USSR

BAYBAKOVA, O. V., and MOLODYKH, L. V., All Union Institute of Plant Breeding
imeni N. I. Vavilov

"Susceptibility to Powdery Mildew of Varieties of Peas"

Moscow, Selektsiya i Semenovodstvo, Vol 36, No 6, Nov/Dec 71, pp 75-76

Abstract: Powdery mildew caused by Erysiphe communis is the most common
disease of peas in Leningradskaya Oblast'. Dry and hot weather favors the
development of the disease. Forty varieties of peas were subjected to tests
to determine the susceptibility to powdery mildew. Methods recommended by the
All Union Institute of Plant Protection were applied in estimating the degree
of infection. Slow-ripening varieties were more susceptible to infection than
rapidly ripening varieties or those with a medium rate of ripening, because
their ripening coincided with the time of mass development of the disease.
Of the forty varieties tested, three showed a low susceptibility to powdery
mildew, 10 a medium susceptibility, and 27 a high susceptibility. The
varieties with a low susceptibility (degree of infection of the plants on
the basis of the plant area affected, 20-25%) were Afganistanskiy, Perchak,
and Shirobana kinusaja, and those with a medium susceptibility (degree of
infection 25-50%) Chicara, Pobeditel', Signal, Superperfection, Da Beira,
Olho preto, Acclimatized Round-Seeded, Ambrosiana, Nano Taccola, and Ehgl.
Sabel.

USSR   UDC 518:517.949.12

OSIPOV, V. M., GONCHAROV, V. I., MOLODYKH, V. A., and CHUDINOV, V. N.

"Approximation of Complex Transfer Functions by Interpolation"

Translation: In analog computer investigations of automatic control systems
of processes with distributed parameters, complex transfer functions must be
approximated by fractionally rational expressions. A method of finding the
coefficients of such approximating expressions by interpolation is presented
for the case of processes with distributed parameters that have monotonic
or near-monotonic transfer characteristics, which are approximated by
exponents with a high degree of accuracy. The increase in approximation
accuracy is due to the increase in the order of the approximating expression.
Results of approximating transfer functions of the lag component are discussed.

1/1

USSR   UDC 547.26'118

BARABANOV, V. I., SAZONOVA, Z. Ya., MOLODYKH, Zh. V. Kazan Veterinary
Institute imeni N. E. Bauman

"Synthesis of Halogenated Phosphorylated Acetals of Chloral and Bromal"

Abstract: Biologically highly active esters (I) were obtained from the reac-
tion of halogen-substituted hemiacetals of chloral and bromal with dipropyl
chlorophosphite. I were prepared by mixing 0.1 g-mole of hemiacetal and 0.1
g-mole triethylamine in diethyl ether, cooling the mixture, and adding drop-
wise dipropyl chlorophosphite. Physical data for many such compounds are
given in tabular form.

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USSR   UDC: 621.374.33(088.8)

MOLODYKO, B. K.

"A Device for Equalizing the Currents of Two Transistors Connected in Parallel"

USSR Author's Certificate No 283324, filed 19 Jul 68, published 7 Dec 70 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6G307 P)

Translation: A device is proposed for equalizing the currents of two parallel-connected transistors operating in the switching mode. The device contains a current-equalizing reactor with two windings which are connected to one of the poles of the power supply. To improve accuracy in equalizing the currents through the transistors with simultaneous elimination of electrical losses, the free ends of the windings in the current-equalizing reactor are connected in opposition and tied to the emitters of the transistors.

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Information Theory

USSR

UDC: 682.327.02

BUROVIKOV, I. I., MOLOGIN, A. I.

"A Direct-Access Memory"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 6, 1970, pp 37-38, patent No 262181, filed 16 Dec 68

Abstract: This Author's Certificate introduces a direct-access memory which contains a stack of accumulative matrices, a monitoring unit and a control unit. Connected to the matrix stack are the address and number channels of the memory. As a distinguishing feature of the patent, provision is made for detection and correction of malfunctions. The monitoring unit contains a checking register, a cadence pulse generator, a memory cell address counter, a malfunction coordinate selector, a unit which shapes a malfunction coordinate selector interrogation signal, a gating signal shaper, and a reset signal blocking unit. Connected to the input of the malfunction coordinate selector are the outputs of the unit which shapes the selector interrogation signal and the outputs of the number register for the memory number channel and the checking register. The corresponding inputs of the checking register are connected to the outputs of channels which are coupled to the readout amplifiers of the memory number channel and to the gating signal channel. The inputs of the reset signal blocking unit are connected to the output of the control unit and to the output of the malfunction coordinate selector. The output of the cadence pulse generator is connected to the gate

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BUROVIKOV, I. I., MOLOGIN, A. I., Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 6, 1970, pp 37-38, patent No 262181, filed 16 Dec 68

input, and the output of the gate is connected to the input of the address counter, and through a collector circuit to the input of the control unit, while the address counter output is connected to the input of the address register in the memory number channel.

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1/2   023   UNCLASSIFIED   PROCESSING DATE--23OCT70
TITLE--ON THE CLASSIFICATION OF SILICOTUBERCULOSIS -U-

AUTHOR-(05)-MOLOKANOV, K.P., RASHEVSKAYA, A.M., KONCHALOVSKAYA, N.M.,
SENKEVICH, N.A., KALITEYEVSKAYA, T.N.
COUNTRY OF INFO--USSR

SOURCE--GIGIYENA TRUDA I PROFESSIONAL'NYYE ZABOLEVANIYA, 1970, NR 4, PP
49-52
DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TUBERCULOSIS, SILICA, RADIOGRAPHY, NECROSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1983/1736   STEP NO--UR/0391/70/000/004/0049/0052

CIRC ACCESSION NO--AP0054578
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0054578

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A CLINICO ROENTGENOLOGICAL
CLASSIFICATION OF SILICOTUBERCULOSIS WHICH FOR A NUMBER OF YEARS IS HAS
BEEN USED AT THE CLINIC OF THE INSTITUTE OF INDUSTRIAL HYGIENE AND
OCCUPATIONAL DISEASES OF THE AMS OF THE USSR, IS OFFERED FOR DISCUSSION.
THE AUTHORS SUBDIVIDE SILICOTUBERCULOSIS INTO 2 DISTINCT GROUPS. THE
FIRST INCLUDES SILICOTUBERCULOSIS WHERE THE FORM OF TUBERCULOSIS CAN BE
CONDITIONALLY SPECIFIED AGAINST THE BACKGROUND OF SILICOSIS.   TO THE 2D
GROUP IS REFERRED THE PROCESS IN WHICH DEFINITION OF THE TUBERCULOSIS
FORM AND, AT TIMES, THE STAGE OF SILICOSIS TOO APPEARS TO BE IMPOSSIBLE.
THE FOLLOWING FROMS OF THE DISEASE ARE SET APART WITH REFERENCE TO THE
2D GROUP: SILICOTUBERCULOUS BRONCH ADENITIS, MICRO AND MACRONODULAR AND
ALSO MASSIVE SILICOTUBERCULOSIS. MOREOVER, IT IS SUGGESTED THAT THE
PRESENCE OF TUBERCULOUS INTOXICATION, CASEOUS DEGENERATION AND POSITIVE
BECILLOSCOPY BE POINTED UP SEPARATELY, ALONG WITH THE ABOVE MENTIONED
CONDITIONS.

USSR   UDC: 621.762:669.018.25(088.8)

MOLOKHOV, I. F., STRAKHOV, N. S., CHEPURKIN, Yu. N., KARINKIN, P. M., TUNEV, I. G.

"Method of Manufacture of Metal Ceramic Products"

Translation: In order to increase the wear resistance (by 1.5-6 times) of hard alloy products, they are annealed after sintering in a medium of quartz sand at 800-900°, then normalized at 900-950°. The method has been tested under production conditions, provides for an increase in wear resistance of hard alloy tools working under conditions of vibration during cutting of channels and drilling of ZhSBK alloy.

Hydraulic and Pneumatic

USSR   UDC 532.546.013.2

KORNIL'TSEV, YU. A., MOLOKOVICH, YU. M.

"Electromodeling of Plane-Radial Problems in the Filtration of Newtonian Fluids"

V sb. Probl. gidrodinamiki i rats. razrabotki neft. mestorozhd (Problems of the Hydrodynamics and Rational Developments of Petroleum Deposits -- Collection of Works), Kazan', Kazan' Institute, 1971, pp 44-50 (from RZh-Mekhanika, No 12, Dec 71, Abstract No 12B1568)

Translation: The non-steady-state plane-radial filtration of fluids exhibiting an inertial shift gradient is discussed. The electrical analog for filtration rate and for the equation which the pressure $p(r, t)$ satisfies is described and the corresponding similarity criteria are derived. Solved on the analog electrical model are problems with the initial condition $p(r, 0) = p_0$, boundary conditions $p(r_c, t) = p_c < p_0$ and either $p(R, t) = p_0$ or $\partial p/\partial r = \beta$ for $r = R$ and also problems without initial conditions under the following boundary conditions: $p(r_c, t) = (p_0 - p_c) \cos \omega t$ and either $p(R, t) = p_0$ or $\partial p/\partial r = \beta$ for $r = R$. Solutions are represented in the form of graphs and tables. The filtration of Newtonian and non-Newtonian fluids is compared. E. V. Skvortsov.

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USSR

UDC: 519.2

MOLOSTVOV, V. S.

"On a Differential Game With Random Perturbations"

Vestn. Mosk. un-ta. Mat., mekh. (Moscow University Herald. Mathematics, Mechanics), 1972, No 6, pp 58-63 (from RZh-Kibernetika, No 5, May 73, abstract No 5V108 by the author)

Translation: A differential two-person game with zero sum is considered:

$$\dot{x} = f(t, x, w, u, v), \quad x(0) = x_0, \quad w(0) = w_0, \tag{1}$$

$$J[x_0, w_0, u, v] = M\left\{\left(\int_0^T \omega(t, x, w, u, v)\, dt + F(x(T)))/x(0) = x_0, \; w(0) = w_0\right)\right\} \tag{2}$$

where $t \in [0, T]$, $x \in R^n$, $w \in R^m$, $u \in R^p$, $v \in R^q$, $M\{\cdot/\cdot\}$ is the conditional mathematical expectation. Strategies are constructed by the players in the form $u = u(t,x,w)$, $v = v(t,x,w)$. The functions f, u, v are piecewise-continuous with respect to t and satisfy the Lipshits condition with respect to x, w, u, v to equal degree, the scalar functions ω and F are continuous;

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w(t) is a purely discontinuous bounded Markov process with stepwise rea-
lizations. The strategies are called optimum if they yield a saddle
point in functional (2) on the strength of system (1). Sufficient con-
ditions of optimality of strategies are derived on the basis of the
method of optimum Lyapunov functions as proposed by N. N. Krasovskiy for
stochastic control problems. These conditions give an explicit form of
optimum strategies for linear games with square-law payoff. In this case
the additive perturbation appearing in the equations of motion is as-
sumed to be a scalar, homogeneous Markov process with a finite number of
states. Finding the optimum strategies in linear games requires solving
differential equations, one of which is a matrix equation of the Riccati
type. A pursuit and evasion game on a straight line is considered by
way of example.

ADLER, YU. P., DOLZHANSKIY, YU. M., MOLOSTOVA, I. I., and SIVILEVA, L. I.,
Institute for Improving the Qualifications of the Ministry of the Chemical
Industry USSR, All-Union Institute of Aviation Materials

"Statistical Study of the Mechanical Properties in the Al-Zn-Mg-Cu System
Using Projected-Experiment Methods"

Abstract: The study related the mechanical properties of the Al-Zn-Mg-Cu
system to the composition of the melt, containing the following weight % of
metals: Zn, 7.5 and 8.5; Mg, 2.5 and 3.5; Cu, 1.5 and 2.3 and Zr, 0.13%.
This resulted in 8 alloys for the first stage. The alloys prepared during the
second stage had the following compositions: Zn, 8.0 and 9.5%; Mg, 1.5 and
2.5%; Cu, 1.0 and 2.0%; Zr, 0 and 0.13%; Co, 0 and 0.2%; Mn, 0. and 0.3%; Fe,
0.1 and 0.2%. The mechanical properties measured were the strength (σ_B in
kg/mm^2) and the relative extension at the rupture point (δ, in %). Sets
of equations of the form δ or $\sigma_B = A \pm BX_b \pm CX_c \ldots NX_n$ were set up and
the coefficients A - N analyzed in matrix form. The X_n is the concentration

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ADLER, YU. P., et al., Tsvetnaya Metallurgiya, No 5, 1973, pp 135-139

of component N. The additions of Zn, Mn, Co resulted in an increase in the strength. The decrease of Mg from 3.5 to 2.5 increased the relative extension from 8.3 to 11.7%.

USSR   UDC 8.74

AYNBERG, V. D., KONOVODCHENKO, I. G., MOLOSTVOVA, L. V., RUMYANTSEVA, G. D.,
SABSOVICH, L. L.

"Expansion of the Library of Standard Procedures of the TA-1M Translator"

Tr. TsNII stroit. konstruktsiy (Works of the Scientific Research Institute of
Structural Parts), 1971, vyp. 20, pp 5-7 (from RZh-Kibernetika, No 9, Sep 72,
Abstract No 9V616)

Translation: A list of developed standard procedures of the TA-1M translator
is presented for: 1) formation of matrices and algebraic operations on them;
2) printout of files   using the alphanumeric printer; 3) exchange
of files in ready-access memory with the external memory of the computer. It
is noted that reference to all the developed procedures is made using the
standard procedure operator $pN(q_1, q_2, \ldots, q_n)$ where N is the library number

of the standard procedure, and $q_1, q_2, \ldots, q_n$ are its actual parameters in

place of which the identifiers of the variables and files, the numbers and
arithmetic expressions can be substituted. All of these described procedures
are formulated as standard programs in the IS-2 system, and the TA-1M translator
is used without auxiliary shaping subprograms. They are written on the magnetic
tape of the translator library and find broad application, increasing the
volume of the ready-acces and external memories used, facilitating the program-
ming process in ALGOL and reducing the solution time of the problems.

1/1

Immunology

USSR   UDC 615.371:576.858.25].038+616.988.25-002.395.42-085.371-039.71

DUBOV, A. V., KOZLOV, L. B., MOLOTILOV, B. A., and FENEVA, M. A., Tyumen' Scientific Research Institute of Regional Infection Pathology, Ministry of Health RSFSR, and Antiencephalitis Division, Ministry of Health RSFSR

"Live Vaccine Against Tick-Borne Encephalitis. Antigenic Potency"

Moscow, Voprosy Virusologii, No 6, Nov/Dec 72, pp 703-705

Abstract: Live vaccine and inactivated formolvaccine against tick-borne encephalitis were tested on 980 individuals to determine differences in immunogenicity and to derive optimum vaccination schedules. Single live vaccination produced virus-neutralizing antibodies in 46% of the individuals, anti-hemagglutinating antibodies in 43%, and complement-fixing antibodies in 6%. With one vaccination schedule production of virus-neutralizing antibodies was 62% greater with live than with inactivated vaccine. The best vaccination schedule for live vaccine was 2 injections (1 ml, 5.5-6.7 lg LD_{50}) 3.5 months to 1 year apart. A pronounced booster effect was noted when individuals had 2-3 previous vaccinations by inactivated vaccine. Thus use of live tick-borne encephalitis vaccine is recommended in foci in which the population had undergone immunization by formolvaccine.

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USSR   UDC: 537.312.62

KADYKOVA, G. N., MOLOTILOV, B. V., PROKOSHIN, A. F., SERGEYEV, I. F.,
FEDOTOV, L. N.

"Properties of 35BT Superconductive Alloy"

Moscow, Sverkhprovodyashchiye aplavy i soyedin.--sbornik (Superconductive
Alloys and Compounds--collection of works), "Nauka", 1972, pp 160-166 (from
RZh-Radiotekhnika, No 12, Dec 72, abstract No 12D558 [résumé])

Translation: The structure, electrical resistance and thermal expansion
of 35BT superconductive alloy containing titanium and small additives of
zirconium in addition to 35% niobium were studied in the state after cold
deformation, annealing, and also during heating. A maximum current den-
sity $I_k = 1 \cdot 10^5$ A/cm^2 in a transverse magnetic field of 30,000 Bi/cm was
reached after cold deformation and annealing at 450°C for 4 hours. Segre-
gations of α-phase with transverse dimensions of about 300 Å are observed
in the structure of the alloy in this state. On the $I_k(H)$ curve of the
specimens in the state after cold deformation and after annealing at
200-300°C, a peak is observed due to the presence of α-phase in the alloy
structure. Four illustrations, bibliography of 14 titles.

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UDC 537.312.62

IL'ICHEV, A. I., MOLOTILOV, B. V., SUVOROV, V. A., FEDOTOV, L. N., SHIRYAYEV, YU. P.

"Properties of Superconducting Materials"

Sb. tr. TsNII chern. metallurgii (Collected Works of the Central Scientific Research Institute of Ferrous Metallurgy), 1971, vyp. 78, pp 108-110 (from RZh-Radiotekhnika, No 6, Jun 72, Abstract No 6D450)

Translation: In recent years the Central Scientific Research Institute of Ferrous Metallurgy has developed and mastered the production of the following superconducting materials: 65BT, wire (ChMTU 1-29-66); 50BT, wire (ChMTU/TsNIIChM 1458-67); 35BT, wire (ChMTU/TsNIIChM 1489-69); 70B, tape (ChMTU/TsNIIChM 1491-69); SKM, compositional material (ChMTU/TsNIIChM 1487-69). In this survey a study is made of the technological and the physical-mechanical properties of the indicated materials, and recommendations are made with respect to their application.

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Single Crystals

M

UDC 669.1:539.374

USSR

AFANAS'YEV, S. V., and MOLOTILOV, B. V., Institute of Precision Alloys, Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin, and Leningrad Steel Rolling Mill

"Plastic Deformation of Fe-3% Si Single Crystals under Stress"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 29, No 4, Apr 70, pp 890-892

Abstract: An experimental study was made of slip in single crystals of Fe-3% Si. Single crystals with an orientation of (110) [001] and minimum slope of the (110) plane to the plane of the sheet from which the samples were cut $(2-3^0)$, were cut into samples measuring 0.5 x 13 x 120 mm at different angles 'a' $(0 \leq a \leq 90^0)$ to direction [001]. The samples were strained by elongation at two different rates $(4 \times 10^{-3}$ and 4×10^{-5} sec$^{-1})$ to the yield point. The change in the active systems of slip (for traces of slip in two mutually perpendicular planes) and the yield point in changing orientation of the samples were analyzed.

A comparison of experimental values for the angles, formed by slip traces, with calculated angles for the same slip systems did not show complete conformance with any of the inspected systems; the experimental data were closer to the results for the system $\{hkl\} < 111 >$, than for planes of maximum tangential stress, but still with no conformance.

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Thus, slip in the Fe-3% Si alloy can be characterized by the following features:

1. Slip has a non-crystallographic character in all planes except the $\{110\}$ plane.

2. Change in yield point can be closely described by the principle of critical shear stresses for the slip system $\{110\} \langle 111 \rangle$.

3. The planes of slip are close to the planes of maximum tangential stress but not coincident with them.

4. Slip is asymmetrical for relatively positive and negative angles.

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TITLE--EFFECT OF PLASTIC DEFORMATION AND RECOVERY ON THE MAGNETIC
  PREPERTIES OF TRANSFORMER STEEL CRYSTALS -U-
AUTHOR-(05)-BRASHEVAN, G.A., VEKSLER, A.Z., DRUZHININ, V.V., MOLOTILOV,
  B.V., NOVIKOV, V.F.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK. SSSR, SER. FIZ. 1970, 34 (2)- 322-8

DATE PUBLISHED-------70

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

TOPIC TAGS--PLASTIC DEFORMATION, TRANSFORMER STEEL, METAL CRYSTAL, SHEET
  METAL, MAGNETIC PROPERTY, MAGNETOSTRICTION, CRYSTAL DISLOCATION, ALLOY
  COMPOSITION, METAL ROLLING, SILICON STEEL, HYDROGEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/1529   STEP NO--UR/0048/70/034/002/0322/0328

CIRC ACCESSION NO--AP0120310
                        UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--23OCT7

CIRC ACCESSION NO--AP0120310
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. LARGE CRYSTALS CUT OUT FROM
TRANSFORMER METAL SHEET, 0.35 MM THICK, REFINED IN H (850DEGREES, 4 HR)
AND UNDER VACUUM (1100DEGREES, 4 HR) WERE STUDIED. AFTER REFINING, THE
STEEL CONTAINED SI 2.9, C 0.004, N 0.005, AND S 0.003PERCENT. STUDIES
OF THEIR MAGNETIC STRUCTURE (BY THE POWDER METHOD), AS WELL AS OF
DISLOCATION DS. WERE MADE AT THE SAME SPOT OF THE SAMPLE. SP. CORE
LOSSES, COERCIVE FORCE, H SUBC, AND MAGNETOSTRICTION WERE MEASURE.
ROLLING IN THE (001) DIRECTION PRODUCED A STRUCTURE WITH A MUCH LOWER
DISLOCATION D. THAN ROLLING IN THE (110) DIRECTION. HOWEVER, WITH
SMALL DEFORMATIONS H SUBC (001) LARGER THAN H SUBC (110). THE
SIMULTANEOUS ACTION OF STRESSES AND DISLOCATION DS. LED TO A CHANGE IN
DELTA H SUBC. A LINEAR CORRELATION WAS NOTED BETWEEN H SUBC AND SP.
CORE LOSSES.   FACILITY: TSNIICHM IM. BARDINA, MOSCOW, USSR.

UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--09OCT70

1/2   019
TITLE--SECONDARY RECRYSTALLIZATION IN COLD ROLLED SILICON STEEL ALLOYED IN THE ANNEALING PROCESS -U-
AUTHOR-(05)-AFANASYEV, S.V., BARYATINSKIY, V.P., GORBACHEV, V.N., KRYZHANOVSKIY, V.V., MOLOTILOV, B.V.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 276-80

DATE PUBLISHED--------70

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

TOPIC TAGS--SILICON STEEL, METAL RECRYSTALLIZATION, COLD ROLLING, TRANSFORMER STEEL, ALLOY COMPOSITION, METAL TEXTURE, HIGH QUALITY STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/0190   STEP NO--UR/0048/70/034/002/0276/0280

CIRC ACCESSION NO--AP0115894
UNCLASSIFIED

CIRC ACCESSION NO--AP0115894

ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT. THE PROCESS OF SECONDARY RECRYSTN.
IN THE PRESENCE OF S WAS STUDIED ON COLD ROLLED, HIGH PURITY TRANSFORMER
STEEL SHEET 0.05, 0.08, AND 0.10 MM THICK TO DET. THE EFFECTS OF THE
PRIMARY STRUCTURE, HEAT TREATMENT CONDITIONS, AND THE S CONTENT ON THE
FINAL PRODUCT. THE STEEL CONTAINED C 0.007, MN 0.08, SI 3.05, P 0.006,
S 0.0025, NI 0.04, CR 0.01, CU 0.05, AL 0.01, AND N 0.0107PERCENT.
ALLOYING THE THIN SHEET IN THE ANNEALING PROCESS MADE IT POSSIBLE TO
CONTROL THE SECONDARY RECRYSTN. THE STRUCTURE AND TEXTURE OF THE
SECONDARY MATRIX DEPENDED ON BOTH THE INITIAL STRUCTURE AND THE AMT. OF
S INTRODUCED BY DIFFUSION.   AT RELATIVELY LOW S CONCNS. THE SECONDARY
RECRYSTN. DEVELOPED A RIBBED TEXTURE WHEREAS AT HIGHER S CONCNS. IT
RESULTED IN AN ORIENTATION NEAR (111) (110). A PRELIMINARY RECRYSTN.
OWING TO HEAT TREATMENT AND A SUBSEQUENT STABILIZATION OF THE PRIMARY
MATRIX BROUGHT ABOUT THE FORMATION OF A MORE PERFECT TEXTURE IN
SECONDARY RECRYSTN.   FACILITY: TSNIICHM IM. BARDINA, MOSCOW,
USSR.

1/2   036   UNCLASSIFIED   PROCESSING DATE--04DEC70
TITLE--PLASTIC DEFORMATION OF IRON 3PERCENT SILICON SINGLE CRYSTALS
   SUBJECTED TO TENSILE STRAIN -U-
AUTHOR-(02)-AFANASYEV, S.V., MOLOTILOV, B.V.

COUNTRY OF INFO--USSR

SOURCE--FIZIKA METALLOV I METALLOVEDENIE, APR. 1970, 29(4), 890-892

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PLASTIC DEFORMATION, SINGLE CRYSTAL, STRAIN, STRESS ANALYSIS,
   IRON, SILICON, CRYSTAL LATTICE STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/0207   STEP NO--UR/0126/70/029/004/0890/0892

CIRC ACCESSION NO--AP0129463
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0129463

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MECHANISMS OF PLASTIC
DEFORMATION IN FE-3PERCENT SI SINGLE CRYSTALS SUBJECTED TO TENSILE
STRAIN WERE STUDIED WITH SPEICAL REF. TO THE QUESTION OF SLIP. SLIP IN
GENERAL WAS OF A NON CRYSTALLOGRAPHICAL CHARACTER WITH RESPECT TO ALL
PLANES EXCEPT THE (110); THE SLIP TRACES DID NOT CORRESPOND TO SPECIFIC
TYPES OF SLIP PLANE. THE SLIP PLANES WERE CLOSE TO THE PLANES OF MAX.
TANGENTIAL STRESS, BUT FAILED TO COINCIDE COMPLETELY WITH THESE.

UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--27NOV70
TITLE--DETERMINATION OF THE MONOTONIC BENDING OF CRYSTAL LATTICES BY X RAY
   DIFFRACTION TOPOGRAPHY -U-
AUTHOR-(02)-MAKAROV, V.P., MOLOTILOV, B.V.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB., 1970, 36, (2), 187-189

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--CRYSTAL LATTICE DEFORMATION, X RAY DIFFRACTION ANALYSIS,
   TOPOGRAPHY, CRYSTAL SURFACE, X RAY MEASUREMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/0312   STEP NO--UR/0032/70/036/002/0187/0189

CIRC ACCESSION NO--AP0129544
                         UNCLASSIFIED

2/2   025
CIRC ACCESSION NO--AP0129544

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN IMPROVED METHOD OF DETERMINING
THE MONOTONIC BENDING OF METALLIC LATTICES, BASED ON THE SCHULZ X RAY
TOPOGRAPHICAL TECHNIQUE, IS DESCRIBED. A STRAIGHT WIRE IS STRETCHED
OVER THE CRYSTAL AND THE IMAGES OF THIS WIRE FORMED BY X RAY DIFFRACTION
CORRESPOND TO THE BENDING OF THE CRYSTAL PLANES. A FORMULA REPRESENTING
THE RELATIONSHIP BETWEEN THE SHAPE OF THE WIRE IMAGE AND THE CURVATURE
OF THE LATTICE IS DERIVED. THE FORMULA ENABLES A DISTINCTION TO BE
MADE BETWEEN THE ACTUAL BENDING OF THE PLANES AND ASPERITIES ON THE
CRYSTAL SURFACE.

UNCLASSIFIED

1/2   019   UNCLASSIFIED   PROCESSING DATE--23OCT7'
TITLE--STRUCTURAL REASONS FOR THE PRODUCTION OF TRANSFORMER STEEL WITH
  CUBIC TEXTURE -U-
AUTHOR-(03)-SOSNIN, V.V., MOLOTILOV, B.V., CHERVONENKOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 367-70

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--TRANSFORMER STEEL, METAL TEXTURE, ALLOY PHASE TRANSFORMATION,
  IRON ALLOY, SILICON ALLOY, HOT ROLLING, SOLID SOLUTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/1525   STEP NO--UR/0048/70/034/002/0367/0370

CIRC ACCESSION NO--AP0120306
                          UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--23OCT7

CIRC ACCESSION NO--AP0120306
ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT.   STRUCTURAL CHANGES ARE DISCUSSED,
OCCURRING IN A FE-SI ALLOY WITH 3PERCENT SI WHEN CAST METAL WITH AN
AXIAL (001) TEXTURE IS ANNEALED AND HOT ROLLED. THE RESULTING TEXTURE,
WHICH SOULD BE (001) (100), DEPENDS ON FACTORS LIKE THE DEGREE OF
TEXTURE DEVELOPMENT IN THE INGOT, THE AMT. OF ALLOYING ADDNS. IN THE
SOLID SOLN., AND AN ABSENCE OF PHASE TRANSFORMATIONS.   FACILITY:
TSNIICHM IM. BARDINA, MOSCOW, USSR.

UNCLASSIFIED

1/2   022   UNCLASSIFIED   PROCESSING DATE--09OCT70
TITLE--STRUCTURAL FEATURES OF THE STABILIZATION OF PRIMARY
 RECRYSTALLIZATION MATRIX FOR TRANSFORMER STEEL -U-
AUTHOR-(02)-MOLOTILOV, B.V., YANOVSKAYA, T.N.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 356-60

DATE PUBLISHED------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--TRANSFORMER STEEL, NONMETALLIC INCLUSION, SULFIDE, NITRIDE,
 METAL RECRYSTALLIZATION, ELECTRON MICROSCOPY, MAGNETOMETER, ELECTRON
 MICROPROBE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/0182   STEP NO--UR/0048/70/034/002/0356/0360

CIRC ACCESSION NO--AP0115886
                            UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0115886
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NITRIDE OR SULFIDE INCLUSIONS
APPEARING IN TRANSFORMER STEELS ACCORDING TO THE METALLURGICAL TECHNOL.
USED, PRODUCE A STABILIZATION OF THE FERRITE MATRIX NECESSARY FOR THE
SECONDARY RECRYSTN. TO OCCUR, WITH THE ACCOMPANYING FORMATION OF THE
(110) (001) TEXTURE. AN INVESTIGATION HAS BEEN CARRIED OUT, INVOLVING
ELECTRON MICROSCOPY, ELECTRON MICROPROBE ANAL., AND MAGNETOMETRIC
METHODS, TO DET. THE STRUCTURE OF THE PRIMARY RECRYSTN. MATRIX, AND THE
INFLUENCE OF NONMETALLIC INCLUSIONS ON THE MATRIX FORMATION AND THE
PROCESS OF SECONDARY RECRYSTN. CONTENTS OF N, S, AND C, GRAIN SIZE OF
THE MATRIX, AS WELL AS CHARACTER, SIZE AND DISTRIBUTION OF INCLUSIONS
WHICH PRODUCE OPTIMUM MATRIX CHARACTERISTICS ARE GIVEN.
FACILITY: TANIICHM IM. BARDINA, MOSCOW, USSR.

UNCLASSIFIED

TITLE--EFFECT OF HIGH TEMPERATURE THERMAL TREATMENT MEDIUM ON THE
  STRUCTURE AND MAGNETIC PROPERTIES OF TRANSFORMER STEEL -U-

AUTHOR-(05)-KAZADZHAN, L.B., MOLOTILOV, B.V., SUKHANOV, L.F., FRANTSENYUK,
  I.V., SHAPOVALOV, A.P.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 262-6

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--TRANSFORMER STEEL, MAGNETIC PROPERTY, METAL HEAT TREATMENT,
  NITROGEN, HYDROGEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0189   STEP NO--UR/0048/70/034/002/0262/0266

CIRC ACCESSION NO--AP0115893
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0115893

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REFINING ABILITY OF THE
PROTECTIVE MEDIA USED IN HIGH TEMP. THERMAL TREATMENT WAS STUDIED AND
ALSO THEIR EFFECT ON THE STRUCTURE AND MAGNETIC PROPERTIES OF
TRANSFORMER STEEL. THE INVESTIGATED MEDIA WERE VACUUM IN THE RANGE 10
PRIME NEGATIVE3 MINUS 30 TORR, H, H AFTER PURGING WITH N 95PERCENT-H
5PERCENT, AND N 95PERCENT-H 5PERCENT. FOR THE ACHIEVEMENT OF GOOD
MAGNETIC PROPERTIES THE THERMAL TREATMENT SHOULD BE CARRIED OUT AT A
PRESSURE SMALLER THAN 10 PRIME NEGATIVE3 TORR.   FACILITY:
TSNIICHM IM. BARDINA, MOSCOW, USSR.

UNCLASSIFIED

TITLE--FORMATION OF STRUCTURE DURING THE ROLLING AND ANNEALING OF CAST
CRYSTALS OF TRANSFORMER STEEL -U-

AUTHOR-(04)-MOLOTILOV, B.V., POTEMKINA, V.F., SAMARINA, N.M.,
CHERVONENKOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 245-8

DATE PUBLISHED--------70

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

TOPIC TAGS--TRANSFORMER STEEL, ANNEALING, METAL SINGLE CRYSTAL, IRON
ALLOY, COLD ROLLING, HOT ROLLING, CRYSTAL DISLOCATION, METAL TEXTURE,
CRYSTAL GROWING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/0187   STEP NO--UR/0048/70/034/002/0245/0248

CIRC ACCESSION NO--AP0115891
                              UNCLASSIFIED

CIRC ACCESSION NO--AP0115891   UNCLASSIFIED   PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT. SINGLE CRYSTALS OF SILICIDED FE
WERE GROWN FROM THE MELT BY CZOCHRALSKI'S METHOD.   SAMPLES FOR HOT AND
COLD ROLLING WERE CUT FROM THE CRYSTALS.   THE STUDY OF THE (110) (001)
CRYSTALS AFTER COLD ROLLING WITH 5PERCENT DEFORMATION SHOWED THAT THE
PLASTIC STRAIN OCCURS BY TWINNING AND SLIP.   AFTER 80PERCENT STRAIN
BANDS WITH AN ELEVATED DISLOCATION D. APPEAR VISIBLY IN THE STRUCTURE.
THE TEXTURE OF HOT ROLLED CRYSTALS DEPENDS ON THE TEMP. OF ROLLING AND
THE DEGREE OF DEFORMATION.   BY SUITABLY CHOOSING THE ROLLING CONDITIONS
THE INITIAL ORIENTATION OF THE SINGLE CRYSTALS CAN BE PRESERVED DURING
HOT ROLLING.   FACILITY: TSNIICHM IM. BARDINA, MOSCOW, USSR.

UNCLASSIFIED

UNCLASSIFIED
TITLE--X RAY DIFFRACTION CONTRAST IN FERROMAGNETIC DOMAINS OF THE FE PLUS 3.5PERCENT SI ALLOY -U-

AUTHOR-(02)-MAKAROV, V.P., MOLOTILOV, B.V.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 361-6

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--X RAY DIFFRACTION, IRON ALLOY, SILICON STEEL, FERROMAGNETIC DOMAIN, METAL SINGLE CRYSTAL, METAL CRYSTALLIZATION, CRYSTAL GROWING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/0200

STEP NO--UR/0048/70/034/002/0361/0366

CIRC ACCESSION NO--AP0115904
UNCLASSIFIED

CIRC ACCESSION NO--AP0115904   UNCLASSIFIED   PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT.   SINGLE CRYSTALS OF THE ALLOY FE
PLUS 3.5PERCENTSI WERE GROWN FROM A MELT WITH CRYSTN. RATE 0.12 MM PER
MIN AND TEMP. GRADIENT IN SOLID PHASE 50DEGREES PER CM.   THE MAGNETIC
STRUCTURE WAS EXAMD. SIMULTANEOUSLY BY POWDER AND X RAY DIFFRACTION
TOPOGRAPHIC TECHNIQUES.   THE X RAY PHOTOGRAPHS WERE TAKEN BY THE
SENSITIVE SHULZ METHOD.   THERE ARE 3 KINDS OF DIFFRACTION CONTRAST:
DYNAMIC (A), EXTINCTIAL (B), AND DISCRETE EXTENSION OF A CRYSTAL LATTICE
(C).   THE A IS THE RESULT OF A DISTORSION OF H A WAVE FIELD GENERATED IN
THE "THICK" CRYSTAL (MUT APPROXIMATELY EQUAL TO 10, WHERE MU EQUALS
LINEAR ABSORPTION COEFF., T EQUALS THICKNESS OF THE CRYSTAL) WHEN THE
LAUE TYPE PHOTOGRAPH IS TAKEN.   IT DECREASES THE INTENSITY OF THE
DIFFRACTED BEAM.   THE B OCCURS IN THE "THIN" CRYSTALS (MUT APPROXIMATELY
EQUAL TO 1) ON THE LAUE PHOTOGRAPHS OR IN THE "THICK" CRYSTALS ON THE
PHOTOGRAPHS TAKEN WITH REFLECTION (BRAGG METHOD).   THE C IS A RESULT OF
EXTENSION OF TWO ADJACENT REGIONS OF SIZE 10 PRIME NEGATIVE1 MM OR
LARGER.   THE BORDER BETWEEN THESE REGIONS OCCURS ON A PHOTOGRAPH AS
LIGHT OR DARK STREAKS.   THE B IS OBSERVABLE IN THE PLACES OF GREAT
DISTORTIONS ON TOPODIAGRAMS TAKEN BY SHULZ METHOD.   FACILITY:
TSNIIGHM IM. BARDINA, MOSCOW, USSR.

UNCLASSIFIED

USSR

KAZADZH, L. B., et al, Izvestiya Akademii nauk SSSR, Seriya fizicheskaya,
Vol. 34, No. 2, Feb 70, pp 262-266

lower specific losses and raise the output of high-grade transformer steels,
heat treatment should be carried out under industrial conditions in a vacuum
higher than 10^{-3} mm Hg or in dry hydrogen with a dew point $\leq -40°C$.

Card 2/2

- 70-

Thermodynamics

USSR

KAZADZH, L. B., MOLOTILOV, B. V., SUKHANOV, L. F., FRANTSENYUK, I. V. and
SHAPOVALOV, A. P., Institute of Precision Alloys, Central Scientific Research
Institute of Ferrous Metallurgy imeni I. P. Bardin, Novo-Lipetskiy Metallurgical
Plant

"Effect of A High-Temperature Heat Treatment Medium on the Structure and Mag-
netic Properties of Transformer Steel"

Abstract: The refining ability of various media in high-temperature annealing
in industrial dome furnaces was studied by optical microscopy methods, by mea-
suring magnetic properties and by determining the chemical composition of trans-
former steel. Four different steel compositions were tested in the experiment
and their concentrations of Si, C, S, N, O, Al, Mn, and H before and after an-
nealing in a vacuum or in a hydrogen or nitrogen medium are given in tabular
form. It was found that high-temperature annealing in dome vacuum and gas fur-
naces did not ensure the required degree of refinement of the steel from C, N,
O, and S impurities. Raising the degree of evacuation under high-temperature
heat treatment of the steel in the most improved industrial furnaces also had
little effect in improving the refinement. It was concluded that in order to

Card 1/2

USSR

MOLOTKOV, I. A., KRAUKLIS, P. V.

UDC 539.3:534.231.1

"Mixed Surface Waves at the Boundary of a Nonuniform Elastic Medium with a Non-uniform Liquid"

Tr. V Vses. simpoz. po difraktsii i rasprostr. voln, 1970 (Works of the Fifth All-Union Symposium on Wave Diffraction and Propagation, 1970), Leningrad, Nauka Press, 1971, pp 144-162 (from RZh-Mekhanika, No 11, Nov 71, Abstract No 11V114)

Translation: The solutions of the equations of motion of a nonuniform medium called mixed surface waves are isolated. The waves are propagated along the boundary of an elastic medium and a liquid and are formed as a result of inter-ference of whisper tunnel waves and ordinary Stanley or Rayleigh surface waves. The solution is found in the form of asymptotic series with respect to powers of $\omega^{-1/3}$ (ω is the frequency). Substitution of the series in the equations and boundary conditions leads to a system of differential equations which must be solved. The physical properties of the waves are investigated: dispersion, polarization, damping and depth of penetration. The possibility of using the method of structural interference to describe mixed surface waves near the boundaries of nonuniform media where the beam field loses its regularity is confirmed.
1/1

USSR

MOLOTKOV, L. A.

UDC: 539.3:534.231.1

"Elastic Wave Propagation from a Source Applied to a Nonuniformly Broadening Circle"

V sb. Vopr. dinamich. teorii rasprostr. seysmich. voln. (Problems in the Dynamic Theory of Seismic Wave Propagation-- collection of works) No. 10, Leningrad, "Nauka" 1970, pp 4-15 (from RZh-Mekhanika, No. 8, Aug 1970, Abstract No. 8V246)

Translation: A study is made of the propagation of waves in an elastic half-space under the action of a source applied to a non-uniformly widening circle. A particular case is chosen in which the radius r of the circle is proportional to $\sqrt{t}$. That problem is especially interesting since the field of movement is represented by only two repeated integrals. In the general case, however, the components of the movement are described by three repeated integrals; the additional integration is then made over the time preceding the observation. Since this integral is computed by asymptotic methods in the investigation of the movements, it is useful to compare the asymptotic with the accurate expressions. This paper makes such a comparison. Resume.

1/1

--1/2 -- 021
UNCLASSIFIED

TITLE--EFFECT OF ACTH ON THE DISTRIBUTION AND METABOLISM OF SULFUR
  CONTAINING PROTEINS IN THE ADRENAL CORTEX -U-

PROCESSING DATE--16OCT70

AUTHOR-(03)-TKACHEVA, G.H., TSODIKOVA, L.B., MOLOTKOV, O.V.

COUNTRY OF INFO--USSR

SOURCE--PROBL. ENDOKRINOL. 1970, 16(2), 78-83

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ADRENAL CORTEX, PROTEIN METABOLISM, ORGANIC SULFUR COMPOUND,
  ACTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0256

STEP NO--UR/0502/70/016/002/0078/0083

CIRC ACCESSION NO--AP0117508
UNCLASSIFIED

CIRC ACCESSION NO--AP0117508
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DISTRIBUTION OF S CONTG.
PROTEINS IN THE RAT ADRENAL CORTEX INCREASED FROM THE ZONA GLOMERULOSA
TO THE ZONA RETICULARIS. SINGLE AND PROLONGED (10 DAY) ADMINISTRATION
OF ACTH (3 UNITS-100 G DAILY) DID NOT AFFECT THE LEVEL IN THE ZONA
GLOMERULOSA BUT INCREASED IT IN THE ZONA RETICULARIS AND ZONA
FASCICULATA. DURING PROLONGED ACTH ADMINISTRATION THE STIMULATION WAS
GRADUALLY REPLACED BY A DECREASED PROTEIN LEVEL.   FACILITY: LAB.
NEIROENDOKRINOL., INST. MED. RADIOL., OBNINSK, USSR.

UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--16OCT70

1/2   014
TITLE--STYRENE COPOLYMERS -U-
AUTHOR-(05)-PETROV, G.N., RAPPOPORT, L.YA., SAVINSKIY, P.A., MONAKHOVA,
   L.A., MOLOTKOV, R.V.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 263,877
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--10FEB70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--STYRENE, COPOLYMER, POLYMER CROSSLINKING, ACRYLATE, ETHYL
   CARBAMATE, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/1082   STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0116548
                        UNCLASSIFIED

CIRC ACCESSION NO--AA0116548
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COPOLYMERS ARE PREPD. BY
  COPOLYMG. STYRENE WITH A CROSSLINKING AGENT (POLYDIENE URETHANE
  DIACRYLATE) IN THE PRESENCE OF A HARDENER.

UNCLASSIFIED

AA0 043482

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

240756 PULSE FREQUENCY DIVIDER, comprises a
waiting multivibrator 1 and a series
resonant circuit 2, which is tuned to the quasi
harmonic of the input signal. Capacitor 4 also
is utilised as a voltage divider. Resistor 5 and
6 set the working point at the V-A characteristic
of the tunnel diode 3. A quasi harmonic signal
is applied from L.C. circuit, the oscillation is
built up and capacitor 4 charges. Then the oscill-
ation reaches the bend of the V-A characteristic
of the tunnel diode, the output pulse is formed,
this has damping effect on the LC network. Again
quasi harmonic oscillation is built up and the
output pulse is generated.   25.12.67. an 1205641/
26-9. V.I. MOLOTKOV. (15.8.69.) Bul.13/1.4.69.
Class 21a⁴, 21a'. Int.Cl. H03b, H03k.

19761864

AA0043482
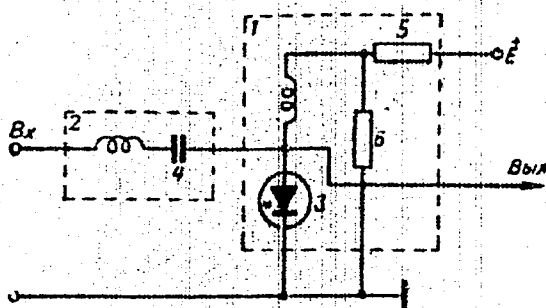
2/2

19761865

UDC 51

USSR

MOLOTKOVA, YU. B.

"Solving Duel Games with Noncontradictory Interests"

V sb. Issled. operatsiy. Modeli, sistemy, resheniya. Vyp. 3 (Operations Re-
search. Models, sistems, decisions. Vyp. 3 -- collection of works), Moscow,
1972, pp 126-130 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V468)

Translation: For nonantagonistic single-step games of the duel type the Pon-
tryagin principle of the maximum can be used to derive the necessary conditions
of the existence of equilibrium strategies permitting the entire set of
strategies to be found which contains the equilibrium strategies. Numerical
examples are presented.

1/1

USSR   UDC 542.91 + 547.42 +661.718.1

MOLOTKOVSKIY, Yul. G., KOZHUKHOV, V. I., and BERGEL'SON, L. D., Institute of
Natural Products Chemistry, Academy of Sciences USSR

"Synthesis of Phosphatidic Diols"

Abstract: The synthesis of phosphatidic diols (I) is based on the condensa-
tion of the silver salt of benzyl-(1-lauroyl-2-oleoyl-snglyceryl) phosphate
with trityl ethers of glycol iodohydrines. Removal of the benzyl group from
the thiophosphates with sodium iodide in acetone followed by removal of the
trityl group by acid hydrolysis yielded 1-lauroyl-2-oleoyl-sn-glycero-3-phos-
phorylethylene glycol, 1-lauroyl-2-oleoyl-sn-glycero-3-phosphorylpropanediol,
and 1-lauroyl-2-oleoyl-sn-glycero-3-phosphorylbutanediol. The phosphatidic
diols obtained are soluble in most common organic solvents and can be stored
in the form of calcium salts.

1/1

Publications

~ USSR   UDC 58.08.581.1

MOLOTKOVSKIY, YU. G., Candidate of Biological Sciences, Acting Editor

Biofizicheskiye Metody v Fiziologii Rasteniy (Biolophysical Methods in Plant Physiology), Order of Labor Red Banner Institute of Plant Physiology imeni K. A. Timiryazev, Academy of Sciences USSR, Moscow, Nauka Publishing House, 1971, 132 pp

Translation: Annotation: The compendium contains descriptions of methods which were included in the arsenal of physiological investigations in recent years: preparative purification of proteins on polyacrylamide gels, yielding homogenous protein fractions in quantities adequate for subsequent determinations of their properties and activities; immunochemical methods which make it possible to determine changes in protein spectra in the samples under investigation during various induced phenomena and morphological alterations; methods of determining gas exchange in green plants by means of infrared gas analyzers and oxygen electrodes; photocalorimetric methods of determining energy metabolism in plants and methods of recording fluorescence in whole leaves; and the bioluminiscent method of measuring ATP quantities.
     The methods were tested experimentally and approved by the authors. Some of the methods are original, while other represent improved modifications. The compendium was prepared for a wide circle of investigators in the area of plant physiology and biochemistry.
1/3

USSR

MOLOTKOVSKIY, YU. G., Biofizicheskiye Metody v Fiziologii Rasteniy, Order of
Labor Red Banner Institute of Plant Physiology imeni K. A. Timiryazev,
Academy of Sciences USSR, Moscow, Nauka Publishing House, 1971, 132 pp

2/3

USSR

MOLOTKOVSKIY, YU. G., Biofizicheskiye Metody v Fiziologii Rasteniy, Order of
Labor Red Banner Institute of Plant Physiology imeni K. A. Timiryazev,
Academy of Sciences USSR, Moscow, Nauka Publishing House, 1971, 132 pp

3/3

1/2   029   UNCLASSIFIED   PROCESSING DATE--23OCT70
TITLE--LIGHT INDUCED UPTAKE OF H PRIME POSITIVE BY ISOLATED CHLOROPLASTS
-U-
AUTHOR-(02)-MOLOTKOVSKIY, YU.G., DZYUBENKO, V.S.

COUNTRY OF INFO--USSR

SOURCE--MOLEKULYARNAYA BIOLOGIYA, 1970, VOL 4, NR 3, PP 383-394

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--VEGETABLE CROP, PLANT PHYSIOLOGY, CHLOROPLAST, PROTON
   INTERACTION, PHOTOCHEMISTRY, ELECTRODIALYSIS, LIGHT BIOLOGIC EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0150   STEP NO--UR/0463/70/004/003/0383/0394

CIRC ACCESSION NO--AP0120650
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0120850
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CHLOROPLASTS PREPARED FROM VICIA
FABA LEAVES EXHIBIT LIGHT INDUCED PROTON UPTAKE IN SALT MEDIA AT PH 6.0.
THE STEADY STATE OF THIS PROCESS IS ACHIEVED IN 20 PLUS OR MINUS 2 SEC
OF LIGHT EXPOSURE, THE CHLOROPLASTS ACCUMULATING 0.6 MU MOL H PRIME
POSITIVE PER 1 MG OF CHLOROPHYLL. THIS RESULTS IN APPEARANCE OF PH
GRADIENT ACROSS THE MEMBRANE IN THE LIMITS OF 3.0 PH UNITS. THE UPTAKE
OF H PRIME POSITIVE BY CHLOROPLASTS IS STIMULATED BY PMS AND SUPPRESSED
BY DCMU, SOME UNCOUPLERS (METHYLAMINE, NH SUB4 CL, PHLORIZINE), AG PRIME
POSITIVE, PCMB. THE INHIBITORY EFFECT OF PCMB CAN BE REVERSED BY
SUBSEQUENT ADDITION OF DIMERCAPTOPROPANOL. CHLOROPLASTS LOSE THE
ABILITY FOR H PRIME POSITIVE UPTAKE IN THE LIGHT AFTER DEIONIZATION BY
ELECTRODIALYSIS, THIS PROPERTY BEING RESTORED BY KCL OR NACL ADDITION.
AFTER ADDITION OF THE SAME SALTS IN DARK, DEIONIZED CHLOROPLASTS RAPIDLY
EXTRUDE PROTONS, THE LATTER ONES BEING COMPLETELY ABSORBED AFTER
SWITCHING ON LIGHT. IT IS SUPPOSED THAT THE LIGHT INDUCED UPTAKE OF H
PRIME POSITIVE BY CHLOROPLASTS IS CONNECTED WITH EXISTENCE OF ANIONIC
GROUPS ACCEPTING H PRIME POSITIVE IN THE LIGHT ON THE INNER SIDE OF
THYLAKOIDS.   FACILITY: INSTITUTE OF PLANT PHYSIOLOGY, ACADEMY OF
SCIENCES, USSR, MOSCOW.

UNCLASSIFIED

USSR
UDC 539.373

LEONOV, M. YA., MOLOTNIKOV, V. YA., and RYCHKOV, B. A., Institute of Physics
and Mathematics, Academy of Sciences, Kirgizskaya SSR

"Development of the Concept of Slip in the Theory of Plasticity"

Abstract: The plastic deformation of a body, the volume of which does not
change in the process of this deformation, is determined via the intensity of
movements (local slips) of the linear distortions taking place along a set (fan)
of planes and directions of slip. A study is made of "semisimple" loading,
when the sign of the stresses changes only once. The deformation of plastic
materials which have a yield platform is described for the first time on the
basis of the slip concept. 3 figures. 12 references.

1/1

Materials

USSR

UDC: 621.396.69:621.316.8

VLASOV, L. G., KRASIL'NIKOV, B. G., LUK'YANOV, V. B., MOLOTOVA, A. Yu.

"An Investigation of Stability in Production of Ceramic Bases for Type SPO Resistors by the Method of Mathematical Statistics"

Elektron. tekhnika. Nauchno-tekhn. sb. Radiodetali (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 1 (18), pp 57-65 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12V336)

Translation: Information is given on the use of mathematical statistics for studying conditions of making ceramic bases for SPO resistors. A description is given of the scheme for planning the experiment in the initial stages of the investigation using the methods of a priori ranging of factors and random balance. Bibliography of nine titles. Ye. M.

1/1

USSR   UDC 77

MOLOTSKIY, M. I., LATYSHEV, A. N.

"Interaction of Silver Atoms on the Surface of a Halide"

V sb. Mezhdunar. kongress po fotogr. nauke, Moskva, 1970, Priroda fotogr.
chuvstvitel'nosti (International Congress on Photographic Science, Moscow,
1970, Nature of Photographic Sensitivity -- Collection of Works), no place of
publication given, Vneshtorgizdat, no year given, pp 143-146 (from RZh-Fizika,
No 12(I), Dec 70, Abstract No 12D1366)

Translation: On the assumption that a chemisorbed Ag atom on the surface of
AgBr forms the quasimolecule Ag_2^+, with the closest Ag^+ ion of the lattice in
the field of the remaining ions, the position of the local level of this atom
is calculated. The values obtained for the thermal and optical ionization from
this level into the 0.804 and 1.246 ev conductivity bands were close to experi-
mental data on the thermal decay energy of the first atom of the Ag-center
(in terms of isoopacities) and on the long-wave boundary of the Herschel effect.
The adsorption of Ag_2 molecules with the formation of a stable Ag_3^+ quasimolecule

1/2

USSR

MOLOTSKIY, M. I., LATYSHEV, A. N., Mezhdunar. kongress po fotogr. nauke, Moskva, 1970, Priroda fotogr. chuvstvitel'nosti, no place of publication given, Vnesh-torgizdat, no year given, pp 143-146

and the adsorption of a linear Ag_3 molecule transforming into triangular Ag_4^+ and forming a tetrahedron is considered under the same assumption. The inter-action of two Ag atoms on the surface is considered as the rise (due to ex-change forces) and the repulsion of two parallel dipoles; it is shown that the formation of an Ag_2 molecule from these on a smooth surface is possible despite the energy barrier caused by their interaction with the lattice. A similar analysis for the Ag atom and the Ag^+ ion showed that the $AgAg^+$ complex forms only on a stepped surface and not on a smooth surface; on the [111] edge of this complex there is a considerably deeper electron shower than on the [100] edge, in agreement with experimental data showing higher sensitivity of octahedral microcystals than of cubic crystals. A.L. Kartuzhanskiy.

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USSR   UDC 614.7:615.285.7

IVANOVA, L. N., and MOLOZHANOVA, Ye. G., All-Union Scientific Research
Institute of the Hygiene and Toxicology of Pesticides, Polymers, and
Plastics, Kiev

"The Static and Dynamic Distribution of Sevin in the Environment"

Abstract: Upon treatment with 1.36 kg/ha of 85% wettable sevin powder of
1 ha of an apple orchard at 20-21° and a wind velocity of 1.5 m/sec, experi-
mental data were obtained which were used in the derivation of mathematical
relations that describe the static and dynamic distribution of sevin or of
a similar insecticide in the environment. The relation between the concen-
tration C on vegetation located at a distance S from the objects treated,
on which the concentration was C_r, could be described by the equation
$C/C_r = -0.065 + 0.67 X 1/S X 10^2$. The dynamics of changes of the concen-
tration of sevin in the air, on the ground and at plant surfaces, and in
the apples were determined. The dynamics of disappearance of sevin from
the surface layer of soil and from the apples could be described by expo-
nential equations, on the basis of which the time required for the dis-
appearance of the insecticide could be calculated. The concentration C_a
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of sevin in the air adjacent to the soil varied in relation to its concentration C_s in the soil, the temperature T, and the velocity V of air motion according to the equation $C_a/C_s = -0.14 + 0.126 \sqrt{T/V}$. It followed from this equation that in the southern regions of the USSR in hot (T = 38°) and windless weather the maximum permissible concentration of sevin in the air (1 mg/m³) would be exceeded during the first 12 days after application of this insecticide. According to the relations derived, sevin would disappear from the apples after 34 days. This corresponds pretty closely to the 30 days after application of sevin at the expiration of which fruit are normally harvested.

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USSR   UDC 615.747/.779

MOLOZHANOVA, YE. G., REMIZOVA, L. B., and BRANTSEVICH, L. G., All Union
Scientific Research Institute of Hygiene and Toxicology of Pesticides, Polymers,
and Plastic Masses, and Kiev State University

"Detoxification of Chlorophos by Soil Microorganisms"

Abstract: It has been established that chlorophos may be decomposed in soil by
exoenzymes of soil microorganisms. The negligible amount of the agent that
remains in the soil up to two weeks may be explained by microbiological detoxi-
fication.

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USSR

UDC: 632.95

MOLOZHANOVA, Ye. G., KANEVSKIY, A. A.

"Use of Mathematical Analysis in Modeling the Behavior of Sevine in the Soil"

V sb. Gigiyena primeneniya, toksikol. pestitsidov i klinika otravl. (Pesticides -- Safety Measures in Using, Toxicology, and the Poison Clinic--collection of works), vyp. 9, Kiev, 1971, pp 77-83 (from RZh-Khimiya, No 7, Apr 72, Abstract No 7N750)

Translation: A piecewise approximation is found for the dissolution curve of sevine in 6 kinds of soil typical of the central territory of the USSR under laboratory conditions with concentrations of 0.5-10 mg/kg of sevine in the soil. In the interval up to 15 days, the dissolution curve takes the form 10^{a+bt} where a is the decimal logarithm of the initial concentration, t is time and b ranges from -0.114 to -0.046 depending on the type of soil. In the interval from 15 to 45 days, the dissolution curve becomes a straight line with a slope equal to the rate of dissolution on the 15th day. As the dose is decreased, the initial rate of dissolution of sevine increases. The proposed model does not have sufficient precision for describing dissolution of sevine under natural conditions since it does not account for climatic conditions, the type of cover crop and other factors. A. N. Volkov.

USSR   UDC 632.95

KOLOZHANOVA, YE. G., and REMIZOVA, L. B.

"Determination of Certain Organophosphorus Pesticides in the Soil When They are Present in Combination"

Tr. 2-go Vses. soveshch. po issled. ostatkov. pestitsidov i profilakt. zagryazneniya imi produktov pitaniya, kormov i vnesh. sredy (Works of the Second All-Union Conference on Investigation of Residues of Pesticides, and Prevention of Pesticide Contamination of Foodstuffs, Fodder and the External Environment), Tallinn, 1971, pp 177-178 (from RZh-Khimiya, No 11, Jun 72, Abstract No 11N407)

Translation: The method of thin-layer chromatography on KSK silica gel in a fixed layer in the hexane - acetone system (1:1) is used for determining chlorophos, DDVF and rogor in the soil with development by a solution of iodine in alcohol and a solution of resorcinol in an alkaline medium. The pesticides are extracted from the soil with $CHCl_3$.

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USSR   UDC: 518.5:681.3.06

KOGAN, T. I., MOLTYANER, F. I.

"Iteration Process for Systems of Nonlinear Equations"

V sb. Mashiny dlya inzh. raschetov (Machines for Engineering Calculations--
collection of works), vyp. 4, Kiev, 1971, pp 15-20 (from RZh-Kibernetika,
No 12, Dec 71, Abstract No 12V968)

Translation; For a system of nonlinear algebraic or transcendental equa-
tions

$$f_i(X) \equiv f_i(x_1, \dots, x_n) = 0 \quad (i = \overline{1, n}) \qquad (1)$$

the iteration process

$$X^{(n+1)} = Y^{(n+1)} - [2J - \Gamma_a P'(Y^{(n+1)})] \Gamma_a (Y^{(n+1)}), \qquad (2)$$

is proposed where $Y^{(n+1)} = X^n - \Gamma_a P(X^{(n)})$.

   Here $X^{(0)} = (x_1^{(0)}, \dots, x_n^{(0)})$ is the initial approximation to solution of the
system, J is a unit matrix of order n, $P(X) = f_1(X), \dots, f_n(X))$;

$$P'(X) = \left[\frac{\partial f_i(X)}{\partial X_j} \right]_{j=\overline{1, n}}^{i=\overline{1, n}}; \quad \Gamma_a = [P'(X^{(n)})]^{-1}.$$

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KOGAN, T. I., MOLTYANER, F. I., <u>Mashiny dlya inzh. raschetov</u>, vyp. 4, Kiev, 1971, pp 15-20

.The proposed process has a rate of convergence of the same order as Newton's method, but in this case $[P'(X^{(n)})]^{-1}$ is calculated on every other step, which cuts down the number of calculations.

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USSR   UDC 632.95

PROTOPOPOVA, G. V., REYDALOVA, L. I., DZYUBAN, A. D., MOLYAVKO, L. I., DOROSH-
ENKO, V. V., MIKHAYLYUCHENKO, N. K., SHOKOL, V. A., DERKACH, G. I.

"Insecticidal Activity of Esters of bis-(3-arylcarbamido) phosphoric and
thiophosphoric Acids"

Translation: A study was made of the insecticidal activity of esters with
the formula $ROP-(X)(NHCONHR')_2$ (I) (X = 0 or S; R = alkyl, aryl; R' = Ph,
$C_6H_4SCN-\pi$, α-pyridyl) for rice weevils, housefly larvae and imago and
greenbugs. The I containing the SCN-group have the highest insecticidal
activity, and among them the activity rises on going from the methyl to
the propyl and isopropyl radicals.

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USSR

SIDORIN, I. I., Doctor of Technical Sciences, Professor; MOLYAKOVA, A. A.,
Assistant; KURKIN, S. A., Doctor of Technical Sciences, Professor; KOSTOGONOV,
V. G., Engineer, Moscow Higher Technical School imeni N. E. Baumann, Central
Scientific Research Institute of Ferrous Metallurgy

UDC 669.01

"On the Effect of Plastic Deformation Under Biaxial Stretching at Liquid Nitro-
gen Temperatures on the Structure and Properties of 1Kh18N10T Steel"

Abstract: The plastic deformation was determined and the structure and mecha-
nical properties of 1Kh18N10T steel were studied. The steel was intended for
the fabrication of vessels and various welded reservoirs operating under con-
ditions of biaxial stretching at low temperatures. It is noted that austenite
stainless steels are very important structural materials in cryogenic technology
and a basic feature of their behavior under deep cooling is a rise in strength
while maintaining sufficient plasticity. Experimental data was available on
the mechanical properties of many steels of the austenite class under axial

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stretching at low temperatures, but there has not been data for biaxial stretching and therefore the effect of plastic deformation under conditions of biaxial stretching on the structure and properties of samples of 1Kh18N10T steel were studied at liquid nitrogen temperatures. Comparison of the results obtained under biaxial stretching conditions with published data for uniaxial stretching shows that the martensite is considerably greater than under uniaxial stretching conducted at a temperature of -196°C. This is in good agreement with the results of strength tests showing a considerably greater effect of strengthening under biaxial stretching than under axial stretching. At a temperature of 20°C both biaxial and uniaxial stretching did not lead to a considerable formation of martensite. It is concluded that the transformation of austenite into martensite under biaxial stretching of 1Kh18N10T steel at liquid nitrogen temperatures occurs considerably more intensively than under uniaxial stretching. This is attributed to the greater intensity of strengthening of the steel under biaxial stretching under low temperature conditions than under uniaxial stretching.

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USSR   UDC 546.185

SHOKOL, V. A., MOLYAVKO, L. I., MATYUSHA, A. G., MIKHAYLYUCHENKO, N. K.,
and DERKACH, G. I. (deceased)

"Diisocyanates of Phosphorus Thioacids"

Abstract: Twenty-four derivatives of alkyl- and aryl diisocyanothiophosphates
ROP(S)(NHCOR')$_2$, and the diisocyanate of phenylthiophosphonic acid, were
synthesized by reacting alkyl- and aryl diisocyanophosphites and diisocyanate
of phenylphosphonic acid with phosphorus thiochloride. The isocyanate groups
of these compounds were found to react with substances containing active
hydrogen atoms. Details of experimental procedures and tables of physical
constants are given.

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USSR   UDC 547.26'118

SHOKOL, V. A., MOLYAVKO, L. I., MIKHAYLYUCHENKO, N. K., and DERKACH, G. I.
(deceased), Institute of Organic Chemistry, Academy of Sciences Ukr. SSR

"Alkyl Esters of tris-Dimethylamido-, Methyl-bis-dimethylamido- and Dialkyl-
dialkylamidophosphazocarbonic Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 2, Feb 71, pp 318-319

Abstract: The reaction of tris-dimethylamidophosphite, methyl bis-dime-
thylamidophosphonite, and dialkyldialkylamidophosphinite with the azides of
carbonic acid esters yields corresponding alkyl esters of phosphazocarbonic
acids. To a solution of 0.1 g-mole of the azide of carbonate ester in 20 ml
of absolute ether, 0.1 g-mole of the respective phosphite, phosphonite in 20
ml of solvent is added dropwise. The reaction is exothermic. After the
addition is completed, the mixture is heated for 30 min, the solvent is re-
moved and the product is distilled under vacuum.

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SHOKOL, V. A., MOLYAVKO, L. I., MATYUSHA, A. G., and DERKACH, G. I.

"Tetraisocyanato- *P*-phenylene Diphosphite and Its Derivatives"

Abstract: Heretofore, only the synthesis of tetraisocyanatodiphosphine with a yield of 5% [M. Baudler, et al., Z. Naturforsch, No 20b, 494, 1965] and 3,9-diisocyanato-2,4,8,10-tetraoxy-3,9-diphosphaspiro-5,5)-undecane, its dioxides, mono and dithiooxides [P. M. Pivawer, et al., J. Heterocyclic. Chem., No 4, 599, 1967] has been described. On interaction of tetrachloro-n-phenylene diphosphite with sodium cyanate, tetraisocyanato-*P*-phenylene diphosphite is formed. The tetraisocyanato-n-phenylene diphosphite is easily oxidized by nitrogen oxides into tetraisocyanato-n-phenylene diphosphate, and on reacting with phosphorus thiooxychloride, it is converted into tetraisocyanato-n-phenylene phosphitophionphosphate or tetraisocyanato-*P*--phenylene-bis-thionphosphate. On storing tetraisocyanato-n-phenylene diphosphite and phosphate, they polymerize, apparently, with the formation of uretidine dionic rings. The tetraisocyanates reacting easily with alcohols and amines with the formation of the corresponding urethanes and ureas.

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SHOKOL, V. A., MOLYAVKO, L. I., and DERKACH, G. I., (DECEASED).
Institute of Organic Chemistry, Academy of Sciences Ukrainian SSR

"Alkyl Esters of Alkyldialkoxyphosphazocarbonic Acid"

Abstract: Dialkyl phosphonites react with azides of alkyl esters of
carbonic acid to give alkyl esters of alkyldialkoxyphosphazocarbonic
acid. Heating of alkyl esters of alkyldimethoxyphosphazocarbonic
acid (120-140°, 3-5 hrs) gives methyl esters of N-methylalkylurethan-
methylphosphonic acid, with a side reaction resulting in the forma-
tion of dimethyl phosphonates. The structure of the resultant
compounds was confirmed by IR spectra.

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USSR

UDC 621.372.8.092.22

MOLYAVKO, V. I.

"Effect of Geometry on the Characteristics of a Two-Dimensional-Periodic Delay System of the 'Cellular' Cylinder Type"

Radiotekhnika. Resp. mezhved. nauchno-tekhn. sb. (Radio Engineering. Republic Interdepartmental Scientific and Technical Collection), 1970, vyp. 14, pp 82-84 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4B121)

Translation: Results are presented from computer calculations of the dispersion and coupling impedance curves of the system. There are 3 illustrations and a 1-entry bibliography.

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A70-23143   Experimental investigation of the characteristics of two-dimensionally periodic slow-wave structures (Eksperimental'noe issledovanie kharakteristik dvumerno-periodicheskikh zamedliaiuhchikh sistem). A. G. Shein, V. I. Moliavko, and G. Ia. Krasovskii (Khar'kovskii Institut Radioelektroniki, Kharkov, Ukrainian SSR). Radiofizika, vol. 13, no. 1, 1970, p. 152-154. In Russian.

Experimental verification of Shein's (1968) theoretical study of the characteristics of a two-dimensionally periodic slow-wave structure. It is found that Shein's formulas derived in zero approximation, accounting only for the first harmonic are, in general, in satisfactory agreement with the experimental data. A certain increase in the error at the band boundaries is attributed to an augmented influence of the higher spatial harmonics on the structure of the hf field.   V.P.

USSR   UDC 547.26'118

SHOKOL, V. A., MOLYAYEKO, L. I., and DERKACH, G. I., Institute of Organic
Chemistry, Ukrainian Academy of Sciences

"Alkyl Esters of Alkoxy-Bis(dimethylamido)- and Dialkoxy(dimethylamido)car-
bonic Acids"

Abstract: As part of their work on synthesizing and studying the insecticidal
activity of the N-phosphorylated derivative amides of carbonic acid, the
authors synthesized the alkyl esters of alkoxy-bis(dimethylamido)- and
dialkoxy(dimethylamido)phosphazocarbonic acids from the azides of the alkyl
esters of carbonic acid and the alkyl bis(dimethylamido)- and dialkyl (di-
methylamido)phosphites. The previously unknown isopropy bis(dimethylamido)-
phosphite was also obtained. Physical constants and yields of these sub-
stances are given.

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USSR

YERSHIN, SH. A., ZHAPBASBAYEV, U. K., MOLYUKOV, I. D., and PAK, V. V.

"The Aerodynamics of Supersonic Flows of a Compressible Gas"

Translation: The article presents the results of an experimental investigation of a supersonic jet (submerged and with weak cocurrent flow). The installation consisted of two coaxial pipes 200 and 400 mm in diameter; on one end of the pipes were profiled nozzles, one of them with a vent diameter of 5 mm (a Laval nozzle) and the other with a vent dimateter of 100 mm (a Vitoshinskiy nozzle). At the other end of the pipes are fittings for supplying air from a system consisting of high-pressure capacities and a fan. The basic regime parameters of the experiments were within the limits of $2 \leqslant p_0 \leqslant 3$ and $340 \leqslant u_0 \leqslant 600$, where p_0 is the pressure at the Laval-nozzle inlet, u_0 is the discharge velocity from the Laval nozzle.

It is established that the laws governing the development of the jet

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USSR

BORODIKHIN, R. G., LUK'YANOV, A. T., MOLYUKOV, I. D.

"A Method for the Numerical Solution of Hyperbolic Equations"

Alma-Ata, Vestnik Akademii Nauk Kazakhskoy SSR, No 3, Mar 1970, pp 61-63

Abstract: The following problem is considered in the region (1)
$0 \leq x \leq a$, $0 \leq y \leq b$: $U_{xy} = A(U, x, y)U_x + B(U, x, y)U_y + C(U, x, y)$,

$$U\,|_{y=0} = \varphi(x);\ U\,|_{x=0} = \psi(y),\qquad (2)$$

where $\varphi(0) = \psi(0)$. The solution of problem (1), (2) satisfied the integro-differential equation

$$U(x, y) = \varphi(x) + \psi(y) - \varphi(0) + \int_0^x \int_0^y (AU_\xi + BU_\eta + C)\,d\xi\,d\eta.\qquad (3)$$

Since the analytical solution of equation (3) involves many mathematical difficulties, the following is a method for the numerical

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BORODIKHIN, R. G., et al, Vestnik Akademii Nauk Kazakhskoy SSR, No 3, Mar 1970, pp 61-63

solution of equation (3) which can be easily carried out on computers of the "static electrointegrator" type. The continuous region D is replaced by a discrete region D' with nodes $x_{i+1} = x_i + \Delta x$ and $y_{j+1} = y_j + \Delta y$, where $\Delta x = \Delta y = h$. The values of the function at the intersection are denoted by: $U(x_i, y_j) = U_i^j$, $U(x_{i+1}, y_j) = U_{i+1}^j$, and $U(x_{i+1}, y_{j+1}) = U_{i+1}^{j+1}$. Equation (3) in the region D' is written in the form

$$U_{i+1}^{j+1} = U_{i+1}^j + U_i^{j+1} - U_i^j + \iint_{\omega} [AU_\xi + BU_\eta + C]\, d\xi\, d\eta, \qquad (4)$$

where
$$\omega = \begin{cases} x_i < x < x_{i+1} \\ y_j < y < y_{j+1} \end{cases}.$$

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BORODIKHIN, R. G., et al, Vestnik Akademii Nauk Kazakhskoy SSR, No 3,
Mar 1970, pp 61-63

To determine the function U_{i+1}^{j+1} from equation (4) it is sufficient
to know its values at neighboring intersections of the grid and to
calculate the integral over the region ω by some approximation
method. The calculations should begin from the line of initial
values, shifting successively from one grid point to another over
the entire region D'. The distinguishing feature of this method is
that an integral that is a much smoother function than the integrand
is approximated; it is possible to limit oneself to a small number
of grid points and still obtain a sufficiently good approximation.
An example is given.

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USSR

ABRAMOV, V. S., KOBZEV, V. V., MOMA, Yu. A., NEVSKIY, M. V.

"Semiconductor Laser Diode as a Modulator of Gas Laser Emission"

Abstract: Experimental proof is given for the feasibility of modulating gas laser emission by using a semiconductor laser diode with simultaneous amplification of the power of the modulated emission. Argon—oxygen gas laser pulse emission was modulated by a gallium arsenide diode with both coated and uncoated optical faces. The power of the emission passed through the diode increased in the pulse by a factor of 7-10 (pure amplification). Heating of the active region of the diode leads to distortion of the vertex of the modulated pulse. Estimates are made of the limitations on pulse duration due to this effect. One illustration, bibliography of ten titles.

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USSR

UDC 621.375.82

ABRAMOV, V. S., KOBZEV, V. V., MOMA, Yu. A., NEVSKIY, M. V.

"Semiconductor Laser Diode-Modulator for Gas Laser Emission"

Translation: The possibility of modulation of gas laser radiation by a
semiconductor laser diode with simultaneous amplification of the power of
the modulated emission is shown experimentally. Pulse modulation of the
radiation of an Ar-O_2 gas laser was achieved with a GaAs diode with coated
and uncoated faces. The power of the radiation passing through the diode
rose in a pulse by a factor of 7-10 (pure amplification). Heating of the
active region of the diode leads to distortion of the peak of the modulated
pulse. Limitations on the duration of the pulse due to this effect are
calculated. 10 ref. Authors abstract.

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USSR

KRUGLOV, I.I., KOMA, YU.A.

"Calculation Of The Light Transmission Coefficients Of Optron Pairs"

Translation: Formulas are presented for calculation of the light transmission coefficients in the system semiconductor--intervening medium--semiconductor for the case of a two-dimensional light source and receiving surface. The numerical results are presented for a gallium arsenide radiation source and a silicon receiving area which have the form of disks coaxial with one another. 5 ill. 1 ref. Summary.

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Lasers and Masers

USSR

M

UDC: 621.375:530.145.6

KOMA, Yu. A., KOBZEV, V. V.

"Nonlinear Effects in Gallium Arsenide Lasers"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices in Electrical Communications Technology--collection of works), Vyp. 5, Moscow, "Svyaz'", 1970, pp 12-14 (from RZh-Radiotekhnika, No 6, Jun 70, Abstract No 6D196)

Translation: Experimental data for a gallium arsenide laser are used to determine the degree of homogeneity of gain saturation in the laser pass band under the effect of a powerful signal. A conclusion is made on homogeneous saturation throughout the entire laser pass band. Three illustrations, bibliography of five titles. Resumé.

1/1

Polymers and Polymerization

USSR   UDC 541.64:678.664

LIPATOVA, T. E., LOOS, S. M., and MOMBUZHAY, M. M., Institute of the Chemistry
of High-Molecular Compounds, Academy of Sciences of the Ukrainian SSR

"Interaction of Polyester Urethanes With Physiologically Active Media"

Abstract: Polyester urethane film nets with and without a filler were studied
to determine the feasibility of using these materials in gastroenteritic im-
plants. The films were based on polydiethylene glycol adipinate, toluylene
diisocyanate, hemamethylene diisocyanate or diphenylmethane diisocyanate. The
cross linking agent was trimethylolpropane, and the filler was ordinary sugar
or starch in quantities of 20% by weight. It was found that after subcutan-
eous implantation of polyester urethane, as well as after standing in gastric
juice for three months, destruction of the material begins, the mechanism of
destruction being the same in both instances: dissociation of both the ure-
thane group and the ester bonds. Pepsin is absorbed by the surface of the
implant, resulting in a loss of activity of the enzyme solution. At the same
time, it is shown that pepsin can be desorbed from the polyester urethane
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USSR

LIPATOVA, T. E., et al, Vysokomolekulyarnyye Soyedineniya, Vol 12, Series A,
No 9, Sep 70, pp 2,051-2,056

surface under certain conditions. Specimens are more rapidly "dissolved" in
physiologically active media if sugar is introduced as a filler in the im-
plant.

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USSR   UDC 681.325.65

ARUSTAMYAN, V. YE., GRIGORYAN, L. A., KAZARYAN, S. YE., MOMDZHYAN, I. A.,
and SARKISYAN, A. YE.

"Transistor-Transistor Logic Circuit"

Translation: There are well-known devices which contain an input multiemitter
transistor (T) connected by the collector to the base of an intermediate T,
whose collector and emitter are connected to the bases of two output series-
connected Ts. The logic circuit described differs from these in that it con-
tains a complementary T connected by its collector to the emitter of the
intermediate T, by its emitter to the collector of the input T, and by its base
through the resistor to the base of the input T. This makes it possible to
increase the operating speed of the device.

1/1

JPRS 61430
7 Jan. 1974

REMOVAL OF MERCURY FROM WASTE WATER BY SILICON OXYHYDRIDE

UDC 628.543:663.632.1

[Article by V. B. Budkevich, V. Ya. Momot, L. I. Strenko, Yu. A. Tarasenko, and L. A. Kovaleva; Kiev, Khimicheskaya tekhnologiya, Russian, No 6, 1973, signed to press 13 December 1973, pp 50-52]

10062122PE

In producing chlorine and alkalis by the mercury method, the waste water contains a considerable amount of mercury in metallic form, in the form of low-solubility compounds, and in ion form.

The only method of removing mercury from waste water that is presently used in the technology of producing chlorine and alkalis is sulfide treatment, based on the interaction of bivalent mercury and the sulfide ion [1]. The finely-dispersed colloid sediment of the sulfide of mercury is difficult to remove by filtration or clarification. In addition, where there is in-sufficient sodium sulfide, there is incomplete bonding of the ion mercury; where there is too much, an insoluble complex Na₄HgS₂ is formed. The use of other methods of cleansing waste water [2 -- 7] is restricted by the capa-bility of extracting only the ion form of mercury. For this reason, searches for new and more efficient methods of extracting mercury from waste water represent an important and urgent scientific-technical problem.

One promising method for cleansing waste water of mercury appears to be the use of a silicic water-containing adsorbent [8], a silicon oxyhydride (HSiO₁.₅)ₚ. When the silicon oxyhydride comes in contact with solutions that contain ion mercury, there occurs on its surface a reduction of the ions to the metallic state. The reduced metallic mercury settles on the surface of the sorbent and sticks to its pores because of dispersion forces.

The study gives experimental data concerning the removal of mercury from waste water that comes from the production of mercury by the mercury method; the experiments utilize the adsorption-reduction method by means of silicon oxyhydride. For the investigation, the fraction 3±0.5 mm silicon oxyhydride was used, obtained by procedures described in [9]. The total volume content of the pores of the silicon oxyhydride that was obtained,

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(4)

USSR   UDC 628.543:663.631.8

BUDKEVICH, G. B., MOMOT, V. YA., SIRENKO, I. I., TARASENKO, YU. A., and
SHEKA, I. A.

"Removal of Mercury From Polluted Water by Silicon Oxyhydride"

Kiev, Khimicheskaya Tekhnologiya, No 6, Nov/Dec 73, pp 50-52

Abstract: The compound $(H_2Si_2O_3)_N$ is proposed as an absorbent. The H_g ion in
solution is reduced to the metal on the surface of the $(H_2Si_2O_3)_N$ where it is
fixed. A table gives the amount of H_g removed under various conditions. The
amount of H_g removed is 99+% for every case except the high H_g concentration
(4000 mg). In another set of experiments the concentration of H_g was reduced
40 to 85 times at a pumping rate of 4 to 6 l/hr over 1 kg of absorbent.

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TITLE--THE, PICKLING, INHIBITING ACTION OF
  2N,N,DIMETHYL,P,AZOANILINE,4,CARBOXYTHIAZOLE -U--
AUTHOR-(02)-MALTSEVA, V.P., MOMSENKO, A.P.

COUNTRY OF INFO--USSR

SOURCE--ZASHCHITA METALLOV, JAN.-FEB. 1970, 6, (1), 91-92

DATE PUBLISHED--------70

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

TOPIC TAGS--CORROSION INHIBITOR, PICKLING, IRON ALLOY, CARBON STEEL, ACID
  CORROSION, THIAZOLE, CARBOXYL RADICAL, ANILINE, AZO COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/0322   STEP NO--UR/0365/70/006/001/0091/0092

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CIRC ACCESSION NO--AP0129554
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WEIGHT LOSS MEASUREMENTS AND
  POLARIZATION TESTS WERE USED TO STUDY THE INHIBITIVE ACTION OF
  2(N,N,DIMETHYL,P,AZOANILINE),4,CARBOXYTHIAZOLE ON ARMCO FE AND C STEELS
  (CONTG. C 0.06-0.12, 0.09-0.15, AND 0.14-0.22PERCENT, RESP.) IN HCL AND
  H SUB2 SO SUB4. THE COMPOUND HAS A SOLUBILITY IN WATER OF SIMILAR TO
  0.02 G-100 G AT 25DEGREESC. THE PROTECTIVE ACTION INCREASES WITH C
  CONTENT OF THE STEEL AND WITH INCREASING ACIDITY AND FALLS SLIGHTLY WITH
  RISING TEMP. FOR EXAMPLE, IN 5 N-H SUB2 SO SUB4 AND 5 N-HCL SIMILAR TO
  87PERCENT PROTECTION IS OBTAINED WITH ST. 3. IT HAS LITTLE EFFECT ON
  THE CATHODIC REACTION AND GIVES INCREASED ANODIC POLARIZATION.

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UDC 519.272

USSR

OLEYNIK, O. G., and MONAKHOV, A. V.

"Measuring System With Fast Fourier Transform"

V Sb. "Konf. po Avtomatiz. Nauch. Issled. na Osnove Primeneniya EVM, 1972"
[In the Collection "Conference on Automation of Scientific Investigations on
the Basis of the Application of Electronic Computers, 1972"], Novosibirsk,
1972, pp 37-41 (from Referativnyy Zhurnal, No 10, Oct 72. 32, Metrologiya i
Izmeritel'naya Tekhnika. Single Issue. Abstract No 10.32.59)

Translation: The possibility is investigated to apply a digital analyzer
with a small electronic computer, using the technique of Fourier analysis
for investigation purposes of the characteristics of signals and for sta-
tistical analysis. The basic program realizing the algorithm of fast Fourier
transform is described. It is indicated that the introduction of additional
equipment makes possible the use of the analyzer for measuring the parameters
of four-terminal networks. Three illustrations, three bibliographical
references.

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MONAKHOV, B. S.

Public Health

IMPROVEMENT OF DISPENSARY CARE (A RESPONSE TO THE ARTICLE BY L.A. MAURER ENTITLED 'MEANS OF IMPROVING DISPENSARY CARE IN A THERAPEUTIC DISTRICT')

A considerable number of works (I.B. Rostotskiy, 1954; K.V. Maystrakh, 1955; S.L. Freydlin, 1961; I.B. Engaryev, 1968) deals with development and improvement of the dispensary method. Nevertheless, as properly pointed out by L.A. Maurer, there are still several unsolved organizational problems. We agree with the author that it is necessary to introduce a medical log [booklet] for specific groups of individuals under dispensary observation. This would definitely improve the quality of physical examinations, it would provide rational vocational guidance, etc. Also of interest is the author's position with respect to evaluation of the effectiveness of dispensary care supported by expert methods. Many interesting thoughts are voiced in the article about the paper work on dispensary patients (insert for the outpatient chart, epicrisis scheme, etc) and about the effectiveness of health education.

It is common knowledge that the dispensary method includes a system of measures, including active detection of sick cases, taking specific population groups and patients with certain nosological forms of pathology under systematic dispensary care, prompt institution of therapeutic and prophylactic measures for speedy recovery of health and ability to work, investigation of the environment, of industrial and living conditions and improvement thereof.

Unfortunately, with reference to the means of improving dispensary care in the therapeutic district, L.A. Maurer discusses only organization of preventive examinations. Such an approach to the issue at hand causes one to question many positions voiced in the article. First of all, the author states that much is unclear in dispensary care because of the "inadequacy of unified methodological supervision." The idea is absolutely valid, but what solution does the author find? To have the therapist perform complex medical examinations and call upon consultants only when

*Sovetskoye Zdravookhraneniye, No 1, 1971.

- 28 -

MONAKHOV, F.I.

AEC/USRL TRANS-10710

UCRL-Trans-10710

CHARACTERISTICS OF KURILE - KAMCHATKA

EARTHQUAKES AS OBSERVED FROM NEARBY

STATIONS DURING THE PERIOD 1952 - 1954

F.I. MONAKHOV AND R.Z. TARAKHANOV

5701397 BY

Translated (June 1973) from the Russian

Харрактеристика Курило-Камчатских

землетрясений по наблюдениям близ-

ких станций за 1952-1954 гг. [Kha-

rakteristika Kurilo-Kamchatskikh zemle-

tryaseniĭ po nablyudeniyam blizkikh stan-

tsiĭ za 1952-1954 gg.] Izv. AN SSSR,

Ser. geofiz., No. 5 (1955), pp. 401-415.

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post office box 5456

Santa Barbara, California 93103

(415) 831-1040

University of California
LAWRENCE LIVERMORE LABORATORY
Livermore, California

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ANILOV, V. M., BORISOV, M. S., VLASOV, F. S., YEREMIN, A. T., MONAKHOV and RUMYANTSEV, V. I.

"Computer Complex"

USSR Authors' Certificate No 308430, Cl. G 06 f 15/16, filed 20 Apr 70, published 12 Aug 71 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 5, May 72, Abstract No 5B95P)

Translation: Special-purpose computer complexes are known which contain a set of digital computers with interlinking units, with synchronization of synchro-series of machines and coupling lines between the digital computers of the complex, which assure correction of data errors occurring as a result of machine malfunctions. However, the amount of time and hardware redundancy used for increasing reliability and for organization of input data averagings in these complexes is considerable. In addition, parallel operation of the machines of the set is impossible in the event that it is necessary to raise the productivity of the computer complex by lowering its reliability. The unique feature of the proposed complex is that the output data, address, and control into which each computer of the complex is divided entering via assembly circuits into data, address, and control registers, which are connected to the inputs of the ...

.OV, V. M., et al., USSR Authors' Certificate No 308420

tersectional coupling units of all machines of the set; the output data, ddress, and control lines of the intersectional coupling unit of each machine of the complex are connected to the data, address, and control inputs of the functional sections of the corresponding computer of the complex. Another unique feature of the special-purpose computer complex is the fact that the intersectional coupling unit of each machine of the complex contains "m" out of "n" (where n > m) majority circuits, majorizing inhibit gates, by-pass gates, assembly circuits, and a control register with a control signal generating circuit: the mainline of each machine of the complex being connected to the majority circuit input, through the majorizing inhibit gate to the first assembly input, and through the by-pass gate to the additional assembly input, the control inputs of the gates coupled by control lines to the corresponding outputs of the control circuit, which is connected to the control register output. This makes it possible to reduce the time and hardware redundancy for increasing reliability, provide averaging of input data, and organize parallel operation of the machines of the complex.

UDC 612.822.3+612.821.6

USSR

MONAKHOV, K. K., RUMYANTSEVA, L. K., and LOBACHEVA, V. P., Laboratory of Neurophysiology, Institute of Psychiatry, Academy of Medical Sciences USSR, Moscow

"Spacial-Temporal Systems of Connections Between Evoked Activities in Conditioned Reactions in Man"

Abstract: The feasibility of investigating complex forms of conditioned activity according to the principle of systemic organization of electrical activity in the human brain is analyzed. Determinations of correlation connections (Cc) between evoked activities in different functional cortical areas during elaboration of a trace motor conditioned reflex (stimulation with light followed by verbal confirmation) revealed generation of high Cc between motor and visual areas at the beginning and at the end of the trace pause and a marked decrease in Cc in the middle of the pause. By means of a special computer algorithm, models of spatial-temporal systems were designed for Cc forming between the different cortical areas during the action of a non-signal stimulus and trace conditioning with a 5-sec delay. In this system, principal Cc exist between background activity and evoked activity in the first second after stimulation.

1/2

USSR

MONAKHOV, K. K., et al., Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlov, Vol 23, No 2, Mar/Apr 73, pp 366-374

During conditioned activity, a Cc system is formed throughout the whole trace pause, with especially pronounced Cc appearing in the first and fifth second. When such a system is formed, motor reactions appear. The model is considered useful for defining systemic cerebral activity and the participation of individual functional areas.

2/2

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2/2   021

TITLE--CONCERNING THE STRUCTURE OF FUNCTIONAL CONNECTIONS IN EVOKED ELECTRIC ACTIVITY OF THE PARIETAL AND OCCIPITAL BRAIN AREAS IN NORMALS

AUTHOR-(02)-MONAKHOV, K.K., STRELETS, V.B.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKOVA, 1970, VOL 70, NR 6, PP 864-870

DATE PUBLISHED------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BRAIN, BIOPOTENTIAL, SCHIZOPHRENIA

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PROXY REEL/FRAME--3001/0236

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CIRC ACCESSION NO--AP0126015
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS REPORT OF A STUDY
CONCERNING COMPARATIVE INVESTIGATIONS OF NORMALS AND SCHIZOPHRENIC MALE
PATIENTS FROM THE AGE OF 20-40. THE REGISTRATION OF ELECTRIC ACITVITY
OF PARIETAL AND OCCIPITAL BRAIN AREAS WAS CONDUCTED BY THE METHOD OF
SUPERPOSITION BY PHOTO STIMULATION. THE RESULTS WERE PROCESSED BY A
COMPUTER ACCORDING TO A PROGRAM OF MUTUAL CORRELATIONS OF INSTANT
SIGNIFICANCE OF BIOPOTENTIALS FROM 2 AREAS. COMPARING THE COEFFICIENTS
OF CORRELATIONS WITH THE MORPHOLOGY OF THE ELECTRIC CURVES OF THESE
AREAS IN NORMALS IT WAS DISPLAYED THAT THE HIGHEST CORRELATION OF
INSTANT SIGNIFICANCES OF THE BIOPOTENTIALS COINCIDES WITH THE PHASE OF
DEVELOPMENT OF THE FIRST NEGATIVE, POSITIVE AND THE SECOND NEGATIVE
WAVE. THE COEFFICIENT WAS LESS ON THE APEX AND FALL OF THE WAVE. ON
THE BASIS OF ACHIEVED RESULTS THE AUTHORS PRESUME THAT THERE MAY EXIST A
SPECIFIC PROGRAM IN THE DEVELOPMENT OF ELECTRIC RESPONSES, EXERTING A
SUCCESSIONAL INVOLVEMENT OF DIFFERENT FUNCTIONAL STRUCTURES, WHICH FORM
THE RESPONSE. IN SCHIZOPHRENIC PATIENTS WITH DIFFERENT FORMS THE
PROGRAM IN THE DEVELOPMENT OF THE EVOKED RESPONSE IS DISTORTED. THE
AUTHORS BELIEVE THAT THIS IS A REFLECTION OF THE DISORDERS IN THE
INTEGRATIVE ACTIVITY OF THE BRAIN IN GENERAL IN SCHIZOPHRENIC PATIENTS.
THE CONVENED THERAPY IN SUCH CASES DID NOT BRING ON A NORMALIZATION OF
THESE PROCESSES.   FACILITY: INSTITUT PSIKHIATRII AMN SSSR.

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TITLE--RESPIRATORY ACTIVITY OF ISOLATED NUCLEAR MEMBRANES AND NUCLEI OF
   RAT LIVER -U-
AUTHOR-(05)-KUZMINA, S.N., MONAKHOV, N.K., GAYTSKHOKI, V.S., NEYFAKH,
   S.A., ZBARSKIY, I.B.
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SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(1), 215-17

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