLE PARTICLE PARTITION FUNCTIONS
AT A LARGE DISTANCE FROM PHASE BOUNDARY IS FOUND. FACILITY:
LENINGRAD. GOS. UNIV. IM. ZHDANOVA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--PARTITION FUNCTIONS IN SURFACE LAYERS. X. PRESSURE TENSOR IN A
MULTICOMPONENT LIQUID MIXTURES -U-
AUTHOR-(03)-RUSANOV, A.I., KUNI, F.M., BRODSKAYA, YE.N.
CCOUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 766-72
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--FLUID SURFACE, TENSOR, PRESSURE, VAN DER WAALS FORCE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/1231 STEP NO--UR/0076/70/044/003/0766/0772
CIRC ACCESSION NO--AP0128647
UNCLASSIFIED

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2/2 017

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0128647

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ASYMPTOTIC FORMULAS FOR THE NORMAL AND TANGENTIAL COMPONENTS OF THE PRESSURE TENSOR IN MULTICOMPONENT LIQ. SURFACE LAYER AT LARGE DISTANCES FROM THE BOUNDARY SURFACE ARE DERIVED IN THE NEXT PART OF THE STUDY ON THE PRESSURE TENSOR IN LIQ. SURFACE LAYERS. THE DERIVATION IS BASED ON THE ASYMPTOTIC EQUATIONS FOR 1, AND 2, PARTIAL DISTRIBUTION FUNCTIONS OF MULTICOMPONENT MIXTS. THE PARTICULAR CASE WAS CONSIDERED OF VAN DER WAALS FORCES AND RETARDATION EFFECTS OF ELECTROMAGNETIC INTERACTIONS OF MOLES. ACTING BETWEEN THE MOLES. OF THE SYSTEM. THE DERIVED ASYMPTOTIC FORMULAS ENABLE THE DETN. OF THE ASYMPTOTIC FUNCTION OF LOCAL TENSION IN THE MULTICOMPONENT SURFACE LAYER AS A CHARACTERISTIC OF ELEMENTARY LAYER TENSION WITH UNIT THICKNESS INSIDE THE SURFACE LAYER. FACILITY:
 LENINGRAD. GOS. UNIV. IM. ZHDANOVA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--NMR STUDY OF THE ASSOCIATION OF ALCOHOLS AND PHENOLS -U-
AUTHOR--(03)-BRODSKIY, A.I., POKHODENKO, V.D., KUTS, V.S.
COUNTRY OF INFO--USSR **B**
SOURCE--USP. KHIM. 1970, 39(5), 753-72
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--NMR SPECTRUM, HYDROGEN BONDING, MOLECULAR STRUCTURE, ALCOHOL,
PHENOL

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605013/B11 STEP NO--UR/0074/70/039/005/0753/0772
CIRC ACCESSION NO--AP0140359
UNCLASSIFIED