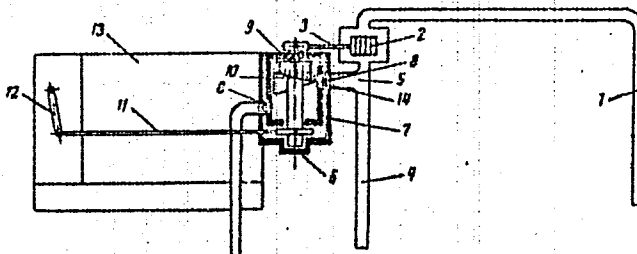


AA0053084  
Leonov, O.B.; Borovitskiy, V.I.; Arapov, V.V.; Manuylov, N.N.;  
Petrakhal'tsev, N.N.; Soldatov, N.K.; Moskovskoye Vyssheye  
Tekhnicheskoye Uchilishche im. N.E. Baumana



7/2

19821983

USSR

UDG 632.95

PATRASHKU, F. I., VNI, All-Union Scientific Research Institute of Biological  
Methods of Plant Protection

"Results of a Study of Volatility and Speed of Hydrolysis of Methylnitrophos,  
Metathion, and Sumithion in Various Media"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 10, No 2, (100), 1972, pp 39-42

Abstract: For studying the volatility of preparations a prepared surface  
is analyzed throughout determined time intervals. Glass, green leaves,  
wax paper, etc. are commonly used as substrates. Petri dishes were used by  
the author. 7.4 mg methylnitrophos and 10 mg each of metathion and sumithion  
were dissolved per ml of acetone. A 20% emulsion concentrate (starch  
equivalent) of methylnitrophos and 50% concentrate emulsions of metathion and  
sumithion were used. The volatility of these three compounds was shown to  
depend upon climatic conditions. Methylnitrophos was shown to hydrolyze  
more weakly in acidic and neutral media than in alkaline media.

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USSR

UDC 632.951

PATRASHKU, F. I., VNIИ All-Union Scientific Research Institute of Biological Methods of Plant Protection

"Results of a Study of Volatility and Rate of Hydrolysis of Methylnitrophos, Metathion, and Sumithion in Various Media"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 10, No 2 (100), 1972, pp 39-42

Abstract: For studying the volatility of preparations a prepared surface in analyzed throughout determined time intervals. Glass, green leaves, wax paper, etc are commonly used a substrates. Seven, four mg methylnitrophos and 10 mg each of metathion and sumithion were dissolved per each ml of acetone. A 20% emulsion concentrate (starch equivalent) of methylnitrophos and 50% concentrate emulsions of metathion and sumithion were used. The volatility of these three compounds was shown to depend upon climatic conditions. Methylnitrophos was shown to hydrolyze more slowly in acidic and neutral media than in alkaline media.

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USSR

UDC 632.95

VAYNTRAUB, F. P., and PATRASHKU, F. I.

"Concerning Isolation of Pesticides and Purification of Extracts in Determining Trace Quantities of Pesticides in Products Derived from Plants"

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 337-344 (from RZh-Khimiya, No 11, Jun 72, Abstract No 11N412)

Translation: The nature of the substrate, the mechanism of action of the pesticide and the nature of the toxic residue determine the selection of the method of extracting a pesticide from plant matter. Steam distillation extraction in the Soxhlet apparatus, homogenization and cold agitation are used. The last method is recommended for organochlorine and organophosphorus compounds. Sublimation under vacuum and distribution between two solvents are used for purifying extracts.

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USSR

UDC 632.951

PATRASHKU, F. I., All-Union Scientific Research Institute of  
Biological Methods of Plant Protection

"Dynamics of the Residues of Methylnitrophos, Metatione and  
Sumitione on the Leaves, Branches and Fruit of Apple Trees in  
Moldavia"

Moscow, Khimiya v sel'skom khozyaystve, No 11, 1971, pp 35-37

Abstract: A study is described of the dynamics of the residue of the Soviet-made insecticide methylnitrophos and the foreign preparations metatione and sumitione. The tests were conducted under both laboratory and field conditions. All three preparations are shown to have retained their toxic properties on the leaves and branches of the apple trees for 10-15 days. Accordingly, the suggested intervals between sprayings of these preparations against San Jose scale and apple worm are 10-15 days; when sprayed for the apple leaf miner, the suggested interval is 8-10 days. A check for insecticide residues on apples conducted 20 days after spraying revealed 0.3-0.7 mg/kg methylnitrophos, 0.5-2.0 metatione  
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USSR

PATRASHKU, F. I., Khimiya v sel'skom khozyaystve, No 11, 1971,  
pp 35-37

and 0.6 and 6.0 mg/kg sumitions (the latter applied in concen-  
trations of 0.15 and 0.25%, respectively). Metatime is  
preserved in the soil for not more than 6-7 days.

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USSR

UDC 632.95

PATRASHKU, F. I., SOROKSKAYA, L. B., REKHIER, B. A.

"Analysis of Figon in Plants by Thin-Layer Chromatography and Photometric Methods"

Tr. 2-go Vses. soveshch. po issled. ostatkov pestitsidov i profilakt. zaryazneniya imi produktov pitaniya, kormov i vnesh. sredy (Works of the Second All-Union Conference on the Investigation of Pesticide Residues and Preventive Contamination of Food Products, Feeds and Environment), Tallin, 1971, pp. 181-183 (from RZh-Khimiya, No 12, Jun 72, Abstract No 12N479)

Translation: For extraction of figon (I) from grape leaves, grapes or apples,  $C_6H_6$  or  $CHCl_3$  is used. The extract is purified by microsublimation at  $100^\circ$  and 1 mm Hg; it is dissolved in acetone or  $CHCl_3$  and analyzed by the method of thin-layer chromatography, colorimetric or spectrophotometric methods at 340 nm. The thin-layer chromatographic analysis is performed in silicic acid reinforced with gypsum, in the cyclohexane- $CHCl_3$  system (7:3), and it is developed by  $Et_2NH$ . The sensitivity of the method is 0.05-0.01 mg/kg. The sensitivity of the colorimetric method with  $Et_2NH$  is 0.25 mg/kg, the degree of detection of I is ~70%, the relative error in the analysis is +4%. The sensitivity of the spectrophotometric method was 50  $\gamma$  of I in the sample.

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1/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--DETERMINATION OF THE FAT CONTENT IN HOMOGENIZED MILK -U-  
AUTHOR--(02)-PATRATY, A.P., ZHDANOVA, YE.A. P  
COUNTRY OF INFO--USSR  
SOURCE--MOLUCH. PROM. 1970, 31(3), 15-16  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--PROCESSED ANIMAL PRODUCT, FAT, FOOD ANALYSIS, CENTRIFUGATION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1998/0678 STEP NO--UR/0333/70/031/003/0015/0016  
CIRC ACCESSION NO--AP0121339  
UNCLASSIFIED



2/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70  
CIRC ACCESSION NO--AP0121339  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METHOD OF GERBER FOR DETN. OF  
FAT IN HOMOGENIZED MILK WAS INVESTIGATED AND COMPARED WITH THE RUESE  
GOTTLIEB METHOD. CONTINUOUS CENTRIFUGATION CAN BE SUBSTITUTED FOR A 3  
STEP PROCEDURE. FACILITY: VSES. NAUCH.--ISSLED. INST. MOLOCH.  
PROM., MOSCOW, USSR.

UNCLASSIFIED

PATRATY, I. Z.

Mathematics

PART II: SYMPOSIA

to Vol. 1 (1972)

NUMERICAL ALGORITHMS OF THE THEORY OF STATISTICAL METHODS AS APPLIED TO CLASS RECOGNITION PROBLEMS

Article by A. G. Ionkhov, V. I. Spiva, V. B. Petukov, *Soviet Journal of Numerical Analysis*, 1971, No. 1, pp. 1-11.

The theory of statistical solutions in the discrete approximation for pattern or class recognition implementing the idea of information accumulation in classical form, this theory is polynomial in the sense that it is based on a single calculation of the risk function with respect to three cofactors: the matrix of a priori probabilities, the experimental matrix and the loss matrix. These three matrices can be called "complete," since they consider all the arguments directly, and for dependent arguments, all their covariation, which requires quite broad initial data for strict observation of stationarity of the process.

In accordance with the basic idea of the "method of Group Consideration of Arguments" (see the Ukrainian journal *Avtomatika*, 1969-1970), it is proposed that the polynomial "complete" algorithm be replaced by a system of several series of "partial" descriptions for all possible paths of arguments. For treating each of the partial algorithms it is sufficient to have a comparatively short series of experimental data available, and the so-called analog of the complete description can be obtained from a system of partial descriptions by exclusion of intermediate variables.

The complete description (algorithm) has the known form:

$$p(d_j) = \prod_{i=1}^n p(x_i | R_j, c, x_1, \dots, x_n) p(x_1 | R_j, c, \dots, x_n | R_j, c), \quad (1)$$

where  $p(d_j)$  is the definition-making risk;  $p(R_j)$  is the a priori probability of the class;  $c_j$  is the solution in favor of the  $j$ -th class;

$x_1, \dots, x_n$  are discrete arguments ( $x_i = 1, 2, \dots, q$  where  $q$  is the number of digitization levels);

USSR

UDC 62-50

IVAKHNENKO, O. G., SPYNU, YE. I., DIMITROV, V. D., PATEREU, S. G.,  
and PATRATYI, I. Z. (Kiev, Sofia, Kishinev)

"Recognizing the Lethal Duration and Content of Pesticides in Plant  
According to a Probability Algorithm for a Method of Data Handling by  
Groups"

Kiev, Avtomatyka, No 5, Sep-Oct 70, pp 42-52

Abstract: The article describes the development of a probability al-  
gorithm for a method of data handling by groups which uses the numerator  
of the Bayes formula or its modification as a support function. The  
probability algorithm is used to solve the following problem:

1) Approximately determining the time constant in the exponent  
in the expression for a pesticide's toxicity on the basis of data con-  
cerning the physicochemical properties of the preparation, the conditions  
of its use, and plant peculiarities;

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USSR

IVAKHNENKO, O. G., et al., Avtomatyka, No 5, Sep-Oct 70, pp 42-52

2) Determining the current concentration of a pesticide at a given time from calculated data on the initial concentration of the substance in plants and the destruction rate constant.

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USSR

UDC: 681.327.21.06

PATRATIY, I. Z. and MGELADZE, Sh. G."MGCA Probability Algorithm With Paired Sequential Introduction of Symbols"

Tbilisi, V sb. Dokl. 2-y resp. nauch.--tekhn. konf. po metrologii 27-29 noyabrya 1972 g. Ch. 1, Tbilis. fil. VNII metrologii (Reports of the Second Republic Scientific-Technical Conference on Metrology, 27-29 November 1972, Part 1, Tbilisi Branch of the All-Union Scientific Research Institute of Metrology, 1972, pp 47-52 (from RZh--Avtomatika, telemekhanika i vychislitel'naya tekhnika, No 12, 1973, Abstract No 12B131)

Translation: The probability algorithm of the method of grouped consideration of arguments (MGCA) is considered with the criterion of paired sequential introduction of symbols. According to the algorithm, the indeterminacy of the solution of all possible pairs of symbols from  $N$  given pairs is computed; all pairs of symbols are ranged in the order of increase of the indeterminacies of the solution they present.

The pairs of symbols are introduced into a recognition formula, and its accuracy is checked in a separate verification sequence. The introduction of

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USSR

PATRATYI, I. Z. and MGELADZE, Sh. G., Dokl. 2-y resp. nauch.-tekhn. konf. po metrologii 27-29 noyabrya 1972 g. Ch. 1, Tbilis. fil. VNI, 1972, pp 47-52

the symbol pairs is continued until the required accuracy is attained at a particular step or until the accuracy improves. Bibliography of three. T. V.

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USSR

UDC 632.95.028:519.2

IVAKHNENKO, A. G., SPYNU, YE. I., PATRATYIY, I. Z., IVANOVA, L. N., All-Union Scientific Research Institute of Hygiene and Toxicology of Pesticides, Polymers and Plastics and the Cybernetics Institute of the Ukrainian SSR Academy of Sciences, Kiev

"Mathematical Forecasting of the Degradation Time of Pesticides in Plants by the Probability Algorithms of the Grouped Argument Method"

Moscow, Gigiyena Sanitariya, No 10, 1972, pp 43-48

Abstract: A study was made of one of the elements of a generalized mathematical model reflecting the multifactor dependence of the process of propagation and disappearance of pesticides in various parts of the environment with indication of forecasting the degradation time of the pesticides in plants. A set of pesticides was divided into classes with respect to duration of their degradation the function of 22 attributes including the physical-chemical properties, parameters characterizing the crop and the conditions of applying the pesticide to it, and also of the meteorological conditions. Three digitalization levels were introduced, and simple recognition formulas were obtained which can be used for manual calculations and to discover the pesticide dynamics in the case of multiple combination of the indicated factor with an accuracy up to 80%. The recognition formula in the logarithmized form appears as follows:

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IVAKHNENKO, A. G., et al., Gigiyena Sanitariya, No 10, 1972, pp 43-48

$$\begin{aligned} \ln(P_{ai}) = & \ln[P(X_1 X_{10}/R_i)] = \ln[P(X_2 X_3/R_i)] + \ln[P(X_2 X_4/R_i)] + \\ & + \ln[P(X_3 X_4/R_i)] + \ln[P(X_3 X_{13}/R_i)] + \ln[P(X_4 X_{10}/R_i)] + \\ & + \ln[P(X_4 X_{19}/R_i)] + \ln[P(X_5 X_6/R_i)] + \ln[P(X_6 X_{21}/R_i)] + \\ & + \ln[P(X_9 X_{17}/R_i)] + \ln[P(X_{13} X_{18}/R_i)]. \end{aligned}$$

where  $P(X_k X_l/R_i)$  is the probability of the appearance of combinations of attributes in the  $i$ -th class. The data indicate that the mathematical models can satisfactorily replace the complex and limited production studies lasting two years and more.



1/2 036 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--LUMINESCENCE ACCOMPANYING MECHANICAL DEFORMATION AND FAILURE OF POLYMERS -U- *7/2*  
AUTHOR--(05)-BUTYAGIN, P.YU., YEROFEYEV, V.S., MUSAYELIAN, I.N.,  
PATRIKEYEV, G.A., STRELETSKIY, A.N.  
COUNTRY OF INFO--USSR  
SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(2), 290-9 *P*  
DATE PUBLISHED-----70  
SUBJECT AREAS--MATERIALS, CHEMISTRY, PHYSICS  
TOPIC TAGS--LUMINESCENCE, MECHANICAL FAILURE, ELONGATION, POLYMER,  
POLYTETRAFLUOROETHYLENE, POLYETHYLENE TEREPHTHALATE, PLASTIC FILM,  
POLYETHYLENE, PROPYLENE, POLYVINYL CHLORIDE, NATURAL RUBBER,  
VULCANIZATE, POLYMETHYLMETHACRYLATE, THERMAL DEGRADATION, POLYMER  
DEGRADATION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1995/1224 STEP NO--UR/0459/70/012/002/0290/0299  
CIRC ACCESSION NO--AP0116686  
UNCLASSIFIED

2/2 036

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0116686

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE LUMINESCENCE OCCURRING DURING CONTRACTION, ELONGATION, AND FAILURE OF POLYMERS WAS STUDIED ON A SNK-7 IKHF APP. EQUIPPED WITH PHOTOMULTIPLIERS FEU-29 (LAMBDA SUBMAX EQUALS 400 PLUS OR MINUS 40 MMU), FEU-13 (LAMBDA SUBMAX EQUALS 410 PLUS OR MINUS 10 MMU), AND FEU-22 (LAMBDA SUBMAX EQUALS 750 PLUS OR MINUS 100 MMU). A CROSS SECTIONAL DIAGRAM OF THE APP. AND ITS MODE OF OPERATION ARE PRESENTED. THE MOST INTENSIVE LUMINESCENCE DURING FAILURE WAS OBSD. IN POLY (TETRAFLUOROETHYLENE) FP-4 (I) AND POLY(ETHYLENE TEREPHTHALATE) (II) FILMS; THE LEAST LUMINESCENT POLYMERS WERE HIGH PRESSURE POLYETHYLENE, ETHYLENE PROPYLENE COPOLYMER (III), ETHYLENE ALPHA BUTYLENE COPOLYMER, POLY(VINYL CHLORIDE), POLYPROPYLENE, AND NATURAL RUBBER (IV) VULCANIZATES. FAILURE OR SUDDEN CONTRACTION IN I-IV FILMS WAS ACCOMPANIED BY POST LUMINESCENCE, (GREATER THAN OR EQUAL TO 15 MIN). THE LUMINESCENCE INTENSITY WAS LOW IN ALL CASES AND EXCEEDED THE SENSITIVITY THRESHOLD OF THE PHOTOMULTIPLIERS ONLY BY A FACTOR OF 10 PRIME2-10 PRIME3. A HYPOTHESIS WAS ADVANCED TO ACCOUNT FOR THE LUMINESCENCE. STUDY OF THERMAL LUMINESCENCE OF POWD. POLYMERS SUGGESTED THAT LUMINESCENCE IN POLY (ME METHACRYLATE) AND POLYSTYRENE AT 270-330DEGREEK WAS DUE TO RECOMBINATION OF PEROXIDE RADICALS FORMED DURING MECH. SCISSION OF MACROMOLS., WHEREAS INTENSIVE LUMINESCENCE ABOVE 330DEGREEK WAS DUE TO OXIDATIVE THERMAL DEGRADATION INITIATED BY DECOMP. HYDROPEROXIDES.

UNCLASSIFIED

USSR

UDC 51:621.591

PATRIKEYEV, V. I.

"Minimization of the Operator Systems of Yanov"

Tekhn. Kibernetika. Vyp. 6, [Engineering Cybernetics, No 6--Collection of Works],  
Kiev, 1970, pp 42-46, (Translated from Referativnyy Zhurnal Kibernetika, No 5,  
1971, Abstract No. 5V468).

No Abstract.

1/1

USSR

UDC 582.282.23.095

PARINA, O. V., ~~PATRIKEYEV, V. V.~~, and LYSENKO, S. V., Institute of Microbiology, Academy of Sciences USSR, Moscow

"Survival and Physiological Activity of Some Yeast Strains Studied After a Prolonged Storage in Silica Gel"

Moscow, Mikrobiologiya, Vol 41, No 1, Jan/Feb 72, pp 164-167

Abstract: Yeast cultures of *Candida guilliermondii*, *C. tropicalis*, and *C. lipolytica* were used in the study. The 24-hour cultures of yeast were mixed with silica gel or with silica gel containing one of the following compounds: 10 milligrams/liter of  $\text{FeSO}_4 \cdot 7 \text{H}_2\text{O}$  or  $\text{MnSO}_4 \cdot 7 \text{H}_2\text{O}$ , or 6 milligrams/liter of  $\text{ZnSO}_4 \cdot 7 \text{H}_2\text{O}$ ,  $\text{CoCl}_2 \cdot 6 \text{H}_2\text{O}$ ,  $\text{NH}_4\text{NO}_3$ , or  $(\text{NH}_4)_2\text{MoO}_4$ . The mixtures were dried and stored in sealed ampules for 1, 6 or 12 months at room temperature. The yeast survived in all mixtures, but the mixtures of silica gel containing  $\text{FeSO}_4$  or  $\text{MnSO}_4$  gave the best survival and retained best their capability to oxidize carbohydrates even after one year of storage, which indicated that their oxidizing function was preserved.

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1/2 015

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--UTILIZATION OF THE COMPLEX FORMING PROPERTIES OF METALS FOR THE  
PURIFICATION OF AN ATMOSPHERIC MOISTURE CONDENSATE FROM AMMONIUM IONS

AUTHOR--(05)--YEGOROVA, L.E., KRASNOSHCHKOV, V.V., PATRIKEYEVA, T.M.,  
PEPELIAYEV, YU.V., STOLBOV, V.F.

COUNTRY OF INFO--USSR

SOURCE--KOSMICHESKAIA BIOLOGIIA I MEDITSINA, VOL. 4, JAN.--FEB. 1970, P.  
56-60

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--MAGNESIUM, ZINC, COPPER, COBALT, NICKEL, AMMONIUM COMPOUND,  
ION EXCHANGE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1997/1559

STEP NO--UR/0453/70/004/000/0056/0060

CIRC ACCESSION NO--AP0120338

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0120338

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESCRIPTION OF A PROCEDURE FOR THE ELIMINATION OF AMMONIUM IONS FROM ATMOSPHERIC MOISTURE CONDENSATES BY TREATMENT WITH ME(MG, ZN, CU, CO, NI) EXCHANGE RESINS. THE VOLUME SORPTION CAPACITY OF THESE ION EXCHANGE RESINS IS STUDIED AS A FUNCTION OF THE AMMONIUM CONCENTRATION AND PH. EXPERIMENTS INDICATE THAT AMMONIA, AMINES AND AMINO ACIDS CAN BE EFFECTIVELY REMOVED FROM AQUEOUS SOLUTIONS BY THIS METHOD.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--11SEP70  
TITLE--USE OF THE COMPLEX FORMING PROPERTIES OF METALS FOR FREEING  
ATMOSPHERIC CONDENSATE FROM AMMONIUM IONS -U-  
AUTHOR--YEGOROVA, L.E., KRASNOSHCHKOV, V.V., PATRIKEYEVA, T.M.,  
PEPELYAYEV, YU.V., STOLBOV, V.F.  
COUNTRY OF INFO--USSR

SOURCE--MOSCOW, KOSMICHESKAYA BIOLOGIYA I MEDITSINA, RUSSIAN, VOL 4, NO 1,  
JANUARY-FEBRUARY 1970, SUBMITTED FOR PUBLICATION 25 SEPTEMBER 1969, PP  
DATE PUBLISHED-----70

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

TOPIC TAGS--AMMONIA, ADSORPTION, CATION EXCHANGE RESIN, METAL COMPLEX  
COMPOUND, ATMOSPHERIC WATER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1987/1291

STEP NO--UR/0453/69/004/001/0056/0060

CIRC ACCESSION NO--AP0104629

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104629

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY WAS MADE OF THE SORPTION OF AMMONIUM, WHICH IS ONE OF THE MAIN COMPONENTS OF ATMOSPHERIC CONDENSATE, FROM WATER SOLUTIONS BY MEANS OF CATION EXCHANGE RESINS IN THE ME FORM. THE RELATIONSHIP BETWEEN THE VOLUME CAPACITY OF CATIONITES IN ME FORM, THE AMMONIUM CONCENTRATION IN THE SOLUTION AND THE HYDROGEN ION CONCENTRATION WAS EXAMINED. IT WAS FOUND THAT THE USE OF CATIONITES IN ME FORM (PARTICULARLY IN THE CU FORM) INCREASED THEIR AMMONIUM CAPACITY.

UNCLASSIFIED



PATRIKYAN, I. T.

IN VITRO MATURATION OF THE HUMAN OVUM

UDC: 611-013.16-085.2

JPRS 55669  
29 MAR 72

Article by I.A. Patrikyan, I.P. Dzhanyan, N.A. Samokhina, A.I. Nikitin,  
M.A. Kirilov, Institute of Obstetrics and Gynecology, USSR Academy of  
Medical Sciences, and Institute of Experimental Medicine, USSR Academy of  
Sciences, Leningrad; Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR,  
Russkaya, No 2, 1972, pp 60-65j

Cytogenetic investigations of human sex cells are of substantial interest both to theoretical and clinical medicine. We know that some congenital pathological states (for example, Down's, Shereshevsky-Turner, Klinefelter syndromes, and others) are determined by numerical chromosomal aberrations arising in parental sex cells when chromosomes do not separate in meiosis (Pentose, 1954; Lejune et al., 1959; Lejune et al., 1960). It was also shown that a considerable number of spontaneous miscarriages related to chromosomal aberrations formed with nonseparation of chromosomes in meiosis or splitting of the zygote (Carr, 1963; N.P. Bochkov and N.S. Stonova, 1969). In the presence of diseases associated with chromosomal infertility (Stein-Leventhal syndrome) impaired maturation of the ova and degenerative changes therein were demonstrated (A.I. Nikitin and N.A. Samokhina, 1966, 1970).

Thus, investigation of maturing sex cells brings us closer to understanding the mechanism of chromosome pathology, miscarriages, and some forms of fertility in man.

In addition, one can clearly demonstrate different types of chromosomal anomalies (for example, translocations, inversions, and others) in the meiotic chromosomes of sex cells, which are unrecognizable when analyzing the examination of meiotic chromosomes and other somatic tissues. In such cases, chromosomal aberrations, and this has definite diagnostic and prognostic value.

It is not surprising that contemporary cytogenetics is concentrating on the study of human sex cells (Carr, 1969; A.A. Frokof'yeva-Bel'govskaya, 1971).

1/2 023

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--ESR SPECTRA OF MOD SUB3 SINGLE CRYSTALS DOPED WITH VANADIUM AND NIOBIUM -U-

AUTHOR--(03)-IOFFE, V.A., PATRINA, I.B., ZELENETSKAYA, E.V.

COUNTRY OF INFO--USSR

SOURCE--PHYSICA STATUS SOLIDI, 1970, VOL 37, NR 1, PP 425-432

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--EPR SPECTRUM, MOLYBDENUM OXIDE, SINGLE CRYSTAL PROPERTY, CRYSTAL IMPURITY, VANADIUM, NIOBIUM, ELECTRON HOLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1078

CIRC ACCESSION NO--AP0107587

STEP NO--GE/0030/70/037/001/0425/0432

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0107587

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN MOO SUB3:V SINGLE CRYSTALS ESR SPECTRA OF V PRIME4 POSITIVE IONS AND ELECTRON HOLE CENTRES INTERACTING WITH V PRIME51 (I EQUALS SEVEN HALVES) ARE OBSERVED. THE RELATIVE INTENSITIES OF THE V PRIME4 POSITIVE IONS AND HOLE SIGNALS CHANGE WITH THE ATMOSPHERE OF CRYSTAL GROWTH. IN MOO SUB3:NB SINGLE CRYSTALS ELECTRON HOLE CENTRES INTERACTING WITH NB PRIME93 (I EQUALS NINE HALVES) NUCLEI ARE PRESENT; THE ELECTRONS ARE PARTLY LOCALIZED IN THE MOLYBDENUM SUBLATTICE. NB PRIME4 POSITIVE IONS ARE ABSENT. SYMMETRY OF THE ELECTRON HOLE SPECTRA SHOWS THAT THE V PRIME51 NUCLEI ARE IN SUBSTITUTIONAL POSITIONS AND THE NB PRIME93 NUCLEI ARE IN INTERSTITIAL ONES. FACILITY: I. V. GREBENSHIKOV INSTITUTE OF SILICATE CHEMISTRY. FACILITY: ACADEMY OF SCIENCES OF THE USSR, LENINGRAD.

UNCLASSIFIED

USSR

UDC 51:155.001.57:681.3.06

PATRUGIN, Yu. A.

"Measurement of Qualitative Characteristics"

Modelir. Sots. Protsessov [Modeling of Social Processes -- Collection of Works], Moscow, Nauka Press, 1970, pp 103-118 (Translated from Referativnyy Zhurnal Kibernetika, No 3, 1971, Abstract No 3 V574 by M. Chelyshev).

Translation: Each phenomenon or object in the material world is perceived and recognized as a set of defined properties and characteristics differentiating it from other phenomena and objects. Four types of characteristics can be differentiated. For example, such characteristics as the form of geometric figures have discrete and disordered sets of manifestations. An example of a discrete and ordered characteristic can be found in the prices of objects for sale. Continuous and disordered characteristics include colors as physiologically perceived. Finally, continuous, ordered characteristics include most physical values and many social and psychological characteristics. Measurement itself concerns only ordered characteristics. Historically, measurement techniques have been developed and improved as applicable to additive characteristics, i. e., characteristics for which the operation of natural addition is defined, allowing any two intensities of a characteristic to be combined according to a certain rule to produce

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- 34 -

USSR

UDC 51:155.001.57:681.3.06

PATRUGIN, Yu. A., Modelir. Sots. Protsessov, Moscow, Nauka Press, 1970, pp 103-118.

a third intensity such that its numerical expression is equal to arithmetic sum of the numerical expressions of the initial intensities. For nonadditive characteristics, the only initial material for scaling is the set of empirical order relationships produced using a comparing device for various pairs of intensities. An attempt is made to present a mathematical interpretation of the problem of measurement. The method of arbitrary scales used to measure nonadditive characteristics in practice is studied.

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AA0051783

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

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239684 MULTICOLOUR FERROGRAPHIC RECORDING OF INFORMATION. Signals of different wave-length are used for developing the magnetic powder. The signals are modulated according to the colour of the transmitted picture. There are two inputs for the incoming signals. Each input has a colour sensitive inverter. The modulated signals are applied to the ferrite powder on a rotating drum and the images are transferred on to paper unwinding from a reel.

24.1.68 as 1212972/18-24. V.G. PATRUNOV & L.F. NAZIN  
MINING INST. IN MOSCOW. (1.8.69) Bul 11/18.3.69. Class 42m6. Int.Cl.G 06 k.

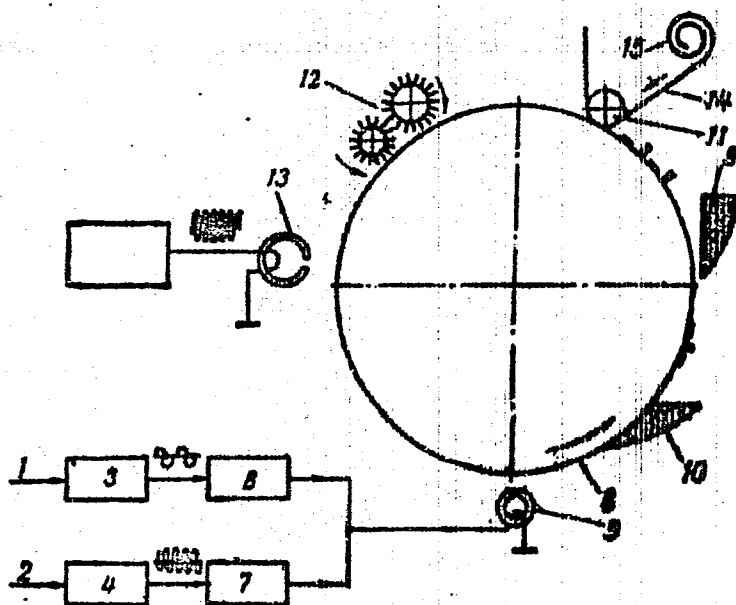
Moskovskiy Gornyy Institut

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AA0051783



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7NT

UDC: 621.378.325

USSR

MIRONOV, V. L., ~~PATRUSHEV, G. Ya.~~, Institute of Optics of the Atmosphere,  
Siberian Department of the Academy of Sciences of the USSR

"Fluctuations in the Field of a Laser Beam Propagating Through a Turbulent  
Atmosphere"

Gor'kiy, IVUZ Radiofizika, Vol. 15, No 6, 1972, pp 865-872

Abstract: The paper is a continuation of research utilizing the Kolmogorov spectrum of fluctuations in the index of refraction to calculate the statistical characteristics of the amplitude and phase of a laser beam field. Results are presented from a numerical analysis of the dispersion, and the correlational and structural functions of fluctuations in the logarithm of the amplitude and phase of the field in the cross section of a laser beam propagating in a turbulent atmosphere as a function of the dimensions of the emitter, the conditions of radiation focusing, and the coordinates of the points of observation. The authors thank S. I. Tuzova and S. N. Belovitskiy for assistance with the computations.

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3

UDC 621.762

USSR

BRYNZA, A. P., OGNEV, R. K., RYNSKAYA, Ye. S., PATRUSHEVA, A. G., KOLOMOYETS, G. G., SOROKINA, Z. Ye., and TER-POGOSYAN, E. D.

"Corrosion of Powder Metallurgy Titanium in a Damp Atmosphere Containing Hydrogen Chloride and in Solutions of Hydrochloric Acid"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 105-111

Translation: The corrosion behavior of powder metallurgy titanium in gases and solutions of hydrochloric acid within the temperature interval 20-80°C is investigated. It is established that at a temperature of 20°C, atmospheric corrosion of powder metallurgy titanium above 3 and 7% solutions of hydrochloric acid is not observed, and in a solution of hydrochloric acid with a concentration up to 10%, slight corrosion is observed after a certain induction period. At 80°C, powder metallurgy titanium corrodes with all concentrations of hydrochloric acid that were studied. The effective energy for activating the process of dissolving titanium specimens is 62.8-71.2 kilojoules per mole. Seven illustrations, one table, and 11 bibliographic entries.

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USSR

UDC 595.771(571.14)

PATRUSHEVA, V. D., Biology Institute, Siberian Department, Academy of Sciences  
USSR, Novosibirsk

"On the Ecology and Taxonomy of the Flies *Titanopteryx maculata* Mg. and  
*Schoenbaueria pusilla* Fries. (Diptera, Simuliidae) in the Ob' River Basin"

Leningrad, Entomologicheskoye Obozreniye, Vol 50, No 4, 1971, pp 770-779

Abstract: This article discusses some of the results of a study of the ecology  
and taxonomy of bloodsucking flies in the upper, middle, and lower regions of  
the Ob' River and its tributaries; observations were carried out from 1959 to  
1965 by associates of the author's institute.

It was established that the most widely distributed and malicious bloodsuckers  
are the spotted fly (*Titanopteryx maculata* Mg.), which is found everywhere  
from the tundra to the Salair foothills, and the tundra fly (*Schoenbaueria  
pusilla* Fries.), which is found in the forest tundra, taiga, and forest steppes.  
The former species inhabits only the Ob' and its major tributaries, such as the  
Irtysh and Chulym, but the latter is also found in average-size rivers, such  
as the Yuksa, Chichka-Yul, and so on.

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USSR

PATRUSHEVA, V. D., Entomologicheskoye Obozreniye, Vol 50, No 4, 1971, pp 770-779

Both species, which are ordinarily found together, produce one generation per year. As one proceeds from the upper to the lower Ob' basin, the emergence of *Sch. pusilla* Fries. shifts from the beginning of June to the end of June. In each case, the first flight of *T. maculata* Mg. occurs from a few days to about two weeks later. In both species, the mass flight and attack period lasts a little less than one month.

Morning and evening peaks of activity were observed for *Sch. pusilla* Fries., but *T. maculata* Mg. was active throughout the day, as it was the more heat- and light-loving of the two species.

Finally, with respect to the taxonomy of the flies, the spotted fly found in the Ob' region is believed to be the subspecies *T. maculata maculata* Mg. The species *Sch. pusilla* Fries. is a heterogeneous one; a great deal of intraspecies variability in the structure of the genitalia of the male flies was observed.

2/2

- 71 -

UDC 616.981.71-022.395.42-036.21(571.51)

USSR

SHAYMAN, M. S., VOSHCHAKINA, N. V., NOZIK, S. I., PATS, S. I., and KRASOV-SKIY, F. V., Omsk Institute of Infections with Natural Foci and Krasnoyarsk Kray Sanitary Epidemiological Station.

"Data Pertaining to the Epidemiology of North Asian Tickborne Rickettsiosis in Krasnoyarsk Kray in 1936-1967"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, Apr 71, p 7 11

Abstract: North Asian tickborne rickettsiosis which was initially identified in Krasnoyarsk Kray in 1936, still occurred there in 1967, with a distribution exceeding that in any other part of the USSR. From 1936 to 1967, 10,634 cases of this disease were recorded in Krasnoyarsk Kray. The highest incidence of the disease was in the 30 south-eastern rayons. Children younger than 16 yrs were mainly affected (61.3% of cases). The principal vector of the disease was *D. nuttalli*. The agent (*D. sibiricus rickettsiae*) was isolated for the first time from *I. persulcatus* and *H. concinna*. The most effective methods of detecting *D. sibiricus rickettsiae* in ticks were by immunofluorescence tests and tissue culture methods. Comparison of results obtained by various test methods showed that epidemiological data pertaining to exposure of the popula-

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USSR

SHAYMAN, M. S., et al., Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii,  
No 4, Apr 71, pp 7-11

tion to the infection could be best obtained by means of skin allergy tests.  
It was established that a considerable degree of latent immunity existed  
in the population. Absence of latent immunity was one of the reasons for the  
predominant occurrence of the disease among children.

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USSR

UDC 681.327.11

VOROB'YEV, A. D., KUDRYAVTSEVA, A. A., PRYADKIN, A. M., PATS, V. B.,  
SHAMURINA, R. Z.

"Mosaic Printer"

Moscow, Otkrytiya izobreteniya, promyshlennyye obraztsy, tovarnyye  
znaki, No. 17, May 72, p 159

Translation: Patent No. 339925, class G 06k 15/02 was granted for a mosaic printer containing a mechanism for feeding paper and ribbon, a carriage, and a unit of metal tapes insulated from one another and placed in a magnetic field. The ends of the tape are connected to an excitation unit. The printer is distinguished by the fact that a fulcrum is fastened to it on the carriage at an angle to the metal tape unit located on the opposite side of the paper in order to increase the speed of the device.

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USSR

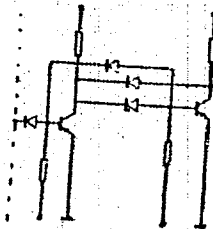
UDC: 621.375.4

PATS, V. B., PEPELYAYEVA, N. N.

"A Diode-Transistor Logic Element"

Moscow, Otkrytiya, Izobreneniya, Promyshlennyye Obratzsy, Tovarnyye Znaki,  
No 10, Apr 72, Author's Certificate No 332576, Division H, filed 16 Dec 68,  
published 14 Mar 72, p 225

Translation: This Author's Certificate introduces a diode-transistor logic element which contains an input diode circuit, and two series connected transistorized inverters with biasing diodes in the base circuit. As a distinguishing feature of the patent, reliability is improved by connecting the collector and base of the transistor in the first inverter through diodes to the collector and base respectively of the transistor in the second inverter.



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USSR

UDC 621.357.7:669.776(088.8)

YANITSKIY, I. V., PATSAUSKAS, E. I., RISELIS, S. P.

"Method of Electrochemical Deposition of a Selenium Alloy"

USSR Author's Certificate No 314818, filed 28 Mar 70, published 2 Nov 71 (from RZh-Khimiya, No 12, Jun 72, Abstract No 12L335P)

Translation: A procedure has been patented for electrochemical deposition of a Se alloy from an electrolyte containing selenic acid. The procedure is distinguished by the fact that in order to obtain a uniform film of a Se-Bi alloy, Bi nitrate and  $HNO_3$  are introduced into the electrolyte, and the process takes place at room temperature,  $D_c$  1-20  $ma/cm^2$ . The electrolyte contains (in g/liter):  $H_2SeO_3$  0.5-15,  $Bi(NO_3)_2$  1-53,  $HNO_3$  188-189. Se-Bi alloy with semiconductor properties is obtained by the proposed procedure.

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USSR

UDC 621.187:669.018.2

CHERNYAKOVA, L. YE., SHUGAYENKO, V. K., VORONTSOV, N. M., SANDLER, N. I.,  
and PATSEKA, R. F., Ukrainian Scientific Research Institute of Metals

"Electron-Microscope Study of Excess-Phase Precipitation in the Deformation of  
Alloy 36NKhTYu"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 8, Aug 73,  
pp 16-19

Abstract: The structural properties of alloy 36NKhTYu containing (in %): 0.04 C, 1.1 Mn, 0.36 Si, 36 Ni, 12-13 Cr, 3 Ti, 1.2 Al, balance-Fe, were studied in relation to degree of deformation and tempering mode. Strip samples 0.15 mm thick were water quenched from 1100°C, rolled with a high degree of reduction (50-70%), and tempered at 600-750°C for two hours. It was found that decomposition of the solid solution in the alloy with precipitation of the metastable gamma'-phase (NiFe)<sub>3</sub> (TiAl) with an FCC lattice starts even in the deformation process: at 50% primarily along the grain boundaries and at 70% -- in the grain volume. Decomposition of the solid solution when deformed at 600-650°C is characterized by discontinuous precipitation along the grain boundaries and in 1/2

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USSR

CHERNYAKOVA, ET AL., Metallovedeniye i Termicheskaya Obrabotak Metallov, No 8,  
Aug 73, pp 16-19

the colonies of grains in the volume of metastable  $\gamma'$ -phase particles;  
at  $700-750^{\circ}\text{C}$  it is characterized by continuous precipitation of finely dispersed  
 $\gamma'$ -phase particles in the matrix volume. The formation of the stable  
intermetallic nu-phase, leading to softening, starts during alloy  
deformation after tempering at  $700^{\circ}\text{C}$  for two hours. Three figures, eight  
bibliographic references.

2/2

1/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--CONSTRUCTION OF THE INFLUENCE FUNCTION FOR A THIN TOROIDAL SHELL IN  
THE CASE OF AXISYMMETRIC LOAD -U-  
AUTHOR--PATSELT, I.  
COUNTRY OF INFO--USSR  
SOURCE--AKADEMIIA NAUK SSSR, IZVESTIIA, MEKHANIKA TVERDOGO TELA, MAR.-APR.  
1970, P. 100-103. 6  
DATE PUBLISHED-----70  
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR  
TOPIC TAGS--METAL STRESS, THIN SHELL STRUCTURE, STRESS LOAD  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--2000/0354 STEP NO--UR/0484/70/000/000/0100/0103  
CIRC ACCESSION NO--AP0124111  
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0124111

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE CONSTRUCTION OF THE INFLUENCE FUNCTION FOR A THIN TOROIDAL SHELL IN THE CASE OF A LOAD UNIFORMLY DISTRIBUTED ALONG THE LINE  $\theta = \text{CONST}$  (WHERE  $\theta$  IS THE ANGULAR GEOMETRICAL COORDINATE ON THE SURFACE OF REVOLUTION). USING THE METHOD PROPOSED, THE MEISSNER FUNCTIONS ARE FOUND FOR LOADS OF TWO TYPES, AND THE GENERALIZED FORCES, STRESSES, AND DISPLACEMENTS IN VARIOUS CROSS SECTIONS OF THE TORUS ARE DETERMINED. THE PRINCIPLE OF SUPERPOSITION IS APPLIED IN DETERMINING THE INFLUENCE FUNCTIONS AND THE GENERALIZED STRESSES OF THE GIVEN STRUCTURE.

UNCLASSIFIED

AA0040654

P

UR 0482

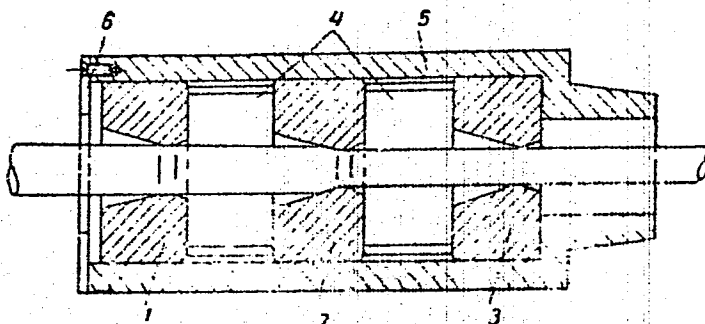
Soviet Inventions Illustrated, Section I Chemical, Derwent, <sup>70</sup>

240654 TUBE DRAWING ASSEMBLY provides firm tube distribution on the drum. It consists of a guide draw plate 1, working draw plate 2 and an additional plate 3. The plates are divided by sleeves 4 and enclosed in a body 5 with a cover 6. The plate 2 has a diameter equal to the diameter of the tube whilst the plates 2 and 3 are of equal smaller diameter.

AUTHORS: Ural'skiy, V. I.; Patseruk, A. P.; Popov, Yu. A.; and Pedas, V. P.

19750240

AA0040654



19.5.67 as 1156931/22-2. V.I. URALSKY et alia.  
(21.8:69.) Bul 13/1.4.69. Class 7b. Int.Cl.B 21c.

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*LD*

19750241

Acc. Nr: **AP0044612**

**P**

Ref. Code: **UR0497**

PRIMARY SOURCE: *Klinicheskaya Meditsina*, 1970, Vol 48,  
Nr 1, pp 84-89

**INTRAVENOUS AND INTRASPLENIC RADIOPORTOGRAPHY  
IN PATIENTS WITH PORTAL HYPERTENSION**

M. D. Patsiora, T. F. Belinskaya, Yu. A. Ershov

**Summary**

Intravenous radioportography (determination of the cardiportal time) was carried out in 78 patients with portal hypertension. The investigations have shown that intravenous radioportography in combination with other techniques is perspective in the diagnosis of portal hypertension. However, it not always make it possible to evaluate the form of portal hypertension, inasmuch as changes of the cardiportal time mainly depend on the degree of obstruction of the portal system and the development of collateral circulation.

Intrasplenic radioportography was done in 16 patients with renal hypertension. The latter technique is perspective in the diagnosis of portal hypertension, as well as in the evaluation of features specific to collateral routs of circulation. Intrasplenic radioportography in combination with other techniques should also be utilized for the recognition of the severity of liver affection in patients suffering from portal hypertension.

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REEL/FRA  
**19771289**

*02 72h*

Acc. Nr: AP0047355

Ref. Code: UR0589

PRIMARY SOURCE: Vestnik Khirurgii imeni I. I. Grekova, 1970,  
Vol 104, Nr 1, pp 39-44

ON PATHOGENESIS OF HEMORRHAGE FROM ESOPHAGEAL AND GASTRIC  
VEINS IN PORTAL HYPERTENSION

By M. D. Patsiora, L. I. Aruin, L. M. Karpman and A. K. Yeramishantsev

The authors have investigated 123 patients with portal hypertension complicated by esophageal or gastric phlebectasis. In 88 patients there were gastroesophageal hemorrhages in the anamnesis. In 34 patients during surgical procedures on esophageal and gastric veins the biopsy mucosa specimens from the cardiac portion of the stomach and lower esophagus were studied. It is concluded, that a hemodynamic factor — high portal pressure is of primary importance in causing hemorrhage from esophageal or gastric varices. The starting mechanism of bleeding is hypertensive crisis in the portal system. Acid-peptic factor could contribute to hemorrhage, while disturbances in the blood coagulation system could stipulate its massive character and duration, but they do not play a leading part in the occurrence of bleeding.

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REEL/FRAME

19790881

22h

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1/2 021 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--CHARACTERISTICS OF THE ALLOYING OF METAL WHEN BUILDING UP WITH A  
FLUX CORED WELDING STRIP -U-  
AUTHOR-(02)-PATSKEVICH, I.R., KHEYFETS, L.YA. P  
COUNTRY OF INFO--USSR  
SOURCE--AVTOMAT. SVARKA, FEB. 1970, (2), 13-15  
DATE PUBLISHED-----70  
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR  
TOPIC TAGS--WELD SURFACING, WELD FACING, WELDING ELECTRODE, METAL POWDER  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REFL/FRAME--2000/0313 STEP NO--UR/0125/70/000/002/0013/0015  
CIRC ACCESSION NO--AP0124072  
UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0124072

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BEHAVIOR OF THE CONTENTS OF A FLUX CORED POWDER ELECTRODE STRIP USED FOR BUILDING UP THE SURFACE OF A METAL PART BY WELDING IS DISCUSSED. A CERTAIN PROPORTION OF THE CONTENTS FILTERS THROUGH THE WEAK PART AT THE END OF THE STRIP AND PASSES STRAIGHT INTO THE WELDING BATH, BY PASSING THE MOLTEN DROPS ON THE END OF THE ELECTRODE, AND THUS ENTERING DIRECTLY INTO THE METAL. THE EXTENT TO WHICH THIS HAPPENS DEPENDS ON THE METHOD OF MANUFACTURING THE POWDER STRIP.

UNCLASSIFIED

USSR

UDC 521. 314.61

PATSEVICH, I.R., MARISHKIN, A.K., POSTAUCHKIN, V.F., RYKOV, C.A.

"Thyristor Converter For Investigation By The Method Of Pulse Fusion Of Melting And Evaporation Of Electrode Material"

Sb. nauchn. tr. Perm. politikh. in-ta (Collection Of Scientific Works Of The Perm-kiy Polytechnical Institute), 1970, No 76, pp 75-79 (From Elektronika i yeye primeneniye, No 6, June, 1970, Abstract No 6B555)

Translation: A unit is proposed for investigation of the instantaneous melting rate and for determination of the coefficients of melting and evaporation of electrode material during arc welding. The unit consists of a controlled rectifier, a control system, an electronic timing relay, and a device for immobilization of the specimens and for striking of the arc. The rectifier is built up of a 3-phase bridge circuit based on WEDU-2-150 thyristors. The control system consists of an electron switch based on a transistor and a 3-phase rectifier with six peak transformers.

3 ill. 2 ref. A.T.

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USSR

AMOSOV, N. M., LISHCHUK, V. A., PALETS, B. L., PATSKINA, S. A., YERMAKOVA,  
I. I., LYABAKH, Ye. G.

2

"Algorithmic Support of a Model of the Internal Sphere of an Organism"

Upr. i Inform. Protsessy v Zhivoy Pripode. [Control and Information Processes  
in Living Nature -- Collection of Works], Moscow, Nauka Press, 1971, pp 178-  
182, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract  
No 3 V594 by V. Mikheyev).

Translation: Requirements are studied for a system of algorithmic support  
of the model of the "internal sphere" of an organism for realization by digi-  
tal computer. The most important are the following: 1) the model must have  
a modular structure with the minimum number of global variables; 2) all  
modules of the model should be described in the same language; 3) great inde-  
pendence (in the sense of programming) of individual modules from each other  
and from the system as a whole is possible; 4) good controlability of the  
program realizing the model; 5) the program should have wide possibilities  
for contact with the operator during the process of computation; 6) self-  
improvement of the model during operation. The modules of the general model  
of the "internal sphere" of the organism are the cardiovascular system, the  
temperature control system, the respiration control system, the system for

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AMOSOV, N. M., LISHCHUK, V. A., PALETS, B. L., PATSKINA, S. A., YERMAKOVA, I. I., LYABAKH, Ye. G., Upr. i Inform. Protsessy v Zhivoy Pripode, Moscow, Nauka Press, 1971, pp 178-182.

self-regulation of local blood circulation, the regulation of water and salt metabolism and the central nervous control system. Mathematical models are presented for the system of regulation of blood flow through the skeletal musculature and the system for temperature control in the organism. It is noted that programs have been created on their basis for machine realization in the input language BESM-ALGOL. A special "control" program is called for, allowing printout of all variables of interest to an investigator in digital or graphic form, as well as calculation of a number of arbitrary quantities for the model (mean values, integral estimates, etc.).

2/2

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USSR

UDC 62-50 .

PATSKO, V. S., Sverdlovsk

"Conditions for Acceleration in a Second-Order Linear Differential Game"

Moscow, Prikladnaya Matematika i Mekhanika, No. 3, May/Jun 72, pp 420-425

Abstract: The following second-order system is considered

$$dx/dt = Ax + u - v, \tag{1.1}$$

where  $x$  is a two-dimensional phase vector,  $A$  is a constant  $2 \times 2$  matrix, and  $u$  and  $v$  are the controlling actions of the first and second players respectively. It is assumed that at any time  $t$

$$u(t) \in U, \quad v(t) \in V, \tag{1.2}$$

where  $U$  is a segment on a plane not reducing to a point and  $V$  is a convex, bounded closed set. A game is defined as the system (1.1) hitting at some previously assigned point  $m$ . Necessary and sufficient conditions are given for deviation in a second-order linear differential game. The notion of deviation is defined as follows: let the "realization  $u(\cdot)$ " be a measurable function of time  $u(t)$ ,  $t_0 \leq t < \infty$ , satisfying the restriction

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USSR

PATSKO, V. S., Prikladnaya Matematika i Mekhanika, No. 3, May/Jun 72,  
pp 420-425

(1.2) at any time  $t$  and formed by the first game in any manner in the process of the game. It is assumed that the second game for  $t \geq t_0$  can encounter any realization  $u(\cdot)$ . Its control of the second game must be constructed on the feedback principle using the discrete scheme  $\{v[x], \Delta[x]\}$ . The time discrete  $\Delta[x] > 0$  determines the magnitude of the semi-interval  $t^* \leq t < t^* + \Delta[x[t^*]]$ , over which the control  $v$  stays constant and depends on the position  $x[t^*]$ , where  $v[x]$  is selected in terms of  $v$ . Excluded from the discussion is the case in which the set  $V$  is a segment lying on a line passing through the segment  $U$ . Necessary and sufficient conditions for this case follow from the previous results of the theory of differential games.

2/2

- 17 -

USSR

UDC 691.327:539.376

MEL'NIK, R. A., Candidate of Technical Sciences, and PATSULA, A. Ya.,  
Engineer

"Study of Nonlinear Creep of High-strength Concrete"

Moscow, Beton i Zhelezobeton, No 3, Mar. 1973, pp 39-40.

Abstract: The Dnepropetrovsk Institute of Construction Engineering has been studying the deformation and strength of heavy vibrated concrete and the influence of creep of this concrete on loss of prestressing and crack resistance of centrally and noncentrally compressed reinforced concrete structural elements since 1965. This article presents some of the results of studies of type 600 and 700 concrete of compositions 1:1.09:2.97 (W/C = 0.40) and 1:0.94:1.65 (W/C = 0.34).

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USSR

UDC: 8.74

DRYGA, D. A., PATSYUK, P. P.

"Evaluating the Spectral Density of a Random Process From the Correlation Function"

Tr. Zap.-Sib. n.-i. geologorazved. neft. in-t (Works of the West Siberian Scientific Research Institute of Geological Petroleum Prospecting), 1972, vyp. 55, pp 207-208 (from RZh-Kibernetika, No 10, Oct 72, abstract No 10V652)

Translation: A standard program in Minsk-22 codes. The program is used for calculating the spectral densities of a process from available values of the correlation function.

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1/2 CC9 UNCLASSIFIED PROCESSING DATE--20NOV70  
TITLE--METHODS OF SOLVING CERTAIN COALITIONLESS DIFFERENTIAL GAMES OF N  
PLAYERS -U-  
AUTHOR--PATSYUKOV, V.P. P  
COUNTRY OF INFO--USSR  
SOURCE--AVTOMATIKA I TELEMEXHANIKA, 1970, NR 4, PP 31-39  
DATE PUBLISHED--70  
SUBJECT AREAS--MATHEMATICAL SCIENCES  
TOPIC TAGS--DIFFERENTIAL EQUATION, LINEAR DIFFERENTIAL GAME THEORY  
CENTRCL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1998/0604 STEP NO--UR/0103/70/000/004/0031/0039  
CIRC ACCESSION NO--AP0121273  
UNCLASSIFIED

2/2 CC9

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0121273

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE METHODS OF SOLVING COALITIONLESS GAMES OF N PLAYERS ARE SUGGESTED. THE ESSENTIAL FEATURE OF WHICH IS THAT THE PLAYERS' STRATEGIES IN THE GENERAL CASE ARE NONSEPARATELY INCLUDED IN THE RIGHT PARTS OF THE EQUATIONS OF THE GAME PROCESS AS WELL AS IN THE EXPRESSIONS OF THE CRITERIAN OF THE PLAYER' WINNINGS. THE SUFFICIENT CONDITIONS OF THE EXISTENCE OF THE GAME SOLUTION ARE OBTAINED. THERE ARE ALSO GIVEN THE NECESSARY CONDITIONS OF THE EXISTENCE OF THE GAME SOLUTION IN THE FORM OF A SYSTEM OF ORDINARY DIFFERENTIAL EQUATIONS.

UNCLASSIFIED

1/2 009

UNCLASSIFIED

PROCESSING DATE--20NOV70

TITLE--PREPARATION OF DOUGH FROM WHEAT FLOUR -U-

AUTHOR--(03)-SECHERBATENKO, V.V., SOZLOV, G.F., PATT, V.A.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 262,788

REFERENCE--CTKRYIYA, IZOBRET., PKOM. CBRAZTSY, TOVARNYE ZNAKI 1970,  
DATE PUBLISHED--04FEB70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--CHEMICAL PATENT, WHEAT, PROCESSED PLANT PRODUCT, AMINO ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1082

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

CIRC ACCESSION NO--AA0130117

UNCLASSIFIED

2/2 GC9

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AAG130117

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

ABSTRACT. DOUGH WAS PREPD. FROM WHEAT FLOUR IN AN INTERMEDIATE PRODUCT BY ADDN. OF CYSTEINE, WHICH HAD BEEN PREMIXED WITH FLOUR AND WATER. THE RESULTING MIXT. WAS ACTIVATED AT 31-50DEGREES FOR 10-20 MIN. CYSTEINE WAS 0.003-0.02 WT. PERCENT OF THE FLOUR WHICH CONSTITUTED 20-5PERCENT OF THE MIXT. WHICH ALSO CONTAINED 80-5PERCENT WATER. FACILITY: ALL-UNION SCIENTIFIC-RESEARCH INSTITUTE OF THE BAKING INDUSTRY.

UNCLASSIFIED

USSR

UDC 621.762.2(088.8)

PATYUKOV, G. M., ROMANOV, A. I., BARANOV, M. N., BUTORIN, N. I., KHROMENKO, G. S., GONCHAROV, M. T., and SAGUNOV, T. M., Noril'sk Mining and Metallurgical Combine imeni A. I. Zavenyagin

"Electrolyzer for Making Metal Powder"

USSR Authors' Certificate No 267080, Cl. 40c, 1/02; 40c, 5/00, (C 22d), filed 21 Feb 67, published 23 Jan 70 (from RZh-Metallurgiya, No 3, Mar 71, Abstract NO 3G405P)

Translation: The electrolyzer contains a bath, anodes, disk cathodes fastened on a shaft, current supply unit, and drive mechanism. In order to decrease power consumption and increase dependability of electrolyzer operation, the drive mechanism is supplied with a toothed rack, which engages with the gear that is fixed on the shaft with the cathodes and imparts to the cathodes a reciprocating motion along the path of a pendulum. The contact at the point of the current supply to the shaft by the cathodes is made to be fixed. One illustration.

1/1

- 29 -

Pharmacology and Toxicology

USSR

UDC 577.153.4.(575.3)

KHAYDAROV, K. Kh., PAUK, S. I., and NIKITIN, V. I., Institute of Chemistry, Academy of Sciences Tadzhik SSR, and Tadzhik State Medical Institute imeni Abuali ibn-Sino

"Effect of Certain Derivatives of Carbamic Acid on the Cholinesterase Level in Blood Serum of Intact Rabbits

Dushanbe, Doklady Akademii Nauk Tadzhikskoy SSR, Vol 14, No 6, 1971, pp 68-69

Abstract: To determine whether a derivative of carbamic acid, preparation K<sub>2</sub>, affects the cholinesterase level in blood serum of intact rabbits, two derivatives of this series were investigated. The preparations were: 5-carbamoyloxy-2,5,6,6-tetramethyl-2-ethyl-delta<sup>3</sup>-dihydropyrane (K<sub>3</sub>) and 5-carbamoyloxy-2,2,5,6-tetramethyl-6-ethyl-delta<sup>3</sup>-dihydropyrane (K<sub>6</sub>). These compounds are white crystalline powders poorly soluble in water. Both preparations were given intraperitoneally in doses of 50-100-200 mg/kg in starch. The results were compared with proserine (10 mg/kg). During the first hours after the administration of 50, 100, and 200 mg of the K<sub>3</sub> and K<sub>6</sub> preparations, no marked changes were discovered in the activity of pseudocholinesterase. A sharp decline in this level was detected 5 hours after the administration of 100 mg/kg of the K<sub>3</sub> preparation, and on the third day after the administration 1/2

USSR

KHAYDAROV, K. Kh., et al., Doklady Akademii Nauk Tadzhikskoy SSR, Vol 14, No 6, 1971, pp 68-69

of 200 mg/kg of the K<sub>6</sub> preparation. Experiments with proserine were tested under similar conditions to compare its effect with the K<sub>3</sub> and K<sub>6</sub> preparations. Proserine was tested in a dose of 10 mg/kg. A reduction in the cholinesterase level of 30-34% was noted already in the first 5 hours. The maximum decrease was detected in the first day -- 53%, and a 45% reduction was observed by the third day. It was thus shown that the K<sub>3</sub> and K<sub>6</sub> preparations have some anti-cholinesterasic properties, but that the action is much weaker and less prolonged than that of proserine.

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- 65 -



USSR

UDC 615.3

TUKHTAYEV, T. M., and ~~PAUK, S. T.~~; Tadzhik State Medical Institute imeni Abuali ibn-Sino

"Effect of Mumio on the Nucleic Acid Content of the Hematopoietic Organs During Acute Radiation Sickness Induced by Low-Intensity Irradiation"

Dushanbe, Doklady Akademii Nauk Tadzhikskoy SSR, Vol 13, No 7, 1970, pp 62-65

Abstract: Eighty mice received a single exposure to whole-body x-ray irradiation (450 r) and, 3 to 25 days later, were given a single peroral dose of the preparation mumyo (500 mg/kg). Irradiation sharply reduced the nucleic acid (particularly DNA) content of the bone-marrow and spleen cells. The decrease in RNA was less pronounced in the bone marrow than in the spleen. Restoration of the nucleic acids, especially of RNA, proceeded more rapidly in mice treated with mumyo than in the control group. Mumyo also stimulated hematopoiesis and cell division

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1/2 034

TITLE--CHANGE IN THE CONTENT OF TOTAL PROTEIN AND  
BLOOD SERUM OF RATS IN THE HIGH MOUNTAINS -U-

PROCESSING DATE--11SEP70  
PROTEIN FRACTIONS IN THE

AUTHOR--TUKHTAYEV, T.M., PAUK, S.I.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, KOSMICHESKAYA BIOLOGIYA I MEDITSINA, RUSSIAN, VOL 4, NO 1,  
JANUARY FEBRUARY 1970, PP 81-82

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ALTITUDE SICKNESS, BLOOD CHEMISTRY, BLOOD SERUM, PROTEIN,  
SPACE MEDICINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--1986/0751

STEP NO--UR/0453/70/004/001/0081/0082

CIRC ACCESSION NO--AP0102716

UNCLASSIFIED

2/2 034

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102716

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DETERMINATIONS OF THE DYNAMICS OF THE CONTENT OF TOTAL PROTEIN AND PROTEIN FRACTIONS IN THE BLOOD SERUM OF RATS WERE MADE IN THE HIGH MOUNTAINS (3,500 M ABOVE SEA LEVEL) ON ANZOBSKIY PASS (TADZHIKSKAYA SSR) DURING A SCIENTIFIC EXPEDITION IN JULY TO AUGUST 1968, ORGANIZED BY THE TADZHIK MEDICAL INSTITUTE. THE EXPERIMENTS WERE CARRIED OUT WITH 90 COMMON RATS OF BOTH SEXES WEIGHING 150-170 G. THE RATS WERE DECAPITATED ON THE 1ST, 3D, 5TH, 7TH, 10TH, 12TH AND 15TH DAYS AFTER THEY HAD BEEN TRANSPORTED TO THE HIGH MOUNTAINS.

UNCLASSIFIED

USSR

UDC: 621.391.17

PAUK, S. M., Active Member of the Scientific and Technical Society of Radio Engineering, Electronics and Communications imeni A. S. Popov

"On the Problem of Resistance to Interference of Actual Communications Systems With Multiple-Position Frequency Keying"

Moscow, Radiotekhnika, Vol 26, No 6, Jun 71, pp 34-36

Abstract: Analysis of the resistance to interference of an incoherent multiple-frequency discrete data transmission system gives a relatively simple expression for evaluating the probability of malfunction of an elementary transmission. It is shown that this expression can be used to account for the actual operating conditions of the system.

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1/2 039

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--THE EXPEDIENCY OF USING SYSTEMS WITH MULTIPOSITIONAL FREQUENCY  
MANIPULATION DURING THE ACTION OF PULSED NOISE -U-

AUTHOR--(02)-SERVINSKIY, YE.G., PAUK, S.M.

P

COUNTRY OF INFO--USSR

SOURCE--ELEKTROSVIAZ', VOL. 24, FEB. 1970, P. 44-51

DATE PUBLISHED----FEB70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., NAVIGATION

TOPIC TAGS--SIGNAL NOISE SEPARATION, DATA TRANSMISSION, TELEPHONE NETWORK,  
PULSE SIGNAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1997/1175

STEP NO--UR/0106/70/024/000/0044/0051

CIRC ACCESSION NO--AP0120022

UNCLASSIFIED

2/2 039

CIRC ACCESSION NO--AP0120022

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DERIVATION OF AN EXPRESSION FOR THE IMPROVEMENT IN THE NOISE STABILITY OF A DISCRETE DATA TRANSMISSION SYSTEM HAVING MULTIPositional FREQUENCY MANIPULATION AS COMPARED TO A BINARY SYSTEM. THE STUDY IS CONDUCTED FOR THE CASE OF A DOMINATING PRESENCE OF PULSE NOISE IN THE CHANNEL SUCH AS IN MODERN TELEPHONE LINKS. EXPRESSIONS ARE DERIVED AND ILLUSTRATED BY GRAPHS FOR THE DEPENDENCE OF THE IMPROVEMENT ON THE NUMBER OF POSITIONS. THESE RESULTS SHOW THAT THE IMPROVEMENT INCREASES WITH THE NUMBER OF POSITIONS AND ATTAINS SIGNIFICANT VALUES EVEN BELOW TEN POSITIONS.

UNCLASSIFIED

Extraction and Refining

USSR

UDC 622.7:553.492.1

PAUKER, I. A., Ministry of Geology RSFSR, KUZNETSOV, V. P. and PAUKER, V. I.,  
All-Union Scientific Research Institute of Mineral Resources (VIMS)

"Technology of Processing High-Silica Bauxites"

Moscow, Razvedka i Okhrana Nedr, No 1, Jan 73, pp 31-33

Abstract: The processing of high-silica bauxite ores is discussed with respect to increasing the extraction of alumina from these ores and productivity while reducing energy consumption. Sintering in a kiln was compared to sintering on OK-108 conveyors. Different alumina charges were tested under laboratory conditions at the Moscow Institute of Steels and Alloys (MISiS), where it was established that sintering in roasting conveyors is the best method since the productivity of gas-sintering pellets on the OK-108 conveyor was 600 kg sinter from 1 m<sup>2</sup> fire grate per hour instead of 30-40 kg from 1 m<sup>2</sup> inner surface of the kiln, and heat consumption of 800 thousand kcal per ton of sinter instead of 11-1400 thousand kcal in a kiln. Results of laboratory tests showed that alumina yield from the conveyor-roasted sinter was 90%, which was almost 5% higher than from kiln sintering. At the present time conveyor sintering is being mastered at VIMS, MISiS and VAMI (All-Union Aluminum-Magnesium Institute on bauxites from different ore deposits. 5 bibliographic references.

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USSR

UDC: 621.372.5

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

"Characteristics of a Transistorized Quadripole Gyrator"

V sb. Elektrotehnika (Electrical Engineering--collection of works), Kaunas, 1970, pp 241-244 (From RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A196)

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

1/1



PAUKOV G.B.

Acc. Nr.: AN0104123

Ref. Code: 71P9003

49

TITLE-- ANNOUNCEMENT OF THE COMMITTEE ON LENIN AND STATE PRIZES, U.S.S.R.

NEWSPAPER-- IZVESTIYA, MAY 28, 1970, P 4, COLS 1-5

ABSTRACT-- NINETY ONE BASIC AND APPLIED RESEARCH WORKS HAVE BEEN NOMINATED FOR THE STATE PRIZES. TWO OF THESE, "THE MULTI-PURPOSE INDUSTRIAL HELICOPTER KA-26", BY N. I. KAMOV, V. B. AL, PEROVICH, V. B. BARSHEVSKIY, A. A. DMITRIYEV, G. L. IOFFE, M. A. KUPFER, L. A. POTASHNIK, N. N. PRIOROV, A. G. SATAROV, I. M. VEDENEYEV, S. B. BREN, AND V. A. NAZAROV, AND "THE DEVELOPMENT OF TURBOFAN JET ENGINES NK-8 AND NK-8-4, AND THE DEVELOPMENT AND REDUCTION TO SERIAL PRODUCTION A SYSTEM OF TECHNOLOGICAL PROCESSES WHICH ASSURED WIDE USES FOR TITANIUM ALLOYS", BY N. D. KUZNETSOV, M. T. VASILISHIN, V. A. KURGANOV, P. M. MARKIN, V. D. RADCHENKO, P. A. SUKHOV, A. A. MUKHIN, V. G. SHITOV, G. I. MUSHENKO, L. A. SHKODO, AND G. P. DOLGOLENKO, HAVE BEEN SUBMITTED BY THE MINISTRY OF THE AVIATION INDUSTRY.

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Reel/Frame

19870555

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Acc. Nr.: AKO104123

"A SERIES OF INVESTIGATIONS INTO THE DYNAMICS OF A BODY WITH FLUID-FILLED CAVITIES", /65-68/, BY N. N. MOISEYEV, A. A. PETROV, V. V. RUMYANTSEV AND F. L. CHERNOUSKO AND "ULTRA HIGH PRECISION JIG BORING MILLS WITH 1,000 X 1,600 AND 1,400 X 2,240 MM PLATENS", BY A. I. KIRYANOV, V. G. ABRAMOVICH, I. V. GUTKIN, A. S. ALIMPIYEV, G. B. PAUKOV, AND A. S. YEGUDKIN, HAVE BEEN SUBMITTED BY THE COMPUTATION CENTER OF THE ACADEMY OF SCIENCES AND THE MINISTRY OF THE MACHINE TOOL CONSTRUCTION AND TOOL INDUSTRY, RESPECTIVELY.

"THE RADICALLY IMPROVED MELTING TECHNOLOGY OF CRITICAL-PURPOSE HIGH-ALLOY STEELS AND ALLOYS OF IMPROVED QUALITY ACHIEVED BY THE INERT GAS TREATMENT OUTSIDE THE FURNACE", BY YU. V. GERASIMOV, O. M. CHEKHOMOV, N. V. SIDOROV, S. K. FILATOV, B. A. CHEREMNYKH, R. M. KHAYRUTDINOV, I. P. BARMOTIN, L. K. KOSYREV, K. P. BAKANOV, N. N. VLASOV, P. I. MELIKHOV, AND N. A. TULIN, HAS BEEN SUBMITTED BY THE ZLATOUST METALLURGICAL PLANT.

2/2

Reel/Frame  
19870556

KZ

1/2 025

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--TRUE SPECIFIC HEAT AT LOW TEMPERATURES, ABSOLUTE ENTROPY AND ENTHALPY UNDER STANDARD CONDITIONS OF KBO SUB2 -U-

AUTHOR--(03)-PAUKOV, I.YE., KHRIPLOVICH, L.M., POPOV, A.P.

COUNTRY OF INFO--USSR

P

SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 547

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--SPECIFIC HEAT, ENTROPY, ENTHALPY, LOW TEMPERATURE PROPERTY, CALORIMETRY, POTASSIUM COMPOUND, BORATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1419

STEP NO--UR/0076/70/044/002/0547/0547

CIRC ACCESSION NO--AP0135093

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135093

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TEST SPECIMENS WERE PREPD. FROM PURE K SUB2 CO SUB3 AND H SUB3 BO SUB3 AND DEHYDRATED AT 550DEGREES. THE SP. HEAT C SUBP WAS MEASURED IN A VACUUM ADIABATIC CALORIMETER AT 12.11-312.22DEGREE SK. THE C SUBP VALUES INCREASED WITH TEMP. FROM 0.106 CAL PER MOLE DEGREE AT 12.11DEGREE SK TO 16.39 CAL PER MOLE DEGREE AT 312.22DEGREE SK. BELOW 18DEGREE SK, C SUBP FOLLOWS THE ALPHATAU PRIME3 LAW. THE C SUBP (TAU) CURVES WAS EXTRAPOLATED TO 0DEGREE SK (S SUB12 EQUALS 0.0339 ENTROPY UNIT; H SUB12 MINUS H SUB0 EQUALS 0.303 CAL PER MOLE). UNDER STANDARD CONDITIONS 5DEGREE SUB298 TIMES 15 EQUALS 19.12 ENTROPY UNIT AND 15DEGREE SUB298 TIMES 15 MINUS H SUB0 DEGREE EQUALS 2895 CAL PER MOLE.

UNCLASSIFIED

1/2 018

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--TEMPERATURE FUNCTION OF THE SPECIFIC HEAT AND ELECTRIC RESISTANCE OF DYSPROSIUM NEAR THE NEEL POINT -U-

AUTHOR--(04)--AMITIN, YE.B., KOVALEVSKAYA, YU.A., RAKHMENKULOV, F.S., PAUKOV, I.YE.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(3), 774-80

DATE PUBLISHED--70

SUBJECT AREAS--PHYSICS

TUPIC TAGS--RESISTIVITY, SPECIFIC HEAT, DYSPROSIUM, TEMPERATURE DEPENDENCE, NEEL TEMPERATURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1968

STEP NO--UR/0181/70/012/003/0774/0780

CIRC ACCESSION NO--AP0105042

UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0105042

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MEASUREMENTS WERE CARRIED OUT OF SP. HEAT AND ELECT. RESISTANCE OF DY CLOSE TO THE NEEL POINT. CONSIDERABLE DEVIATIONS EXIST FROM THE EXPECTED PROPORTIONALITY BETWEEN THE MAGNETIC PART OF SP. HEAT AND THE DERIV. OF ELEC. RESISTANCE WITH TEMP. THE TEMPS. CORRESPONDING TO THE EXTREMES OF THE STUDIED PROPERTIES DO NOT COINCIDE. AN ATTEMPT WAS MADE TO DET. THE FORM OF THE FUNCTION WHICH DESCRIBED THE PECULIARITY OF SP. HEAT, WITHOUT THE CHOICE OF THE NEEL POINT. FACILITY: INST. NEORG. KHIM., NOVOSIBIRSK, USSR.

UNCLASSIFIED

1/2 021

UNCLASSIFIED

PROCESSING DATE--11SEP70

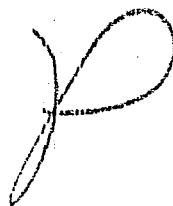
TITLE--TRUE SPECIFIC HEAT AT LOW TEMPERATURES, ABSOLUTE ENTROPY, AND ENTHALPY OF CESIUM CARBONATE -U-

AUTHOR--PAUKOV, I.YE., RAKHMENKULOV, F.S., LUKYANOVA, I.G.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 256-7

DATE PUBLISHED-----70



SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ENTROPY, ENTHALPY, CESIUM COMPOUND, CARBONATE, CALORIMETER, SPECIFIC HEAT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1983/0944

STEP NO--UR/0076/70/044/001/0256/0257

CIRC ACCESSION NO--AP0053868

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0053868

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SP. HEAT OF CS SUB2 CO SUB3  
HAS MEASURED IN AN ADIABATIC VACUUM CALORIMETER AT 13-307DEGREE SK. AT  
20-95DEGREE SK, THE SAMPLE COOLING RATE HAS A GREAT INFLUENCE ON THE  
VALUE OF ITS SP. HEAT.

UNCLASSIFIED



1/2 023 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--USE OF THE ODD HARMONICS OF A PIEZOEMITTER IN AN ULTRASONIC  
INTERFEROMETER FOR LIQUIDS -U-  
AUTHOR--(03)-ILGUNAS, V., PAULASKAS, K., TAMASHAUSKAS, A.  
COUNTRY OF INFO--USSR  
SOURCE--AKUST. ZH. 1970, 16(1), 148-9  
DATE PUBLISHED-----70  
SUBJECT AREAS--PHYSICS  
TOPIC TAGS--FLUID STATE, INTERFEROMETER, ULTRASONIC ABSORPTION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3007/1033 STEP NO--UR/0046/70/D16/001/0148/0149  
CIRC ACCESSION NO--AP0136460

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136460

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INTERFEROMETRIC METHODS CAN BE USED FOR THE SIMULTANEOUS MEASUREMENT OF THE VELOCITY AND THE ABSORPTION OF THE ULTRASOUND. A SERIES OF ODD HARMONICS OF A PIEZOCRYSTAL WAS USED IN THE ULTRASONIC INTERFEROMETER. IT WAS SHOWN EXPTL. THAT THE REACTION CURVE ON THE ODD HARMONICS CORRESPONDS TO THAT OBTAINED ON THE BASE FREQUENCY; ONLY THE COEFF. OF THE STANDING WAVE DECREASES WITH INCREASING ORDER NO. OF THE HARMONIC. THE MEASUREMENTS OF THE VELOCITY AND ABSORPTION OF THE ULTRASOUND WERE CARRIED OUT BY THE METHOD AND WITH THE APP. USED PREVIOUSLY BY I. AND P. (LOC.CIT.). THE RESULTS WERE IN AGREEMENT FOR THE SAME HARMONIC. DIFFRACTION LOSSES WERE TAKEN INTO CONSIDERATION FOR THE LOWER HARMONICS. FACILITY: KAUNAS. POLITEKH. INST., KAUNAS, USSR.

UNCLASSIFIED

USSR

PAULASKAS, V. and STEYSHUNAS, S.

"The Rate of Coverage of the Distribution of the Maximum of Sequential Sums of Independent, Variously Distributed Random Vectors to the Limit Rule"

Lit. Mat. Sb. [Lithuanian Mathematics Journal], 1973, Vol 13, No 2, pp 139-147 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V32)

Translation: This work presents multidimensional analogues of several theorems of V. B. Nevzorov (RZHMat, 1971, 12V49; 1972, 7V29) concerning the rate of convergence of a distribution of the maximum of sequential sums to the limit rule. The first three theorems give the rate of convergence as the distribution of the maximum approaches the normal rule, while the fourth theorem studies the case when identically distributed components belong to the areas of attraction of a k-dimensional symmetrical stable rule with index  $1 < \alpha \leq 2$ . Theorems 2 and 4 are new for the one-dimensional case as well.

Author's view

1/1

USSR

UDC: 519.214

PAULAUSKAS, V.

"One Estimate of Rate of Convergence Using Pseudomoments"

Lit. mat. sb. (Lithuanian Mathematics Collection), 1971, 11, No 2, pp 317-327  
(from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V42)

Translation: The paper deals with an estimate of the rate of convergence in a central limit theorem for independent identically distributed terms where these terms have  $m$  first moments which coincide with the corresponding moments of standard normal distribution, and a finite pseudomoment of order  $m+\delta$  ( $m > 2$  is a whole number,  $0 < \delta < 1$ ). The reduced one-dimensional and multidimensional results generalize estimates by the author contained in previously published papers (RZhMat, 1970, 8V21; abstract 11V41).  
Author's abstract.

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USSR

UDC 519.214

PAULASKAS, V.

"Multidimensional Central Limit Theorem"

Lit. mat. sb. (Lithuanian Mathematical Collection), Vol 10, 1970, No 4, pp 783-789 (from Referativnyy Zhurnal - Matematika, No 8, Aug 71, Abstract No 8V36 by V. Petrov)

Translation: Extending his studies on estimates of the rate of convergence in the multidimensional central limits theorem (Referativnyy Zhurnal - Matematika, 1970, Abstract 8V21 and 5V20), the author derives a new estimate of the residue in the central limits theorem for a sequence of independent random vectors with finite third moments. This result is a generalization of a theorem by V. V. Sazonov (Referativnyy Zhurnal - Matematika, 1969, Abstract No 6V21).

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USSR

PAULAUSKAS, V. I.

"The Distribution of the Maximum of Sequential Sums of Independent, Identically Distributed Random Vectors"

Lit. Mat. Sb. [Lithuanian Mathematics Journal], 1973, Vol 13, No 2, pp 133-138 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V31)

Translation: This article presents several limit theorems with an estimate of the residual terms for the distribution of the maximum of sequential sums of independent, identically distributed random vectors (RV), produced by direct probability methods from the works of V. A. Rogozin (RZHMat, 1967, 3V19) and V. B. Nevzorov (RZHMat, 1971, 12V49). Suppose  $\xi_i = (\xi_{i1}, \dots, \xi_{ik})$ ,  $i = 1, 2, \dots, n$  are independent, identically distributed RV

$$S_0 = 0, S_i = \sum_{j=1}^i \xi_j, \bar{S}_n = (\max_{0 \leq j < n} S_{j1}, \dots, \max_{0 \leq j < n} S_{jk}),$$

$$\sigma = M\xi_i = (a_1, \dots, a_k), \sigma_j^2 = M(\xi_{ij} - a_j)^2,$$

$\Lambda$  is the correlation matrix of RV  $\xi_1$ . Suppose  $\bar{F}_n(x)$ ,  $x \in R_k$ , represents the distribution function of the RV

USSR

PAULAUSKAS, V. I., Lit. Mat. Sb., 1973, Vol 13, No 2, pp 133-138

$$\left( \frac{\bar{S}_{n1} - a_{1n}}{\sigma_1 \sqrt{n}}, \dots, \frac{\bar{S}_{nk} - a_{kn}}{\sigma_k \sqrt{n}} \right),$$

while  $\Phi_{\Lambda}(x)$  is the normal distribution function with zero vector of mathematical expectations and matrix of second moment  $\Lambda$ . The most important theorem in the article is

Theorem 1. If  $a_i > 0$ ,  $B_{3i} = M|\xi_{1i} - a_i|^3 < \infty$ ,  $i = 1, 2, \dots, k$  and  $\Lambda$  is a nondegenerate matrix, then

$$\sup_{x \in R_k} |\bar{F}_n(x) - \Phi_{\Lambda}(x)| = O\left(\frac{1}{\sqrt{n}}\right),$$

where the constant in the estimate depends on the dimensionality and parameters of the RV.  
Author's view

2/2

I. PROBABILITY THEORY AND MATHEMATICAL STATISTICS  
A. Probability Theory

USSR

PAULAUSKAS, V. I.

"Concentration Function of Finite-Dimensional and Infinite-Dimensional Random Vectors"

Lit. mat. sb. [Lithuanian Mathematics Collection], 1973, 13, No 1, pp 137-157 (Translated from Referativnyy Zhurnal - Kibernetika, No 8, 1973, Abstract No 8V15 by the author)

Translation: This work consists of two parts. The first part contains a study of the concentration functions for random elements with values in a separable real Hilbert space. A simple method is used to reduce estimation of the concentration function of certain one-dimensional random quantities. The use of known estimates in the homogeneous case allows a number of estimates to be produced for concentration functions in the infinite-dimensional case. The second portion of the work studies the concentration functions of K-dimensional random vectors. The primary results are an amplification and summarization of the results of Esseyen.

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USSR

PAULASKAS, V. I.

"Estimate of Rate of Convergence in Central Limit Theorem for Variously Distributed Components"

Lit. Mat. Sb. [Lithuanian Mathematics Collection], 1972, Vol 13, No 4, pp 183-194 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1972, Abstract No 4V44, by the author).

Translation: A proof is presented for a one-dimensional estimate in a central limit theorem for differently distributed independent random quantities by means of pseudomoments as announced in (RZhMat, 1971, 11V43), as well as a multidimensional analogue of the estimate. It is shown that all estimates with pseudomoments produced in earlier works of the author can be strengthened by replacing the pseudomoments with so-called difference moments.

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USSR

PAULASKAS, V. I.

UDC: 519.214

"One Theorem of the Rate of Convergence in a Central Limit Theorem"

Lit. mat. sb. (Lithuanian Mathematics Collection), 1971, 11, No 1, pp 173-179  
(from RZh-Kibernetika, No 11, Ncv 71, Abstract No 11V41)

Translation: Let  $X_1, \dots, X_n$  be independent random quantities with general distribution function  $F(x)$ ,  $EX_1 = 0, EX_1^2 = 1$ . Let  $F_n(x) = P\left(\frac{1}{\sqrt{n}} \sum_{j=1}^n X_j < x\right)$ ,  $\Phi(x)$

be a normal (0,1) distribution function  $\mu_k = \int_{-\infty}^{\infty} x^k d(F - \Phi)$ ,  $\nu_k = \int_{-\infty}^{\infty} |x|^k |d(F - \Phi)|$ .  
If  $\mu_1 = \dots = \mu_{m-1} = 0$  and  $\nu_m < \infty$  for some integer  $m \geq 3$ , then

$$\sup_x |F_n(x) - \Phi(x)| < \frac{C(m)}{\sqrt{n}} \max\left(\frac{1}{\sqrt{m+1}}, \nu_m\right)$$

for any  $n$ , where the constant  $C(m)$  depends only on  $m$ . In particular,  $C(3) \leq 2, 16$ . V. Petrov.

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USSR

UDC: 519.2

PAULAUSKAS, V. I.

"A Multidimensional Inequality for Large Deviations"

Lit. mat. sb. (Lithuanian Mathematics Collection), 1972, 12, No 1, pp 207-212 (from RZh-Kibernetika, No 10, Oct 72, abstract No 10V50 [author's abstract])

Translation: Let  $\xi_i = (\xi_{i1}, \dots, \xi_{ik})$ ,  $i = 1, 2, \dots, n$  be independent identically distributed random vectors,  $M\xi_{ij} = 0$ ,  $M\xi_{ij}^2 = 1$ . The sum

$$S_n = \sum_{i=1}^n a_i \xi_i$$

is considered, where  $a_i \xi_i = (a_{i1} \xi_{i1}, \dots, a_{ik} \xi_{ik})$ ,  $a_{ij}$  are real numbers. We use the notation

$$\sigma_i^2 = \sum_{j=1}^k a_{ij}^2, M\xi_{ij}^m = \lambda_{ijm}$$

In this paper, which is a continuation and extension for the  
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USSR

PAULAUSKAS, V. I., Lit. mat, sb., 1971, 12, No 1, pp 207-212

multidimensional case of the result of Daneydzh [transliterated from the Cyrillic Данейдж] (RZhMat, 1972, 1V33), proofs are given for two theorems with corollaries in which estimates of the Bernshteyn-Kolmogorov type are presented for limited random vectors.

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USSR

UDC 621.316.825.4:678.762

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

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

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

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

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

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

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1/2 011

UNCLASSIFIED

PROCESSING DATE--11SEP70  
-U-

TITLE--CATALYTIC PYROLYSIS OF GASOLINE IN A BENCH APPARATUS -U-  
AUTHOR--LYAKUMOVICH, A.G., PAUSHKIN, YA.M., NIKIFOROV, P.A., TAROV, YU.T.

COUNTRY OF INFO--USSR

SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW,) 1970, (1) 20-2

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, PROPULSION AND FUELS

TOPIC TAGS--CATALYTIC CRACKING, PYROLYSIS, GASOLINE, METAL CATALYST,  
ETHYLENE, PROPYLENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1989/1142

STEP NO--UR/0318/70/000/001/0020/0022

CIRS ACCESSION NO--AP0107631

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107631

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PYROLYSIS WITH GROUP VI METALS AS CATALYSTS AT 780 AND 790 DEGREES YIELDED 70-80 PERCENT AND 35-40 PERCENT MORE C SUB2 H SUB4, RESP., AND ONE SIXTH TO ONE EIGHTH OF THE UNREACTED HYDROCARBONS AND RESINS OBTAINED BY PYROLYSIS WITHOUT A CATALYST. THE C SUB3 H SUB6 YIELD REMAINED IN SIMILAR LIMITS. THE GASOLINE, B. 37-149 DEGREES AND HAVING SP. GR. 0.657, N, AND ISOPARAFFINS 92.58, NAPHTHENES 2.83, AND AROMATICS 4.59 PERCENT, WAS DILD. WITH 40-52 PERCENT STEAM. A SCHEMATIC REPRESENTATION OF THE APP. IS PRESENTED.

UNCLASSIFIED



USSR

Polymers

UDC 547.565.2

PAUSHKIN, YA. M., LUNIN, A. F., and KOMISSAROV, V. I., Moscow Institute of Petrochemical and Gas Industry Imeni I. M. Gubkin

"Synthesis of Thermally Stable Oxidation-Reduction Polymers"

Moscow, Doklady Akademii Nauk SSSR, Vol 195, No 5, Dec 70, pp 1125-1127

Abstract: In light of the increasing interest in redox polymers, a synthetic route was developed based on heterocondensation of disodium acetylenide (DNaAc) with 2,5-dibromoquinone (DBQ) and 1,4-dimethoxy-2,5-dibromobenzene followed by demethoxylation with HI. It was determined that the redox capacity of the polymer drops with increased reaction temperature, which may be due to partial crosslinking and dehydration. The polymer obtained maintained its redox capacity for 10 hrs even when heated in air to 300°C. This polymer shows semi-conductive properties. The synthesis took place in two stages: first stage was carried out in a flask in hexadecane medium, with reaction temperature of 250°. The process lasted 10 hrs in argon atmosphere. The ratio of DNaAc to DBQ was 2:1. Second stage was carried out in solid phase in temperature range 300-450° yielding the polymer, a black powder insoluble in water or organic solvents.

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USSR

UDC 577.1:615.7/9

PAUSTOVSKAYA, V. V., RAPPOPORT, M. B., GOLENKO, V. S.

"Data on the Toxicological Evaluation of the Hexahydrodimethyl Ester of Terephthalic Acid"

Farmakol. i toksikologiya. Resp. mezhved. sb. (Pharmacology and Toxicology. Republic Interdepartmental Collection of Works), 1970, No 5, pp 154-157 (from RZh-Biologicheskaya Khimiya, No 19, 10 Oct 70, Abstract No 19 F1794 by A. Ignat'yev)

Translation: This substance has low toxicity and when injected into white rats and mice (1/5-1/10 LD50) it produces only a tendency for total blood protein, including the albumin fractions, to decrease with a slight increase in the amount of globulin fractions. Some changes occur in the higher divisions of the animals' central nervous system.

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1/2 014  
UNCLASSIFIED  
PROCESSING DATE--30OCT7  
TITLE--SYNTHESIS OF NEW WEAKLY ACIDIC CATION EXCHANGERS BASED ON CHLORO  
SUBSTITUTED PHENOLS -U-  
AUTHOR--(03)--MANGASAROV, S.A., PAUSHKIN, YA.M., OMAROV, O.YU.  
COUNTRY OF INFO--USSR  
SOURCE--VYSOKOMGL. SOEDIN., SER. B. 1970, 12(3), 173  
DATE PUBLISHED--70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--CATION EXCHANGE RESIN, CHLORINATED AROMATIC COMPOUND, PHENOL,  
CATALYTIC POLYMERIZATION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--2000/0662  
STEP NO--UR/0460/70/012/003/0173/0173  
CIRC ACCESSION NO--AP0124334  
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--30OCT7

CIRC ACCESSION NO--AP0124334

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLYMN. OF CHLOROPHENOLS, SUC AS O CHLOROPHENOL, IN THE PRESENCE OF ALCL SUB3 CUCL SUB2, FECL SUB3, O MOCL SUB5 IN THE 150-300DEGREES RANGE GAVE ION EXCHANGE RESINS STABLE LESS THAN OR EQUAL TO 350DEGREES WITH ION EXCHANGE CAPACITY 2.5-4.5 MEQUIV.-G.

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