

USSR

BOROĐIN, V. V., KOZOKINA, S. M., KONOVALOVA, V. V., MAYOROVA, V. A.

"Algorithm for Lexicographic Processing of Texts"

Izbr. Tr. Vses. Mezhvuz. Simpoz po Prikl. Mat. i Kibernet., Gor'kiy, 1967
[Selected Works of All-Union Interuniversity Symposium on Applied Mathematics and Cybernetics, Gor'kiy, 1967], Moscow, Nauka Press, 1973, pp 359-365 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V770, by the authors).

Translation: Problems of organization of a machine dictionary capable of performing a broad range of linguistic tasks is studied. It is suggested that the dictionary be based on list structures using the apparatus of grammars with a finite number of states. It is considered that the most acceptable form of operation with an automatic dictionary is the method of standard programs. With this purpose in mind, a set of operators is given for writing the program. The most typical tasks of lexicographic analysis performed by computers are formulated in terms of the operators.

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1/2 029 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--HETEROGENEITY OF DEFORMATION DISTRIBUTION DURING CREEP AND
EXTENSION -U-
AUTHOR-(03)-RYBALKO, F.P., GUSEV, G.V., KONOVALOVA, YE.A. K
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., FIZ. 1970, 13(2), 66-9
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--ALUMINUM, PLASTIC DEFORMATION, METAL CREEP, TENSILE STRESS,
POLYCRYSTAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1994/1781 STEP NO--UR/0139/70/013/002/0066/0069
CIRC ACCESSION NO--AT0115610
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

2/2 029

CIRC ACCESSION NO--AT0115610

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

ABSTRACT. BY USING THE STATIC METHOD, THE QUANT. CHARACTERISTICS OF THE HETEROGENEITY OF DEFORMATION DISTRIBUTION DURING CREEP AND STATIC TENSION OF POLYCRYST. AL (99.8PERCENT PURE) WERE DETD. DURING CREEP THE HETEROGENEITY OF THE DISTRIBUTION OF THE MICRODEFORMATIONS ACCORDING TO THE DEGREES OF DEFORMATION IS CONTROLLED BY THE ELONGATION PROCESS AND, IN CONTRAST TO STATIC TENSION, IS ALMOST INDEPENDENT OF THE GRAIN SIZE, THE TEMP., AND THE ACTING LOAD. DURING THE CREEP PROCESS THE HETEROGENEITY OF THE DISTRIBUTION OF MICRODEFORMATIONS AT LARGE DEGREES OF DEFORMATION DEVELOPS MORE INTENSELY THAN DURING STATIC TENSION.

FACILITY: URAL. GOSUNIV.

IM. GOR'KOGO, SVERDLOVSK, USSR.

UNCLASSIFIED

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UDC 621.912-492.2

USSR

BEZYKORNOV, A. I., BOGOMOLOV, N. I., GURINCHUK, I. I., KOVAL'CHENKO, M. S.
KONOVALOVA, Ye. S., and PADERNO, Yu. B., Institute of Problems of Material
~~Science, Academy of Sciences Ukr SSR~~

"Investigation of the Form, Durability, and Abrasive Ability of Grains of
Refractory Compound Powders"

Kiev, Poroshkovaya metallurgiya, No 5, May 71, pp 65-69

Abstract: The results are presented of an investigation of the form, strength, and abrasive properties of powders of fused titanium and niobium carbides and calcium boride, in comparison with certain data on synthetic corundum. The results show that the deviation from grain isometricity of niobium carbide is larger than that of titanium carbide; that the strength of niobium and titanium carbides with a grain size of more than 250 μ is higher than that of calcium boride and white synthetic corundum grains, while at smaller grain sizes the opposite is true. The compounds considered here may be ordered with respect to their increasing abrasive power, beginning with synthetic corundum: EB-NbC-TiC-CaB₂ = 1-1.18 - 1.36 - 1.88.

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1/2 007 UNCLASSIFIED PROCESSING DATE--18SEP70
 TITLE--VIXCOSES AND VISCOSE FIBERS FROM LOW SUBSTITUTED CARBOXYMETHYL
 CELLULOSE -U-
 AUTHOR--(03)-YASHUNSKAYA, A.G., KONOVALOVAY, YE.M., MOGILEVSKIY, YE.M.
 COUNTRY OF INFO--USSR
 SOURCE--KHIM. VOLOKNA 1970, (1), 24-7
 DATE PUBLISHED-----70
 SUBJECT AREAS--MATERIALS
 TOPIC TAGS--RAYON, CELLULOSE RESIN, CARBON DISULFIDE, SYNTHETIC RESIN
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAME--1984/1821 STEP NO--UR/0183/70/000/001/0024/0027
 CIRC ACCESSION NO--AP0100395
 UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--18SEP70

2/2 007

CIRC ACCESSION NO--AP0100395

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

ABSTRACT. VISCOSE (I) FIBERS PREPD. FROM A CM. CELLULOSE (II) WITH A LOW DEGREE OF SUBSTITUTION EXHIBITED SUPERIOR FILTERABILITY, WHICH REDUCED THE CONSUMPTION OF CS SUB2 DURING XANTHATION. INTRODUCTION OF A SMALL NO. OF II GROUPS AFFECTED THE STRUCTURE AND THE PHYSICOMECH. PROPERTIES OF I FIBERS. THUS, THE PHYSICOMECH. PROPERTIES OF I YARN MARKEDLY DETERIORATED, ALTHOUGH THE STRUCTURE AND THE PROPERTIES OF A CORD FIBER WERE ESSENTIALLY UNCHANGED, WHEREAS THE STRUCTURE OF A POLYNOSIC FIBER DETERIORATED AND ITS RESISTANCE TO ALKALI DECLINED.

UNCLASSIFIED

USSR

KONOVAL'TSEVA, O. T. and PUCHKOVA, A. P.

"Organization of a Library in the TAAM-23 Translating System for a Configuration of the Minsk-23 Computer without an Operational System and with an Operational System"

Materialy Mezhevuz. Konf. po Mat. Obespecheniyu Avtomatizir. Sistem Upr. [Materials of Inter-University Conference on Control System Automation Software], Moscow, 1973, pp 174-181 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V668)

Translation: Two approaches are presented to the realization of the operator of the LIBRARY procedure of ALGEK algorithmic language. The operator is used to access library subroutines.

The first approach to realization is related to development of the TAAM-23 translator for the ALGEK language for the Minsk-23 computer configuration without an operational system and consists in the use of the interpretation method. For this, an interpreting system (IS) is developed, allowing the necessary program to be called to a defined point in the operational accumulator, adjusted to its position, control shifted to a certain standard subroutine and return made to the main program.

The second approach to realization of the LIBRARY procedure operator involves development of a version of the TAAM-23 translator from

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KONOVAL'TSEVA, O. T. and PUCHKOVA, A. P., Materialy Mezhvuz, Konf. po Mat. Obespecheniyu Avtomatizir. Sistem Upr., Moscow, 1973, pp 174-181

ALGEX for a configuration of the Minsk-23 computer with an operational system. In this case, the compilation method is used.

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UDC 8.74

USSR

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 $p_N(q_1, q_2, \dots, q_n)$ where N is the library number of the standard procedure, and q_1, q_2, \dots, 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-access and external memories used, facilitating the programming process in ALGOL and reducing the solution time of the problems.

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USSR

UDC 537.312.62

KONOVODCHENKO, V. A., DMITRIYEV, V. M., KOMAREVSKIY, S. K., LOKTIONOV, N. F.

"Nonisothermal Superconducting Bolometer. II"

Tr. Fiz.-tekhn. in-t nisk. temperatur AN USSR (Works of the Physico-Technical Low Temperature Institute of the Ukrainian SSR Academy of Sciences), 1970, vyp. 9, pp 72-84 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract 4D463)

Translation: The concept of creating a nonisothermal superconducting bolometer arises directly from the statement of the problem of thermal conductivity for an ordinary (isothermal) superconducting bolometer considering non-uniformity of the temperature distribution along its sensitive element. However, along with the useful effect used, the understanding of the fact of simultaneous existence of sections with different superconducting states in the sensitive element of the superconducting bolometer implies significant complication of the problem which in this statement is very simple for ordinary bolometers. In some practical cases the sections of the sensitive element in the intermediate state make an insignificant contribution to its total electrical resistance, and analysis of the operation of the superconducting bolometer can be greatly simplified if only its superconducting and

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KONOVODCHENKO, V. A., et al., Tr. Fiz.-tekhn. in-t nisk. temperatur AN USSR, 1970, vyp. 9, pp 72-84

normal sections are considered. This problem was investigated earlier by the authors. This paper is devoted to solving the most general stationary problem of thermal conductivity of nonisothermal superconducting bolometers and development of a method of graphoanalytical investigation of its characteristics. A system of equations for determining the current coordinates of the boundaries of the sections of the superconducting bolometer with different states of the superconductor was obtained as a result of solving this problem. A number of special cases of solving the system are investigated, which along with having independent value, also turn out to be very useful when writing and developing the program for its complete solution. There are 2 illustrations and a 4-entry bibliography.

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USSR

UDC 539.4:624

KONOVODCHENKO, V. I. CHERKASHIN, A. V.

"Study of the Operation of Elements of Walls of Large-Block Buildings Under the Action of a Horizontal Load"

V sb. Vses. soveshch. "Proyektir. i str-vo seismostoyk. zdaniy i sooruzh", 1971 (All-Union Conference "Design and Construction of Earthquake-Proof Buildings and Structures," 1971 -- Collection of Works), Moscow, 1971, pp 94-97 (from RZh-Mekhanika, No 3, Mar 72, Abstract No 3V1217)

Translation: Preliminary results are presented on actual static tests of the partitions of four-story buildings in Yalta that were made of large blocks of cut limestone. The partitions were loaded with a horizontal force in the plane of the building in the upper level. The displacement of the partitions was determined at four points along the height. Graphs of the displacement are given as a function of the level of stresses for two partitions located on the first and second stories of the building. It is pointed out that complete processing and analysis of the results is still incomplete and final results will be published later. A. S. Arkhipov.

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Construction

UDC 539.4:624

USSR

POLYAKOV, S. V., KONOVODCHENKO, V. I., SAFARGALIYEV, S. M., GUNINA, R. S.

"Study of the Strength of Brick Masonry of Various Design Types"

V sb. Materialy k Vses. soveshch. po proyektir. i str-vu seismostoyk. zdaniy i sooruzh. (Materials from the All-Union Conference on the Design and Construction of Earthquake-Proof Buildings and Structures -- Collection of Works), Moscow, 1971, pp 115-119 (from RZh-Mekhanika, No 3, Mar 72, Abstract No 3V1224)

Translation: The results of tests of brick masonry of calcined clay brick, ordinary and patterned (with grooves on the side spaces) and also of silicate brick, ordinary, hollow and wavy (with a wavy surface) are given. The normal and tangential adhesion to the masonry was studied on samples, columns of dimensions 25 x 25 x 30 (and 22) cm. The samples of calcined brick were tested under static and pulsation (10 Hz) loads. The samples of silicate brick were tested only under static load. A rise in the strength of adhesion to the masonry was noted for patterned and wavy brick. Tests for central compression were conducted on samples of masonry of dimensions 38 x 64 x 120 cm of clay ordinary and patterned brick with reinforcement and without reinforcement. The strength of the reinforcement of the masonry was much higher than the theoretical values calculated by the formulas from the construction norms and regulations. The bearing

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← POLYAKOV, S. V., et al, Materialy k Vses. soveshch. po proyektir. i str-vu seismostoyk. zdaniy i sooruzh., Moscow, 1971, pp 115-119

capacity of the masonry under the action of a transverse load was determined on masonry samples of dimensions 38 × 64 × 120 cm. The samples were anchored in a force field and were subjected to the simultaneous action of horizontal and vertical compressing forces. Dynamic tests of the samples were conducted on a seismic platform. A. S. Arkhipov.

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1/2 014 UNCLASSIFIED PROCESSING DATE--23OCT70
 TITLE--EQUATIONS OF DIFFUSION KINETICS OF CHEMICAL REACTIONS IN POWDERED
 MIXTURES OF SOLIDS -U-
 AUTHOR--KONOYUK, I.F. *K*
 COUNTRY OF INFO--USSR
 SOURCE--DOKL. AKAD. NAUK BELORUSS. SSR 1970, 14(2), 137-40
 DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY
 TOPIC TAGS--CHEMICAL REACTION RATE, REACTION KINETICS, KINETIC EQUATION,
 SOLID STATE, DIFFUSION COEFFICIENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--1997/1138

STEP NO--U3/0250/70/014/002/0137/0140

CIRC ACCESSION NO--AT0119992

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

2/2 014

CIRC ACCESSION NO--AT0119992

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

ABSTRACT. THE RATE OF CHEM. REACTIONS INVOLVING POWDERY SOLIDS IS LIMITED BY THE RATE OF DIFFUSION THROUGH THE LAYER OF SOLID PRODUCT WHICH FORMS ON GRANULES OF ONE OF THE REAGENTS AND WHICH PHYS. SEPS. THE REACTANTS. KINETICS OF SUCH REACTIONS ARE USUALLY DESCRIBED WITH THE AID OF THE JANDER EQUATION. THIS EQUATION WAS LATER IMPROVED BY GINSTLING AND BROUNSHTEIN, AND MORE RECENTLY BY CARTER. A KINETIC EQUATION IS DERIVED STARTING WITH THE FICK EXPRESSION FOR DIFFUSION INTO A HOLLOW SPHERE FROM A POINT SOURCE. THE DERIVED EQUATION IS TO BE GENERAL AND CAN BE EXPRESSED IN FORMS SIMILAR TO THE 3 EQUATIONS MENTIONED FOR SPECIFIC CONDITIONS. THESE EQUATIONS CAN, THEREFORE, BE COMPARED. TABLES ARE GIVEN COMPARING RATES OF REACTIONS CALCD. ON THE BASIS OF EACH OF THESE REACTIONS. CONSIDERABLE DIFFERENCES ARE NOTED, PARTICULARLY AT LOW DEGREES OF CONVERSION. THE CONCLUSION IS THAT THE EQUATION OF JANDER IS RATHER CRUDE, THAT OF GINSTLING AND BROUNSHTEIN IS MORE ACCURATE, AND THE EQUATION OF CARTER IS RELATIVELY THE BEST FOR THE CASE STUDIED.

FACILITY: BELORUSS. GOS. UNIV.
 IM. LENINA, MINSK, USSR.

UNCLASSIFIED

UDC 621.395.347

USSR

KOBLENTS, Ya. G., GRUSEVICH, S. I., KONOVSKIY, A. G., and
GORYACHOVA, L. I.

"Fast-Acting Selective Mixers"

Moscow, *Elektrosvyaz*, No. 7, 1971, pp 30-35

Abstract: The mixers discussed in this article refer to the circuits used in automatic telephone lines of the decade type. They can be made to operate speedily through the use of quasi-electronic techniques, semiconductor devices and hercons (hermetically sealed contacts). With such instrumentation, the lines are better utilized and there is little delay in establishing contacts. This article presents the basic technical data of such mixing circuits, indicates the connections and switching procedures, and explains their operation with the assistance of block and switching diagrams. Fast-acting selective mixer equipment has proved its worth under test conditions in the telephone lines between Leningrad and Moscow. It is asserted that, in addition to using fast-acting mixers, existing lines should be modified to improve the efficiency of individual operators' equipment. In the information center of the Leningrad lines, for example, two racks of the fast-acting mixer circuits have improved the uniformity of calls on the operators with a 10% increase in information supplied.

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Soviet Inventions Illustrated, Section II Electrical, Derwent,

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242238 PULSE CONTROLLED COMMUTATING COMPONENT
 has two coils wound on the magnetic core.
 The holding coil provides a big enough magnetic field for supporting the making contacts. The de-energising coil is also operated by a pulse. Both coils have independent ampere-turns and their on and off operation can be adjusted so that the contacts make and brake without hesitation. The component is applicable to the telephony. 8.1.68. as 1208072/26-9. I.D.KOPTSEV et al. (16.9.69.) Bul.15/25.4.69. Class 21a³. Int.Cl. H04m.

AUTHORS: Koptsev, I. D.; Koblents, Ya. G.; MT
Konovskiy, A. G.

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USSR

UDC 546.48'22:548:537.311.31

GALUSHKA, A. P., DAVIDYUK, G. YE., DUBOVOY, V. K., and KONOZENKO, I. D.,
Institute of Nuclear Research of the Academy of Sciences "Ukrainian SSR"

"Investigation of Nonuniformity of Specific Electrical Conductivity of
Single CdS Crystals"

Moscow, Neorganicheskiye Materialy, vol. 9, No 5, May 73, pp 750-754

Abstract: This article considers the nature of nonuniform distribution of the specific electrical conductivity of single CdS crystals and the effect of nonuniformity on the Hall mobility of electrons. Single CdS crystals, obtained by the method of zone sublimation, were used in the investigation. A nonuniform distribution of fast recombination s-centers is evident in single CdS crystals which leads to nonuniform distribution of the specific electrical conductivity over the length of the specimen. The mobility of conductors determined in such specimens from the data of Hall effect can be significantly different from that of actual Hall mobility μ_x . In determining the mobility of conductors in single CdS crystals from the experimental data

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GALUSHKA, A. P., et al, Neorganicheskiye Materialy, Vol. 9, No 5, May 73,
pp 750-754

according to the Hall effect, it is always necessary to take into account the nonuniformity of distribution of the specific electrical conductivity in the specimen. In specimens with nonuniform distribution of the recombination centers over the entire length of the specimen the dependence of nonuniformities of the distribution of specific electrical conductivity and of μ_s on the intensity of short exposure will be higher at high temperatures (200-350°K) than at lower ones. The lowering of temperature results in decreased nonuniformity.

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USSR

UDC 53.07/.08+53.001.89

KOPAS', N. F., GALUSHKA, A. P., KONOZENKO, I. D.

"Radiation Resistant Gamma Dosimeters based on CdS Single Crystals with Compensated Admixtures"

Moscow, Pribory i Tekhnika Eksperimenta, No 5, 1972, pp 59-60

Abstract: Gamma-dosimeters based on single CdS crystals with compensated admixtures are described which permit measurement of the γ -radiation intensity of ^{60}Co from 0.1 to several thousands r/sec with an error not exceeding $\pm 5\%$ to an integral dose of 10^8 r. The increase in radiation stability of the γ -sensitivity of the CdS single crystals is achieved by alloying them during the growth process with admixtures: 0.05% Ag and 0.1% Ga (by weight). The admixtures are added to the initial CdS powder. The structural design and the basic characteristics of the γ -dosimeters are presented.

The sensitivity of the γ -dosimeters as a function of temperature is plotted for three different intensities of the γ -radiation (70, 420 and 1,600 r/sec) with a crystal voltage of 0.1 volts. By comparison with the CdS crystals without admixtures these single crystals have several times less dependence on temperature.

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USSR

UDO 537.311.33:514.28

~~KONOVENKO, I.D.,~~ VINETSKIY, V.L., VARENTSOV, M.D., YERITSYAN, G.N., SEMENYUK,
A.K., STARCHIK, M.I., KHIVRICH, V.I.

"Effect Of Certain Factors On The Processes Of Formation Of Radiation Defects
In Silicon And Germanium During Gamma Irradiation"

V sb. Radiatsion. fiz. nemet. kristallov (Radiation Physics Of Non-Metallic
Crystals--Collection Of Works), Minsk, "Nauka i tekhn.," 1970, pp 22-44 (from
RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2B26)

Translation: The kinetics are studied of the buildup of radiation defects in
Si and n- and p-type Ge during Gamma irradiation. The effect of the charge
state and temperature on the formation of recombination centers is considered
as well as the effect of dosage, the intensity of Gamma irradiation, concent-
ration, preliminary irradiation and other factors on the formation of radiation
defects. 32 ref. V.B.

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USSR

UDC 621.382

BRAILOVSKIY, YE.YU., KONQZENKO, I.D.

"On The Participation Of Doping Impurities In The Formation Of Radiation Defects In Gallium Arsenide"

V sb. Radiatsion. fiz. nemet. kristalloy (Radiation Physics Of Non-Metallic Crystals--Collection Of Works), Minsk, "Nauka i tekhn.," 1970, pp 91-96 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2B36)

Translation: The effect is investigated of Co⁶⁰ Gamma irradiation on the electrical properties of single crystals of n-type GaAs, doped with Te and non-doped, and single crystals of p-type GaAs doped with Mo, Ni, Co. The rate of introduction of defects and the energy position of the levels in the forbidden band are determined and annealing of the defects is conducted. It is shown that in n-type GaAs the atoms of the doping impurity Te do not participate in the formation of radiation defects responsible at room temperature for a change of the concentration of carriers and conversely in p-type GaAs, the kind of doping impurity has an effect on the type of radiation defects. 5 ill. 1 tab. 6 ref. Summary.

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UDC 537.311.33:546.48.221

USSR

GALUSHKA, A. P., DAVYDYUK, G. YE., and KONOZENKO, N. D., Institute of Nuclear Research, Academy of Sciences Ukrainian SSR

"Influence of Heterogeneities σ on Certain Properties of CdS Single Crystals"

Moscow, Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, No 9, Sep 73, pp 1506-1510

Abstract: The technology used today for growing binary compounds A_2B_6 does not permit producing large ideal single crystals of these semiconductors. The experiments conducted by the authors involved use of CdS single crystals grown by the method of zone sublimation. The authors found that the heterogeneous distributions of conductivity in the CdS single crystals grown by this method are due to the heterogeneous distribution throughout the mass of the crystal of fine traps associated with the natural defects in the lattice. They studied the influence of intensity of exposure on the mobility of carriers and the distribution of conductivity. The article contains 4 figures and 11 bibliographic references.

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UDC 619:616.988.43:636.22/.28

USSR

TOLSTYAK, I. Ye., BAKUMENKO, M. D., CHECHETKINA, N. P., ~~KONOZENKO, P. A.~~ and
OMELAVENKO, A. A., Ukrainian Scientific Research Institute of Experimental
Veterinary Medicine

"Epizootiology of Food-and-Mouth Disease Variant A22"

Moscow, Veterinariya, No 5, May 71, pp 45-46

Abstract: The history of foot-and-mouth disease variant A22 in the Ukraine can be separated into two periods: the prevaccination period, when the fight against the infection consists primarily of veterinary sanitation measures, and the vaccination period, characterized by widespread use of aluminum hydroxide formaldehyde vaccine from lapinized A22 virus. Still, active immunization of animals in the Ukraine was required. The development of the disease in recent years (1966-1969) in various regions of the Ukraine is reviewed. It was concluded that the establishment of immune zones for cattle, using the above vaccine, might solve the foot-and-mouth disease problem for all animals within a given region.

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UDC: 8.74

USSR

DOVGOPOLYY, V. G., KALAYDA, Ye. I., KONOZENKO, V. I., MASHBITS, G. Ya.,
NIKITIN, A. I.

"Principles of Adjusting an Operational System for a Variable Set of
Equipment, and the Number of Solvable Problems"

Kiev, Konstruirovaniye i vnedreniye novykh sredstv vychisl. tekhn.--
sbornik (Designing and Introducing New Computer Facilities--collection
of works), t. 1, 1971, pp 91-94 (from RZh-Kibernetika, No 7, Jul 73,
abstract No 7V639)

Translation: Rapid and effective alignment of an operational system for
a certain set of equipment and the necessary number of problems to be
handled is one of the most urgent and most complicated problems of systems
programming. This paper describes methods of solving some aspects of
this problem; these procedures have been used in developing an oper-
ational system for the "Dnepr-2" computer. An operational system of
modular structure was used as the basis of these methods (see Ye. I.
Kalayda, V. I. Konozenko, G. Ya. Mashbits, A. I. Nikitin, "Konstruiro-
vaniye i vnedreniye novykh sredstv vychisl. tekhn.", t. 1, pp 94-96).

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USSR

KALAYDA, Ye. I., KONOZENKO, V. I., MASHBITS, G. Ya., NIKITIN, A. I.

"Some Problems of Systems Programming Arising with Modular Organization of an Operational System"

Konstruirovaniye i vnedreniye novykh sredstv vychisl. tekhn. T. 1 [Design and Introduction of New Computer Equipment. Volume 1 -- Collection of Works], Kiev, 1971, pp 94-98 (Translated from Referativnyy Zhurnal - Kibernetika, No 8, 1973, Abstract No 8 V639 by V. Ostrovskiy)

Translation: Certain methods of systems programming used by the authors in the development of the DD-3 operational system for the Dnepr-2 computer are presented. Attention is drawn to the fact that the success of development of an OS depends to a great extent on making of the proper decisions in such problem areas as: efficient organization of the program; revision of system expandability; special approaches for combined debugging; methods for automatic OS generation. The authors feel that the key to the solution of these problems lies in modular organization of the system. In this connection, a general description of the structure and process of functioning of standard modules used in the development of DD-3 is presented.

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USSR

KALAYDA, Ye. I., KONOZENKO, V. I., MASHBITS, G. Ya., NIKITIN, A. I.
Konstrunrovaniye i vnedreniye novykh sredstv vychisl. tekhn. T. 1, Kiev,
1971, pp 94-98

The modular organization of the OS allowed a mean productivity of 8 to 10 instructions per day per programmer to be achieved in the period of writing and debugging of the main portion of DD-3 (approximately 10,000 instructions), and is recommended by the authors for use in developing of large programming systems for computers.

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USSR

UDC 681.3.06.51

KONOZENKO, V. I. , MASHBITS, G. Ya., NIKTIN, A. I.

"The DD-3 Supervisory Program for the Dnepr-2 Computer"

1-YA Nauchno-tekhn. Konferentsiya Spets. Konstrukt. Byuro Mat. Mashin i Sistem [First Scientific and Technical Conference of the Special Design Bureau for Mathematical Machines and Systems -- Collection of Works], Kiev, 1970, pp 66-77 (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4V666).

Translation: DD-3 is a development of the DD-1 and DD-2 supervisory programs and is designed for use in automatic production control systems and physical experiment automation systems using the Dnepr-2 computer. Furthermore, DD-3 is the basic supervisory program for the communications machines of multemachine complexes operating both in the computing and control modes. DD-3 allows three types of external organization of the computer process: 1) a process closed for a technical or technological object and occurring in real time; 2) a process closed for a consumer (operative reception of information for production, dialogue with programmer during debugging of programs); 3) separate (with respect to consumer) process with packet program running.

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Steels

USSR

UDC 621.73.073

TISHAYEV, S. I., KONRAD, YU. G., POZNYAK, L. A., STETSENKO, N. V., and OSADCHIY, A. N.

"New Steel 5Kh2VMNF (DI-32) for Hot Deforming Die Tool"

Moscow, Kuznechno-Shtampovochnoye Proizvodstvo, No 8, Aug 73, pp 14-16

Abstract: The results of comparative studies of the basic properties are presented for a new steel 5Kh2VMNF (DI-32), standard grade steel 5KhNM, and a steel recently presented, 4OKhSMF, as well as the strength of dies made from the new steel and 5KhNM. Chemical composition of the three steels was (in %):

	C	Mn	Si	Cr	Mo	Ni	W	V
5Kh2VMNF	0.47	0.49	0.40	1.78	0.49	1.50	0.87	0.37
5KhNM	0.54	0.64	0.24	0.80	0.19	1.65	--	--
4OKhSMF	0.38	0.57	0.80	1.69	0.95	0.10	--	0.35

Data of mechanical tests showed that the new steel surpasses the other two steels in both heat resistance and impact strength for the same level of strength. The new steel also had higher hardness than the other two steels for all tempering temperatures. The average strength of dies made from 1/2

USSR

TISEYEV, S. I., et al., *Kuznechno-Shtampovochnoye Proisvodstvo*, No 8,
Aug 73, pp 14-16

steel 5Kh2VMNF was 2.5-3 times higher than dies made from 5KhNM and the economic effect from use of the new steel amounts to 1000 rubles/ton. Tests of the new steel and 5KhNM were conducted for tools made of the two steels at the Tokmaksk Die-Forging Plant. Four tables, four bibliographic references.

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USSR

UDC 616-001.7

ZHIYEVSKIY, V. I., PYATYSHEV, L. I., KONRADI, G. G., and ZAMILATSKIY, YE. P.

"Cryostat with a Recharging Device for Tensile Testing Materials at 20° K"

Moscow, Zavodskaya Laboratoriya, No 10, Oct 72, pp 1271-1273


Abstract: The authors developed a cryostat which makes it possible to remove fractured samples and put new samples in without having to remove the liquid hydrogen from the working chamber. This newly developed cryostat also allows a sample to be pre-cooled, clamped and stressed in a special chamber containing liquid nitrogen before being submerged in the liquid hydrogen. Three to six samples can be tested before having to recharge the cryostat with liquid hydrogen. One figure, 3 bibliographic references.

1/1

AA0040443

KONRADI GG

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 

236676 ARGON ARC WELDING TORCH has a water-cooled arrangement in the form of two coaxial cylindrical channels inside a housing, which are joined at the lower part by radial openings. To reduce the protrusion of the electrode to 10-15mm the ratio of length of cylindrical part of nozzle to its bore is made 0.3-0.6 and this improves the life of the tungsten electrode. 30.11.67, as 1200836/25-27. A.K. BARANOV et alia. (19.6.69.) Bul. 7/3.2.68. Class 21h. Int.Cl. B23k.

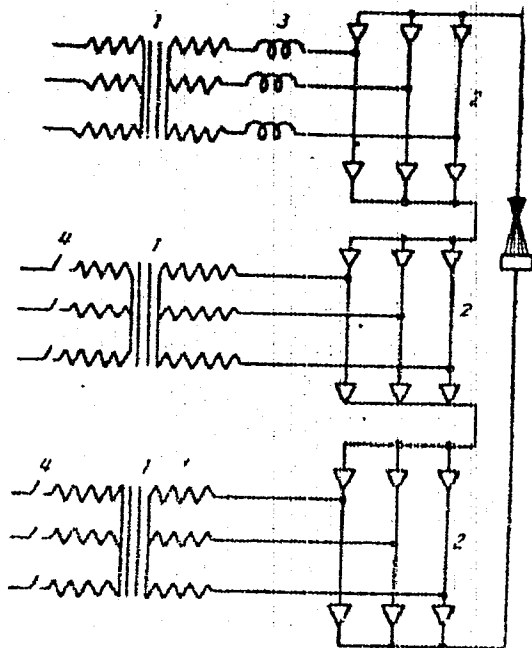
AUTHORS: Baranov, A. K.; Kryukovskiy, V. N.; Kucherenko, G. P.;
Konradi, G. G.; Raymond, E. D.; Agroskin, Ya. Z.

1/2

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19741933

AA0040443



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19741934

172 020 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--DEPENDENCE OF REACTIVE HYMEREMIA INTENSITY, ON THE OCCLUSION
DURATION IN SKELETAL MUSCLE -U-
AUTHOR--(02)-KONRADI, G.P., LEVTOV, V.A.
COUNTRY OF INFO--USSR
SOURCE--FIZOLOGICHESKIY ZHURNAL SSSR IMENI I. M. SECHENOVA, 1970, VOL 56,
NR 3, PP 366-374
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CAT, HYDEREMIA, MUSCLE PHYSIOLOGY, ARTERY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1982/1605

STEP NO--UR/0239/70/056/003/0366/0374

CIRC ACCESSION NO--AP0052800

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--A0052800

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VENOUS OUTFLOW FROM AN ISOLATED IN SITU GASTROCHEMIUS MUSCLE IN NARCOTIZED CATS WAS SIGNIFICANTLY INCREASED IN RESPONSE TO 3 SEC DURATION OF ARTERY OCCLUSION. THE VALUES OF THE REACTION INTENSITY: ADDITIONAL OUTFLOW AT THE MAXIMUM OF REACTIONS (I), TOTAL EXCESS OF BLOOD DURING HYPEREMIAS (II) AND THE DURATION OF HYPEREMIAS (III), WERE PRACTICALLY CONSTANT IN SPIE OF INCREMENT IN OCCLUSION DURATION PERIODS FROM 3 TO 7, 15 TO 30 SEC. PROLONGATION FO THE OCCLUSIONS TO 1, 2 AND 4 MIN WAS FOLLOWED BY AN INCREASE OF REACTION INTENSITY VALUES IN APPROXIMATE PROPORTION WITH THE LOGARITHM OF OCCLUSION DURATION. AFTER THE HYPEREMIAS TO 8 AND 16 MIN DURATION OF OCCLUSIONS HAD BEEN ELICITED, THE ABILITY OF MUSCLE VESSELS TO DISPLAY POST OCCLUSION HYPEREMIAS WAS REDUCED, AND THE CONSTANCY OF REACTION INTENSITY VALUES AT SHORT OCCLUSIONS (3-30 SEC DURATION) DISAPPEARED.

FACILITY: LAB. OF REGULATION OF THE BLOOD CIRCULATION, L. P. PAVLOV'S INSTITUTE OF PHYSIOLOGY, ACAD. SCI. USSR, LENINGRAD.

UNCLASSIFIED

USSR

UDC: 621.373.531.3(088.8)

KONRADI, L. G., DMITRIYEV, V. A., PUZYREVICH, Yu. S.

"A Sawtooth Voltage Generator"

USSR Author's Certificate No 266832, filed 28 Mar 69, published 2 Jul 70
(from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1G280 P)

Translation: This Author's Certificate introduces a sawtooth voltage generator which contains a transistorized flip-flop and two resistance-capacitance charging networks. For separate regulation of the durations of sawtooth voltage pulses and the pauses between them, the outputs of the resistance-capacitance networks are connected through semiconductor switching diodes to the inputs of the flip-flop, and through separate semiconductor diodes to the collectors of the flip-flop transistors.

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- 96 -

Nitrogen Compounds

USSR

UDC 615.216:547.831

ABRAMOCHKIN, E. S., ~~KONSHIN, M. YE.~~, ZAKS, A. S., and ZIL'BERMAN, L. G., Permsk
Pharmaceutical and Medical Institute

"Study of Heterocyclic Compounds. VIII. Substituted Amides of 2,3-Pentamethylenocholinoline-4-carboxylic Acid"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 1, Jan 72, pp 19-21

Abstract: Synthesis of the amides of 2,3-pentamethylenocholinoline-4-carboxylic acid and its 6-methyl analogue was carried out by heating the hydrochloride of the parent acyl chloride with primary or secondary amines in benzene and in presence of triethylamine. The products -- colorless crystalline compounds -- are obtained in 55-80% yields; they form water soluble chlorohydrates. The amides synthesized show maxima in the UV spectra at 232-240, 280-286, 306-312, and 320-326 μ ; these maxima are shifted bathochromically with introduction of a 6-methyl substituent. The LD₅₀ doses of these compounds ranged from 84-375 mg/kg body weight.

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USSR

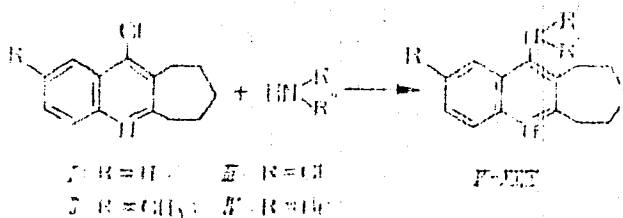
UDC 615.212.7:547.8317.012.1

ABRAMOCHKIN, E. S., and KONSHIN, M. YE., Perm' Pharmaceutical Institute, Perm, Ministry of Health USSR

"Synthesis of N-Substituted 4-Amino-2,3-pentamethylenequinolines"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 4, No 7, 1970, pp 10-13

Abstract: N-substituted 4-amino-2,3-pentamethylenequinolines (X-XXIX) were synthesized to test their biological activity and to establish the possible dependence of action on molecular structure. The synthesis proceeded by reaction of 4-chloro-2,3-pentamethylenequinolines (I-IV) and primary or secondary amines in phenol:



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USSR

ABRAMOCHKIN, E. S., et al., Khimiko-Farmatsevticheskiy Zhurnal, Vol 4, No 7, 1970, pp 10-13

Compounds with different R substituents were tested for biological activity; toxicity (LD₅₀), analgesic activity, and anti-curaric activity (ability to remove or ameliorate myorelaxant effect of diplacin) were studied. The authors thank Professor A. S. ZAKOS and Candidate of Medical Sciences I. G. ZIL'BERMINETS for conducting the biological tests.

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1/2 007 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--ALKYD LINOLEUM BASED ON CAPROLACTAM BY PRODUCTS -U-

ALTHOR--(04)--GONCHARKO, V.M., KISELEVA, R.A., TORBINSKIY, V.V., KONSHIN,
N.P.
COUNTRY OF INFO--USSR

SOURCE--STRCIT. MATER. 1970, (3), 19-20

DATE PUBLISHED-----70

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

TOPIC TAGS--CONSTRUCTION MATERIAL, CAPROLACTAM, ALKYD RESIN, INDUSTRIAL
BYPRODUCT, ADIPIC ACID, SUCCINIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1245

STEP NO--UR/0228/70/000/003/0019/0020

CIRC ACCESSION NO--AP0128661

UNCLASSIFIED

2/2 007 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AP0128661
ABSTRACT/EXTRACT--(U) EP-0- ABSTRACT. CAPROLACTAM BY PRODUCTS CONTG.
ADIPIC, SUCCINIC, AND GLUTARIC ACIDS WERE ACIDIFIED WITH H SUB2 SO SUB4
TO PH 3, THE ORG. LAYER WAS SEPD. FROM THE AQ. SOLN., AND ALLOWED TO
REACT WITH GLYCEROL IN THE PRESENCE OF KOH TO GIVE A DARK BROWN, ALKYD
RESIN USED AS A BINDER FOR LINOLEUM.

UNCLASSIFIED

USSR

UDC: 539.17.02+539.172.4

KON'SHIN, V. A.

"Nuclear Physical Constants for Transplutonium Elements, III"

Minsk, Izvestiya Akademii Nauk BSSR---Seriya Fiziko-Energeticheskikh Nauk, No 4, 1972, pp 26-34

Abstract: This article is the third of a series of installments published in this journal, dealing with the interaction of neutrons and the nuclei of transplutonium elements, prompted by the relative unavailability of such information in Soviet journals. The purpose of the present installment is to assemble all available information regarding the constants for Cm²⁴⁷, Cf²⁴⁹, and Cf²⁵¹ and, through an analysis of this information, to recommend values for those constants. A partial review of the experimental work done on the subject, principally from foreign sources, is also given. Tables for the fission cross section for thermal energy and the fission integral for Cm²⁴⁷ and Cf²⁴⁹, as found by various researchers, are reproduced along with a large table of nuclear physical constants for the Pu isotopes and the transplutonium elements. The author expresses his appreciation to A. K. Krasin, Academician of the Belorussian Academy of Sciences, for posing the problem.

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USSR

UDC: 539.17.02+539.172.4

KON'SHIN, V. A.

"Nuclear Physical Constants for the Transplutonium Elements, Part 2"

Minsk, Vestnik Akademii Nauk BSSR--Seriya Fiziko-Energeticheskikh Nauk,
No 3, 1972, pp 28-36

Abstract: In this second part of the article, evaluations are given for the nuclear physical constants of Cm^{245} , Cm^{247} , and Cf^{251} , which have high fission cross sections for neutron thermal energy. The cause of this phenomenon is that the addition of a neutron to an odd isotope provides an additional 0.5-0.7 Mev of excitation energy. The article discusses neutron cross sections for transplutonium elements, the determination of the effective thermal cross section, fission cross section in the thermal neutron energy region and the resonance integral for Cm^{245} , the capture cross section in the thermal energy region and the capture resonance integral for Cm^{245} , the estimated capture cross section of Cm^{245} , and the full Cm^{245} cross section in the thermal energy region. The third part of this article is to appear in the next number of the journal named above. The author is associated with the Institute of Nuclear Energy, Belorussian Academy of Sciences.

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USSR

UDC:621.313.12:539.172.12

BOL'SHOV, V. I., DUBININ, A. A., DMITRIYEV, V. M., KAPCHIGASHEV, S. P., KON'SHIN, V. A., MATUSEVICH, YE. S., POLIVANSKIY, V. P., PUPKO, V. Ya., REGUSHEVSKIY, V. I., STAVISSKIY, Yu. Ya., and YUR'YEV, Yu. S.

"Physical Investigation of the Target in an Electronuclear Neutron Flux Generator"

Moscow, Atomnaya Energiya, Vol 28, No 5, May 70, pp 388-392

Abstract: Fluxes of thermal neutrons on the order of 10^{17} - 10^{18} n/cm²-sec open new possibilities for investigations in many areas of science and technology. There is great interest in the study of the possibility for increasing neutron fluxes by using the process of multiple neutron birth upon interaction of nucleons with energies in the hundreds of MeV with heavy nuclei. This article presents the results of experiments and calculations concerning the neutron-physical characteristics

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USSR

BOL'SHOV, V. I., DUBININ, A. A., DMITRIYEV, V. M., KAPCHIGASHEV, S. P., KON'SHIN, V. A., MATUSEVICH, Y. E. S., TOLIVANSKIY, V. P., TUPKO, V. Ya., REGUSHEVSKIY, V. I., STAVISSKIY, Yu. Ya., YUR'YEV, Yu. S., Moscow, Atomnaya Energiya, Vol 28, No 5, May 70, pp 388-392

of the target in an electronuclear device for the generation of neutron fluxes. The yield of neutrons and distribution of the number of reactions in a heavy target and moderator are measured. The space-energy distribution of neutron flux in the moderator is calculated and the accumulation of transuranium elements in a system with high neutron flux is computed.

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USSR

R UDC:621.313.12:539.172.12

BOL'SHOV, V. I., DUBININ, A. A., DMITRIYEV, V. M., KAPCHIGASHEV, S. P., KON'SHIN, V. A., MATUSEVICH, YE. S., POLIVANSKIY, V. P., FUPKO, V. Ya., REGUSHEVSKIY, V. I., STAVISSKIY, Yu. Ya., and YUR'YEV, Yu. S.

"Physical Investigation of the Target in an Electronuclear Neutron Flux Generator"

Moscow, Atomnaya Energiya, Vol 28, No 5, May 70, pp 388-392

Abstract: Fluxes of thermal neutrons on the order of 10^{17} - 10^{18} n/cm²·sec open new possibilities for investigations in many areas of science and technology. There is great interest in the study of the possibility for increasing neutron fluxes by using the process of multiple neutron birth upon interaction of nucleons with energies in the hundreds of MeV with heavy nuclei. This article presents the results of experiments and calculations concerning the neutron-physical characteristics

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USSR

BOL'SHOV, V. I., DUBININ, A. A., DMITRIYEV, V. M., KAPCHIGASHEV, S. P., KON'SHIN, V. A., MATUSEVICH, Y. E. S., TOLIVANSKIY, V. P., TUPKO, V. Ya., REGUSHEVSKIY, V. I., STAVISSKIY, Yu. Ya., YUR'YEV, Yu. S., Moscow, Atomnaya Energiya, Vol 28, No 5, May 70, pp 383-392

of the target in an electronuclear device for the generation of neutron fluxes. The yield of neutrons and distribution of the number of reactions in a heavy target and moderator are measured. The space-energy distribution of neutron flux in the moderator is calculated and the accumulation of transuranium elements in a system with high neutron flux is computed.

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USSR

K

UDC 621.396.6-151.5

GREVTSEV, N. V., YENKROV, A. V., KONSHIN, V. V., NOSTINSKIY, L. N., KRAMNIK, Ya. I.,
PETROV, Yu. P.

"An Installation for Film Vaporization by the Method of Electrical Explosion of Foil"

Elektron. prom-st'. Nauchno-tekhn. sb. (The Electronics Industry. Scientific and
Technical Collection), 1970, No 1, pp 67-69 (from RTS-Radiotekhnika, No 10, Oct 70,
Abstract No 10V233)

Translation: The authors describe the semiautomatic MEV-1 machine designed for
laboratory production of vaporized current-conducting films, contact areas and so
forth by the method of electrically exploding foil. To assure directed flight of
the foil particles, a magnetic field is used together with a special directing device
which utilizes gas-kinetic forces. A bank of capacitors is used to create the ex-
plosion. Three illustrations, bibliography of six titles. N. S.

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USSR

RUSTAMOV, B. R., FAYZULIN, F. G., KON'SHINA, L. N., and SEITNEYAZOV, U. S.,
Uzbek Scientific Research Institute of Medical Parasitology and Helmin-
thology imeni L. M. Isayev

"Some Characteristics of the Epidemiology of Zoonotic Cutaneous Leishmaniasis
in Northern Regions of the Karakalpak ASSR"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 12, Dec 71, pp 61-62

Abstract: Examination of 15,000 subjects in 28 hamlets of the Takhtakupyrsk Rayon and 2500 subjects in the Muynakak Rayon of the Karakalpak ASSR indicated that 240 persons had had cutaneous leishmaniasis (227 in the Takhtakupyrsk Rayon and 13 in the town of Muynak). Both rayons are located in the northern part of the Karakalpak ASSR. There were no indications of occurrence of the disease among the native population. Cases of cutaneous leishmaniasis had occurred since at least 1900 in the area studied. Those who had recovered from the disease comprised 0-2.5% and 0.4-7.5% (1.5% on the average) of the population of settled localities of the desert and of cases, respectively. The incidence of the disease increased during 1966-68, as indicated by the fact that 54% of past infections occurred during these three years vs 75% during 1961-68. Of those who had recovered from the disease, 54.6% were infected at an age < 10 yrs and only 16.5% at an age > 20 yrs.

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KONSHINA, S. K.

JPRS 55341
6 MAR 72

UDC: 611.36.014.477-013.9

CHANGES IN TROPIC FUNCTION OF THE EMBRYONIC LIVER UNDER THE INFLUENCE OF TRANSVERSE G FORCES (H₂)

(Article by S.K. Konshina, V.I. Stepanov, A.V. Yermola, Chair of Normal Anatomy (Headed by Professor M.G. Prives, Honored Scientist), Rybinsk Leningrad Medical Institute, Ismail Academician I.P. Pavlov; Leningrad, Arkhiv Anatomi, Gistolovii i Embriologii, Russian, No 11, 1971, submitted 25 December 1970, pp 30-35)

The problem of investigating the effect of accelerations on the human organism acquired special significance with development of aviation and rocket technology which resulted in high speed flights.

At the present time we have many works by Soviet and foreign authors dealing with physiological, morphological, histochemical, and other changes developing in the organism under the influence of diverse gravitational stress. Kh.G. Prives, 1963, 1969, and others; V.I. Stepanov, 1955, 1963; A.V. Yermola, V.I. Stepanov, 1969; V.C. Petukhin, 1954, 1962; V.I. Babushkin, 1956, 1966; N.V. Vasil'yev, 1963; A.R. Kotovskaya, 1962, 1964; R.Ye. Fogan, 1963; A.S. Batar, 1961, 1962; V.A. Orellin, 1964; A.A. Kiselev, 1963; A.D. Vostresenskiy, 1963; Prouer et al., 1952; Wabb, 1958; Muller, 1961, and others). All these studies were conducted on adult organisms.

Of particular interest is the study of the effect of accelerations on the normal ontogenetic process. This is not only of theoretical interest, but also of great practical significance for distant and superdistant space flights, living on orbital stations or other planets under conditions that are substantially distinct from earth. The effect of accelerations on the young developing organism could lead to significant changes and affect its development in a specific manner.

However, we failed to find any special works dealing with changes in organs and systems in the course of ontogeny arising under the effect of accelerations in the literature available to us. For this reason, it appeared purposeful to pursue experimental investigations in this direction.

We selected the liver and, specifically, its trophic function as our investigative object, since it reflects to total energy balance in the

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--THE ENZYMIC EXCRETORY FUNCTION OF THE SMALL INTESTINE IN PERSONS
WITH SUSTAINED COLECTOMY -U-
AUTHOR-(03)-BRUSILOVSKIY, M.I., KONSISTORUM, A.V., MARKO, O.P.

COUNTRY OF INFO--USSR

SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 48, NR 6, PP 95-99

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ENZYME, SECRETION, SMALL INTESTINE, PHOSPHATASE, SURGERY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1781

STEP NO--UR/0497/70/048/006/0095/0099

CIRC ACCESSION NO--AP0129149

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSIGN NO--AP0129149

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE CONTAINS DATA CONCERNED WITH THE CONTENT OF ENTEROKINASE AND ALKALINE PHOSPHATASE IN THE DUODENAL JUICE AND FECES IN 35 PERSONS WHO HAVE SUSTAINED COLECTOMY IN THE PAST. THE AUTHORS DEMONSTRATE THE RELATION BETWEEN THE CONTENT OF ENZYMES IN THE REFERRED TO MEDIA ON THE ONE HAND, AND THE QUANTITY AND QUALITY OF THE INTESTINAL MICROFLORA AND MOTORICITY OF THE SMALL INTESTINE, ON THE OTHER HAND. IT IS SHOWN THAT IN PATIENTS WHO HAVE SUSTAINED COLECTOMY THE FORMATION OF ALKALINE PHOSPHATASE AND ENTEROKINASE IN THE SMALL INTESTINE DECREASES, AND THERE OCCURS AN AUGMENTED EXCRETION IN MOST OF THEM OF ENTEROKINASE WITH THE FECES AND IN SOME, OF ALKALINE PHOSPHATASE. FACILITY:
NAUCHNO-ISSLEDOVATEL'SKAYA LABORATORIYA PROKTOLOGII MZ RSFSR, MOSKVA.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ECONOMICS OF INSTRUMENT CONSTRUCTION -U-
AUTHOR--KONSON, A.S. K
COUNTRY OF INFO--USSR
SOURCE--ECONOMICS OF INSTRUMENT CONSTRUCTION, MOSCOW, VYSSHAYA SHKOLA,
1970, 341 PP
DATE PUBLISHED-----70
SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES
TOPIC TAGS--ECONOMIC ANALYSIS, PRECISION INSTRUMENT INDUSTRY, INDUSTRIAL
PLANNING, RELIABILITY THEORY, INDUSTRIAL AUTOMATION, R AND D FACILITY
EVALUATION, ECONOMIC GEOGRAPHY, COST ESTIMATE, INDUSTRIAL PRODUCTION,
INDUSTRIAL MANAGEMENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1991/0558 STEP NO--UR/0000/70/000/000/0001/0341
CIRC ACCESSION NO--AM0110362
UNCLASSIFIED

2/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70
CIRC ACCESSION NO--AM0110362
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TABLE OF CONTENTS: FROM THE
AUTHOR 3. CHAPTER I INTRODUCTION 5. II THEORY AND METHODS FOR
ECONOMIC EVALUATION OF TECHNICAL SOLUTIONS 11. III THEORY AND METHODS
FOR ECONOMIC ANALYSIS OF RELIABILITY OF INSTRUMENTS AND SYSTEMS IN
DEVELOPMENT 70. IV THEORY AND CALCULATION METHODS OF USEFUL LIFE OF
INSTRUMENTS AND SYSTEMS 122. V THEORY AND METHODS FOR MEASUREMENT OF
THE LEVEL OF MECHANIZATION AND AUTOMATION OF PRODUCTION 141. VI
PLANNING OF APPLIED INVESTIGATIONS AND DEVELOPMENTS, AND EVALUATION OF
DEMANDS FOR NEW INSTRUMENTS 152. VII TECHNOLOGICAL LEVEL AND ECONOMIC
POTENTIAL OF NEW DEVELOPMENTS OF INSTRUMENTS (SYSTEMS) 180. VIII
METHODS FOR ANALYSIS OF RESULTS OF ACTIVITIES OF REGIONAL SCIENTIFIC
RESEARCH INSTITUTES AND DESIGN OFFICES OF INSTRUMENTS 195. IX
ADMINISTRATION, PLANNING AND EVALUATION OF RESULTS OF ECONOMIC
ACTIVITIES OF INSTRUMENT CONSTRUCTING PLANTS 219 X CONCENTRATION,
SPECIALIZATION, COOPERATION AND DISTRIBUTION OF INSTRUMENT CONSTRUCTING
PLANTS 237. XI PRODUCTS IN INSTRUMENT CONSTRUCTION 249. XII NET
COST OF INSTRUMENTS 267. XIII PRICE OF INSTRUMENTS 285. XIV LABOR
ECONOMY IN INSTRUMENT CONSTRUCTION 305. XV BASIC FUNDS, TURNOVER
FUNDS AND FINANCES OF THE INSTRUMENT CONSTRUCTING INDUSTRY 324. THE
BOOK WAS WRITTEN IN AGREEMENT WITH THE NEW SYLLABUS OF THE COURSE
"ECONOMICS OF INSTRUMENT CONSTRUCTION" OFFERED TO SENIOR COLLEGE
STUDENTS OF INSTRUMENT CONSTRUCTION, RADIO ENGINEERING AND
ELECTRONICS... IT CAN BE USEFUL ALSO TO ENGINEERING TECHNICAL
PERSONNEL OF INSTRUMENT CONSTRUCTING, RADIO AND ELECTRONIC PLANTS,
DESIGN OFFICES AND SCIENTIFIC RESEARCH INSTITUTES.

UNCLASSIFIED

USSR

UDC: 519.2

KATKOVNIK, V. Ya., KONSON, Ye. D.

"Procedures for Sequential Planning of Experiments"

Kibernet. i vychisl. tekhn. Resp. mezhved. sb. (Cybernetics and Computer Technology. Republic Interdepartmental Collection), 1973, vyp. 19, pp 50-55 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V310 by Ye. Markova)

Translation: Procedures are described for constructing plans close to D-optimum plans, or procedures asymptotically coincident with them.

Two cases are considered: the information matrix is degenerate (the number of experimental points is lower than the number of unknown parameters of the model), and the information matrix is non-degenerate (the number of experimental points is not less than the number of unknown parameters of the model). Sequential planning on the main components is described for the first case. A scheme of ascent by parameters is constructed in finding the exact D-optimum plan for a model on the main components which contains p parameters. Convergence of the sequence to the D-optimum plan on p main components depends on the system

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USSR

KATKOVNIK, V. Ya., KONSON, Ye. D., Kibernet. i vychisl. tekhn. Resp. mezhved. sb., 1973, vyp. 19, pp 50-55

of functions $\phi_0(x)$, the form of the region U , and the initial position of the points x_j ($j=1, 2, \dots, p$).

In the second case a planning sequence is considered where p measurements ($p \geq n$) are made to estimate the parameters of the model, and the points of the experiments are arranged so that the information matrix is nondegenerate. There exists the possibility of making q additional measurements. In accordance with the criterion of D-optimality the arrangement of the additional experiments is defined when the determinant of the information matrix is maximized with respect to all q points simultaneously. A proof is presented for convergence as $q \rightarrow \infty$ of the procedure described by S. N. Sokolov (RZhMat, 1963, 8V222) to the value of the information matrix determinant which is the maximum possible for the given system of functions $\phi_0(x)$ in the region of planning U .

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- 13 -

1/2 033 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--PREPARATION OF STEREOREGULAR SYNTHETIC RUBBERS --(U)--

AUTHOR--(05)--LYAKUMOVICH, A.G., KONSTANDI, B.V., SULTANOVA, M.KH., ZAYTSEV,
V.S., IRKHIN, V.L.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 236,002
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--04FEB70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--CONJUGATED POLYMER, SYNTHETIC RUBER, POLYISOPRENE,
PARAMAGNETISM, TITANIUM CHLORIDE, ORGANOALUMINUM COMPOUND,
ELECTROMAGNETIC FIELD, POLYMERIZATION, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3002/1443

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

CIRC ACCESSION NO--AA0128842

UNCLASSIFIED

2/2 033

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0128842

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STEREOREGULAR SYNTHETIC RUBBERS WERE OBTAINED BY POLYMG. CONJUGATED DIENES, SUCH AS ISOPRENE, IN CATALYTIC SYSTEMS CONTG. SUCH PARAMAGNETIC COMPONENTS AS TICL SUB4 AND ISO BU SUB3 AL. TO INCREASE THE NO. OF CIS,1,4 UNITS AND TO IMPROVE THE PROPERTIES, POLYMN. WAS DONE IN A VARIABLE OR CONST. ELECTROMAGNETIC FIELD.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--P SUB2 Q SUB5 AND SB SUB2 Q SUB3 R SUBX Q SUBY SYSTEM (R EQUALS CR,
V, TI, FE). IV. PHOSPHORUS PENTOXIDE, ANTIMONY SESQUIOXIDE AND FERRIC
AUTHOR--(04)-DOMBROVSKAYA, V.K., KONSTANTS, Z., MILLERS, T., VAYVADS, A.

COUNTRY OF INFO--USSR

SOURCE--LATV. PSR ZINAT. AKAD. VESTIS, KIM. SER. 1970, (1), 15-18

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--PHOSPHOROUS COMPOUND, X RAY ANALYSIS, ANTIMONY COMPOUND,
CHROMIUM COMPOUND, VANADIUM COMPOUND, TITANIUM COMPOUND, IRON OXIDE,
GLASS STRUCTURE, THERMAL EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0611

STEP NO--UR/0464/70/000/001/0015/0018

CIRC ACCESSION NO--AP0105594

UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105594

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TERNARY SYSTEM WAS STUDIED AT 1000, 1200, AND 1400DEGREES BY X RAY AND THERMOGRAPHIC ANAL. AT 1000DEGREES A GLASS WAS FORMED ONLY WHEN THE COMPN. WAS P SUB2 O SUB5 60, SB SUB2 O SUB3 20, AND FE SUB2 O SUB3 20 MOLE PERCENT. AT 1200DEGREES, 3 X RAY AMORPHOUS SUBSTANCES WERE OBTAINED CONTG. (1) P SUB2 O SUB5 60, SB SUB2 O SUB3 20, AND FE SUB2 O SUB3 20 MOLE PERCENT; (2) P SUB2 O SUB5 60 AND FE SUB2 O SUB3 40 MOLE PERCENT; AND (3) P SUB2 O SUB5 70, SB SUB2 O SUB3 10, AND FE SUB2 O SUB3 20 MOLE PERCENT. AT 1400DEGREES AN X RAY AMORPHOUS COMPN. EXTENDED OVER MORE THAN HALF OF THE 3 COMPONENT SYSTEM. WITHIN THIS SYSTEM FUSION OCCURRED ONLY IF THE FE SUB2 O SUB3 IN THE MIX DID NOT EXCEED 40 MOLE PERCENT AND THE P SUB2 O SUB5 CONTENT WAS GREATER THAN OR EQUAL TO 20 MOLE PERCENT.

UNCLASSIFIED

USSR

UDC 632.95

GILLER, S. A., BULENKOVA, L. F., KONSTANT, G. G., KALININ', M. M., and SHIMANSKAYA, M. V.

"Gas Chromatographic Separation of Organochlorine Insecticides on Various Columns"

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 51-53 (from RZh-Khimiya, No 11, Jun 72, Abstract No 11N403)

Translation: Excellent separation of p,p'-DDT, o,p'-DDT, p,p'-DDE and γ -hexachlorocyclohexane is achieved on SKTFT-50 fluorinated silicone (Leningrad) applied (5%) on silanized chromosorb W. The relative times of retention of these pesticides are given as well as those of lindane and dieldrin on various fixed phases.

1/1

USSR

UDC 547.859.7'785.5:543.4.6

POZHARSKIY, A. F., KASHPAROV, I. S., ANDREICHIKOV, YU. P., HURYAK, A. I.,
KONSTANTINCHENKO, A. A., and SIMONOV, A. M., Rostov-on-Don State University

"Heterocyclic Analogs of Pleiadene. VII. Tautomerism of 2-Amino-derivatives
of Perimidine, Aceperimidine, and Their Imidazole Analogs"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 71, pp 807-813

Abstract: Analysis of the ionization constants, infrared and ultraviolet
spectral data and of quantum mechanical calculations showed that 2-aminoperi-
midines and 2-aminoaceperimidines show a greater tendency toward a tautomeric
equilibrium shift in the direction of the imino form than the 2-aminoderivatives
of 4,5-diphenylimidazole, benzimidazole, and angular or linear naphthimidazoles.
This tendency is believed to be connected with their π -electron structure.

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Epidemiology

USSR

KONSTANTINOV, A. A., Professor

"Hemorrhagic Fever With a Renal Syndrome"

Moscow, Zdorov'ye, No 8, 1971, p 3

Translation: This disease is also known as hemorrhagic nephrosonephritis. It is characterized by increased capillary permeability and multiple hemorrhages in various organs, the kidneys in particular.

The disease sets in abruptly. A human usually develops malaise, chills, headache, pain in the throat, and loss of appetite. During the first 2 days the temperature rises to 37.5 to 37.8°C, and by the 3d or 4th day it may climb to 39 or even 40°C.

The temperature drops to normal a week later, but the patient's condition deteriorates instead of improving. Sharp pain occurs in the lumbar region and abdomen along with nausea, vomiting, and severe thirst. The kidneys are particularly affected. Therefore, the amount of urine excreted decreases. Laboratory urinalysis reveals the presence of albumin and blood (red blood cells). The patient's condition gradually starts to improve after 10 to 13
1/6

USSR

KONSTANTINOV, A. A., Zdorov'ye, No 8, 1971, p 3

days, the first indication being an increase in the amount of urine excreted.

Successful treatment requires prompt hospitalization. The patient should be transported carefully, recumbent, on a stretcher with a mattress.

What is the cause of this serious ailment and how can it be avoided? The pathogen of hemorrhagic fever with a renal syndrome is a peculiar virus. The vectors of this virus are murine forest rodents: red-backed, red, and eastern voles and field mice.

A sick person is not a danger to those around him for he cannot infect others.

The virus penetrates into the body in different ways. It sometimes enters when a person breathes air with dust containing virus excreted by rodents. Infection may occur when food infected by rodents is eaten. The virus may also enter through the mucous membranes or injured skin (through wounds, abrasions, scratches) if a person touches grass, leaves, brushwood, berries, hay, or other substances in contact with rodent excrement.

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USSR

KONSTANTINOV, A. A., Zdorov'ye, No 8, 1971, p 3

The disease strikes in all seasons, but mostly in the summer and fall when a person is hunting, walking, fishing, hiking and spending the night in the woods, or staying in a hayloft.

He can become infected while harvesting crops, procuring and exporting hay, transporting grain and vegetables, sorting potatoes, working in private gardens and orchards, or when in a country cottage. People whose jobs require them to stay a long time in woods (geologists, builders, geodesists, oilmen, lumberjacks) are likely to become infected.

Those living on the outskirts of a village or city can also become infected in their homes, because when cold weather sets in or when food becomes scarce, the rodents head for human dwellings, warehouses, granaries, barns, and cellars. The infection of such items as bread, pastry, candy, lard, sausage, and cheese is particularly dangerous because these foods are not cooked.

Prevention of hemorrhagic fever consists chiefly of exterminating rodents in human dwellings and in natural foci of the disease. Observance of the rules of personal hygiene is also important.

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USSR

KONSTANTINOV, A. A., Zdorov'ye, No 8, 1971, p 3

Under no circumstances should rodents be handled! While resting in the woods, one should hang food on trees or bushes to keep it out of the reach of rodents. Spoiled or contaminated items should not be eaten, at least not until after they are seared or thoroughly boiled or roasted. The hands must be washed with soap before eating.

When spending the night in a woods, one should select a dry, clean place. It is well not to sleep on a haystack or straw because they usually contain many rodents.

Food wastes or trash should not be left in the place where one has spent the night in order to avoid attracting rodents. Mittens should be worn when collecting brushwood or firewood or while working in gardens or orchards. Abrasions and scratches on the hands should be treated with iodine or brilliant green.

Observance of proper agricultural practices also helps to combat rodents. Their numbers increase sharply on neglected fields or when crops are carelessly harvested.

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USSR

KONSTANTINOV, A. A., Zdorov'ye, No 8, 1971, p 3

Efforts should be made to keep rodents from getting into houses and farm structures. Food products at homes and in storehouses should be kept on shelves, racks, in jars, or closed bins.

The living quarters and land of a farmstead should be kept free from trash and food wastes. Hay, straw, and firewood should not be stored any closer than 10 to 15 meters from a house.

If rodents are found in a house or garden, steps should be taken to exterminate them. A disinfecting or sanitary-epidemiological station should be asked to get rid of rats.

Traps should not be used to control rodents because live animals pose a great threat of infection.

Workers engaged in rodent extermination use a variety of poisons. They mix them with meal and powdered sugar, which is placed in trays and then set out in barns, cellars, storehouses, and other places. Rodent extermination in
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USSR

KONSTANTINOV, A. A., Zdorov'ye, No 8, 1971, p 3

houses is best done in the fall (September and October) when the cold weather drives the rodents out of the woods.

The sanitary epidemiological service constantly conducts preventive measures in natural foci of hemorrhagic fever. It exterminates rodents in parks, suburban and recreational areas. Rodent extermination in forests is also conducted along that part of a settlement which is adjacent to a woods. A protective zone is established which consists of two parallel poison strips 300 meters wide and 50 meters apart. Grain with poison is scattered on these strips. People are warned not to allow cattle, domestic animals, or poultry to go into this area.

6/6

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Pathology

USSR

UDC 616.61-092.151-022.6-008.9

KONTSEVAYA, N. G., KONSTANTINOV, A. A., SHAPIRO, S. Ye., and KOVAL'SKIY, G. S.,
Khabarovsk Medical Institute

"Some Indices of Protein Metabolism and Vitamin Balance in Patients With Far-Eastern Hemorrhagic Fever With a Renal Syndrome"

Moscow, Voprosy Meditsinskoy Khimii, Vol 16, No 4, Jul/Aug 70, pp 376-381

Abstract: A study was made of 269 patients suffering from Far-Eastern hemorrhagic fever with a renal syndrome. During the first 3 weeks of the illness, a high degree of azotemia is present which is caused by the specific tissue processes as well as by the disturbance of kidney function. The increased porosity of vascular walls accounts for the hemorrhagic syndrome. The decomposition of tissue proteins, vomiting, and dehydration which are characteristic of the syndrome are conditioning factors in the extra-renal azotemia. The content of amino acids and proteins in serum is distorted. Loss of water-soluble vitamins C and P is not compensated by their administration, an indication that the condition is endogenous. Oliguria (200-300 ml per day) or even anuria during the first week is followed by polyuria the second week (6,000-8,000 ml), but elimination of urea nitrogen is still below normal.
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USSR

KONTSEVAYA, N. g., et al, Voprosy Meditsinskoy Khimii, Vol 16, No 4, Jul/Aug 70, pp 376-381

It is believed that the disproteinemia, which involves all proteins, tyrosine, tryptophan, xanthurenic acid, and vitamins C and P, is caused by a disturbance in the proteolytic enzyme system, since some distortion remains even during the convalescent period in the fourth week.

2/2

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USSR

UDC 591.185.5:577.37:599.423

STOSMAN, I. M. and KONSTANTINOV, A. I., Leningrad University

"Characteristics of Evoked Potentials in the Colliculus Inferior of the Developing Horseshoe Bat *Rhinolophys ferrum-equinum* During Exposure to Ultrasound"

Leningrad, Zhurnal Evolyutsionnoy Biokhimi i Fiziologii, No 6, 1972,
pp 612-616

Abstract: The first high-threshold low-amplitude evoked potentials were recorded in 7-day-old *R. ferrum-equinum*, and 2 to 3 days later the frequency-threshold curves ranged from 10 to 50 kHz. At age 12 to 16 days the band of frequencies perceived widened to 60 to 70 kHz. By day 21 the audiogram was indistinguishable from that recorded in the colliculus inferior of adult animals. The development of the echolocation system proceeds more quickly and is completed sooner in horseshoe bats than in other forms of the Vespertilionidae, a phenomenon consistent with other aspects of their development. The period of embryonal development is much longer than in other bats, but the late birth of young *R. ferrum-equinum* is compensated by more rapid postnatal growth. After 1 month they are able to fly and catch insects, a stage not reached by, e.g., *Myotis oxygnathus* until 2 months after birth.
1/1

UDC 591.185.5:599.4

USSR

KONSTANTINOV, A. I., and SOKOLOVA, N. N., Chair of the Physiology of Higher Nervous Activity, Leningrad State University imeni A. A. Zhdanov

"The Possibility of Function of Bat Echolocation Without Participation of the Auditory Cortex"

Leningrad, Zhurnal Evolyutsionnoy Biokhimii i Fiziologii, Vol 6, No 3, May/June 70, pp 347-350

Abstract: Experiments were conducted on two bat species -- *Myotis oxygnathus* and *Rhinolophus ferrum-equinum*. The first series of experiments studied the ability of intact *M. oxygnathus* bats to overcome barriers of wires reduced in diameter from experiment to experiment (1.12, 0.55, and 0.20 mm). A total of eight *M. oxygnathus* were subjected to bilateral extirpation of the auditory sections of the cortex. Analysis of 2,583 flights of intact *M. oxygnathus* bats across wire barriers showed a reduction in the percentage of deflections with decreasing wire diameter. This is in direct relationship to the resolving power of the bat's echolocation system. After bilateral extirpation, all bats studied showed no difference from intact animals in avoiding wires and discriminating different targets. The conditioned reflex to sound (750 hertz) and discrimination of the sound source persisted in experimental bats. The auditory cortex is apparently nonessential for echolocation.

USSR

KONSTANTINOV, B. P.; et al

"Apparatus for Selective Microanalysis with the Use of a Diffusion Chamber"

Leningrad, Zhurnal Tekhnicheskoy Fiziki; March, 1971; pp 650-3

ABSTRACT: An apparatus has been constructed for making a selective micro-analysis of gaseous mixtures. As an example, the content of mercury vapors in air was analyzed. The effect of the formation of condensation nuclei in purified air containing mercury vapors under the action of ultraviolet radiation with a wave length of 2537 Å was established. The sensitivity of the apparatus to mercury vapors in air is about 10^{-15} mol/cm³.

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USSR

KONSTANTINOV, B. P., et al., Zhurnal Tekhnicheskoy Fiziki,
Mar 71, pp 650-653

The article includes 5 figures. Figure 1 is a schematic drawing of the diffusion chamber. Figure 2 is a diagram of the optical arrangement of the recording apparatus. Figure 3 shows three photographs of "background noise" and condensation nuclei over a length of 2 mm in 1 second. Figures 4 and 5 show curves for the dimensions and concentrations of the drops.

There are 10 bibliographic references.

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USSR

KONSTANTINOV, B. P. (Deceased), BREDOV, M. M., KOLCHIN, A. A., LEBEDEV, V. V. and SKREBTSOV, G. P., Physicotechnical Institute imeni A. F. Ioffe, Academy of Sciences USSR

"Investigation of Proton Fluxes in the Range 1.5-50 Mev on the 'Zond-4' and 'Zond-5' Automatic Interplanetary Station"

→ Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, No. 11, Nov 70, pp 2250-2254

Abstract: A brief description of the equipment used and the data obtained on "Zond-4" and "Zond-5" is presented. "Zond-4" was launched toward the moon on 2 March 1968 and "Zond-5" on 15 September 1968. Two proton detectors were used, one detecting protons in the ranges 1.5-10 Mev and 10-21 Mev and the other to detect protons in the ranges 30-35 Mev and 45-50 Mev. No other particles besides protons were recorded. Measurements beginning at a distance of $3.5 R_E$ are summarized, concentrating on data from "Zond-5". It was noted that "Zond-5", in accordance with the flight program, sometimes changed orientation and maneuvered in space;
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USSR

KONSTANTINOV, B. P., Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, No 11,
pp 2250-2254

the average counting intensity in all channels remained approximately the same, thus making it possible to speak of the "average intensity" of the proton flux. The magnitudes of the average intensities of proton fluxes obtained were: 1.5-10 Mev, $I = 0.5 \cdot 10^3 \text{ m}^{-2} \cdot \text{str}^{-1} \cdot \text{sec}^{-1}$; 10-20 Mev, $I = 40 \text{ m}^{-2} \cdot \text{str}^{-1} \cdot \text{sec}^{-1}$; 30-35 Mev, $dI/dE = 35 \text{ m}^{-2} \cdot \text{str}^{-1} \cdot \text{sec}^{-1} \cdot \text{Mev}^{-1}$; and 45-50 Mev, $dI/dE = 50 \text{ m}^{-2} \cdot \text{str}^{-1} \cdot \text{sec}^{-1} \cdot \text{Mev}^{-1}$. A table is given comparing the intensities of proton fluxes in the range 1-10 Mev obtained with U.S. and Soviet space probes from 1964 to 1969.

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1/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--DETERMINATION OF SELENIUM AND TELLURIUM ACCORDING TO ION MOBILITY
-U-
AUTHOR--(03)--KONSTANTINOV, B.P., OSHURKOVA, O.V., CHEBOTAREVA, N.V.
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(3), 544-8
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--SELENIUM, TELLURIUM, ION, METAL CHEMICAL ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1999/1061 STEP NO--UR/0080/70/043/003/0544/0548
CIRC ACCESSION NO--AP0123054
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123054

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONDITIONS OF THE IONS SEPN. ACCORDING TO THE ION MOBILITY ARE DISCUSSED. THE EXPTL. APP. CONSISTS OF TWO ELECTROLYTIC VESSELS FITTED WITH PT ELECTRODES AND JOINED BY A HORIZONTAL CAPILLARY BRIDGE (LENGTH 18-25 CM, CAPILLARY BORE 0.1-0.3 MM). THE SAMPLE IS ELECTROLYZED IN THE CAPILLARY BRIDGE FOR 4 HR AT 1 MA. THE COMPLETE SEPN. OF SED SUB3 PRIME2NEGATIVE AND TED SUB3 PRIME2NEGATIVE IONS WAS ATTAINED BY USING 4N KCL AS ANOLYTE AND 1.8N NA SALICYLATE PLUS 0.07N NAOH CATHOLYTE. THE SED SUB3 PRIME2NEGATIVE AND TED SUB3 PRIME2NEGATIVE ARE DETD. BY DIVISIONS ON "SHADOW PICTURES".
FACILITY: FIZ.-TEKH. INST. IM. IOFFE, LENINGRAD, USSR.

UNCLASSIFIED

1/2 035 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--HOLOGRAPHY IN MOTION PICTURES AND TELEVISION -U-

AUTHOR--KONSTANTINOV, B.P.

COUNTRY OF INFO--USSR *K*

SOURCE--MOSCOW, USPEKHI FIZICHESKIKH NAUK, VOL 100, NO 2, FEB 1970, PP
185-192

DATE PUBLISHED----FEB70

SUBJECT AREAS--METHODS AND EQUIPMENT, NAVIGATION

TOPIC TAGS--HOLOGRAPHY, TV SYSTEM, MOTION PICTURE PHOTOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/1306

STEP NO--UR/0053/70/100/002/0185/0192

CIRC ACCESSION NO--AP0121807

UNCLASSIFIED

2/2 035
CIRC ACCESSION NO--A0121807

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THIS ARTICLE IS A REPRINT OF A LECTURE GIVEN BY THE AUTHOR ON 24 JANUARY 1969 TO THE PARTICIPANTS IN A SCHOOL OF HOLOGRAPHY IN SESSION FROM THE 20TH TO THE 25TH OF JANUARY, 1969, IN MOSCOW. IT IS THE LAST PUBLIC TALK GIVEN BY THE AUTHOR, WHO DIED 9 JULY 1969. THE ARTICLE ANSWERS THREE PRINCIPAL QUESTIONS. ONE, WHAT IS MEANT BY HOLOGRAPHIC CINEMA AND TELEVISION. TWO, WHAT ARE THE ADVANTAGES OF THE VARIOUS HOLOGRAPHIC METHODS IN CINEMA AND TELEVISION. THREE, WHAT ARE THE TECHNICAL PROSPECTS OF THE APPLICATION OF HOLOGRAPHIC METHODS TO THE CINEMA AND TELEVISION. AN EXTENSIVE DISCUSSION IS GIVEN OF THE PECULIARITIES OF THREE DIMENSIONAL PICTURES AND THE RELATIVE POSSIBILITIES OF PROVIDING THE ILLUSION OF DEPTH BY WIDE SCREEN PROJECTION AND OTHER METHODS. THE AUTHOR QUOTES SEVERAL AUTHORS AS TESTIFYING THAT THE VERY WIDE BAND OF FREQUENCIES IS REQUIRED FOR HOLOGRAPHIC TELEVISION AND ASSERTS THAT TO TRANSMIT THREE DIMENSIONAL IMAGES IN COLOR AN EVEN GREATER BAND OF FREQUENCIES IS REQUIRED THAN THAT PROVIDED BY COLOR TELEVISION OR MOVIES. HE EMPHASIZES THAT A SCREEN ON WHICH HOLOGRAMS COULD BE FORMED, SUCH THAT THE TIME DELAY WOULD BE A MINIMUM OR WOULD BE ZERO COMPARED TO THE MOMENT OF HOLOGRAM FORMATION, IS REQUIRED FOR TRANSMITTING AN AMOUNT OF INFORMATION SUFFICIENTLY LARGE TO PERMIT THE OBSERVATION OF A THREE DIMENSION OBJECT WITH HIGH RESOLUTION. SOME HISTORY OF AMERICAN AND RUSSIAN ATTEMPTS TO TRANSMIT HOLOGRAMS OVER COMMUNICATIONS CHANNELS IS GIVEN. MENTIONED AS AN EXAMPLE OF A SYSTEM PROVIDING COMPLETE THREE DIMENSIONAL PERCEPTION WITH NO ADAPTERS IS A NEW TYPE OF JAPANESE STEREOPTICAL POST CARD.

UNCLASSIFIED

USSR

K

UDC 778.534+621.397

KONSTANTINOV, B. P. (Deceased)

"Holography in Motion Pictures and Television"

Moscow, Uspekhi Fizicheskikh Nauk, Vol 100, No 2, Feb 1970, pp 185-192

Abstract: This article is a reprint of a lecture given by the author on 24 January 1969 to the participants in a School of Holography in session from the 20th to the 25th of January, 1969, in Moscow. It is the last public talk given by the author, who died 9 July 1969. The article answers three principal questions: one, what is meant by holographic cinema and television; two, what are the advantages of the various holographic methods in cinema and television; three, what are the technical prospects of the application of holographic methods to the cinema and television. An extensive discussion is given of the peculiarities of three-dimensional pictures and the relative possibilities of providing the illusion of depth by wide-screen projection and other methods. The author quotes several authors as testifying that a very wide band of frequencies is required for holographic television and asserts that to transmit three-dimensional images in color an even greater band of frequencies is
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USSR

KONSTANTINOV, B. P., Uspekhi Fizicheskikh Nauk, Vol 100, No 2, Feb 1970, pp 185-192

required than that provided by color television or movies. He emphasizes that a screen on which holograms could be formed, such that the time delay would be a minimum or would be zero compared to the moment of hologram formation, is required for transmitting an amount of information sufficiently large to permit the observation of a three-dimension object with high resolution. Some history of American and Russian attempts to transmit holograms over communications channels is given. Mentioned as an example of a system providing complete three-dimensional perception with no adapters is a new type of Japanese stere-optical post card.

2/2

1/2 C18 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--THE INTERACTION OF ULTRA HIGH ENERGY COSMIC RAYS WITH PHOTONS AND
NEUTRINOS IN THE UNIVERSE -U-
AUTHOR--(C3)--KONSTANTINOV, G.P., KOCHAROV, G.E., STARBUNDY, I.N.

COUNTRY OF INFO--USSR, HUNGARY

SOURCE--INTERNATIONAL CONFERENCE ON COSMIC RAYS, 11TH, BUDAPEST, HUNGARY,
AUGUST 25-SEPTEMBER 4, 1969, PROCEEDINGS. VOLUME 1 ORIGIN AND GALACTIC.
DATE PUBLISHED-----70

SUBJECT AREAS--ATMOSPHERIC SCIENCES

TOPIC TAGS--COSMIC RAY, ENERGY SPECTRUM, PHOTON, NEUTRINO

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605060/F07 STEP NO--HU/2506/70/029/000/0527/0530

CIRC ACCESSION NO--AT0144420

UNCLASSIFIED

2/2 018 UNCLASSIFIED PROCESSING DATE--11DEC70
CIRC ACCESSION NU--ATC144420
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROBLEM OF THE DISTORTION OF
THE ENERGY SPECTRUM OF ULTRA HIGH ENERGY COSMIC RAYS DUE TO THE
ISOTROPIC BACKGROUND OF PHOTONS AND NEUTRINOS IS CONSIDERED. IT IS
SHOWN THAT THE SHAPE OF THE ENERGY SPECTRUM OF COSMIC RAYS IN THE ULTRA
HIGH ENERGY REGION MAY YIELD INFORMATION ON SOME IMPORTANT ASTROPHYSICAL
AND NUCLEAR PARAMETERS. FACILITY: AKADEMIIA NAUK SSSR,
FIZIKO-TEKHNICHESKII INSTITUT, LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC: 539.16.04.08

KONSTANTINOV, D. I., MATVEYEV, V. V., YUZVUK, Yu. A.

"On Optimizing the Parameters of Radiometric Equipment When Determining Low Levels of Radiation"

Tr. Soyuzn. n.-i. in-ta priborostr. (Works of the Union Scientific Research Institute of Instrument Building), 1970, vyp. 12, pp 15-20 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 11, Nov 70, Abstract No 11.32.1472)

Translation: The authors consider the possibility of using the method of verifying statistical hypotheses to derive working formulas for determining the threshold of sensitivity of radiometric equipment in measuring vanishingly small concentrations of radioactive isotopes. It is shown that Gaussian distribution can be used to approximate the Poisson probability distribution of readings up to unity. A working formula is given for the sensitivity threshold of a radiometric unit with a known phonon flux. Five illustrations, bibliography of five titles.

1/1

USSR

UDC: 621.317.763

RODIONOV, G. S., SIDORENKO, G. A., KONSTANTINOV, G. E.

"A Stand for Testing Wave Meters for Durability"

Elektron. tekhnika. Nauchno-tekhn. sb. Kontrol'no-izmerit. apparatura (Electronic Technology. Scientific and Technical Collection. Monitoring and Measuring Equipment), 1970, vyp. 2(20), pp 125-129 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A335)

Translation: A stand is described which includes a mechanical drive device with automatic readout of the number of cycles in addition to the usual system for graduating wave meters. Incorporation of this device makes it possible to test and adjust mechanisms with rotational and helical motion.
Résumé.

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USSR

UDC: 621.317.763

RODIONOV, G. S., SIDORENKO, G. A., KONSTANTINOV, G. K.

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1/2 027

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--MEAN RESIDENCE TIME OF RADIOACTIVE AEROSOLS IN THE UPPER LAYERS OF THE ATMOSPHERE BASED ON FALLOUT OF HIGH ALTITUDE TRACERS -U-

AUTHOR--(04)-LEIPUNSKIY, D.I., KONSTANTINOV, I.E., FEDOROV, G.A., SKOTNIKOVA, O.G.

COUNTRY OF INFO--USSR

K

SOURCE--J. GEOPHYS. RES. 1970, 75(18), 3569-74

DATE PUBLISHED-----70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, ATMOSPHERIC SCIENCES

TOPIC TAGS--RADIOACTIVE AEROSOL, UPPER ATMOSPHERE, RADIOACTIVE FALLOUT, RADIOACTIVE TRACER, CADMIUM ISOTOPE, PLUTONIUM ISOTOPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1154

STEP NO--US/0000/TQ/075/018/3569/3574

CIRC ACCESSION NO--AP0136574

UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136574

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONCNS. OF PRIME109 CD IN
FALLOUT AND IN SURFACE AIR AT OBSERVATION POINTS IN THE SOVIET UNION
DURING 1964-7 ARE SUMMARIZED. ANAL. OF THESE DATA AND THEIR COMPARISON
WITH RESULTS FROM EXPTS. ON PRIME102 RH SUGGEST THAT THE MEAN RESIDENCE
TIME OF FINELY DIVIDED AEROSOLS IN THE ATM. ABOVE 21 KM FROM SOURCES
ABOVE 100 KM IS 14 YR. ANAL. OF THE PRIME238 PU FALLOUT DATA INDICATES
THAT THE MEAN RESIDENCE TIME OF AEROSOLS INJECTED AT SIMILAR TO 40-60 KM
ALTITUDE IS SIGNIFICANTLY LOWER, POSSIBLY SIMILAR TO 4 YR.

UNCLASSIFIED

I. I. KONSTANTINOV

Acc. Nr:

AP0049172

Abstracting Service:
CHEMICAL ABST. 5-70

Ref. Code:

4R0050

103961c Physicochemical properties of 1,4-tetra- and 1,8-octamethylene diisocyanates. Zhuravlev, E. Z.; Voronina, T. I.; Pereslegina, L. S.; Kormushchikina, A. I.; Konstantinov, I. I. (Inst. Azot. Prom. Khim. Sverdlovsk, Permyansk, USSR). Zh. Prikl. Khim. (Leningrad) 1970, 43(1), 159-61 (Russ). From temp. dependence of mol. vols. in $(CH_2)_n(NCO)_2$ with $n = 4$ or 8, as well as from temp. dependence of their d , viscosity and η , it was concluded that the contribution of methylene groups to mol. vols. depends not only on the temp. but also on their location in the mol. Activation energy of flow is increased by 120 cal/mole per CH_2 in the 20-50° interval and by 90 in the 50-80° interval. The NCO group contribution is 2700 cal/mole and 2350 cal/mole, resp. Thus, these isocyanates have a degree of interaction or conjugation not only within NCO groups but also between the terminal NCO groups, which declines with increasing value of n . G. M. Kasalapeff

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19860979

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1/2 021 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--YIELD OF CARBON 11 FROM PRIME9 BE (PRIME3 HE, N) PRIME11 C AND
PRIME9 BE (ALPHA, 2N) PRIME11 C REACTIONS -U-
AUTHOR--(05)-KRASNOV, N.N., DMITRIYEV, P.P., DMITRIYEVA, Z.P.,
KONSTANTINOV, I.O., MOLIN, G.A.
COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. 1970, 28(3), 258

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--CARBON ISOTOPE, ION BOMBARDMENT, ALPHA BOMBARDMENT, BERYLLIUM
ISOTOPE, ION ENERGY, ALPHA SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1994/1236

STEP NO--UR/0089/70/028/003/0258/0258

CIRC ACCESSION NO--AP0115253

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0115253

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE YIELD OF PRIME11 C IN THE PRIME9 BE (PRIME3 HE, N) PRIME11 C REACTION INCREASES ALMOST LINEARLY (0.05-1.60) TIMES 10 PRIME9 DECAYS-(SECMUA HR) WHEN THE PRIME3 HE IONS ENERGY IS INCREASED 2-30 MEV; THE YIELD OF PRIME11 C IN THE PRIME9 BE(ALPHA, 2N)PRIME11 C REACTION INCREASES FROM 0 TO (0.125-0.75) TIMES 10 PRIME9 DECAYS-(SEC MUA HR) WHEN THE ALPHA PARTICLES ENERGY IS INCREASED FROM 20 TO 27-44 MEV, RESP. THE ABOVE YIELDS WERE MEASURED BY BOMBARDING THE BE IN A CYCLOTRON.

UNCLASSIFIED

1/2 031 UNCLASSIFIED PROCESSING DATE--23OCT7
TITLE--YIELDS OF FLUORINE 18 DURING THE IRRADIATION OF SODIUM, MAGNESIUM,
AND ALUMINUM BY HELIUM 3 IONS AND THE IRRADIATION OF SODIUM BY ALPHA
AUTHOR--(05)-KRASNOV, N.N., DMITRIYEV, P.P., DMITRIYEVA, Z.P.,
~~KONSTANTINOV, I.O.~~, MOLIN, G.A.
COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. 1970, 28(3), 257

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--FLUORINE ISOTOPE, SODIUM, MAGNESIUM, ALUMINUM, IRRADIATION,
ALPHA PARTICLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/1578

STEP NO--UR/0084/70/028/003/0257/0257

CIRC ACCESSION NO--AP0120357

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT7

2/2 031

CIRC ACCESSION NO--AP0120357

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE YIELDS OF PRIME18 F (DISINTEGRATIONS-SEC-MU A-HR) FROM PRIME23 NA (PRIME3 HE, 2 ALPHA) PRIME18 F AND PRIME23 NA (ALPHA, 2 ALPHA N) PRIME18 F WERE SIMILAR TO 8 TIMES 10 PRIME6 AT SIMILAR TO 27.5 MEV AND SIMILAR TO 55 TIMES 10 PRIME6 AT SIMILAR TO 44 MEV, RESP. FOR PRIME24 MG (PRIME3 HE, 2 ALPHA N) PRIME18 NE YIELDS PRIME18 F, THE YIELD WAS SIMILAR TO 5 TIMES 10 PRIME6 AT SIMILAR TO 28 MEV AND FOR PRIME27 AL (PRIME3 HE, 3 ALPHA) PRIME18 F. IT WAS SIMILAR TO 2.5 TIMES 10 PRIME6 AT 29.5 MEV.

UNCLASSIFIED

USSR

UDC 543.275.2.082

OGORODNIKOV, B. I., SITALO, Ye. A., SKITOVICH, V. I., KONSTANTINOV, I. Ye.

"Development of Method of Determination of Dispersed Composition of Radioactive Aerosols Using FP Filter Material"

Tr. In-t Eksperim. Meteorol. Gl. upr. Gidrometeorol. Sluzhby pri Sov. Min. SSSR [Works of Institute of Experimental Meteorology, Main Administration of Hydrometeorological Service, Counsel of Ministers, USSR], 1972, No 25, pp 76-80, (Translated from Referativnyy Zhurnal, Metrologiya i Izmeritel'naya Tekhnika, No 7, 1972, Abstract No 7.32.902, by V.S.K.).

Translation: A review of the influence of filtration rate, aerosol particle and filter fiber diameter and filter layer thickness on effectiveness of trapping of aerosols. It has been found that the preferential holding of aerosols of a given range of dimensions is possible in successive layers of a filter material if the parameters of the filtering process are changed. The results of experimental determination of the filter characteristics of FPP-3, FPP-70 and FPA-100 materials involving studies of the dispersed composition of artificial radioactive aerosols are presented. 2 Figures; 2 Tables; 5 Biblio. Refs.

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1/2 027

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--FALLOUT LEVELS AND FISSION PRODUCT CONCENTRATION IN SURFACE AIR
NEAR MOSCOW FROM 1962-1967 -U-

AUTHOR--(051)-KONSTANTINOV, I.E., FEDOROV, G.A., SKOTNIKOVA, O.G., SOLDAEVA,
L.S., MESHCHANINOVA, E.I.

COUNTRY OF INFO--USSR

K

SOURCE--(AEC-TR-7123, PP 163-79) TRANSLATION OF REPORT A-AC-82-G-L-1292

DATE PUBLISHED-----70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, ATMOSPHERIC SCIENCES

TOPIC TAGS--FISSION PRODUCT, RADIOACTIVITY MEASUREMENT, RADIOACTIVE
FALLOUT, NUCLEAR WEAPON TEST, GEOGRAPHIC LOCATION, ATMOSPHERIC RADIATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/1764

STEP NO--UR/0000/70/000/000/016340179

CIRC ACCESSION NO--AT0054602

UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AT0054602

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FALLOUT LEVELS AND CONCENTRATIONS OF GAMMA RADIATING PRODUCTS OF NUCLEAR EXPLOSIONS IN THE SURFACE AIR IN THE VICINITY OF MOSCOW FOR THE PERIOD FROM 1962 TO 1967 ARE PRESENTED. MONTHLY FALLOUT LEVELS OF PRIME141 CE, PRIME144 CE, PRIME137 CS, PRIME54 MN, PRIME95 NB PLUS PRIME95 ZR, PRIME103 RU, AND PRIME106 RH PLUS PRIME106 RU ARE TABULATED AND PLOTTED. FACILITY: GOSUDARSTVENNYI KOMITET PO ISPOL'ZOVANIYU ATOMNOI ENERGII SSSR, MOSCOW.

UNCLASSIFIED

KONSTANTINOV K.G.

Acc. Nr.: AN0051327

Ref. Code: UR 9012

FROM: FBIS, Daily Report, Soviet Union, 20 March 1970,
Vol III, No 55, p a 27

USSR

POLAR INSTITUTE SHIPS AID POLISH FISHERMEN

Moscow PRAVDA 16 Mar 70 p 4 L

[V. Lognitnov report: "Persey-3' Helps the Fishermen"]

[Text] A telegram has recently reached the Polar Institute from the scientific research ship "Persey-3" which is now in the South Labrador area. It says that the "Persey-3" which is now research work with practical assistance to Polish fishermen.

North Atlantic Polar Institute laboratories head K. G. Konstantinov has commented on this telegram:

"Close cooperation has long been organized between the ichthyologists of Bulgaria, the GDR, Poland, Romania, and the Soviet Union. We meet each other every year at Murmansk, Gdynia, Rostok, or Constantza and exchange scientific information. But more frequently

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the meetings take place at sea, in the regions of the fisheries, where dispatcher conferences are held by radio. The fishermen report on the situation in the industry. There is now a very complex ice situation in the South Labrador area, where a large group of Soviet and Polish ships is located. The Polar Institute's scientific workers are carrying out research on the nature of the ice distribution, giving forecasts of its movement, searching for fish shoals in the most advantageous and secure fishery areas, and are reporting this information to the Polish ships' captains.

AB

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