

USSR

UDC 512.25/.26+519.3:330.115

ROMANOVSKIY, I. V.

"Main Line Theorems for Semi-Markov Decision Processes"

Tr. Mat. In-ta. AN SSSR [Works of Mathematics Institute, Academy of Sciences USSR], Vol 111, 1970, pp 208-223, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V539 by A. Mikhaylova).

Translation: The term "main line theorem" arose in connection with analysis of models of development of economic systems. The optimal trajectory of a multi-step process is compared with a long path, which can be divided into an approach to a high speed line, movement along the line and the final path from this line to the assigned ending point. Stable states of a semi-Markov process and its characteristics are studied. A problem in linear programming is presented, the solution of which produces an optimal stable state of the process being studied. The variable dual problems allow the "quality" of the states of the process to be evaluated. The asymptotic behavior of approach functions for Markov and semi-Markov decision processes is studied. A main line theorem is formulated.

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UDC: 519.281

KAGAN, A. M., LINNIK, Yu. V., Academician, ROMANOVSKIY, I. V., and RUKHIN, A. L.

"Sets With 'Self-Control'"

Moscow, Doklady Akademii Nauk SSSR, vol. 199, No. 4, 1971, pp 766-769

Abstract: In this investigation of the "self-control" of sets in the problem of successive evaluation of shift parameters in arbitrary loss functions, the parameter $\theta \in R^1$ in a standard system of direct measurements $x_i = \theta + \varepsilon_i$, $i = 1, 2, \dots$, is considered, where the measurement errors ε_i are assumed to be random quantities with fully known distribution functions $F(x)$. The purpose of this article is thus to study successive estimation of the shift parameter θ in specified independent observations x_1, x_2, \dots , distributed in accordance with the law $F(x - \theta)$. A formula is derived for the optimal invariant evaluate $\hat{\theta}$ of the parameter θ , and a theorem involving the errors ε_i subjected to hypernormal distribution and the derived formula is stated and proved. The authors are connected with the Leningrad Division of the V. A. Steklov Mathematical Institute.

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USSR

UDC 51.330.115

ROMANOVSKIY, I. V.

"Work on Optimal Programming"

Matematika v Peterburg.-Leningr. Un-te. [Mathematics in the Peterburg-Leningrad University -- Collection of Works], Leningrad, Leningrad University Press, 1970, pp 261-267 (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V520 by A. Korbut).

Translation: An outline of the development of optimal programming at Leningrad University. The presentation begins with the works of P. L. Chebyshev on optimal approximations. Great attention is given to the basic works of L. V. Kantorovich. The basic trends in modern studies are noted.

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UDC 519.281

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LINNIK, Yu. V., (Academician) and ~~ROMANOVSKIY, L. V.~~, Leningrad Section of the
Mathematical Institute imeni V. A. Steklov, Academy of Sciences USSR)

"On the Theory of Sequential Valuations"

Moscow, Doklady Akademii Nauk SSSR (Proceedings of the Academy of Sciences USSR),
Vol 194, No 2, 1970, pp 270-272

Abstract: This is related to a previous paper and relies on the work of I. A. Ibragimov and R. Z. Khas'min. The authors stress the asymptotic and point aspects of sequential valuations in probability theory, using a non-Bayesian approach. Ibragimov and Khas'min set the condition that informational quantities are continuous for $n < 20$ (the I-K condition) and show the asymptotic behavior of the dispersion of the Pitman evaluation $\hat{\theta}_n$ for parameter θ . The authors seek an optimum strategy for the sequential evaluation of $S = (\tau, T_\tau)$ as a pair consisting of a Markov moment τ and statistics T_τ , evaluating the given function $g(\theta)$.

An asymptotically optimal plan S is sought that minimizes $E_\theta (T_\tau - g(\theta))^2$
under the condition $E_\theta \tau \leq n$, where n is a given positive number. Theorems
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LINNIK, Yu. V. and ROMANOVSKIY, I. V., Doklady Akademii Nauk SSSR (Proceedings of the Academy of Sciences USSR), Vol 194, No 2, 1970, pp 270-272

are given that show only infinitely small improvements can be gained in the mean square deviation using sequential analysis as compared to the method of constant volume sampling. The asymptotic results are applicable to homogeneous processes with independent increments and continuous time.

Orig. art. has 10 refs.

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Refractory Materials

USSR

UDC 666.764:621.928.37

(5)

MARANTS, A. G., GUTMAN, V. I., All-Union Institute of Refractories; FRANTOVA, E. S., ZEGER, I. Ye., VASILIVITSKIY, A. V., KREYDLIN, P. N., All-Union Scientific Research, Planning, and Design Institute of Metallurgical Machinery; ROMANOVSKIY, L. B., KOREN, L. N., and KOSTYRYA, Yu. F., Dnepropetrovsk Metallurgical Institute

"Prospects of the Application of the Melting Cyclone for the Production of Melted Refractories"

Moscow, Ogneupory, No 5, 1973, pp 50-54

Abstract: The process of cyclone melting was investigated with a view to produce melted refractories of the magnesium-spinel and brazilite-corundum types. Experiments were carried out at the Institute of the Problems of Material Science of the Academy of Sciences UkrSSR. The experiments indicated the possibility of applying melting cyclones with the use of a blast enriched with oxygen for the production of cast fused refractories with a 1800-1900°C fusion temperature in which the melt aggregates in the warming forehearth for aftercasting into molds. The dust removal in cyclone melting does not exceed 5%, thus ensuring the production of a melt which is close to the initial charge in chemical composition. The optimum content of oxygen in the blast at an approximate natural gas consumption of 1.5 nm³/kg charge was determined.

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MARAFIS, A. G., et al., Ogneupory, No 5, 1973, pp 50-54

The properties of the produced materials are analyzed. Four figures, three tables, three bibliographic references.

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1/2 024 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--ESSENCE OF THE PATHOLOGICAL PROCESS IN CASES OF EPICONDYLITIS OF
THE HUMERUS -U-
AUTHOR--(02)-ROMANOVSKIY, M.G., BOGACHENKO, N.I. R
COUNTRY OF INFO--USSR
SOURCE--ORTOP TRAVMATOL PROT 31(2): 56-59. 1970
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--X RAY STUDY, BONE DISEASE, MUSCULOSKELETAL SYSTEM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605015/F06 STEP NO--UR/9115/70/031/002/0056/0059
CIRC ACCESSION NO--AP0140640
UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140640

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CLINICAL X RAY STUDIES WERE MADE OF 80 PATIENTS WITH EPICONDYLITIS AGED 26 TO 53 YR WITH DIFFERENT PHASES OF THE DISEASE. THESE STUDIES INDICATED THAT THE PATHOLOGICAL PROCESS IN EPICONDYLITIS OF THE HUMERUS IN THE INITIAL PHASE IS PRIMARILY LOCALIZED AT THE SITE OF TRANSITION OF TENDON INTO THE BONE TISSUE OF THE EPICONDYLE. LATER, AS THE DISEASE DEVELOPS, SPREAD AND PENETRATION OF THE DEGENERATIVE DYSTROPHIC ALTERATIONS OCCURS WITH THE PRESENCE OF ASEPTIC INFLAMMATION IN THE MUSCLE TENDONS ATTACHED TO THE EPICONDYLE, IN THE PERIOSTEUM, BONY TISSUE, LIGAMENTS CONNECTED TO THE CAPSULE OF THE ELBOW JOINT, AND IN THE NERVES WHICH INNERVATE THE COMPONENTS OF THE ELBOW JOINT. WITH THE CLINICAL PROGRESSION OF THE DISEASE, DAMAGE TO NERVE FIBERS CAUSES THE CHARACTERISTIC PAIN SYNDROME DETECTED UPON EXAMINATION OF THE PATIENT. THE EPICONDYLE OF THE HUMERUS IS ONLY THE POINT AT WHICH THE PAIN IS LOCALIZED BY PROJECTION. THE CHANGES OCCURRING IN IT ARE A SECONDARY MANIFESTATION OF THE DISEASE. THEREFORE, THE TERM EPICONDYLITIS OF THE HUMERUS DOES NOT REFLECT THE ESSENCE OF THE DISEASE IN ALL ITS VARIEGATED CLINICAL MANIFESTATIONS. IT WOULD BE MORE CORRECT TO CALL IT PERIARTHRITIS OF THE ARTICULATIO CUTIBI. FACILITY: KIEV INST. POSTGRAD. MED., KIEV, USSR.

UNCLASSIFIED

USSR

UDC 547.665:547.564

NEYLAND, G. YA., ROMANOVSKIY, P. YA., Riga Polytechnical Institute,
Riga, Latvian Sovnarkhoz
"Synthesis of 2-(Hydroxyphenyl)-indandiones-1,3 and Some of Their
Properties"

Riga, Izvestiya Akademii Nauk Latviyskoy SSR, Seriya Khimicheskaya,
No 2, 1970, pp249-250

Abstract: Analog of 2-(hydroxyphenyl)-indandione-1,3 (OH-I) were
synthesized by demethylation of their methoxy derivatives using HI or
HBr in glacial acetic acid: o-OH-I m.p. 227°, m-OH-I m.p. 145°, and
p-OH-I m.p. 172-174°. When treated with FeCl₃ in alcoholic solution,
these compounds dimerize.

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USSR

UDC 536.244:538.124

ROMANOVSKIY, S. G., and KOPYLOV, V. F., Minsk

"Experimental Investigation of the Heat Exchange of Ferromagnetic Solids Heated in the Electromagnetic Field"

Kishinev, Elektronnaya Obrabotka Materialov, No. 3 (39), 1971, pp 50-54

Abstract : The heat exchange process of ferromagnetic solids heated in the electromagnetic field was experimentally investigated according to a shown block diagram on a steel plate and a steel plate in contact with a capillary-porous ceramic plate. The carried out experiments are described and the results are analytically discussed by reference to the heating--time curves. It was found that the profile of the heat flux and its density on the surface of the steel plate heated by electromagnetic induction and heated conductively from the electroheating element differ considerably. The observed effects and regularities can

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ROMANOVSKIY, S. G., and KOPYLOV, V. F., Elektronnaya Obrabotka Materialov, No 3 (39), 1971, pp 50-54

be explained somehow on the basis of the theory of elastic, heat, and electric phenomena in ferromagnetic solids. Their physical source may be found in the effect of d-electrons on the behavior of s-electrons which determine the electronic part of ferromagnetic heat transfer. At low temperatures, it can be anticipated that the heat resistance is dependent on the scattering not only of s-electrons on phonons, but also on elementary excitations of the system of internal d-electrons. Three illustr., 5 formulas, 3 biblioc. refs.

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USSR

ROMANOVSKIY, T. B.

UDC [537.226+537.311.33]:[537+535]

"Thermodynamic Relations in the Neighborhood of Phase Transition in Ferroelectrics and Ferrosemiconductors"

Uch. zap. Latv. un-t (Scientific Notes of Latvia University), 1971, 147, pp 117-127 (from RZh-Fizika, No 1, Jan 72, Abstract No 1YE1254 by author)

Translation: The article considers thermodynamic relations of the Pippard type in the case of ferroelectrics and ferrosemiconductors. Relations are presented for both a configurational subsystem and the system as a whole. Pippard relations are also analyzed in the case of diffuse ferroelectric phase transitions.

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1/2 019

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--ALTERNATION OF POLARITY AND DIELECTRIC HYSTERESIS IN THE VICINITY OF EXPANDED FERROELECTRIC PHASE TRANSITION POINT -U-

R

AUTHOR--(02)-ROLOV, B.N., ROMANOVSKIY, T.B.

COUNTRY OF INFO--USSR

SOURCE--LATV. PSR ZINAT. AKAD. VESTIS FIZ. TEHN. SER. (USSR), NO. 2, P. 14-19, 1970

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--HYSTERESIS LOOP, FERROELECTRIC PROPERTY, DIELECTRIC PROPERTY, MATHEMATIC MODEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1726

STEP NO--UR/0371/70/000/002/0014/0019

CIRC ACCESSION NO--AP0136967

UNCLASSIFIED

2/2 019
CIRC ACCESSION NO--AP0136967 UNCLASSIFIED PROCESSING DATE--04DEC70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ATTEMPT IS MADE TO FIND AN
ANALYTIC SHAPE FOR THE HYSTERESIS LOOP WITHIN THE LIMITS OF KANZIG'S
MODEL. THE OBTAINED EXPRESSIONS ENABLE CALCULATING THE MEAN VOLUME OF
KANZIG'S REGIONS AND THE COERCIVE FIELD VALUE. THE RESULTS ARE COMPARED
WITH EXPERIMENTAL DATA.

UNCLASSIFIED

USSR

UDC 621.316.722.1(088.8)

PEKELIS, V.G. ~~ROMANOVSKIY, V.I.~~

"Series Type Voltage Regulator"

USSR Author's Certificate No 261475, filed 11 July 68, published 22 May 70 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12B552P)

Translation: A circuit is proposed for a d-c voltage regulator with a series regulator transistor and a d-c amplifier, in which with the object of increasing the stabilization factor, the input of the d-c amplifier is connected with the base of the regulator transistor. The amplifier is fed from a stabilitron, one end of which is connected to the output of the regulator. The stabilitron is fed across a resistor from the input voltage of the regulator. 1 ill. S.D.

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USSR

UDC 621.316.722.1(088.8)

1/2 042

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--POSSIBLE USE OF REINFORCED THREADS AS WARPS -U-

AUTHOR--(03)-ROMANOVSKIY, V.I., SMELSKAYA, I.F., KABANDVA, Z.P.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., **R** TEKHNOL. TEKST. PROM. 1970, (1), 55-7

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ADHESION STRENGTH, SYNTHETIC FIBER, NATURAL FIBER, WEAR RESISTANCE, COMPOSITE MATERIAL, FABRIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0792

STEP NO--UR/0324/70/000/001/0055/0057

CIRC ACCESSION NO--AP0124461

UNCLASSIFIED

2/2 042

CIRC ACCESSION NO--AP0124461

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADHESION STRENGTH (SIGMA) BETWEEN THE INNER THREAD CORE OF SYNTHETIC FIBERS AND THE OUTER FLAX FIBER COVERING INCREASES WITH THE TWIST CONST. (ALPHA) OF THE COVERING. THE OPTIMUM ALPHA IS 2.2. SIZING THE COMPOSITE THREADS WITH A SOLN. OF STARCH, CHLORAMINE, BORAX, OP-10, AND GLYCEROL IN WATER INCREASED SIGMA BY 18-24PERCENT. SUCH COMPOSITE THREADS CAN BE USED AS WARP IN WEAVING CANVAS FOR BAGS OR TARPAULINS ON STD. LOOMS. THE WEAR RESISTANCE OF THESE FABRICS DEPENDS LARGELY ON SIGMA. FACILITY: KOSTROM. TEKHNOL. INST., KOSTROMA, USSR.

UNCLASSIFIED

USSR

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ROMANOVSKIY, V. R., of Leningrad

UDC 681.142.621

"An Integrated Circuit Digital Voltmeter"

Novosibirsk, Avtometriya, No 2, March-April 1970, pp 95-99

Abstract: The first part of this article is a brief discussion of the history of stepwise equalizing digital voltmeters, in which the following Soviet second generation instruments (discrete solid state components) are mentioned and their accuracies indicated: Sh Ch 1412 - 0.05%, Sh Ch 1512 and Sh Ch 1513 - 0.01%.

The new instrument is the Sh Ch 1312, designed at the Vibrator factory and intended for serial production. The microtransistors are types GT1C8T, MZD and M5, providing an initial accuracy of 0.1% and the capability of development to 0.01%. Standard IP-1 switch microcircuits were found unsuitable, since the production models tested showed accuracies in order of magnitude worse than those obtainable with the transistors listed. To simplify the logical part of the circuit, a unipolar switch control circuit was used with GT1C8T and MZD transistors as switches. Polarity reversal is accomplished by including a
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ROMANOVSKIY, V. R., Novosibirsk, Avtometriya, No 2, March-April 1970, pp 96-99

supplementary base source, simplifying the measuring switch control circuit but complicating the decoder. The control circuit is made of integrated solid state germanium microcircuits, which have low cost and are available in quantity. The stages include a shift register, code register, and inverse code decoder, memory circuit and decoder.

The major difficulties were encountered in setting up comparison circuits, due to the severe demand on the zero unit. In particular, the available type P2222 balance stages have far too low a resistance for this purpose. This problem was solved by using field transistors and subsequent amplification of the signal difference with the P2222 circuit. The resulting zero unit has a sensitivity on the order of 100 microvolts and a response time of not more than 100 microseconds from -300 microvolts to +1 volt. The input current is less than 10^{-9} - 10^{-10} amperes. It is packaged separately and shielded with dimensions of 93 x 67 x 15 millimeters.

The instrument is made without a housing, with dimensions not over 200 x 120 x 235 millimeters and a weight not greater than 5 kilograms.

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USSR

UDC 539.171.12

BENGALI, N., GALAKHMATOVA, B. S., GULAMOV, I. R., KALACHEVA, Z. F., OMAR, M. R.
and FOMINOVSKIY, Ye. A.

"Polarization of Protons as a Function of Energy during Elastic Scattering in ^{24}Mg "

Moscow, Izvestiya Akademii Nauk SSSR -- Seriya Fizicheskaya, Vol XXXV, No 8,
1971, pp 1695-1696

Abstract: The authors used the double-scattering method to measure the extent to which polarization of protons during elastic scattering in ^{24}Mg depends on energy. Their experiments were carried out for energies ranging from 5.9 to 6.5 million electron volts for 60° and 120° angles of scattering. While measuring the dependence of polarization on energy during elastic scattering, they also evaluated it for the case of inelastic scattering of protons in ^{24}Mg with an excitation level of 1.37 million electron volts, borrowing some needed data from another work. They found that polarization of protons varied considerably as a function of their energy for both angles in both types of scattering. The authors emphasize that their results are merely preliminary. They are planning further experiments to obtain spectroscopic information and data on the mechanism by which polarization is initiated.

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172 017

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--ENERGY DISTRIBUTION OF ALPHA PARTICLES FROM THE P PLUS PRIME11 B
YIELDS 3 ALPHA REACTION -U-

AUTHOR--(05)-KOMAROV, V.V., POPOVA, A.M., ROMANOVSKIY, YE.A., KALACHEVA,
Z.F., SALMAN, KH.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ: 1970, 34(11), 84-8

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--ENERGY SPECTRUM, ALPHA SPECTRUM, PROTON BOMBARDMENT, BORON
ISOTOPE, CARBON ISOTOPE, EXCITED NUCLEUS, CALCULATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0207

STEP NO--UR/0048/70/034/001/0034/0088

CIRC ACCESSION NO--AP0105283

UNCLASSIFIED

2/2 017

CIRC ACCESSION NO--AP0105283
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT. THE CALCN. IS DEMONSTRATED OF THE WIDTH OF A 2 PARTICLE ALPHA ALPHA RESONANCE (L PRIMEPI EQUALS 2 POSITIVE), APPEARING IN THE ENERGY DISTRIBUTIONS OF THE ALPHA PARTICLES IN THE REACTION P PLUS PRIME11 B YIELDS 3 ALPHA WHICH OCCURS THROUGH THE STATES 1 MINUS AND 0 POSITIVE OF THE PRIME12 C NUCLEUS (E EQUALS 17.23 AND 17.77 MEV). THE CALCD. VALUES AGREE VERY WELL WITH THE EXPTL. DATA OBTAINED FROM THE EXPTS. WITH THE ENERGY OF THE INCIDENT P 1.7 AND 2.0 MEV, RESP.

UNCLASSIFIED

USSR

UDC: 51:155.001.57:001

ROMANOVSKIY, Yu. M., STEPANOVA, N. V., CHERNAVSKIY, D. S.

"What is Mathematical Biophysics. (Kinetic Models in Biophysics)"

Chto takoye matematicheskaya biofizika. (Kineticheskiye modeli v biofizike)
(cf. English above), Moscow, "Prosveshcheniye", 1971, 136 pp, ill. 23 k.
(from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V864 K)

Translation: The book popularizes problems of mathematical modeling of biological processes. Principal attention is devoted to modeling of periodic processes in various biological systems -- This is the so-called "biological clock" problem. Some examples of oscillatory systems are considered: oscillations in the dimensions of colonies of cells and cellular nuclei, the intensity of photosynthesis and population of two coexisting species. The method of the modern theory of oscillations is used as the method of study for these examples. The first chapter is devoted to presentation of kinetic governing principles in biology. The second chapter outlines modern mathematical methods of studying dynamic systems: the phase pattern method

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ROMANOVSKIY, Yu. M. et al., Chto takoye matematicheskaya biofizika. (Kineticicheskiye modeli v biofizike), Moscow, 1971

and the method of slowly changing amplitudes. The third chapter is devoted to construction and study of a model of growth of a colony of microorganisms and use of the results of modeling in biological industry. The fourth and final chapter deals with a complex of problems related to periodic processes in various kinetic systems. It is noted that this book will be of use to teachers of physics, biology, chemistry and mathematics, and also in biology circles for pupils. V. Mikheyev.

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1/2 023

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--ON MUTUAL SYNCHRONIZATION IN A CHAIN OF COUPLED AUTO OSCILLATORS
-U-
AUTHOR--(02)--POLYAKOVA, M.S., ROMANDVSKY, Y.M.

R

COUNTRY OF INFO--USSR

SOURCE--FIFTH INTERNATIONAL CONFERENCE ON NONLINEAR OSCILLATIONS, KIEV,
AUGUST 25TH-SEPTEMBER 5TH, 1969. ABSTRACTS OF PAPERS, KIEV, 1969, 267
DATE PUBLISHED-----70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--OSCILLATOR THEORY, COUPLING CIRCUIT, MATHEMATIC MODEL,
ELECTRIC ANALOG, CHEMICAL REACTION, FREQUENCY CHARACTERISTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1253

STEP NO--UR/0000/69/000/000/0001/0267

CIRC ACCESSION NO--AT0133231

UNCLASSIFIED

2/2 023

CIRC ACCESSION NO--ATO133231
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--13NOV70

ABSTRACT. MUTUAL SYNCHRONIZATION IN A CHAIN OF COUPLED TOMSON'S TYPE OSCILLATORS IS STUDIED IN THE CASES OF SOFT AND HARD EXCITATION. THE METHOD OF STEP BY STEP ABRIDGEMENT PROPOSED BY R. V. CHICHLOV WAS APPLIED. ANALOGOUS AND DIGITAL COMPUTERS WERE USED. IT IS PERMITTED TO MODEL DISTRIBUTED AUTO OSCILLATORY CHEMICAL RESPONSES, TAKING PLACE IN ONE DIMENSIONAL REACTOR. IN THE CASE OF SOFT EXCITATION THE SINGLE STABLE MODE OF OSCILLATIONS EXISTS WHEN ALL OSCILLATORS ARE TUNED TO THE SAME FREQUENCY AND PHASE. IN THE CASE OF HARD EXCITATION, BESIDE THE ABOVE MENTIONED MODE OF OSCILLATIONS, INDEPENDENT SYNCHRONOUS AUTO OSCILLATIONS OF SOME GROUPS OF OSCILLATORS SEPARATED FROM EACH OTHER BY GROUPS OF UNEXCITED AUTO OSCILLATORS ARE POSSIBLE. IF, IN A CHAIN WITH FIXED COEFFICIENT OF COUPLING, AN OSCILLATOR IS DETUNED WITH RESPECT TO ALL OTHERS, THE BAND OF SYNCHRONIZING SUBSTANTIALLY DEPENDS ON ITS POSITION IN THE CHAIN. IT IS WORTH TO NOTE THAT THE BAND OF SYNCHRONIZING IN A RING OF N OSCILLATORS IS WORTH TWICE AS LARGE AS THAT OF A LINE OF N OSCILLATORS. WHEN CHAIN CONTAINS TWO NEIGHBOURING GROUPS OF OSCILLATORS WITH EQUAL PARTIAL FREQUENCIES INSIDE EACH GROUP, THE BAND OF SYNCHRONIZING IS THE LESS, THE CLOSER THE RATIO OF NUMBERS OF OSCILLATORS IN EACH GROUP TO UNIT.

UNCLASSIFIED

USSR

ROMANOWICZ, Zbigniew

UDC: 519.1

"Characterizations of Sets and Their Application to the Theory of Graphs"

Pr. nauk. Inst. matem. i fiz. teor. PWr. (Scientific Works. Institute of Theoretical Mathematics and Physics), 1972, 6, pp 3-11 (from RZh-Kibernetika, No 5, May 73, abstract No 5V503 by the author)

Translation: Let X and T be two arbitrary sets. We shall understand partial characterization of set X and T to mean a function of one variable $f: D_f \rightarrow T$, where $D_f \subset X$ is its region of definition. We shall call a partial characterization complete if its region of definition is the entire set X . In addition we shall say that a partial characterization f reaches the set $S \subset T$ if $S \subset f(D_f)$. Let F be a set of partial characterizations of set X . We shall say that the partial characterization g is generated by F if for each finite subset $Y \subset D_g$ there exists a partial characterization $f \in F$ whose region

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ROMANOWICZ, Zbigniew, Pr. nauk. Inst. matem. i fiz. teor. PWr.,
1972, 6, pp 3-11

contains Y , and which coincides with g on set Y . The paper explains when the set of partial characterizations satisfying conditions (2) and (3) generates a complete characterization which reaches set S .
This proposition is then used to prove a number of theorems on infinite graphs.

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USSR

UDC 669.24/.25.053.4.094

SPITCHENKO, V. S., KARAMULLIN, S. A., TSEFT, A. L., ROMANTEYEV, Yu. P.

"Principles of Sulfuric Acid Leaching of Oxidized Nickel Ores"

Nauch. tr. Kazakhsk. Politekhn. In-t. [Scientific Works of Kazakh Polytechnical Institute], Alma-Ata, 1971, pp 521-525, (Translated from Referativnyy Zhurnal, Metallurgiya, No 5, 1972, Abstract No 5 G392 by G. Svodtseva).

Translation: Ni- and Co-containing minerals, α -kerolite, β -kerolite, nontronite, and psilomelane were taken for investigation. The consumption of acid was significantly greater than the required quantity for dissolution of all acid-soluble components in the mineral. The dissolution of Ni and Co from the ore and its component minerals occurs in the kinetic area. The similarity of the "apparent" activation energies of dissolution of Ni from the ore (14,460 cal/mol) and β -kerolite (14,300 cal/mol) and Co from the ore (12,820 cal/mol) and psilomelane (13,120 cal/mol) confirm the results of mineralogical studies, which indicated that the basic mineral containing Ni in the ore is β -kerolite, while the basic mineral containing Co is psilomelane. Three figures, 4 biblio. references.

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Nitrogen Compounds

USSR

UDC 543.253

SUDNIK, M. V., and ROMANTSEV, M. F.

"Polarographic Investigation of Stabilized Imino Acid Radicals"

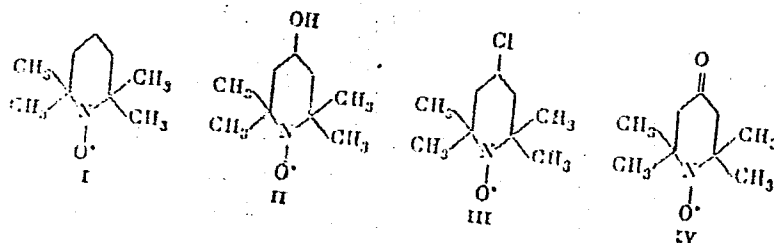
Leningrad, Zhurnal Obshchey Khimii, Vol. 42(104), Vyp 4, 1972, pp 743-746

Abstract: The stabilized imino acid (I-IV) were investigated polarographically using a mercury calomel electrode. New data were accumulated on the change in response of the imido acid to solvents -- 20% and 90% methanol, benzene-methanol, and dimethylformamide (DMF) -- and other environmental conditions, and of substitution (-OH, -Cl, and = O) in the ring. The value of $-E_{1/2}$ increased in the above order of solvents -- from about 0.25 for 20% ethanol to 1.25 for DMF. The value of $-E_{1/2}$ decreased in the order I, II, III, IV. The reduction of the imino acid radical proceeds with the transfer of one electron.

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SUDNIK, M. V. and ROMANTSEV, M. F., Zhurnal Obshchey Khimii, Vol 42(104),
Vyp 4, 1972, pp 743-746



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UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--EFFECT OF IONIZING RADIATION ON C PRIME14 AMINO ACIDS INCORPORATION INTO NUCLEAR PROTEINS AND DNP OF RAT TISSUE CELLS -U-

AUTHOR--(03)-NIKOLSKIY, A.V., BLOKHINA, V.D., ROMANTSEV, YE.F.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY MEDITSINSKOY KHIMII, 1970, VOL 16, NR 3, PP 259-262

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--IONIZING RADIATION BIOLOGIC EFFECT, CARBON ISOTOPE, AMINO ACID, LIVER, SPLEEN, THYMUS GLAND, GLOBULIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0268

STEP NO--UR/0301/70/016/003/0259/0262

CIRC ACCESSION NO--AP012095B

UNCLASSIFIED

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CIRC ACCESSION NO--AP0120958
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--16OCT70

INCORPORATION IN VITRO INTO TOTAL NUCLEAR PROTEINS AND DNP OF LIVER,
SPLEEN AND THYMUS OF RATS IRRADIATED AT A DOSE 1000 R HAS BEEN STUDIED.
PROTEIN SYNTHETIZING SYSTEM OF DNP WAS THE NUCLEAR RESIDUE WHICH DID NOT
CONTAIN GLOBULINS. 1 AND 24 HOURS AFTER THE IRRADIATION THE PRONOUNCED
INHIBITION OF C PRIME14 AMINO ACIDS INCORPORATION INTO NUCLEI AND DNP OF
THYMUS CELLS WAS NOTED. 24 H AFTER THE IRRADIATION THE SAME PICTURE
TOOK PLACE IN THE SPLEEN. ON THE OTHER HAND 1 H AFTER THE IRRADIATION
EITHER THE STIMULATION OR THE INHIBITION DEPENDING UPON THE SEASON WAS
SHOWN. IN THE LIVER AT ALL TIME INTERVALS STUDIED SOME ACTIVATION IN
LABEL INCORPORATION HAS BEEN OBSERVED.

UNCLASSIFIED

USSR

ROMANTSEV, YE., Professor

"Radiation Biochemistry and Medicine"

Moscow, Meditsinskaya Gazeta, 28 Apr 72, p 3

Abstract: The role of biochemical processes in the effects of radiation on cells is discussed. Particular emphasis is placed on current knowledge about radiation damage to DNA molecules in conjunction with restorative enzyme systems and the possibility that radiotoxins form as a secondary effect of radiation. It is noted that ionizing radiation causes changes in the genetic apparatus of the cells and contributes to spontaneous and natural mutation responsible for the evolutionary process. One of the primary tasks for radiation biochemistry is deciphering the change in the substrate of the hereditary apparatus. The stimulating effect of radiation on enzyme activity is explained. The biochemical mechanisms of remote effects of ionizing radiation, which are divided into intumescent and nonintumescent forms are discussed. It is believed that these are caused by a change in or loss of the nitrogen bases of DNA, which causes a change in the pyrimidine bases. It is mentioned that various effects can be produced by using different doses of radiation.

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ROMANTSEV, Ye., Professor

"Radioprotectors and Radiosensitizers"

Moscow, Meditsinskaya Gazeta, 26 Jun 70, p 3

Translation: Protecting the organism from the effect of ionizing radiation by the use of various chemical compounds is one of the most promising areas of modern radiobiology. The danger of the whole organism being affected by large doses of radiation arises rarely. Local irradiation by x-rays or gamma-rays of parts of the body, including also healthy tissues, in the course of x-ray therapy of malignant neoplasms, is much more frequent.

Is it possible to lessen the injurious effect of ionizing radiation by administering certain chemical compounds to the organism prior to irradiation?

It was discovered about 30 years ago that thiourea, for example, is capable of preventing to a significant extent inactivation of certain enzymes due to the effect of x-rays. Later it was established that the amino acid cysteine, if administered intraperitoneally prior to irradiation, is capable of preventing death of animals, while all control rats died. Aminothiols, a derivative of

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ROMANTSEV, Ye., Meditsinskaya Gazeta, 26 Jun 70, p 3

cysteine, has an even more marked radioprotective effect.

From that time on, there has been an intensive search for new radioprotectors. By 1965, more than 3,000 chemical compounds had been tested for possible radioprotective action. Acute shortage of oxygen in the air before irradiation also ensured radiochemical protection.

All radioprotectors can be conditionally divided into two large groups: the ones administered once, which have a radioprotective effect if given once 20-30 minutes before irradiation (aminothiols, certain amino acids, cyanogenetic substances, and so on) and the so-called continuous-action types (certain vitamins and hormones), which require multiple administrations prior to irradiation, and under the condition that sublethal doses of ionizing radiation are used. A combination of various preparations offers the best protection.

The search for more effective radioprotectors is complicated by the fact that many of them are effective only in subtoxic doses. However, several

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ROMANTSEV, Meditsinskaya Gazeta, 26 Jun 70, p 3

methods exist that make it possible to reduce the toxicity of these substances. In many radiobiological centers the search goes on for radioprotectors with a low toxicity and a prolonged effect.

What is the mechanism of chemical protection from the effects of ionizing radiation in the mammalian organism?

The most widespread notion is that of the biochemical mechanism of action of radioprotectors. Up to the moment of optimum radioprotective action after administration, the radiosensitivity of several biochemical processes keeps increasing. The aminothiols affect these processes by forming temporary mixed disulfide bonds between them and the specific enzyme systems. The enzymatic activity of certain processes is slowed down, and the active SH-groups of the enzymes are temporarily blocked and thereby protected from the effect of oxidizing radicals and radiotoxins formed in the course of irradiation. In 1.5-2 hours, the enzymatic activity of the blocked enzymes is completely reestablished.

In this manner, the radiosensitivity of the cell can be changed in the direction of radioresistance. From this it follows that with the help of chemical

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ROMANTSEV, Ye., Meditsinskaya Gazeta, 26 Jun 70, p 3

compounds, the cells can also be made more sensitive to radiation. A positive solution of this problem can have quite a important practical significance. If compounds could be found that would increase the sensitivity of cancer cells to ionizing radiation, this would make the fight against malignant neoplasms a great deal easier.

In recent years radiosensitizers have been discovered, compounds whose administration to animals prior to irradiation increases sensitivity to radiation. Radiosensitizers can be of interest not only to oncologists, but also to specialists studying the problems of radiation sterilization of medical equipment, products, and so on. If it were possible to find radiosensitizers suitable for this task, then the high doses of radiation could be lowered.

Iodoacetamide can serve as an example of a radiosensitizer of microorganisms. It was found that during irradiation this chemical compound forms radicals which have an additional damaging effect. A radiosensitizer like Vikasol can penetrate the cell, oxidize under the effect of radiation, and form a radiotoxin which intensifies the effect of the ionizing radiation.

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ROMANTSEV, Meditsinskaya Gazeta, 26 Jun 70, p 3

The mechanism of the action of radiosensitizers can be connected both with more damage to the living cells during irradiation, and with the weakening of regenerative processes after irradiation. Radiosensitivity was achieved also by changing the fine structure of DNA and increasing oxygen pressure in the cells under increased pressure. In the latter case, the oxidizing radical output increased, while the dose of irradiation remained the same, and the cells were damaged more.

At present, dozens of radiosensitizers are known. As is frequently the case, among 1,000 new substances tested, only a few become part of the pharmacopeia. Among radioprotectors, such preparations are, for example, mercamine hydrochloride and ascorbate. A special approach, based on the principles of radiosensitization, is irradiation of tumors under increased oxygen pressure.

There is every reason to hope that in the near future highly effective radioprotectors and radiosensitizers can be found.

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Doc. Nr:

AP0037241

Ref. Code: UR 0301

PRIMARY SOURCE: Voprosy Meditsinskoy Khimii, 1970, Vol 16,
Nr 1, pp 69-72
ON THE CHEMICAL STATE AND CONTENT OF RADIOPROTECTOR IN SOME
TISSUES OF RAT AT EARLY TIME-INTERVALS AFTER CYSTAMINE
ADMINISTRATION

Koshcheyenko, N. N.; Filippovich, I. V.; Romantsev, Ye. F.
Institute of Biophysics USSR Ministry of Health, Moscow

The relative content of MEA, cystamine and mixed disulphides of protector with cellular proteins in rat thymus, spleen and liver during 3 hr after i. p. cystamine administration at a radioprotective dose has been studied. It was established that at all time-intervals studied only mercapto-form of the protector has been found in tissues. Cystamine and mixed disulphides content was less than 0.01 μ mole per 25-100 mg of tissue. The coincidence of maximal radioprotective effect and MEA accumulation in the tissues studied after cystamine administration was noted. One and the same biochemical mechanism (or mechanisms) of radioprotective action for MEA and cystamine may be postulated on the base of similarity between time-course of MEA accumulation in various tissues after MEA and cystamine administration. The difference between these results and those from paper of Betz (Betz E. H., Mewissen D. J., Lelievre P., Intern. J. Rad. Biol., 1962. 4, 231) probably may be explained by the fact that in the paper of Betz the tissues were not washed before homogenization.

REEL / FRAME
19730168

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USSR

UDC: 681.325.3

KUSTOV, Ye. S., ROMANTSOV, V. D., ROMASHKAN, V. S., TONKAL', A. Ye.

"Voltage-Code Converter"

Pribory i Sistemy Avtomatiki. Resp. Mezhved. Nauchno-Tekhn. Sb. [Automation Devices and Systems. Republic Interdepartmental Scientific-Technical Collection], No 13, 1970, pp 88-94 (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, 1970, Abstract No 10B273, by T. D.)

Translation: A dc voltage-to-binary 10-digit code converter is described. The converter is built of semiconductor devices and operates by digit-by-digit comparison. The principal error of the converter is not over $\pm 0.25\%$, the input impedance is 2 kohm, the speed is 2000 conversions per second, the voltage measurement range is 0-10 v. The converter uses "Mir-1" potential modules. The principal non-standard units of the converter determining its accuracy are made of high-stability elements. The compensator uses a wire-wound resistor of manganin microwire, silicon transistors, and silicon diodes. A potential type null-balance device with a sensitivity of ± 3 mv is used. Six illustrations; two biblio. refs.

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USSR

UDC 8.74

BORKOVSKIY, B. A., GALUZINSKIY, G. P., KATKOV, A. F., ROMANTSOV, V. P.
"Algorithmic Hybrid Systems"

Kiev, Algoritmicheskiye gibridnyye sistemy (cf. English above), "Nauk. dumka",
1972, 116 pp, ill. 68 k. (from RZh-Matematika, No 1, Jan 73, abstract No
1V783K)

Translation: Algorithmic hybrid computer systems are systems in which the
method of representing the information is hybrid i. e., in continuous quan-
tities and codes and the method of solution is algorithmic. This monograph
deals with theoretical and practical questions of constructing computer sys-
tems made up of a digital automaton, or a digital computer, and analog circuits
which model the operator of numerical integration with regard to boundary con-
ditions which play the part of standard sub-programs of a special type.

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USSR

BORKOVEKIY, B. A., GALUZINSKIY, G. P., KATKOV, A. A., SHANTSOV, V. P.
"Algorithmic Hybrid Systems"

Algoritmicheskiye Gibridnye Sistemy [English Version Above], Kiev, Nauk.
Dumka Press, 1972, 116 pages (Translated from Referativnyy Zhurnal, No 1,
1973, Abstract No 1 V783 K).

Translation: Algorithmic hybrid computer systems are systems in which
the method of representation of information is hybrid, i.e., both in
analog and digital representations, while the method of solution is
algorithmic. This monograph studies theoretical and practical problems
of the construction of computer systems consisting of a digital automaton
or digital computer and analog circuits modeling the numerical integration
operator considering boundary conditions, acting as standard subroutines
of a special type.

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USSR

UDC: 681.332.6

PUKHOV, G. Ye., GALUZINSKIY, G. P., KATKOV, A. F., ROMANTSOV, V. P., Institute of Cybernetics, Academy of Sciences of the Ukrainian SSR

"An Analog with Automatic Data Input for Solving Systems of Differential Equations"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 25, Soviet Patent No 278239, class 42, filed 12 May 69, published 5 Aug 70, p 137

Translation: This Author's Certificate introduces an analog with automatic data input for solving systems of differential equations. The device contains interconnected integrating capacitors, digital controlled resistors, an amplifier for generating null-potential points, controlled switches, and a digital automaton. As a distinguishing feature of the patent, the required number of digital controlled resistors is reduced by including prediction devices in the analog which are connected through the switches to the outputs of the amplifier for generating null-potential points. The outputs of the prediction devices are connected to the resistors controlled from the digital automaton and to the integrating capacitors, which are connected through two-position switches to the amplifier input and to a zero-potential line.

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UDC: 681.332.6

PUKHOV, G. Ye., GALUZINSKIY, G. P., ROMANTSOV, V. P., Institute of Cybernetics, Academy of Sciences of the Ukrainian SSR

"A Device for Solving Differential Equations With Boundary Conditions"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 25, Soviet Patent No 278241, class 42, filed 12 May 69, published 5 Aug 70, p 138

Translation: This Author's Certificate introduces a device for solving differential equations with boundary conditions. The unit contains a reversible point analog based on integrators and an adder. Connected to the inputs of the analog are modules for simulating the boundary conditions and the vector of the right-hand members of the equations to be solved. As a distinguishing feature of the patent, accuracy is improved by including a differential analyzer and a boundary-condition converter in the device. The differential analyzer and converter are connected in series in the circuit between the outputs and inputs of the reversible point analog to the modules for simulating the vector of the right-hand members and boundary conditions respectively.

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BORKOVSKIY, B. A.,
TYUTIN, A. A.

UDC 681.3

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"Modeling Mathematical Machines with Variable Structure"

Modeliruyushchiye Matematicheskiye Mashiny S Peremennoy Strukturoy, [English Version Above], Kiev, Nauk. Dumka Press, 1970, 248 pages, (Translated from Referativnyy Zhurnal Kibernetika, No 5, 1971, Abstract No. 5Y602 K, unsigned).

Translation: Results are presented from theoretical studies of models with variable structure, designed for modeling of mathematical operations, systems of finite equations and linear differential equations. Significant attention is given to methods of studying models with variable structure and recommendations are given for their engineering planning. The book is designed for engineers, scientific workers and graduate students interested in electronic modeling.

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Radiobiology

USSR

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UDC 615.849.1.015.25.032.361.033

KOSHCHAYENKO, N. N., FILIPPOVICH, I. V., and ROMANTSOV, YE. F.,
Institute of Biophysics, Ministry of Health USSR, Moscow

"Chemical State and Content of the Radioprotector in Some Rat Tissues
in Early Periods After Intraperitoneal Administration of Cystamine"

Moscow, Voprosy Meditsinskoy Khimii, Vol 16, No 1, Jan/Feb 70, pp
69-72

Abstract: Spectrophotometric determinations of tissue homogenates indicated that cystamine, after intraperitoneal administration to rats in a dose of 75 mg/kg, accumulated in the thymus, spleen, and liver in the form of beta-mercaptoethylamine, while unchanged cystamine and mixed disulfides of the radioprotector with proteins were absent. The maximum content of beta-mercaptoethylamine in tissues was observed 15-30 min after administration of cystamine, i.e., during the period of the maximum radioprotective effect. E. H. Betz et al (Int. J. Radiat. Biol. 4, 231, 1962) used a polarographic method of determination, and found a maximum content of radioprotector in tissues 2 min. after administration of cystamine, but their results were presumably due to the fact that the organs removed from the abdominal cavity were not washed before homogenization.

TITLE--SPECTROPHOTOMETRIC DETERMINATION OF SMALL AMOUNTS OF CYCLOHEXANOL
AND CYCLOHEXANONE IN MIXTURES -U-
AUTHOR--ROMANTSOVA, G.I. PROCESSING DATE--13NOV70

R

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB. 1970, 36(3), 280.

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SPECTROPHOTOMETRIC ANALYSIS, ALIPHATIC KETONE, ALDEHYDE,
CYCLOHEXANOL, CYCLOHEXANONE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--3004/2013

CIRC ACCESSION NO--AP0132274

STEP NO--UR/0032/70/036/003/0280/0280

UNCLASSIFIED

CTRC ACCESSION NO--AP0132274 UNCLASSIFIED PROCESSING DATE--13NOV70
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SAMPLE (0.2 ML) IS BOILED FOR
 15 MIN WITH 4.6 ML 83PERCENT H SUB2 SO SUB4 AND 0.4 ML OF A 5PERCENT
 SOLN. OF P DIMETHYLAMINOBENZALDEHYDE IN 83PERCENT H SUB2 SU SUB4. THE
 CONCN. (C) IN WT. PERCENT OF CYCLOHEXANOL (I) AND CYCLOHEXANONE (II) IS
 FOUND BY USING THE RELATIONS $C \text{ SUB1} \text{ EQUALS } 0.022 \text{ A SUB520} \text{ AND } C \text{ SUBII}$
 $\text{EQUALS } 0.0062 \text{ A SUB435} \text{ MINUS } 0.0041$, WHERE A IS THE ABSORBANCE AT THE
 CORRESPONDING WAVELENGTH IN NM. THE SENSITIVITY IS 1 TIMES 10 PRIME
 NEGATIVE3PERCENT FOR I AND 3 TIMES 10 PRIME NEGATIVE4PERCENT FOR II WITH
 A RELATIVE ERROR OF PLUS OR MINUS 10PERCENT. ALIPHATIC KETONES AND
 ALDEHYDES, PRESENT IN CONCNS. GREATER THAN 110 TIMES THE AMT. OF I PLUS
 II, ALIPHATIC ALCS. HIGHER THAN PROH AND THEIR ETHERS INTERFERE WITH THE
 DETN. FACILITY: GOS. INST. AZOTN. PROM. PRDD. ORG. SIN.,
 MOSCOW, USSR.

UNCLASSIFIED

1/2 010

TITLE--FURTHER GENETIC MAPPING OF THE THYMINE LOCUS OF ESCHERICHIA COLI
K12 -U-

AUTHOR--(03)--ROMANTSOVA, V.YA., SUKHODOLETS, V.V., MIRONOV, A.S.

COUNTRY OF INFO--USSR

SOURCE--GENETIKA 1970, 6(2), 139-47

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ESCHERICHIA COLI, MUTAGEN, BACTERIA MUTATION, GENE, THYMINE,
BACTERIAL GENETICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3003/1137

SECTION NO--AP0130165

STEP NO--UR/0473/70/006/002/0139/0147

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--04DEC70

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CIRC ACCESSION NO--AP0130165
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. TREATMENT OF E. COLI HFR H WITH
HNO SUB2 AND AMINOPTERIN YIELDED 95 THY MUTANTS. RECOMBINATION STUDIES
OF THE COUPLED THY AND CYS GENES SHOWED THAT THE PROPER SEQUENCE IS
THY,CYS,HIS AND NOT CYS,THEY,HIS AS HAD BEEN THOUGHT EARLIER. THE
THYMINE LOCUS WAS MAPPED BY CONJUGATIONAL 3 FACTOR CROSSES AND A 21ST
NEW SITE WAS ESTABLISHED IN THE GENE. FACILITY: INST. GENET.
MICROORG., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC:620.013.4

ROMANUSHKINA, A. YE. and MAMLYKHINA, M. V.,

"Titanium as a Corrosion Resistant Material for Equipment for the Production of α - and β -Dichlorohydrins of Glycerine"

Moscow, Zashchita Metallov, Vol 10, No 1, Jan-Feb 74, pp 39-40

Abstract: Corrosion tests in the technological media used in the production of α - and β -dichlorohydrins of glycerine showed that titanium is the best structural material for this equipment. Corrosion rates were calculated on the basis of weight loss. Specimens of titanium equipment utilized for 3-3.5 years showed practically no corrosive damage. Specimens of titanium-aluminum-zirconium alloy containing 2-3% aluminum and not over 3% zirconium also showed very little damage after 2.5-3 years of testing.

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1/2 036 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--DETERMINATION OF THE MODULUS OF ELASTICITY AT SYATIC ELONGATION FOR
TEXTOLITES, FABRIC LAMINATES -U-
AUTHOR--ROMANYCHEV, A.F. *R*
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., TEKHNOL. TEKST. PROM. 1970, (1), 134-8
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, PHYSICS
TOPIC TAGS--ELASTIC MODULUS, ELONGATION, FABRIC, LAMINATED PLASTIC, STRESS
RELAXATION, STRESS ANALYSIS, MATERIAL DEFORMATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0789 STEP NO--UR/0324/70/000/001/0134/0138
CIRC ACCESSION NO--AT0132887
UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0132887

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MODULUS OF ELASTICITY (EPSILON) OF CLOTH RESIN LAMINATES AT ELONGATIONS LESS THAN OR EQUAL TO 1PERCENT DECREASES WITH TIME DURING THE APPLICATION OF STRESS DUE TO RELAXATION PROCESSES. FORMULAS WERE OBTAINED FOR CALCG. THE INSTANTANEOUS EPSILON AND EPSILON AFTER A KNOWN LAPSE OF TIME WHEN STRESS IS APPLIED AT A KNOWN ANGLE TO THE DIRECTION OF THE CLOTH WARP. THE FORMULAS WERE ALSO USED TO DET. THE DEFORMATION OF LAMINATES SUBJECTED TO CONST. STRESS AND THEIR STRESS RELAXATION.

FACILITY: IVANOV. TEKST. INST. IM. FRUNZE, IVANOVA, USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EFFECT OF A COMPENSATING IMPURITY ON THE HOMOGENEITY OF MERCURY
DOPED GERMANIUM -U-
AUTHOR--(04)-GUZHOVA, I.P., ~~ROMANVCHEV, D.A.~~, CHERKASOV, A.P.,
KHARIONOVSKIY, YU.S.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2), 196-200
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GERMANIUM SINGLE CRYSTAL, SEMICONDUCTOR IMPURITY, RESISTIVITY,
PARTICLE DISTRIBUTION, MERCURY, ANTIMONY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/2000

STEP NO--UR/0363/70/006/002/0196/0200

CIRC ACCESSION NO--AP0105074

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--23DCT70

CIRC ACCESSION NO--AP0105074

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HOMOGENEITY OF RESISTIVITY AND IMPURITY CONC. IN THE TRANSVERSE CROSS SECTION OF GE SINGLE CRYSTALS DOPED WITH HG, PARTIALLY COMPENSATED WITH SB WITH A HG LEVEL OF 0.087 EV WAS INVESTIGATED. THE PRIMARY REASON FOR THE HETEROGENEITY OF THE RESISTIVITY IN THE TRANSVERSE CROSS SECTION OF THE CRYSTALS CONSISTS IN NONUNIFORM DISTRIBUTION OF THE SB DUE TO THE DEVELOPMENT OF THE BOUNDARY EFFECT. THE HG IS DISTRIBUTED UNIFORMLY IN THE TRANSVERSE CROSS SECTION OF THE CRYSTALS, AND THE BOUNDARY EFFECT FOR HG AT A CONC. OF SIMILAR TO 5 TIMES 10 PRIME14-CM PRIME3 WAS NOT OBSD. THE EFFECT OF HETEROGENEITY OF THE SB ON THE HETEROGENEITY OF THE ELEC. PROPERTIES OF THE CRYSTALS DEPENDS ON THE DEGREE OF CONDENSATION. THE HETEROGENEITY OF THE CRYSTALS AT A LOW TEMP. CAN INCREASE TREMENDOUSLY DUE TO THE EFFECT OF RANDOM ACCEPTORS, IF THE CONC. OF THE LATTER IS CLOSE TO THE CONC. OF THE COMPENSATING IMPURITIES.

UNCLASSIFIED

1/2 039 UNCLASSIFIED PROCESSING DATE--30OCT
TITLE--LOW FREQUENCY OSCILLATIONS IN A HOT CATHODE PENNING DISCHARGE
PLASMA -U-

AUTHOR-(03)-NAUMOVETS, V.G., ROMANYUK, L.I., SLOBODYAN, V.M.

COUNTRY OF INFO--USSR

SOURCE--UKRAINS'KII FIZICHNII ZHURNAL, VOL. 15, MAR. 1970, P. 377-390

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--DISCHARGE PLASMA, LOW FREQUENCY, OSCILLATION, CATHODE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/2044

STEP NO--UR/0185/70/015/000/0377/0390

CIRC ACCESSION NO--AP0120687

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--30OCT

CIRC ACCESSION NO--AP0120687

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTAL STUDY OF LOW FREQUENCY (1 TO 100 KHZ) OSCILLATIONS IN A HOT CATHODE PENNING DISCHARGE PLASMA, AND ANALYSIS OF THEIR INFLUENCE ON ION EXTRACTION SYSTEMS USED WITH THIS TYPE OF DISCHARGE. IT IS SHOWN THAT THE INSTABILITY ARISES DUE TO THE ONSET OF DENSITY WAVES WHOSE AZIMUTHAL DIRECTION OF PROPAGATION COINCIDES WITH THE DIRECTION OF PLASMA ROTATION IN CROSSED MAGNETIC AND ELECTRIC FIELDS AND WITH THE DIRECTION OF ELECTRON DRIFT CAUSED BY A RADIAL PLASMA DENSITY GRADIENT. THREE AZIMUTHAL MODES WERE OBSERVED, CORRESPONDING TO DIFFERENT MAGNETIC FIELD STRENGTHS. THE EFFECTS OF DISCHARGE PARAMETERS (CURRENT, VOLTAGE, GAS PRESSURE, AND MAGNETIC FIELD STRENGTH) ON THE OSCILLATION FREQUENCY AND PLASMA CHARACTERISTICS ARE DESCRIBED. FACILITY: AKADEMIIA NAUK UKRAINS'KOI RSR, INSTITUT FIZIKI, KIEV, UKRAINIAN SSR.

UNCLASSIFIED

1/2 033 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--NATURE OF RADIATION DEFECTS IN ROCHELLE SALT AND TRIGLYCINE SULFATE
CRYSTALS -U-
AUTHOR-(02)-VIBLYY, I.F., ROMANYUK, N.A. *R*
COUNTRY OF INFO--USSR
SOURCE--KRISTALLOGRAFIYA 1970, 15(2), 329-33
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--SULFATE, CRYSTAL, GLYCINE, RADIATION DAMAGE, ABSORPTION
SPECTRUM, X RAY IRRADIATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1530 STEP NO--UR/0070/70/015/002/0329/0333
CIRC ACCESSION NO--AP0125158
UNCLASSIFIED

2/2 033

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125158

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ABSORPTION SPECTRA OF X RAY IRRADIATED (SIMILAR TO 10 PRIME6 ROENTGENS) ROCHELLE SALT AND TRIGLYCINE SULFATE CRYSTALS AND SATD. AQ. SOLNS. (BOTH PROTECTED AND KEPT IN O, H, CO, AND CH SUB4 ATM.) WERE STUDIED AT 220-1500 NM. DUE TO THE IRRADN., IN BOTH ROCHELLE SALT AND TRIGLYCINE SULFATE CRYSTALS, SOME PART OF THE MOL. DECCMPS., AND GAS IONS REACT WITH RADIOLYTIC DECOMP. PRODUCTS. EXPTS. CARRIED OUT ON THE ROCHELLE SALT AND TRIGLYCINE SULFATE SATD. AQ. SOLNS. INDICATE THAT THE UV ABSORPTION IN IRRADIATED ROCHELLE SALT AND TRIGLYCINE SULFATE CRYSTALS HAVE TO BE CAUSED BY RADIOLYTIC DECOMP. PRODUCTS CONTG. THE CO GROUP. FACILITY: LIVOV. GOS. UNIV., LIVOV, USSR.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--17JUL70

TITLE--TEMPERATURE DEPENDENCE OF THE POSITION OF THE SELFABSORPTION EDGE
OF SEIGNETTE SALT AND TRIGLYCINE SULFATE CRYSTALS -U-

AUTHOR--VIBLYI, I.F., ROMANYUK, M.A.

COUNTRY OF INFO--USSR

SOURCE--OPT. SPEKTRCSK. 1970, 28(2), 307-10

DATE PUBLISHED-------70

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79*

SUBJECT AREAS--PHYSICS

TOPIC TAGS--TEMPERATURE DEPENDENCE, ABSORPTION EDGE, CRYSTAL ABSORPTION,
PHASE TRANSITION, SULFATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1981/0421

STEP NO--UR/C051/7C/028/002/0307/0310

CIRC ACCESSION NO--A00050442

UNCLASSIFIED

ACC. NO.

AP050442

Abstracting Service:

CHEMICAL ABST. 5770

Ref. Code

4R0051

105566d Temperature dependence of the position of the self-absorption edge of Seignette salt and triglycine sulfate crystals. Viblyi, I. F.; Romanyuk, N. A. (USSR). *Opt. Spektrosk.* 1970, 28(2), 307-10 (Russ). The position of the self-absorption edge of samples X, Y, and Z cuts of Seignette salt and triglycine sulfate crystals in a natural and polarized light with variations in temp. over Curie points area is investigated. The curve $\lambda_e T$ was presented in 3 linear portions. The obsd. portion of the $\lambda_e T$ curve relates to temp. region 20-4° and -20-15°, for Seignette salt, and 35-55° for the glycine sulfate in the phase transition. The slope is smaller than that of two other portions for the former, and smaller or larger than the edge for the latter. The mentioned differences in temp. effect relate to the sharp change of a spontaneous polarization, and the distinctive features of a spontaneous deformation of the domains of these crystals. Luba Jirovcova

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REEL/FRAME
19810421

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N

USSR

UDC: 621.385.002.54(088.8)

RYAZANOV, V. G., ROMANYUK, R. F., KHEYFETS, A. D., IKONNIKOV, Yu. N.

"A Wobulator for Vacuum Resonators in Discriminators"

USSR Author's Certificate No 256093, filed 10 Apr 67, published 3 Apr 70
(from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11E160 F)

Translation: This Author's Certificate introduces a wobulator for vacuum resonators in discriminators. The device contains a rotating plate located in the face end of the resonator. To improve reliability and simplify operation, the rotating plate is separated from the vacuum resonator by a hermetically sealed cap, and is equipped with rotators which operate mechanically, are transparent to radio waves, and are connected to the resonator. Resumé.

1/1

USSR

UDC 621.385.623.5:621.372.233

DEVYATKOV, M.N., KOSTIYENKO, A.I., PIRCOV, YU. A., ROMANVICH, S.K.

"Investigation Of Reflex Klystrons In Regimes Of Rectification And Bias"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron SVCh (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, No 9, pp 86-90 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12A165)

Translation: Reflex klystrons for the 3-cm, 8-mm, and 4-mm band were investigated in regimes of rectification and signal bias. Their sensitivity in a rectification regime is not lower, and in a number of cases is higher, than the sensitivity of crystal rectifiers for corresponding wave bands. Author's Abstract.

1/1

USSR

UDC: 550.831

PEVZNER, B. N., ~~ROMANYUK, V. A.~~ Institute of Physics of the Earth imeni
O. Yu. Schmidt

"A Device for Absolute Measurements of the Acceleration Due to Gravity"

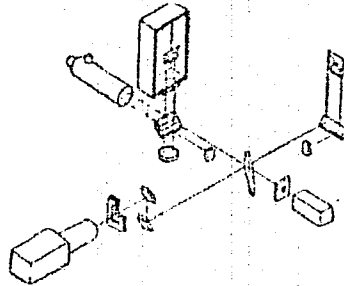
Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzy, Tovarnyye Znaki,
No 7, Mar 72, Author's Certificate No 329496, Division G, filed 28 Jul 70,
published 9 Sep 72, p 184

Translation: This Author's Certificate introduces a device for absolute measurements of the acceleration due to gravity. The device contains a movable reflector, a light source, a semitransparent mirror, a horizontal mirror such as a mercury mirror, and systems for measuring path length and time. As a distinguishing feature of the patent, measurement accuracy is improved by adding an autocollimator and a mirror placed between the semi-transparent mirror and the movable reflector.

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USSR

PEVZNER, B. N., ROMANYUK, V. A., USSR Author's Certificate No 329496



2/2

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USSR

UDC: 621.396.677

ROMANYUK, V. A.

"Using Gunn Oscillators as the Active Elements of an Antenna Array"

Tr. Mosk. aviats. in-ta (Works of the Moscow Aviation Institute), 1970,
vyp. 203, pp 81-93 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1B44)

Translation: The author notes the advantages of Gunn diodes over transistor-
-varactor networks and avalanche diodes for use in active antenna arrays.
Various modes of Gunn diode operation are considered; mention is made of
the advantage of resonance modes: the mode with delay of domain formation
and the mode with suppression of domains. It is shown how the elements of
the array may be constructed by connecting the Gunn diodes in a symmetric
or asymmetric dipole and also in a slot. The parameters of such elements
are analyzed; a method of engineering calculation is proposed. The results
of an experimental study are presented which show the convenience of con-
trolling the parameters of the array. Thirteen illustrations, bibliography
of nine titles. N. S.

1/1

- 11 -

1/2 022 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--INFLUENCE OF DOMAIN CAPACITY ON THE OSCILLATION FREQUENCY OF GUNN
OSCILLATORS -U-
AUTHOR--ROMANYUK, V.A. R.
COUNTRY OF INFO--USSR
SOURCE--RADIOTEKHNIKA, VOL. 25, MAR. 1970, P. 50-54
DATE PUBLISHED-----70
SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.
TOPIC TAGS--GUNN DIODE, OSCILLATOR THEORY, ELECTRONIC OSCILLATOR,
FREQUENCY STABILITY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/1082 STEP NO--UR/0108/70/025/000/0050/0054
CIRC ACCESSION NO--AP0118232
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118232

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THEORETICAL STUDY OF THE INFLUENCE OF SUPPLY VOLTAGE IN A GUNN OSCILLATOR ON THE DIFFERENTIAL DOMAIN CAPACITY AND ON THE MEAN DOMAIN CAPACITY FOR A PERIOD OF OSCILLATION. IT IS SUGGESTED THAT AN EXPERIMENTALLY OBSERVED VARIATION OF FREQUENCY WITH VOLTAGE IS CAUSED BY A NONLINEARITY OF THE DOMAIN CAPACITY. IF A HIGH DEGREE OF FREQUENCY STABILITY IS REQUIRED, A SUFFICIENTLY LARGE CAPACITOR SHOULD BE CONNECTED PARALLEL TO THE GUNN DIODE.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--FORMATION CONSTANTS FOR ANIONIC HYDROXO COMPLEXES OF SOME GROUP III
ELEMENTS -U-
AUTHOR--(04)-IVANOVEMIN, B.N., YEGOROV, A.M., ROMANYUK, V.I., SIFOROVA,
YE.N.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(5), 1224-8
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--COMPLEX COMPOUND, INDIUM COMPOUND, THALLIUM COMPOUND, YTTRIUM
COMPOUND, YTTERBIUM COMPOUND, LUTETIUM COMPOUND, ERBIUM COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1144 STEP NO--UR/0078/70/015/005/1224/1228
CIRC ACCESSION NO--AP0136564
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136564

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPLEX FORMATION CONSTS. OF ANIONIC HYDROXO COMPLEXES OF IN, TL, SC, Y, ER, YB, AND LU ARE CALCD. AND THE RESULTS ARE TABULATED. FACILITY: UNIV. DRUZHBY NAR. IM. LUMUMBY, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 519.2

ROMASHCHENKO, N. V.

"On the Stability of Solutions of Some Systems of Linear Differential Equations With n Degrees of Freedom in the Case of Random Parametric Excitation"

Sb. tr. Odessk. elektrotekhn. in-ta svyazi (Collected Works of the Odessa Electrical Engineering Institute of Communications), 1971, vyp. 19, pp 122-127 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V175)

Translation: The paper deals with problems of stability of the solutions of a system of first-order linear differential equations, where the matrix of the coefficients of this system is periodic, random, and has values which form a random Markov process and are interchangeable by pairs. A theorem is proved which is a necessary and sufficient condition for asymptotic stability with probability 1 of a solution of such a system of differential equations. Author's abstract.

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USSR

UDC 595.754:616-091.8:632.937.14

ROMASHEVA, L. F., SHCHERBAK, V. P., and VIDOMSKIY, E. V., Institute of
Biology, Academy of Sciences Kirgiz SSR

"The Action of the Bacterial Preparations Entomobacterin-3 and Dendrobacillin
and of the Boverine Fungus on Bedbugs"

Frunze, Izvestiya Akademii Nauk Kirgizskoy SSR, No 3, May-Jun 72, pp 63-67

Abstract: The toxicity of the standard bacterial preparations entomobacterin-3 and dendrobacillin to bedbugs was studied. The bedbugs were sprayed under laboratory conditions with aqueous suspensions of the preparations at concentrations of 0.5-2.0%, whereupon the length of time within which 90% of the insects perished was determined. The effect produced increased with increasing concentrations of the suspensions; it was generally the same for a 1.5% as a 2.0% suspension. The effect varied with the season, it was least pronounced in August, when the bedbugs were well-fed on blood, and more pronounced in March, when the bedbugs were underfed, and September, when their vitality was lower than in the summer. The action of the two bacterial preparations was similar, because both belonged to the same group of spore-forming and crystal-forming microorganisms, i.e., Bac. thuringiensis. The effective concentrations of boverine were in the 1-2% range and the optimum

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USSR

ROMASHEVA, L. F., et al., Izvestiya Akademii Nauk Kirgizskoy SSR, No 3, May-Jun 72, pp 63-67

months for its application Jan and Sep, in which the humidity is highest and the physiological activity of the bedbugs is at the lowest level. A histological study was carried out on bedbugs that had been treated with 1-2% suspensions of dendrobacillin. Within 21-24 hrs after the treatment, sporiferous and crystal-forming bacteria were present in the insect bodies. Their greatest accumulation was in the outer fatty tissue, in the region of tracheae, between the malpighian bodies, and within and around the intestine. Gradually necrosis of the tissues in which the bacteria concentrated and destruction of the organs took place. The death of the insects after penetration of the crystal-forming bacteria into their body was apparently due to the action of bacterial toxins. On application of low doses of the bacterial preparations, septicemia predominated, while after application of high doses septicemia almost did not have time to develop. Entonobacterin-3 was obtained from the Agricultural Technology/Administration/ of the Kirgiz SSR, dendrobacillin from the Problem Laboratory of Irkutsk State University (Prof. Ye. V. Talalayev), and boverine from the Biological Method Laboratory at Minsk (T. T. Bezdenko, I. T. Korol), where it was prepared.

2/2

Pharmacology and Toxicology

USSR

UDC 577.158.8

ROMASHINA, L. V., VGZNYA, N. M., GROSSE, R., RAKHIMOV, M. M., and LUZIKOV, V. N., Laboratory of Bioorganic Chemistry, Moscow State University imeni M. V. Lomonosov, Moscow

"Mechanism of the Inactivation of the Respiratory Chain by Cobra Venom Phospholipase"

Moscow, Biokhimiya, Vol 37, No 6, Nov/Dec 72, pp 1204-1209

Abstract: The effects of phospholipase A isolated from the venom of the Central Asian cobra on the respiratory chain of the succinate dehydrogenase system of submitochondrial particles and the NADH oxidase complex (I + III + IV) reconstructed from the cytochrome of c-oxidoreductase (I + III) and the cytochrome of c-oxidase (IV) were studied. It was found that electron transfer was disturbed mainly at the level of cytochrome c in a link of the respiratory chain common to the NADH and succinate oxidase systems.

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USSR

UDC: 681.325.3

KUSTOV, Ye. S., ROMANTSOV, V. D., ROMASHKAN, V. S., TONKAL', A. Ye.

"Voltage-Code Converter"

Pribory i Sistemy Avtomatiki. Resp. Mezhved. Nauchno-Tekhn. Sb. [Automation Devices and Systems. Republic Interdepartmental Scientific-Technical Collection], No 13, 1970, pp 88-94 (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, 1970, Abstract No 10B273, by T. D.)

Translation: A dc voltage-to-binary 10-digit code converter is described. The converter is built of semiconductor devices and operates by digit-by-digit comparison. The principal error of the converter is not over $\pm 0.25\%$, the input impedance is 2 kohm, the speed is 2000 conversions per second, the voltage measurement range is 0-10 v. The converter uses "Mir-1" potential modules. The principal non-standard units of the converter determining its accuracy are made of high-stability elements. The compensator uses a wire-wound resistor of manganin microwire, silicon transistors, and silicon diodes. A potential type null-balance device with a sensitivity of ± 3 mv is used. Six illustrations; two biblio. refs.

1/1

Acc. Nr: **AP0102639**

R Ref. Code: **UR 0475**

PRIMARY SOURCE: Vrachebnoye Delo, 1970, Nr **3**, pp **120-123**

POSTRADIOIODINE HYPOTHYREOIDISM

A. P. Stepanenko and N. V. Romashkan (Kiev)

The characteristic of hypothyreosis developing in 50 patients of the 1000 treated with I-¹³¹ for thyrotoxicosis are reported. Dosage of I-¹³¹ was 2-30 mCu. In 26 hypothyreosis developed within the first year of treatment, in the rest within 3-5 years. Both sexes suffered equally. The incidence was most frequent in the fourth decade but did not substantially depend on the dose. The incidence of hypothyreosis was more frequent in patients with a short history of thyrotoxicosis not previously treated with antithyroid drugs. Late development of hypothyreosis may be explained by gradual, slow reduction of the goiter size.

REEL/FRAME
19860653

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Organometallic Compounds

USSR

UDC 547.525.2'023'245:542.957.2

ODABASHYAN, G. V., ROMASHKIN, I. V., and PASHCHENKO, L. Ye.

"A Study of the Reaction of p-Dibromodimagnesiumbenzene with Fluoroalkyl-(Aryl)chlorosilane"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 11, Nov 1971, pp 2,454-2,457

Abstract: Although the bifunctional Grignard reagents have become widely used in the synthesis of various organosilicon compounds, very little information has been published on their possible use in obtaining organofluorosilicone monomers.

In this connection, the reactions of p-dibromodimagnesiumbenzene with certain alkyl(aryl)chlorosilanes, containing 3,3,3-trifluoropropyl and m-trifluoromethylphenyl radicals, were studied, especially as regards the effect of various substitutions for the silicon atom in the chlorosilane. Also investigated was the optimal ratio of p-dibromobenzene and magnesium and the reaction time for assuring high yield of p-dibromodimagnesiumbenzene.

Thirteen monomers were produced with yields ranging up to 50%. Physical data are given for these, along with details of laboratory procedures.

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1/2 032 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--THERMODYNAMICS OF IODIDES OF GERMANIUM HYDRIDE -U-
AUTHOR--(03)--ROMASHKO, B.V., ANTONOV, A.A., MASLOV, P.G.
COUNTRY OF INFO--USSR **R**
SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 828-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--THERMODYNAMICS, IODIDE, GERMANIUM COMPOUND, HYDRIDE,
THERMODYNAMIC PROPERTY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1993/0291 STEP NO--UR/0076/70/044/003/0828/0829
CIRC ACCESSION NO--AP0113221
UNCLASSIFIED

2/2 032

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0113221

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERMODYNAMIC PROPERTIES OF MANY
IODIDES OF GE HYDRIDE OF TYPE GEX SUB4, GEX SUB3 Y, GEX SUB2 Y SUB2,
GEX SUB2 Y, GEXYZ (X, Y, Z EQUAL H, D, T, I) AS FUNCTION OF ABS. TEMP.
AND PRESSURE CAN BE CALCD. FROM FORMULAS DERIVED BY THE METHOD REPORTED
EARLIER (CA 64: 16715F; 66: 10467G). FORMULAS ARE GIVEN. THEY ARE
VALID AT 250-1500DEGREESK (250-1000DEGREESK FOR C SUBPDEGREES) AT ANY
PRESSURE, WITH AN ACCURACY OF 0.1-1.0PERCENT (0.2-2.0PERCENT FOR C
SUBPDEGREES). IN ORDER TO USE THESE FORMULAS, IT IS NECESSARY TO KNOW
THE MOL. WT., LENGTH OF BONDS AND ANGLES BETWEEN THEM, AND SYMMETRY
VALUES FOR EACH MOL. NUMERICAL DATA FOR COEFFS. USED IN THESE FORMULAS
ARE GIVEN. FACILITY: LENINGRAD PEDAGUG. INST. IM. GERTSENA,
LENINGRAD, USSR.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--THERMODYNAMICS OF GASEOUS MIXED DEUTERIUM AND TRITIUM DERIVATIVES
OF GERMANIUM HYDRIDE -U-
AUTHOR--(03)--RGMA SHKO, B.V., ANTONOV, A.A., MASLOV, P.G.
COUNTRY OF INFO--USSR *R*
SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 827-8
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--THERMODYNAMICS, DEUTERIUM, TRITIUM, GERMANIUM COMPOUND,
HYDRIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1993/0294 STEP NO--UR/0076/70/044/003/0827/0828
CIRC ACCESSION NO--AP0113224
UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0113224

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CALCN. METHOD REPORTED EARLIER
(CA 84 IS TO 16715F; 66 IS TO 10467X; 67 IS TO 57427G) WAS EMPLOYED FOR
THE CALCN. AND TABULATION OF THERMODYNAMIC PROPERTIES OF ALL POSSIBLE D
AND T DERIVS. OF GE HYDRIDES AS FUNCTION OF TEMP. AND PRESSURE.
FORMULAS DERIVED ARE VALID AT 250-1500DEGREESK AT ANY PRESSURES, AND
ARE ACCURATE WITHIN 0.1-1.0PERCENT, AND 0.1-2PERCENT FOR C SUBP. THESE
FORMULAS CAN BE USED WITHOUT KNOWING EITHER THE VIBRATIONAL, OR
ELECTRON AND ROTATIONAL CHARACTERISTICS. FACILITY: LENINGRAD.
GOS. PEDAGOG. INST. IM. GERTSENA, LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC: 612.432+612.45].014.482

ROMASHKO, O. G. and ROGOZKIN, V. D.

"Primary Reaction of the Hypophysis-Adrenocortical System to the Action of Ionizing Radiation"

Moscow, Byulleten' eksperimental'noy biologii i meditsiny, No 8, 1972, pp 23-25

Abstract: Dynamics of changes in hormone formation and secretions in the adrenal glands of rats in the initial minutes and hours after irradiation were studied. 280 white male rats were subjected to 14 days of false radiation to accustom them to the experimental conditions. Rats were then divided into four groups: the control group subjected only to false radiation; the second, to a dose of 650 roentgens; the third, to 850; the fourth, to 1000. In the first group, it was found that there was practically no activation of hormone formation and secretions, indicating sufficient adaptation of the specimens to the experimental conditions. In the other three groups there was a two-phase activation of adrenal activity observed in the first few hours after irradiation. The first phase of renal reactions occurred in the first five minutes, while the level of corticosterone increased in the blood as well as the adrenal gland.

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USSR

UDC: 669.71

PORTNOY, K. I., BABICH, B. N., ROMANOVICH, I. V., ROMASHOV, V. M., Moscow

"The Growth of Particles of Hardening Phases in Processes Producing Dispersion Hardened Alloys"

Moscow, Fizika i Khimiya Obrabotki Materialov [The Physics and Chemistry of Materials Processing], No 6, Nov-Dec 73, pp 99-103.

Abstract: X-ray and electron microscope methods are used to determine the mean diameter of particles of the hardening phase in an alloy of nickel with three vol. % hafnium dioxide during stages of its production from an initial powder mixture of oxides to a compact deformed bar. The greatest growth of the mean particle diameter of the hardening phase is observed during the operations of sintering and hot extrusion. The main reason for enlargement of particles in processes involved in producing the dispersion hardened alloy is the unevenness of the distribution, allowing direct contact between particles. The electron microscope method is recommended for determination of the mean diameters of hardening-phase particles in a dispersion hardened alloy, since it gives more reliable information than the x-ray method.

1/1

Superalloys

USSR

UDC 669.24'298:620.185.5

BABICH, B. N., LYUKEVICH, V. I., LEVINSKAYA, M. KH. and ROMASHOV, V. M.

"Recrystallization of Nickel Strengthened With Thorium Dioxide"

Moscow, Metallovedeniye i termicheskaya obrabotka metallov, No 3, 1972, pp 36-40

Abstract: The study deals with the recrystallization of nickel strengthened with thorium dioxide following cold drawing and anneals of extruded metal powder rods. The material's composition was 96.89% Ni; 2.81% ThO₂; 0.07% C; 0.008% S; 0.003% P; 0.08% Fe; 0.037% Cu. Precipitation-hardened nickel has an extremely stable structure which explains the preservation of a considerable strengthening effect as a result of cold drawing after high-temperature annealing. The material features a wide temperature interval between the recovery occurring at 400-600°C and the recrystallization which develops at 1200-1400°C. On recrystallization, the precipitation-hardened nickel develops a structural inhomogeneity which is stable up to 1400°C. The amount of large recrystallized grains is governed by the preliminary deformation ratio and annealing temperatures. An increase in cold deformation activates the recrystallization of nickel strengthened with ThO₂.

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USSR

BABICH, B. N., et al, Metallovedeniye i termicheskaya obrabotka metallov,
No 3, 1972, pp 36-40

However, higher deformation ratios (83%) suppress the formation of large
recrystallized grains. (3 illustrations, 2 tables, 11 bibliographic
references).

2/2

USSR

UDC: 621.785:661.65

ROMASHOV, V. M., TIMOFEYEVA, N. I., PROLOVA, K. I., and ROMANOVICH, I. V.,
Moscow

"Interaction of Nickel With Samarium Hexaboride and Boron"

Kiev, Poroshkovaya Metallurgiya, No. 9, Sep 70, pp 80-86

Abstract: This study involved 99.7% pure carbonyl nickel powder and samarium hexaboride. The latter was obtained by the reaction $2\text{Sm}_2\text{O}_3 + 3\text{O}_3 + 4\text{SmB}_6 + 3\text{B}_2\text{O}_2$. Alloys of both powders were subjected to x-ray diffraction and microstructure analyses, microhardness measurements of phase components, and quantitative analyses of both nickel and samarium. The interaction of nickel with samarium hexaboride indicates a dissociation of the latter to form SmB_4 . Depending on the nickel and hexaboride ratio in the initial mixtures, nickel borides are formed. Data on thermal and x-ray structure analyses of nickel and samarium hexaboride alloys, given in

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USSR

ROMASHOV, V. M., et al, Poroshkovaya Metallurgiya, No. 9, Sep 70, pp 80-86

tables in the original article, suggest that the melting temperature of nickel boride is higher than that indicated by earlier researchers. An equilibrium diagram in the high boride domain of the Ni-Sm-B ternary system is proposed.

2/2

1/2 010
UNCLASSIFIED
PROCESSING DATE--16OCT70
TITLE--STRUCTURAL STUDY OF RARE EARTH ELEMENT TANTALATES -U-
AUTHOR--(03)-ROMASHOV, V.M., TIMOFEYeva, N.I., BUROBINA, L.N.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 511-14
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--RARE EARTH COMPOUND, TANTALUM COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0837
STEP NO--UR/0363/70/006/003/0511/0514
CIRC ACCESSION NO--AP0118013
UNCLASSIFIED

2/2 010 UNCLASSIFIED PROCESSING DATE--16OCT70
CIRC ACCESSION NO--AP0118013
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE OF TANTALATES OF THE
TYPE RTAO SUB4, R SUB3 TAO SUB7, AND RTA SUB3 O SUB9 OF ALL RARE EARTH
METALS WITH THE EXCEPTION OF CE, PM, AND Y, SYNTHESIZED BY HIGH TEMP.
ANNEALING AND MELTING OF MIXTS. OF THE OXIDES, WAS INVESTIGATED. THE
RTAO SUB4 (WHERE R EQUALS RAREEARTH ELEMENTS RANGING FROM ND TO LU, AND
Y) HAVE A MONOCLINIC FERGUSONITE TYPE STRUCTURE. THE RTA SUB3 O SUB9
HAVE A PEROVSKITE TYPE STRUCTURE, BEING TETRAGONAL FOR COMPOS. RANGING
FROM LA TO SM, ORTHORHOMBIC FOR COMPOS. OF EU AND Gd, AND MONOCLINIC FOR
COMPOS. OF RARE EARTH ELEMENTS WITH TB TO YB. COMPOS. OF THE R SUB3
TAO SUB7 TYPE (WHERE 4 EQUALS RARE EARTH ELEMENTS RANGING FROM SM TO LU,
AND Y) HAVE A CUBIC PYROCHLORE TYPE STRUCTURE.

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--COHERENT BREMSSTRAHLUNG IN A DIAMOND SINGLE CRYSTAL -U-

AUTHOR--(05)-GORBENKO, V.G., ZHEBROVSKIY, YU.V., KOLESNIKOV, L.YA.,
MIROSHNICHENKO, I.I., ROMASKO, L.M.
COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(5), 1044-8

DATE PUBLISHED-----70

R

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--DIAMOND, SINGLE CRYSTAL, PHOTON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1232

STEP NO--UR/0367/70/011/005/1044/1048

CIRC ACCESSION NO--AP0136643

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--04DEC76

CIRC ACCESSION NO--AP0136643

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. QUASI MONOCHROMATIC POLARIZED PHOTON BEAM WAS OBTAINED FROM A DIAMOND SINGLE CRYSTAL AT THE KHARKOV 2,GEV EPSILON LINEAR ACCELERATOR. THE INTEGRAL INTENSITY OF PHOTONS MEASURED WITH QUANTAMETERS WAS 5 TIMES 10 PRIME9 EQUIV. GAMMA QUANTA IN 1 SEC WITH THE MEAN CURRENT OF EPSILON FLUX 0.2 NUA. THE COHERENT EFFECT WAS INVESTIGATED BY MEASURING INTEGRAL PHOTON AND SECONDARY ELECTRON INTENSITIES AS FUNCTIONS OF THE DIAMOND ORIENTATION ANGLES RELATIVE TO THE INCIDENT EPSILON MOMENTUM. INTENSITY AND POLARIZATION SPECTRA OF THE PHOTON BEAM ARE GIVEN. THE PHOTON POLARIZATION WAS ESTD. FROM THE RESULTS OF THE (GAMMA,RHO) REACTION STUDIED IN THE 1ST PI N RESONANCE REGION.

FACILITY: FIZ.-TEKH. INST., KHARKOV, USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70
 TITLE--LIFE OF A QUARTZITE CRUCIBLE FOR A 12 METRIC TON INDUCTION FURNACE
 -U-
 AUTHOR--(C5)--KAYBICHEVA, M.N., PLATONOV, B.P., PLATONOV, YU.B., BERKOVSKIY,
 I.M., RCPATOVSKIY, M.I.
 CCOUNTRY OF INFC--USSR
 SOURCE--LITEINCE PROIZVOD. 1970, (4), 33-46
 DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
 TOPIC TAGS--INDUCTION FURNACE, QUARTZ, THERMAL STABILITY, MAGNESIUM OXIDE,
 CALCIUM OXIDE, IRON OXIDE, ALUMINUM OXIDE, SILICON DIOXIDE

CENTRGL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAME--3004/1932 STEP NO--UR/0128/70/000/004/0033/0036
 CIRC ACCESSION NO--AP0132194
 UNCLASSIFIED

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CIRC ACCESSION NO--A0132194

UNCLASSIFIED

PROCESSING DATE--20NOV70

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

ABSTRACT. TWO QUARTZITES FOR MAKING
 INDUCTION FURNACE CRUCIBLES WERE COMPARED AS TO THEIR ENDURANCE,
 FRIABILITY, AND HEAT RESISTANCE: DOMESTIC AND SWEDISH, WHOSE COMPS.
 WERE SiO SUB2 98.10, 97.34, AL SUB2 O SUB3 0.59, 0.95, FE SUB2 O SUB3
 0.31, 0.26, CAO 0.79, 0.26, MGO MINUS, 0.03, AND M SUB2 O (METAL OXIDES)
 MINUS, 0.24, LOSS ON IGNITION 0.10, 0.46 WT. PERCENT, RESP. THE
 CRUCIBLES MADE FROM THE DOMESTIC QUARTZITE WERE MORE FRIABLE AFTER
 HEATING FOR 2 HR AT 1450DEGREES THAN THE SWEDISH CRUCIBLES, (PROBABLY
 BECAUSE THE DOMESTIC QUARTZITE HAD MORE SiO SUB2), AND THE D. WAS 2.530
 AND 2.360 G-CM PRIME3, RESP. THE ADDN. OF 1.0-2.0PERCENT OF B SUB2 O
 SUB3 DECREASED THE D. TO 2.459, AND 2.330 G-CM PRIME3, RESP. THE
 CRUCIBLES WITHSTOOD 321 AND 309 MELTINGS, RESP.

UNCLASSIFIED

USSR

UDC: 621.373.51

ROMANUK V. A.

"Calculating Gunn Type Generators Under Conditions of Domain Suppression"

Moscow, Radiotekhnika, No 7, 1970, pp 39-47

Abstract: The author studies the effect of the parameters of a Gunn diode on its dynamic volt-ampere characteristic and derives power relationships for the design of Gunn type generators for conditions of domain suppression. The results show that the dynamic branch of the diode volt-ampere characteristic is determined by the magnitude of NL where N is donor concentration and L is crystal thickness. An analysis of the relationship between the coefficient of efficiency for the generator and the current supply shows that maximum efficiency is achieved when the current supply exceeds the threshold 1.8 times. Under these conditions, the load resistance should be 15-30 times greater than diode resistance at low voltage. The output capacity and efficiency of the generator increase significantly with increased mobility. Maximal efficiency reaches 6.15 percent at $7000 \text{ cm}^2/\text{v sec}$. The original article has 12 figures, 12 formulas, and 12 bibliographic entries.

1/1

1/2 009

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--EFFECT OF IRON II SALTS ON THE EXTRACTION OF COPPER II WITH
TRIOCTYLAMMONIUM CHLORIDE FROM CHLORIDE SOLUTIONS -U-
AUTHOR--(03)-IOFFE, E.SH., SHALYGINA, YE.M., ROMAZANOVA, I.I.

R

COUNTRY OF INFO--USSR

SOURCE--ZH. ANAL. KHIM. 1970, 25(1), 187-9

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--METAL CHEMICAL ANALYSIS, CHLORIDE, AMMONIUM COMPOUND, IRON,
COPPER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/1900

STEP NO--UR/0075/70/025/001/0187/0189

CIRC ACCESSION NO--AP0118862

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UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118862

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

ABSTRACT. CU(II) EXTN., IN THE PRESENCE OF
FE(III) IN A LiCl SOLN., WITH A SOLN. OF TRIOCTYLAMMONIUM CHLORIDE IN
XYLENE WAS STUDIED. THE DISTRIBUTION COEFF. E FOR CU INCREASES WITH
INCREASING FE(III) CONC. THE LINEAR DEPENDENCE BETWEEN LOG E AND LOG
(FE) IS 1. WITH A CHLORIDE EXCESS IN THE PRESENCE OF FE(II), CU(II) IS
REDUCED TO CU(I), WHICH IS READILY EXT. FACILITY: STATE
SCI.-RES. DES. INST. GIPRONIKEL, LENINGRAD, USSR.

UNCLASSIFIED

ROMAZANOVICH G.V.

JRS: 5 7493
13 Mar 70

Методика комплексного санитарно-эпидемиологического обследования населения в условиях формирования физического состояния населения в Тамбовской области, Иванов, Иванов, Тамбов, Издательство Тамбовского областного государственного университета, Тамбов, 1970.

The study was conducted in 1970-1971 by the chair and local public health institutions. It was based on a specially developed method which defined the objectives, tasks and subjects of investigation. In particular, a 9,000 person sample of the rural population from two regions - in particular, the physical condition of the rural population. In particular, the objectives and tasks of the study a "Card of medical and social survey of the rural residents" was developed which is completed in accordance with the cur work were based on: 1) Aid of local Party and soviet agencies; 2) utilization of the existing system of public health agencies and institutions; 3) active involvement of public organizations and the broad community in the study.

In the present report we summarize the concrete experience gained in organizing and performing mass physical on the rural population or Tambovskaya oblast which are a component of the Program of a special sociological study.

In the current literature it is customary to submit information about scientific research or the degree of analysis of the results, and such items often are the stages of organization of research designed. At the same time, it is very important, particularly for medical sciences, to be able to be the subject of discussion and even of special study.

Article by G.P. Arkhangel'skiy, G.V. Romazanova, Chief of Sanitary Hygiene and Public Health Organization (former) in Tambovskaya oblast, Secretary Corresponding member of the USSR Academy of Medical Sciences, First Deputy Corresponding Institute Lenin 138, Sechenov Moscow, Специальное обследование физического состояния населения в Тамбовской области, Иванов, Иванов, Тамбов, 1970, pp. 22-23.

ORGANIZATION AND EXPERIENCE OF COMPLETE PHYSICAL EXAMINATIONS OF THE RURAL POPULATION OF TAMBOVSKAYA OBLAST

UOI: 616-086.3147-222

172 012
 UNCLASSIFIED
 TITLE--THE COURSE OF PERIODICAL SCHIZOPHRENIA ACCORDING TO DATA OF REMOTE
 FOLLOW UP STUDIES -U- PROCESSING DATE--18SEP70
 AUTHOR--ROMEL, I.E.
 COUNTRY OF INFO--USSR *A*
 SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKOVA, 1970,
 VOL 70, NR 3, PP 430-435
 DATE PUBLISHED-----70
 SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
 TOPIC TAGS--SCHIZOPHRENIA, PSYCHOSIS
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--1982/0805
 CIRC ACCESSION NO--AP0052241
 STEP NO--UR/0246/70/070/003/0430/0435
 UNCLASSIFIED