"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

UDC: 621.313.522:538.4

BONDARCHUK, A. P., GARBUZOV, V. N., ZASLAVSKIY, B. I., OSEREDIKO, Yu. S., KHANZHINA, Ye. I., YANTOVSKIY, Ye. I.

"An Open-Cycle MHD Electric Power Plant Based on Natural Gas With Chemical Regeneration of Exhaust-Gas Heat"

Teplotekhn. Probl. Pryamogo Preobrazovaniya Energii /Heat Engineering Problem of the Direct Conversion of Energy -- Collection of Works/, No 4, Kiev, Nauk. Dumka Press, 1973, pp 10-19 (Translated from Referativnyy Zhurnal Turbostroyeniye, No 11, 1973, Abstract No 11.49.153)

Translation: Results are presented from analysis of various factors: magnetic induction B, quantity of additive, end effects and air heating temperature on the thermodynamic effectiveness η_{st} of an MHD electric power plant (MHDEPP) with a frame channel of the MHD generator and a steam turbine and thermochemical processing of the fuel (water conversion) using natural gas as the fuel. Calculations of the MHD power plant are presented for a consumption of combustion products of 2000 kg/sec using two types of magnetic system (MS): nonsuperconducting and superconducting. For the nonsuperconducting MS, η_{st} of the MHDEPP changes within limits of 50-49% and 51-52% as B is changed from 5 to

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BONDARCHUK, A. P., et al., Teplotekhn. Probl. Pryamogo Preobrazovaniya Energii, No 4, 1973, pp 10-19

6.5 T at air temperatures of 1100 and 1500°K respectively. For a superconducting MS with B=6 T with a power plant capacity of 2500 Mw, η_{st} increases by 3.5-6.5% as air temperature is increased from 1100 to 1500°K. It is established that the presence of end sectors causes an increase in total length of the MHD generator and an increase in losses to cooling, reducing η_{st}. Injection of K_2CO_3 with 1 wt. % K decreases η_{st} by 1.5%. Problems of water conversion of methane are studied. It is concluded that the MHD power plant discussed is quite promising. 5 Figures; 13 Biblio. Refs. M. I. Osipov

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UDC 539.4:621.81

USSR

ZASLAVSKIY, B.V.

"Loads on Flange Joints of Round Thin-Wall Shells Connected by Ties or Collar Clamps and Subject to Bending"

Moscow, Prochnost' i Ustoychivost' Tonkostennykh Aviatsionnykh Konstruktsiy, 1971, pp 74-82

Abstract: The case of a flanged joint of round thin-wall shells connected by ties or collar clamps and subject to bending is considered. It is assumed that the ties or collar clamps take tension load only and that the flanges take compression load only.

The graph on fig. 2 shows the position of the neutral axis as a function of the ratio flange area/tie area multiplied by the ratio of their diameters.

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ZASLAVSKIY, B. V., Prochnost' i Ustoychivost' Tonkostennykh Aviatsionnykh Konstruktsiy, 1971, pp 74-82

The compression and tension stresses with tie connection are given by formulae (15). An approximation of the same is given by formulae (18).

In the case of connection by collar clamp the stresses are given by formulae (25) or (26).

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USSR UDC 539.3

TRAPEZIN, I.I., ZASLAVSKIY, B.V., LOPOVOK, B.N. and MIRONOV, A.I.

"Calculation of Local Stability of Three-Layer Corrugated Panel at Normal and Elevated Temperatures"

Moscow, Prochnost' i Ustoychivost' Tonkostennykh Aviatsionnykh Konstruktsiy, 1971, pp 250-266

Abstract: The subject panel consists of two skin plates with a trapezoidal corrugated plate located between the two and plug welded to them.

The local stability is calculated by the formula

$$\sigma_K = K \eta E \left(\frac{\delta}{\ell}\right)^2$$

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USSR

TRAPEZIN, I. I., et al., Prochnost' i Ustoychivost' Tonkostennykh Aviatsionnykh Konstruktsiy, 1971, pp 250-266

where σ_K critical buckling stress
K coefficient of end fixity given on figures 8 and 9
η plasticity coefficient
δ plate thickness
ℓ unsupported length of the plate

Experimental values of buckling stress versus $\frac{\ell}{\delta}$ for temperatures 20 to 500°C are shown on graphs.

Tables of theoretical and experimental values of buckling stress for different panel dimensions are also presented.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

Hydrobiology

USSR

ZASLAVSKIY, G. L., Karadagskiy Department, Institute of Biology of the Southern Seas, Academy of Sciences Ukrainian SSR, Feodosiya

"Study of the Ranging Signals of a Bottlenose Dolphin by Means of a Two-Channel Recording System"

Moscow, Biofizika, Vol 17, No 4, 1972, pp 717-720

Abstract: Results of a study of the emission field of a bottlenose dolphin by means of a two-channel recording system are presented. Use of the two-channel system substantially simplifies establishment of the causes which determine, in each specific case, the nature of the field at the reception point. A temporal and spectral analysis of the ranging pulse of the dolphin is conducted. The influence of reflecting surfaces upon the results of analysis is shown. The effect which accompanies the emission of the ranging pulse is described.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

ZASLAVSKIY, G. M.; FILONENKO, N. N. (Institute of Physics, Siberian Department of the USSR Academy of Sciences)

"Statistical Properties of the Energy Spectrum of 'Grazing' Electrons with Intermingling Classical Trajectories"

Moscow, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki; August, 1973; pp 643-56

ABSTRACT: An investigation is made of the statistical properties of the distribution of distances between energy levels in a quasi-classical approximation for a finite system with intermingling classical trajectories in phase space. The model is that of electrons "drifting" in a magnetic field along a periodically goffered surface which is convex at all points in the region of motion of the electrons. Quantization conditions in the quasi-classical approximation are determined. The probability of a given distance ΔE between the levels is evaluated. A Gaussian distribution is obtained for large values of ΔE; for small values of ΔE the probability is basically proportional to the power of ΔE. The exponent depends on the properties of intermingling of the trajectories.

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USSR

UDC 534.2

ZASLAVSKIY, G. M., CHIRIKOV, B. V.

"Stochastic Instability of Nonlinear Oscillations"

Moscow, Uspekhi Fizicheskikh Nauk, Vol 105, No 1, 1971, pp 3-39

Abstract: This article is a review of what has been done in, according to the authors, a field of study relatively new and little known, especially to physicists. In its introduction, they begin with a simple example of the application of this study, a simple pendulum with forced oscillations in which the perturbing force contains many harmonics, and stress the fact that the theory of stochasticity permits obtaining practically important criteria and characteristics of the instability of nonlinear oscillators as well as a detailed examination of the transition from the dynamic to the static description of the motion of a mechanical system. They also point out that this study connects two, apparently different aspects of physics, the theory of nonlinear oscillations and statistical mechanics. The subjects touched on are: unidimensional nonlinear oscillators under periodic disturbances, the basic concepts of ergodic theory, stochastic Fermi acceleration, and others. Simple models

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USSR

ZASLAVSKIY, G. M. et al, Uspekhi Fizicheskikh Nauk, Vol 105, No 1, 1971, pp 3-39

are used for describing the instability, a few possible applications of the principles are given, and some of the history of the subject is considered. The bibliography contains 87 titles. The authors are connected with the Institute of Nuclear Physics and the Institute of Physics, both in the Siberian Department of the Academy of Sciences, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 035 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--VARIATION OF THE ADIABATIC INVARIANT OF A NONLINEAR PERIODIC WAVE -U-

AUTHOR--ZASLAVSKIY, G.M.

2

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK SSSR, DOKLADY, VOL. 192, JUNE 1, 1970, P. 760-763

DATE PUBLISHED--01JUN70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ADIABATIC APPROXIMATION, PERIODIC MOTION, NONLINEAR SYSTEM, WAVE EQUATION, WAVE MECHANICS, PARTIAL DIFFERENTIAL EQUATION, NONLINEAR PLASMA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605009/E02 STEP NO--UR/0020/70/192/000/0760/0763

CIRC ACCESSION NO--AT0140092

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UNCLASSIFIED PROCESSING DATE--04DEC70

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CIRC ACCESSION NO--AT0140092

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF A NONLINEAR PERIODIC WAVE DESCRIBED BY PARTIAL DIFFERENTIAL EQUATIONS IN A WEAKLY INHOMOGENEOUS MEDIUM. AN EXPRESSION IS OBTAINED FOR DETERMINING THE ADIABATIC INVARIANT OF SUCH A WAVE IN A WEAKLY INHOMOGENEOUS MEDIUM. IT IS SHOWN HOW EXPONENTIALLY SMALL CORRECTIONS TO THE PARAMETERS CHARACTERIZING THE WAVE CAN BE CALCULATED. CERTAIN APPLICATIONS OF THESE RESULTS ARE CONSIDERED. FACILITY: NOVOSIBIRSKII GOSUDARSTYVENNYI UNIVERSITET, NOVOSIBIRSK, USSR.

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UDC 51.01;519.5

USSR

ZASLAVSKIY, I. D., and TSEYTIN, G. S., Computer Center of the Academy of Sciences Armenian SSR and Yerevan State University, Computer Center of Leningrad State University

"Rectifiability Criterion for Constructive Plane Curves"

Yerevan, Izvestiya Akademii Nauk Armyanskoy SSR, Seriya Matematika, Vol 5, No 5, 1970, pp 434-440

Abstract: A previous article by I. D. ZASLAVSKIY showed that constructive rectifiability of a constructive curve requires that both its components be functions of constructively bounded variation, but this condition is not sufficient for constructive rectifiability of a curve. During a report on these findings at a Moscow State University seminar A. A. MARKOV suggested that for the rectifiability of a constructive curve it is necessary and sufficient that the components of all curves congruent to it be functions of bounded variation. The present article gives the proof for MARKOV's theory. The following theorem is proved: Constructive curve K, given on $\alpha \Delta \beta$, is constructive-

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USSR

ZASLAVSKIY, I. D., and TSEYTIN, G. S., Izvestiya Akademii Nauk Armyanskoy SSR, Seriya Matematika, Vol 5, No 5, 1970, pp 434-440

ly rectifiable if and only if any linear combination of its components is a function of constructively bounded variation; in this case the length on curve K equals

$$\frac{1}{2}\cdot\int_0^{\pi}\left|\bigvee_{t=\alpha}^{t=\beta}\left(K^{\xi}(t)\cdot\cos\varphi+K^{\eta}(t)\cdot\sin\varphi\right)\right|d\varphi.$$

It is noted that the above formula may also be proved within the limits of classical analysis, although the authors have not encountered such a formula in the literature on classical analysis.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

Acc. Nr: AP0044662

Ref. Code: UR0497

PRIMARY SOURCE: Klinicheskaya Meditsina, 1970, Vol 48, Nr 2, pp 85-90

VARIANTS IN THE CLINICAL COURSE OF IMMUNOGENIC HEPATITIS

A. V. Suchkov, N. V. Privalova, M. L. Zaslavskiy

Summary

The authors describe three clinical variants of immunogenic affections of the liver, depict the diagnostic difficulties and features specific to the treatment of these forms of hepatitis. In all the patients observed there was a progressing affection of the liver with involvemente into the process of the joints with the development of fever. The occurrence of autoimmune affection of the liver in aged patients compels to exercise care in liver lesions in menopausali women. The use of prednisolone in relatively small doses produced a significant clinical effect. However, rapid reduction or cessation of prednisolone intake lead to a more severe exacerbation of the process. The problem of early diagnosis and effective treatment of immunoaggressive forms of hepatitis is quite pressing.

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USSR UDC 613.644.616.28-008.1-07

ZASLAVSKIY, I. Ye., Otorhinolaryngology Department, Dnepropetrovsk Railroad Hospital

"The Effect of Industrial Noise on the Hearing of Railway Car Conductors and Inspectors"

Kiev, Zhurnal Ushnykh, Nosovykh i Gorlovykh Bolezney, No 5, Sep/Oct 70, pp 32-34

Abstract: Audiograms taken of 125 railroad conductors and 51 car inspectors revealed virtually no hearing impairment at low frequencies. Elevation of auditory thresholds by more than 20 db at medium frequencies was noted in 1.2% of the conductors and in 9% of the inspectors. A similar impairment of perception of high frequencies was observed in 25% of the conductors and in 32.3% of the inspectors. Perception of whispered speech at a distance of 1 to 3 meters was found to have deteriorated in 2 conductors over 50 years old with more than 20 years' experience, and in 4 inspectors 39 to 56 years old with 14 to 24 years' experience. None of the individuals examined suffered any loss of work capacity because of a decrease in hearing ability. The few cases of impairment are attributed to factors other than noise.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 032 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--LAGRANGIAN INVARIANTS OF INVISCID COMPRESSIBLE FLUID DYNAMICS -U-

AUTHOR-(02)-GAVRILIN, G.L., ZASLAVSKIY, M.M.

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK SSSR, DOKLADY, VOL. 192, MAY 1, 1970, P. 48-51

DATE PUBLISHED--01MAY70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--HYDRODYNAMIC THEORY, COMPRESSIBLE FLUID, LAGRANGE EQUATION, ADIABATIC APPROXIMATION, THERMODYNAMIC PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1641 STEP NO--UR/0020/70/192/000/0048/0051

CIRC ACCESSION NO--AT0133546

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

2/2 032 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0133546

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ATTEMPT TO SYSTEMATIZE THE KNOWN LAGRANGIAN INVARIANTS AND TO DEVELOP A GENERAL METHOD OF CONSTRUCTING A COMPLETE SET OF LAGRANGIAN INVARIANTS FOR A PARTICULAR CLOSED SYSTEM OF HYDRODYNAMICS EQUATIONS. IT IS SHOWN THAT, IF A CERTAIN THERMODYNAMIC POTENTIAL, SUCH AS THE SPECIFIC INTERNAL ENERGY, IS KNOWN EXPLICITYLY, FOUR LAGRANGIAN INVARIANTS CAN COMPLETELY DETERMINE THE UNKNOWN EULER FIELDS OF THE VARIABLES FIGURING IN THE SYSTEM OF EULER EQUATIONS FOR AN ADIABATIC MODEL OF AN INVISCID COMPRESSIBLE FLUID. SOME REMARKS ARE ALSO MADE CONCERNING THE APPLICATION OF LAGRANGIAN INVARIANTS TO BAROTROPIC AND ISOTHERMAL MODELS. FACILITY: AKADEMIIA NAUK SSSR, INSTITUT OKEANOLOGII, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 031 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--PLASTIC GLASS -U-

AUTHOR-(05)-KHOROSHILOVA, T.I., KUTEPOV, D.F., DEVDARIANI, T.V., ZASLAVSKIY, N.N., SUZDALEVICH, G.A.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,437

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--09MAR70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--PHENOL FORMALDEHYDE RESIN, FURFURAL, ACETATE, GLASS, FIRE RESISTANT MATERIAL, GLASS PLASTIC, REINFORCED PLASTIC, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1768 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0137008

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

2/2 031 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0137008

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PLASTIC GLASS WITH GREATER STABILITY AND LOWERED COMBUSTIBILITY IS PREPD. BY SATG. A GLASS FILLER WITH A BINDER AND HARDENING THE RESULTING MATERIAL WITH 5PERCENT FE PRIME3 POSITIVE SALTS. THIS IS CARRIED OUT WITH A COMPN. CONTG. EQUAL AMTS. OF A 40-70PERCENT SOLN. OF FURFURAL,PHENOL,FORMALDEHYDE ACETATE RESIN IN FURYL ALC. AND AN AQ. SOLN. OF AN ACETATE CONDENSATE OF A PHENOL,HCHO RESIN.

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USSR

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UDC 621.382.002

AMIRKHANOVA, I.B., GVERDTSITELI, I.G., GULDAMASHVILI, A.I., GOLUBKOV, V.B., DANSAMIDZE, E.M., ZASLAVSKIY, S.A., KARPENKO, T.T.

"Doping Of Silicon By Ion Bombardment"

V sb. Radiats. fiz. nemet kristallov (Radiation Physics Of Nonmetallic Crystals--Collection Of Works), Vol 3, Part 2, Kiev, "Nauk.dumka." 1971, pp 111-122 (from RZh--Elektronika i yeye primeneniye, No 10, October 1971, Abstract No 10B456)

Translation: Doping of n-silicon with a resistivity of 0.035--150 ohm.cm was conducted by polyenergetic beams of boron ions with a current density of 10 ma.cm^{-2}, and maximum energy of 300 plus or minus 0.150 kev with doses of $1 \cdot 10^{15}$ -- $1 \cdot 10^{17}$ cm^{-2}. The uniformity of doping was attained by scanning and amounted to 10 percent. Annealing of the doped specimens was conducted in a vacuum at a temperature of 500--700° C during the course of 30 min. The method of studying the specimens and the results obtained are described. 7 ill. 8 ref. I.M.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR UDC 8.74

MINTSER, O. P., CHEPKIY, L. P., TSYGANIY, A. A., ZASLAVSKIY, S. YA.

"Problems of Medical Cybernetics"

Problemy meditsinskoy kibernetiki (Problems of Medical Cybernetics), Moscow, Nauka Press, 1972, 309 pp, ill., 1 r. 44 k. (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V643K)

Translation: A study was made of the problems of applying cybernetics media in medical practice. The use of computers for diagnosing and developing the prognosis of diseases and also when selecting the optimal treatment procedure and constructing the model of the disease is discussed. Comparative characteristics of various medical data processing algorithms are presented in clinical examples.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR UDC: 8.74

ZASLAVSKIY, S. Ya., SLAVUTSKIY, Ye. I.

"A General Approach to a Theory of Resolving Systems"

Probl. bioniki. Resp. mezhved. temat. nauch.-tekhn. sb. (Problems of Bionics, Republic Interdepartmental Thematic Scientific and Technical Collection), 1971, vyp. 7, pp 97-102 (from RZh-Kibernetika, No 4, Apr 72, Abstract No 4V576)

Translation: An automatic system is considered which is capable of responding to a physician's questions with information on the course of an illness and necessary procedures for treating the patient. Authors' abstract.

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GLORIA

Neurobionics

SO: JPRS 55937
9 MAY 1972

SOME PROBLEMS IN NEUROBIONICS

[Article by S. Ya. Zaslavskiy, K. A. Ivanov-Muromskiy, and V. Yu. Meytus; Kiev, Kibernetika i vychislitel'naya tekhnika, Russian, No 7, 1970, pp 6-13]

The development of electronics and computer techniques has promoted the creation of new methods for investigating processes in the nervous systems of living organisms. This, in turn, has permitted striking out from bionics, the science of using the structural principles of living organisms for creating new techniques, into the new direction of neurobionics, connected with the study and simulation of the functions of the central nervous system.

The fundamental goal of neurobionics is, by using our knowledge of the nervous system, to create technical devices capable of behaving like the brain.

The solution to this problem can be approached in two ways: The first is connected with the technical realization of certain characteristics of the nervous system in general and of the brain in particular; the second is connected with the description of the processes going on in the brain on the information level [1, 2].

The first way involves the following:

1) Investigation of the characteristics of the neuron and the neuron assemblies;

2) Simulating the individual functions of the brain -- the memory, recognition of forms, the formation of concepts, the adoption of decisions, etc.;

3) Investigating the interactions of individual parts of the brain in the formation of behavior;

4) The design of technical systems containing the living organism. Here, investigations are possible on various levels, beginning with the

ZASLAVSKIY, S. Ya.

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USSR

UDC 51:155.001.57:518.9

ZASLAVSKIY, S. Ya.

"Analysis of One Class of Decision Systems"

Kibernet. i Vychisl. Tekhn. Resp. Mezhved. Sb. [Cybernetics and Computer Engineering, Republic Interdepartmental Collection], No 4, 1970, pp 57-66, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V656 by the author).

Translation: An object is introduced -- a decision system, reflecting a set of Boolean vectors in itself, dependent on fixed parameters, which change during learning. A relationship is introduced to claculate its effectiveness.

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Entomology

USSR UDC 591.543.4:595.2/7

ZASLAVSKIY, V. A., Zoological Institute, Academy of Sciences USSR, Leningrad

"Two-Step Photoperiodic Reactions as the Starting Point for Developing a Model of Photoperiodic Monitoring of the Development of Arthropods"

Leningrad, Entomologicheskoye Obozreniye, Vol 51, No 2, 1972, pp 217-239

Abstract: By assuming the existence of not one but two elementary reactions implemented by two systems controlled by two independent centers (second and third links), a model was established which explains empirically known and frequently analyzed developmental processes and also yields new explanations for such important phenomena as the antipolarity of long-day and short-day reactions, mutual conversion of quantitative and threshold reactions, cyclic changes, inversion, physiological and evolutionary relationship among various types of photoperiodic reactions (including nutations induced by geographical factors), and the mutual interaction between photoperiodic and thermal factors. The model does not take the afferent link and the first link (controlling all endogenous rhythms) into account. It is postulated that by introducing another variable representing interaction between the two control centers of the second and third links, it may become possible to elucidate the mechanism of spontaneous reactivation which is physiologically still completely mysterious.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

UDC 576.858.73.094.85

USSR

KAVERIN, N. V., and ZASLAVSKIY, V. G., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Subcellular Localization of Nucleocapsid Produced by Newcastle Disease Virus"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 72, pp 394-397

Abstract: Extracts of cells infected with the Beadette strain of Newcastle disease virus were analyzed for the presence of nucleocapsid. Virus-specific H^3-RNA was detected in structures similar to nucleocapsid (sedimentation constant 200S, buoyant density 1.31 gm/ml in CsCl) in the mitochondrial and microsome fractions, but not in the postmitochondrial supernatant. The same distribution pattern was observed for 200S structures produced in infected cells in the presence of Chlorella protein C^{14}-hydrolysate. Such distribution of structures containing both virus-specific H^3-RNA and radioactive protein indicates that newly-synthesized viral nucleocapsid is localized in the mitochondrial-microsome fraction.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 021 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--THERMAL DECOMPOSITION OF METHYL NITRITE IN SHOCK WAVES. I. INITIAL STAGE OF THE DECOMPOSITION AND MECHANISM OF H SUB 2 CO* CHEMILUMINESCENCE.

AUTHOR--ZASLONKO, I. S., KOGARKO, S. M., MOZZHUKHIN, E. V., PETROV, YU. P., BORISOV, A. A

COUNTRY OF INFO--USSR

SOURCE--KINET. KATAL. 1970, VOL 11, NR 2, PP 296-304

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--THERMAL DECOMPOSITION, NITRITE, CHEMILUMINESCENCE, ORGANIC NITROGEN COMPOUND, SPECTROPHOTOMETRIC ANALYSIS, FORMALDEHYDE, METHANOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0096 STEP NO--UR/0195/70/011/002/0296/0304

CIRC ACCESSION NO--AP0132389
UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

2/2 021 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132389

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DECOMPN. OF MEONO IN SHOCK WAVES (780-10000DEGRESSK AND 35-1.6 ATM) WAS STUDIED SPECTROPHOTOMETRICALLY ALONG WITH DETN. OF ABS. INTENSITY OF EMISSION BY EXCITED H SUB2 CO SEXTILE AND HNO SEXTILE MOLS. THE EXPT. REVEALS THAT ENERGYWISE, MEONO DECOMPN. PROCEEDS IN 2 STAGES: 1) THERMALLY NEUTRAL STAGE WHEN H SUB2 CO, NO, AND MEOH ARE FORMED; AND 2) THE BASIC STAGE OF ENERGY EMISSION TAKING PLACE DURING OXIDN. OF H SUB2 CO AND MEOH. RATE CONST. OF THE PRIMARY CLEAVAGE OF N-O BOND IS K SUB1 EQUALS 10PRIME12.9 EXP (MINUS 34,000-RT) SEC PRIME NEGATIVE1. THE EXCITED H SUB2 CO SEXTILE FORMS BY DISPROPORTIONATION OF 2 MEO RADICALS. H SUB2 CO SEXTILE FORMS IMMEDIATELY AFTER INITIATION OF MEONO DECOMPN., ITS CONCN. REACHES A MAX. AND THEN DECREASES PRACTICALLY TO ZERO. THE EMISSION BY H SUB2 CO SEXTILE HAS CHEMILUMINESCENT AND NOT A THERMAL NATURE. CONCN. OF HNO SEXTILE INCREASED UNTIL THE END OF OBSERVATIONS. FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR UDC: 541.124.13

ZASLONKO, I.S., KOGARKO, S.M., MOZZHUKHIN, YE.V., PETROV, YU.P., and BORISOV, A.A., Institute of Chemical Physics, Moscow, Academy of Sciences USSR

"Thermal DEcomposition of Methyl Nitrite in Shock Waves. I. The Initial Stage of Decomposition and the Mechanism of Chemiluminescence of H_2CO and HNO "

Moscow, Kinetika i Kataliz, Vol 11, No 2, Mar-Apr 70, pp 296-304

Abstract: The decomposition of MeONO in shock waves at temperatures of 780-1000°K and pressures of 0.35-1.6 atm was studied on mixtures of MeONO (0.7-1.5%) with Ar by carrying out spectoscopic measurements. The velocities of decomposition of MeONO and the intensities of emission by the electronically excited molecules H_2CO and HNO that formed in its decomposition were determined. The velocity constant of the primary process of cleavage of the O-N bond was $k_1 = 10^{12,9} \exp(-3400/RT)$ sec^{-1}. It was established that the excitation of H_2CO took place as a result of its formation by the reaction 2 MeO → H_2CO + MeOH. The probability of excitation was very low and corresponded to a ratio of $\sim 10^{-10}$. The excitation of HNO in the early stage of decomposition was most likely due to the reaction H + NO + Me → HNO + Me. Addition of NO to the mixture initially increased the rate of decomposition of MeONO to some extent because of the reaction MeONO + NO → (MeO, H_2CO, MeOH) and then reduced it because of the reaction MeO + NO → MeONO. From the energy

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

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ZASLONKO, I.S., et al, Kinetika i Kataliz, Vol 11, No 2, Mar-Apr 70, pp 296-304

standpoint, the decomposition of MeONO consisted of two stages. In the first, in which energy was practically neither evolved nor consumed, formation of H_2CO, MeOH, and NO took place after cleavage of the O-N bond, while in the second, in which the principal amount of energy was evolved, oxidation of H_2CO and MeOH occured.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 049 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--VIBRATIONAL EXCITATION IN BRANCHED CHAIN REACTIONS -U-

AUTHOR-(03)-ZASLONKO, I.S., KOGARKO, S.M., MOZZHUKHIN, E.V.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (1), 157-9

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--HYDROGEN, OXYGEN, SHOCK TUBE, EXCITED STATE, CHEMICAL REACTION MECHANISM, VIBRATION EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/1656 STEP NO--UR/0062/70/000/001/0157/0159

CIRC ACCESSION NO--AP0100260

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

UNCLASSIFIED PROCESSING DATE--18SEP70

2/2 049

CIRC ACCESSION NO--AP0100260

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FROM DATA ON THE REACTION OF H SUB2 WITH O SUB2 IN SHOCK TUBE EXPTS. (Z., ET AL., 1970) THE MAGNITUDE OF VIBRATIONAL TEMP. DURING THE INDUCTION PERIOD OF THE REACTION WAS DEDUCED; THIS CONTRIBUTION OF O VIBRATIONAL EXCITATION ON THE BRANCHING PROCESS OF THE REACTION PROVIDES EXCITED HO SUB2 PARTICLES WITH A RESERVE VIBRATIONAL ENERGY OF LARGER THAN OR EQUAL TO 65 KCAL-MOLE, ARISING FROM EXCITED O MOLES. CONTG. VIBRATIONAL ENERGY OF MORE THAN 17 KCAL-MOLE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 047 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--ELECTRONIC AND VIBRATIONAL EXCITATIONS IN REACTIONS OF HYDROGEN WITH OXYGEN AT HIGH TEMPERATURES -U-

AUTHOR-(03)-KOGARKO, S.M., MOZZHUKIN, E.V., ZASLONKO, I.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER KHIM. 1970, (1) 31-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HYDROGEN, OXYGEN, HIGH TEMPERATURE, SHOCK WAVE, VIBRATION EFFECT, ELECTRONIC SIMULATION, CHEMICAL REACTION, EXCITATION ENERGY, PHOTOMETRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0180 STEP NO--UR/0060/70/000/001/0031/0036

CIRC ACCESSION NO--AP0054976

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

UNCLASSIFIED PROCESSING DATE--18SEP70

2/2 047

CIRC ACCESSION NO--AP0054976

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SHOCK WAVE STUDY OF THE O SUB2NEGATIVE H SUB2 REACTION WAS REPORTED IN AN AR ATM. AT 1190-1390DEGREES K AND 1-35 ATM. TOTAL PRESSURE. IN THE EARLY PAHSES OF THE REACTION, A CONSIDERABLE SUPEREQUIL. EXCITATION OF HO RADICALS TAKES PLACE AS WELL AS IN H SUB2 O MOLS.; THE ELECTRONIC EXCITATION WAS OBSD. IN HO RADICALS AND NA ATOMS ON THE BASIS OF EMISSION PHOTOMETRY OF THE SYSTEM. DURING THE INDUCTION PERIOD, THE ELECTRONIC EXCITATION OF HO IS CAUSED MAINLY BY THE REACTION H PLUS H SUB2 PLUS O SUB2 YIELDS OH PLUS H SUB2 O WHILE AT HIGH PRESSURES IT IS ALSO PROMOTED BY A RECOMBINATION OF H AND O. THE VIBRATIONAL EXCITATION OF H SUB2 O MOLS. PROBABLY IS THE RESULT OF THE REACTIONS: HO SUB2 PLUS H SUB2 YIELDS H SUB2 O PLUS OH AND HO PLUS H SUB2 YIELDS H SUB2 O PLUS H. THE SUPEREQUIL. ELECTRONIC EXCITATION OF NA ATOMS PROBABLY IS THE RESULT OF COLLISION WITH OH AND H SUB2 O THAT HAVE SUFFICIENT EXCESS VIBRATIONAL ENERGY.

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USSR UDC: 621.317.33

TAL'KO-GRINTSEVICH, P. P., KLIMKOVICH, V. I., ZASLONOVA, N. M.

"Some Problems in the Theory of Resonance Circuits Involving Exact Measurements of the Electromagnetic Characteristics of Materials"

Tr. Sib. NII metrol. (Works of the Siberian Scientific Research Institute of Metrology), 1971, vyp. 12, pp 35-39 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6A303)

Translation: The article is devoted to problems associated with increasing accuracy and improving the resolution of resonance circuits, and the resonance method of measuring the electromagnetic properties of materials. Various sources of errors are considered, and criteria for the use of various formulas are pointed out, in particular in the thin specimen method. Resumé.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

UDC 621.314.61

USSR

ZASORIN, S.N., BABAYEVA, V.M., BYKADOROV, A.L.

"Experimental Investigation Of The Possible Use Of A Shunting Thyristor For Protection From Overvoltages Of The Silicon Rectifiers Of Static Converters"

Tr. Mosk. in-ta inzh. zh.-d. transp. (Works Of The Moscow Institute Of Railway Transportation Engineers), 1970, Issue 340, pp 36-42 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4B676)

Translation: The results are presented of an experimental investigation of the possibility of protection from overvoltages of the fundamental [semiconductor] rectifiers of the rectifier of a booster device, which is connected in series with a contact net with the aid of shunting thyristors. 4 ill. 1 tab. 6 ref. Summary.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

E. Mathematical Modeling of Thought Processes

USSR UDC: 8.74

ZASORIN, S. V.

Preprocessing Images for Digital Computer Input"

Tr. Ryazan. radiotekhn. in-ta (Works of Ryazan Radio Engineering Institute), 1972, vyp. 30, pp 169-173 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V678 by V. Mikheyev)

Translation: The author considers the effectiveness of using tracking scanning when feeding images into digital computer storage. It is shown that organizing digital tracking scanning in the isodata input device makes it much easier to handle problems of distinguishing an image outline than when other types of scanning are used. In this case the input process is directly combined with distinguishing the coordinates of points of the image outline since the trajectory of the readout point is determined by the function being scanned, i. e. the outline. When using other forms of scanning it is necessary to work out special algorithms for isolating the outline during input; realization of these algorithms demands considerable expenditures of time and equipment. The use of tracking scanning also considerably reduces the digital computer storage volume

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

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ZASORIN, S. V., Tr. Ryazan. radiotekhn. in-ta, 1972, vyp. 30, pp 169-173

necessary for preprocessing the image. Since the coordinates of points of the outline are not coded into the memory in the given instance, storage is required only for computing the partial moments at each point and accumulating the values of the complete moments.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

UDC 541.651.2

SHTEPANEK, A. S., ZASORINA, V. A., TKACHENKO, O. M., and KIRSANOV, O. V.,
Institute of Organic Chemistry Acad. Sc. Ukr. RSR

"N-Substituted Amides of Triphenylphosphazocarboxylic Acid"

Kiev, Dopovidi Akademii Nauk Ukrains'koi RSR, No 2, Feb 71, pp 153-155

Abstract: Triphenylphosphazohydride (I) reacted with carboxylic and sulfonic acid isocyanates forming N-acylamides of triphenylphosphazocarboxylic acid (II). With trimethylsiliconisocyanate (I) gave an addition product. With silicon tetraisocyanate (I) can react in several ways depending on the ratio of reagents; a 1:1 ratio gave an N-(silyltriisocyanate) amide of (II), the same product being obtained with a 4:1 ratio of (I) to the silicon compound after a 30 min reaction at +5°. The 4:1 ratio after 6 hrs at room temperature yielded $Si(NCO)_2[NHC(O)N:P(C_6H_5)_3]_2$ and after 48 hrs -- $SiNCO[NHC(O)N:P-(C_6H_5)_3]_3$. Reacting (I) with the dichloroanhydride of isocyanatophosphoric acid taken in a 1:1 ratio gave N-dichlorophosphorylamide of (II); when a 5:1 ratio was selected -- the product was N-(bis-triphenylphosphazophosphonyl amide) of (II).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

SHYPANEK, A. S., Dopovidi Akademii Nauk Ukrains'koi RSR, No 2, Feb 71, pp 153-155

Reacting (I) with derivatives of isocyanatophosphonic, isocyanatophosphinic, and isocyanatomethylphosphonic acids yielded N-phosphonyl amides of (II). Finally, reaction of (I) with benzo-2-isocyanato-1,3-dioxa-2-phospholine yielded N-(benzo-1,3-dioxa-2-phospholinamide) of (II).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

UDC 547.558.1

SHTEPANEK, A. S., ZASORINA, V. A., and KIRSANOV, A. V.

"Derivatives of Triphenyl Phosphazo Sulfuric Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol XLIII (CV), No 1, 1973, pp 25-29

Abstract: The derivatives of phosphazo sulfuric acid [A. V. Kirsanov, Izd. AN SSSSR, OKhN, 426, 1950; ZhOKh, No 22, 81, 88, 1346, 1952; A. Vandi, et al., Chem. Ind. 221, 1962], including triphenyl phosphazo sulfuric acid [A. Vandi, et al., Chem. Ind., 221, 1962; R. Appel, et al., Z. anorg. Chem., No 311, 290, 1961] have been studied very little. In continuing the studies of acylation of triphenyl phosphazo hydride [A. S. Shtepanek, et al., ZhOKh, No 39, 1475, 1969], the authors obtained the acid chloride of triphenyl phosphazo sulfuric acid which is the initial material for synthesizing the greatest variety of derivatives of triphenyl phosphazo sulfuric acid. On reacting triphenyl phosphazo hydride with sulphuryl chloride, depending on the ratio of the reagents, the acid chloride of triphenyl phosphazo sulfuric acid or bistrithenylphosphazo sulfone is obtained. The acid chloride of triphenyl phosphazo sulfuric acid easily reacts with alcohols, ammonia, primary and secondary amines, hydrazine and sodium azide and gives the corresponding derivatives.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 013 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--USE OF MATHEMATICAL STATISTICAL METHODS TO OPTIMIZE THE PREPARATION OF TECHNICAL METHOXYCARBONYLSULFONYLGUANIDINE AT THE ISOMERIZATION

AUTHOR-(03)-VEKSLER, M.A., ZASOSOV, V.A., MARKOVA, YE.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM.-FARM. ZH. 1970, 4(2), 33-6

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--ISOMERIZATION, METHOXY COMPOUND, THIOL, STATISTICAL ANALYSIS, ORGANIC SALT, AMMONIA, CHEMICAL REACTION RATE, GUANIDINE, CYANAMIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/0536 STEP NO--UR/0450/70/004/002/0033/0036

CIRC ACCESSION NO--AP0113427

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

2/2 013 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0113427

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TWO SERIES OF EXPTS. WERE RUN, INVOLVING 10 AND 14 TESTS, ON ISOMERIZATION OF THE NH SUB4 SALT OF METHOXYCARBONYLSULFONYLCYANAMIDE (I) TO METHOXYCARBONYLSULFONYLGUANIDINE (II). WITHOUT A SOLVENT THE OPTIMUM YIELD (92.3PERCENT) OF II WAS OBTAINED BY MAINTAINING I AT 182DEGREES FOR 378.0 MIN WITH STIRRING. FACTORS AFFECTING THE YIELD OF II IN THE PRESENCE OF ETHYLENE GLYCOL (III) AS SOLVENT WERE REACTION TEMP., TIME, AND THE I:III RATIO. THE MAX. YIELD (72.5PERCENT) WAS OBTAINED AT THE I:III RATIO OF 0.85 REACTION TEMP. FOR 160DEGREES, AND REACTION TIME 100 MIN. THE OPTIMUM CONDITIONS FOR BOTH REACTIONS WERE DETERMINED BY EMPLOYING THE BOX AND WILSON METHOD OF EXPT. PLANNING. A STATISTICAL ANAL. OF THE RESULTS IS REPORTED.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 009 UNCLASSIFIED

TITLE--CONDENSATION RESIN -U- PROCESSING DATE--02OCT70

AUTHOR-(05)-NOVOSELTSEV, P.V., BRYZGALOVA, M.A., ZASOVA, V.A., TIKHVINSKAYA, M.YU., RUZHANOVSKAYA, G.A.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 263,882

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--06JAN70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--CONDENSATION TYPE RESIN, CHEMICAL PATENT, PHENOL, FORMALDEHYDE, PHENYL ETHER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/0242 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0111436

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

UNCLASSIFIED PROCESSING DATE--02OCT70

2/2 009

CIRC ACCESSION NO--AA0111436

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A CONDENSATION RESIN WAS PREPD. BY TREATING PH SUB2 O WITH HCHO FOLLOWED BY CONDENSATION POLYMN. WITH PHOH.

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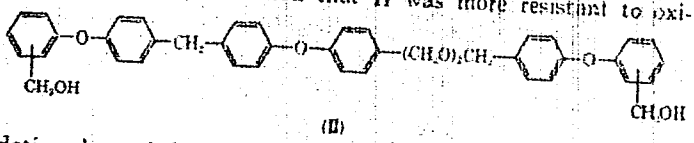
"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

Acc. Nr. AP0045174 Abstracting Service: CHEMICAL ABST. Ref. Code UR0191

90896k **Oxygen-containing oligomers based on diphenyl oxide.** Novoselitsev, P. V.; Zasova, V. A.; Korshak, V. V.; Kul'kova, I. A.; Salamatova, V. A.; Sergeev, V. A. (USSR). *Plast. Massy* 1970, (1), 9-11 (Russ). The polycondensation of Ph_2O with HCHO in glycerol (I), EtOH, AcOH, and AcOEt in the presence of H_2SO_4 was studied. Optimum reaction conditions were: Ph_2O-HCHO-H_2SO_4-solvent ratio = 1:2:0.1:0.2; reaction temp., 100°; reaction time, 10 hr. Best results were obtained in AcOH, EtOH, and I. The polycondensation gave a yellow viscous product, tentatively assigned the structure II. Thermogravimetric tests of II and Iditol (a thermoplastic novolak oligomer) indicated that II was more resistant to oxi-



(II)

dative thermal degradation, presumably due to inhibited oxidn. of the CH_2 bridge in II.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

MIKAELYAN, A. L., KOBLOVA, M. M., ZASOVIN, E. A. UDC 621.375.82

"Investigation of a Deflection System for a Ray Based on Lithium Niobate Crystals"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No. 1, Moscow, 1971, pp 120-124 (from RZh-Fizika, No 7, Jul 71, Abstract No 7D1143)

Translation: A discrete 10-cascade system for the deflection of laser radiation using lithium niobate crystals and Iceland spar was investigated. The beam was displaced at the output in two planes, forming a 32 × 32 matrix. The controlling voltage was equal to 1 kv. Authors abstract.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

UDC: 621.376:530.145.6

MIKAELYAN, A. L., KOBLOVA, M. M., ZASOVIN, E. A.

"Study of a Beam Deflection System Based on Lithium Niobate Crystals"

V sb. Kvant. elektronika (Quantum Electronics--collection of works), No 1, Moscow, 1971, pp 120-124 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D175)

Translation: The authors investigate a discrete ten-stage beam deflection system utilizing crystals of lithium niobate and Iceland spar. The beam is displaced in two planes at the output, forming a matrix of 32 × 32. The controlling voltage is 1 kV. Four illustrations, bibliography of two titles.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

UDC 542.48

DYABLO, V. V., ZASTAVNYUK V. K., KARDASEVICH, O. A., and KORNEICHEV, A. I.

"Calculation of Optimal Parameters of Thermal Distillation Equipment for Salt Water With Maximum Evaporation"

Moscow, Vodosnabzheniye i Sanitarnaya Tekhnika, No 6, 1971, pp 4-8

Abstract: The basic problem facing design of novel desalination equipment is the selection of optimal parameters assuring production of fresh water at minimal cost. A method is reported for determination of such optimal parameters for multiple stage desalination units with maximum evaporation in which the concentration of the solution is brought to about the crystallization point of various salts. To prevent accumulation of sediment on heating surfaces hydrophobic heat carrier is used. An apparatus consisting of the main heater, heat exchange chamber, evaporation chamber, condenser and a pump, and the principles of operation are described in detail. Formulas have been developed, which were solved using the ETsVM "Minsk-22" system. Optimal parameters for desalination equipment have been reported graphically.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

UDC 621.357.5:621.79.027(088.8)

ZASTAVNYY, YE. A., and KURCCHKIN, P. YE., Independent Construction Bureau for Designing Means for the Automation and Control of Electroetching Systems

"Process for Electrochemical Marking"

Avt. sb. SSSR, kl (USSR Authors' Certificate kl. [expansion unknown]), B, 23 pp, 1/16, No 341628, applied 29/08/69, published 11/07/72 (from Referativnyy Zhurnal -- Khimiya, No 7, 1973, Abstract No 7L355P by A. D. Davydov)

Translation: The patented process for the electrochemical etching of goods made of current-conducting metals, such as Ti alloys. The process is distinguished in that in order to eliminate possible destruction of the surface of the etching detail, the object to be etched is not connected to the positive, as is usual, but to the negative terminal of the constant current source. The process is carried out in a weak acid electrolyte such as 8% aqueous solution of ammonium molybdate, using 7-9 volts.

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172 020 UNCLASSIFIED

TITLE--MARKING PRODUCTS BY THE ELECTROCHEMICAL METHOD -U- PROCESSING DATE--09OCT70

AUTHOR-(03)-ZASTAVNYY, YE.A., KOZHIN, S.V., KUROCHKIN, P.YE.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, STANKI I INSTRUMENT, NO 2, 1970, PP 26-27

DATE PUBLISHED--------70

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

TOPIC TAGS--ELECTROCHEMISTRY, TECHNICAL STANDARD, ELECTROLYTE, PATENT, CHEMICAL MARKING AGENT, MACHINE TOOL INDUSTRY, ELECTROLYSIS/(U)EKHM2 ELECTROCHEMICAL MARKER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/0883 STEP NO--UR/0121/70/000/002/0026/0027

CIRC ACCESSION NO--AP0113729

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2/2 020 UNCLASSIFIED

CIRC ACCESSION NO--AP0113729 PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ELECTROCHEMICAL METHOD MAKES IT POSSIBLE, BY MEANS OF INEXPENSIVE AND HARMLESS ELECTROLYTES, TO MARK VARIOUS PRODUCST, INCLUDING THIN WALLED PRODUCTS, MADE OF MATERIALS OF ANY DEGREE OF HARDNESS. HOWEVER THE COMPLEXITY, AND SOMETIMES EVEN THE IMPOSSIBILITY OF PRODUCING STENCILS, AND THEIR LACK OF LONGEVITY, RESTRICT THE APPLICATION OF THIS PROMISING METHOD IN INDUSTRY. THIS DRAWBACK IS ELIMINATED VIA USE OF THE STENCILLES ELECTROCHEMICAL METHOD OF MARKING (AUTHOR'S CERTIFICATE NO 224240), WHICH CONSTITUTES A SPECIAL CASE OF ELECTROLYSIS WITH A SOLUBLE ANODE. THE COMPACE, TABLETOP EKHM-2 INSTALLATION FOR STENCILLESS ELECTROCHEMICAL MARKING HAS BEEN DEVELOPED, TESTED, AND PUT INTO PRODUCTION AT THE LABORATORY OF THE SPECIAL DESIGN OFFICE OF THE MINISTRY OF THE MACHINE TOOL AND TOOL INDUSTRY, USSR. THE TECHNICAL SPECIFICATIONS OF THIS INSTALLATION ARE PRESENTED, ITS OPERATION IS DESCRIBED, AND EXAMPLES OF ITS APPLICATION ARE GIVEN.

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USSR

VINOKUROV, V. G., ZASTELA, V. V., KOSTELYANSKIY, V. M., NOVOKHATNIY, A. A.

"Use of Minicomputers as Centers for Processing of Data of Remote Automatic Queueing Systems"

Vychisl. Sistemy [Computer Systems -- Collection of Works], No 51, Novosibirsk, 1972, pp 146-156 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V601, by the authors).

Translation: Methods of utilization of minicomputers in remote automatic queueing systems (RAQS) are studied. The range of jobs performed by these systems is defined. The expediency is demonstrated of using minicomputers at various levels of RAQS hierarchy, including at the level of the data processing center. In the last case, the data processing center uses a system of minicomputers in place of one or a few large computers. The structure of the data processing center of an airline ticket reservation system is presented.

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1/2 033

UNCLASSIFIED

TITLE--CORROSION RESISTANCE OF A STEEL ALUMINUM CLAD METAL -U-

PROCESSING DATE--02OCT70

AUTHOR-(05)-LEVIN, A.I., ESHCHENKO, V.F., LAZAREV, V.F., ZASUKHA, P.F., KORSHCHIKOV, V.D.

COUNTRY OF INFO--USSR

SOURCE--ZASHCH. METAL. 1970, 6(1), 39-41

DATE PUBLISHED--------70

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

TOPIC TAGS--CORROSION RESISTANCE, METAL CLADDING, COLD ROLLING, ALUMINUM, STEEL, BIMETAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/0751

STEP NO--UR/0365/70/006/001/0039/0041

CIRC ACCESSION NO--AP0111944

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2/2 033 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0111944

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CORROSION RESISTANCE OF AL CLAD STEEL WAS TESTED IN 3PERCENT NACL AND 0.5PERCENT NAOH SOLNS. THE CLAD METALS (TOTAL THICKNESS 1.2 MM) WERE OBTAINED BY COLD ROLLING AND THEN ANNEALING AT 560 PLUS OR MINUS 10DEGREES FOLLOWED BY SLOW COOLING TO 200DEGREES. AL USED FOR THE CLADDING LAYER CONTAINED FE 0.1, CU 0.007, TI 0.003, AND MN 0.01PERCENT AND THE THICKNESSES OF THE CLADDING LAYERS WAS 20-25, 40-45, 89-90, AND 130-140 MU. THE RESISTANCE OF THE CLADDING METAL ALONE (1.2 MM THICK) WAS ALSO INVESTIGATED; STEADY STATE POTENTIALS WERE RECORDED FOR ALL CLAD METALS. THE MOST RESISTANT TO THE EFFECT OF THE MEDIUM WAS THE CLADDING METAL ALONE; DECREASE IN THE THICKNESS OF THE CLADDING METAL ALONE; DECREASE IN CLAD METAL CORROSION RESISTANCE; THIS CAN BE EXPLAINED BY THE PRESENCE OF SMALL AMTS. OF FE INCLUSIONS IN THE AL LAYER INTRODUCED MECH. DURING ROLLING AND BY DIFFUSION DURING HEATING.

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USSR UDC 621.771.08

ZASUKHA, P. F., KORSHCHIKOV, V. D., BUKHVALOV, O. B., and WEYSHOV, A. A.

"Bimetallic Rolled Products"

"Bimetallicheskiy Prokat" [English Version Above], Moscow, Metallurgiya Press, 1971, 264 pages

Translation of Annotation: This book presents the properties and area of application of bimetallic rolled products made from steel and non-ferrous metals.

The results of theoretical and experimental studies of the process of joint plastic deformation of dissimilar metals, the specifics of bonding of the metals, and the effect of technological factors on the bonding strength of the layers and the mechanical and operational properties of bimetals are studied. Parameters of the technology and equipment for production of bimetals by the packet and roll methods in the hot, warm, and cold states are presented. Methods of quality control of bimetallic rolled products are described.

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USSR

ZASUKHA, P. F., et al., "Bimetallicheskiy Prokat," Moscow, Metallurgiya Press, 1971, 264 pages

The book is designed for engineering and technical workers of plants and scientific research and planning institutes involved in the development, production, and application of bimetallic materials. It may be useful to students and graduate students of technical schools.

108 figures; 59 tables; 183 biblio. refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

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ZASUKHA, P. F., et al., "Bimetallicheskiy Prokat," Moscow, Metallurgiya Press, 1971, 264 pages

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

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USSR

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR UDC 576.893.192.1(047)

AKINSHINA, G. T. and ZASUKHIN, D. N., Toxoplasmosis Laboratory, Department of Natural Focus Diseases, Institute of Epidemiology and Microbiology imeni N. F. Gamaleya, Academy of Medical Sciences USSR

"New Data on Toxoplasmosis. 1. The Agent of Toxoplasmosis. Review of the Literature"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, No 5, 1971, pp 608-614

Abstract: A detailed survey is presented of recent Soviet and foreign publications under the following headings: (a) morphology of Toxoplasma; (b) movement of Toxoplasma and penetration of cells; (c) multiplication of Toxoplasma; (d) developmental cycle of Toxoplasma; (e) cytochemical and biochemical study of Toxoplasma; (f) culturing Toxoplasma and maintaining laboratory strains (including a brief discussion of a method developed by the authors for cloning Toxoplasma based on tissue culture technique); (g) taxonomic position of Toxoplasma.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--DEVELOPMENT OF INVASION IN CHICK EMBRYOS INOCULATED WITH TOXOPLASMA OF LOW VIRULENCE. COMMUNICATION I -U-

AUTHOR-(02)-SAVINA, M.A., ZASUKHIN, D.N.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL 39, NR 3, PP 278-282

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TOXOPLASMA, INOCULATION, MOUSE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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CIRC ACCESSION NO--AP0125928

UNCLASSIFIED

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2/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125928

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT HAS BEEN SHOWN THAT IN TISSUES OF CHICK EMBRYOS MULTIPLICATION OF TOXOPLASMA OF LOW VIRULENCE AND THEIR DISSEMINATION FROM THE PRIMARY FOCUS OF MULTIPLICATION OCCURS AS SLOWLY AS IN THE ORGANISM OF ADULT MAMMALS (MICE) WITH HIGH REACTIVITY. UPON INOCULATION ON THE CHORIOALLANTOIC MEMBRANE, INTO THE YOLK SAC OR EMBRYO, EMBRYONAL MEMBRANES ARE INVADED FIRST OF ALL WHICH IS CONFIRMED MICROSCOPICALLY ON THE 5TH POSTINOCULATION DAY. IN EMBRYONAL VISCERA TOXOPLASMA ARE DEMONSTRABLE MICROSCOPICALLY 6 DAYS AFTER INOCULATION. THE INTENSITY OF INVASION OF MEMBRANES AND VISCERA INCREASES WITH TIME REACHING THE MAXIMUM BY 10-14TH DAY AFTER INOCULATION. OWING TO LONGER MULTIPLICATION OF PROLIFERATIVE FORMS OF TOXOPLASMA IN CHICK EMBRYOS THAN IN MICE, THE EXTENT OF INFECTION OF EMBRYONAL TISSUES IS MUCH HIGHER THAN THAT IN MICE OR OTHER ANIMALS. CYSTS OF TOXOPLASMA FORM IN THE VISCERA AND BRAIN OF CHICK EMBRYOS 7 DAYS AFTER INOCULATION. IN 10-12 DAYS CYSTS CAN BE FOUND IN A CONSIDERABLE NUMBER OF IMPRESSIONS OF EMBRYONAL MEMBRANES, BRAIN AND OTHER ORGANS. FORMATION OF CYSTS OF TOXOPLASMA IN THE VISCERA AND MEMBRANES OF CHICK EMBRYOS IN THE ABSENCE OF HUMORAL IMMUNITY SHOULD BE CONSIDERED AS A NECESSARY PART OF THE BIOLOGICAL CYCLE OF TOXOPLASMA DEVELOPMENT. FACILITY: LABORATORYIA TOKSOPLASMOZA, INSTITUTE EPIDEMIOLOGII I MIKROBIOLOGII IM. N. F. GAMALYEI, AMN SSSR, MOSKVA.

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USSR

UDC 574.24

ZASUKHINA, G. D., NESMASHNOVA, V. A. and L'VOVA, G. N., Institute of Poliomyelitis and Viral Encephalitides, USSR Academy of Sciences, Moscow

"The Role of the Reparative Cellular Mechanism in Spontaneous and Induced Mutations in Vertebrate Viruses"

Moscow, Doklady Akademii Nauk SSSR, Vol 212, No 1, 1973, pp 223-225

Abstract: The principles of the mutation process, both spontaneous and induced by methylmethane sulfonate in Western Equine Encephalitis (WEE) virus in cells with active and defective reparative systems were studied. Syrian hamster kidney cells were used to grow the virus and small-plaque mutations were measured. It was found that while mutations in the defective cells progressively increased to a large level, those in the active cells remained constant and small. The mutagen methylmethane sulfonate was also more effective in the defective cells. These results are said to indicate that the reparative mechanism exerts a specific effect on the mutation process in WEE virus.

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Microbiology

USSR

UDC 575.111:575.24:576.858

FROLOVA, M. M., ZASUKHINA, G. D., and RAPOPORT, I. A., Institute of Poliomyelitis and Viral Encephalitides, Academy of Sciences USSR, and Institute of Chemical Physics, Academy of Sciences USSR, Moscow

"Variability of Chikungunya Virus. II. Characteristics of Induced Mutagenesis in Plaque Mutants of Chikungunya Virus"

Moscow, Genetika, No 9, 1971, pp 169-174

Abstract: Plaque mutants of Chikungunya virus differed in sensitivity to the inactivating effect of the mutagens ethyleneimine and chloroethyleneimine. For example, the small-plaque mutant was 10 times more resistant than the large-plaque mutant. The yield of variants differing in virulence for mice varied with the dose of the particular alkylating agent used. High concentrations of ethyleneimine produced the maximum number of mutants pathogenic for mice, but low concentrations of chloroethyleneimine were required for the same effect. Neither agent induced mutations affecting the size of the plaques.

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USSR

UDC 576.858.095.57

ZASUKHINA, G. D.

Mutagenez Virusov Cheloveka i Zhivotnykh (Mutagenesis of Human and Animal Viruses), Moscow, "Meditsina," 1971, 180 pp

Translation: Annotation: This monograph is devoted to three basic problems: the mechanisms for realizing the genetic markers of viruses, and spontaneous and induced mutagenesis of human and animal viruses. An attempt is made to classify the genetic markers of human and animal viruses and, using the example of one genetic marker, plaque size, the numerous factors which affect manifestation of this marker are reviewed. Also the relationship between the marker of plaque size and other genetic marker in vivo and in vitro is demonstrated.

In this section on spontaneous mutagenesis of viruses, there is a review of possible factors affecting the rate and nature of spontaneous mutation in viruses; data are given on spontaneous mutagenesis of viruses under natural conditions of circulation of the agent and during passaging of viruses in vivo and in vitro.

In the section on induced mutagenesis of viruses, consideration is given to the general principles of action of mutagents. Here there is a classification

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

ZASUKHINA, G. D., Mutagenez Virusov Cheloveka i Zhivotnykh (Mutagenesis of Human and Animal Viruses), Moscow, "Meditsina," 1971, 180 pp

of the most important chemical and physical mutagens, and the molecular mechanisms of their interaction with genetic material is explained. Some results of general significance obtained in reference to induced mutagenesis of phages and some microorganisms are extrapolated to human and animal viruses. A summary of results of use of various mutagens of human and animal viruses is presented, principles of this process for different viruses are discussed, and a genetic description of induced variations is given.

Materials characterizing the effect of various mutagens and their effect depending on the genotype of the object, all considered under the heading "specific nature of mutagen action," are presented. The author's assessments as to the prospects of utilizing various mutagens are given.

A special section of the book is devoted to questions of repairing genetic damage. Basic repair systems discovered in microorganisms and in vertebrate cells photoreactivation and dark repair are described. Possibilities of studying this question with human and animal viruses whose systems for restoring lethal and premutation injuries have not yet been studied are presented.
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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

ZASUKHINA, G. D., Mutagenez Virusov Cheloveka i Zhivotnykh (Mutagenesis of Human and Animal Viruses), Moscow, "Meditsina," 1971, 180 pp

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

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ZASUKHINA, G. D., FROLOVA, M. M., and LEVKOVICH, Ye. N., Institute of Poliomyelitis and Virus Encephalitis, Academy of Medical Sciences USSR, Moscow

"Investigation of the Effect of Guanidine on the Replication of Chikungunya Virus"

Moscow, Voprosy Virusology, No 6, Nov/Dec 70, pp 735-736

Abstract: The inhibitory effect of guanidine on variants of the Chikungunya virus was studied. One variant (S^+) included 10-13% of platelets 3-4 mm in diameter and the remainder 1-mm platelets. The second variants (S^-) was homogeneous (1-mm platelets) and stable in passages in chick embryo tissue cultures. The two variants were affected differently by various guanidine concentrations. Guanidine increased the number of platelets formed by both variants in old tissue cultures, perhaps as a result of the effect of guanidine on the antivirus activity of interferon. The effect of guanidine on platelet size is regarded as being related to the characteristics of virus replication in the presence of guanidine.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR UDC 576.858.25.095.5

ZASUKHINA, G. D., and MARININA, V. P., Institute of Poliomyelitis and Virus Encephalitides, Academy of Medical Sciences USSSR, Moscow

"Conditions for the Formation of Small-Plaque Phenotypes of Chikungunya Virus"

Moscow, Voprosy Virusologii, No 1, Jan/Feb 71, pp 56-61

Abstract: Variations in plaque size of large-plaque and small-plaque mutants of Chikungunya virus in cell cultures from chick embryos were studied under the effect of a number of factors. An attempt was made to determine why small plaques forming in 10-13% of S^+ mutant cultures cannot be transformed into larger plaques. It was found that there is a considerable difference in the reproduction cycle of small and large plaques. Differences in the formation of small plaques of hereditary and nonhereditary nature are primarily due to an uncreased virus yield and secondarily to lengthening of the reproductive cycle. Moreover, the formation of small plaques in old cells was connected with sensitivity of the virus to interferon. Also, high cell concentrations led to the formation of small-plaque phenotype Chikungunya virus. This is different from Sindbis virus, another Group A arbovirus.
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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

ZASUKHINA, G. D., and MARININA, V. P., Voprosy Virusologii, No 1, Jan/Feb 71, pp 56-61

Virus clones isolated from small plagues of nonhereditary nature had a longer reproductive cycle than those isolated from large plaques. It was established that the plaque size of the S^+ and S^- mutants varied with the composition of the growth medium, host cells, cell concentration and incubation temperature.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

UDC 576.858.2

USSR

ZASUKHINA, G. D. and CHEKOVA, V. V., Institute of Poliomyelitis and Viral Encephalitides, Academy of Medical Sciences USSR, and Institute of Chemical Physics, Academy of Sciences USSR, Moscow

"Repair of Some Genetic Injuries in RNA-Containing Virus in Relation to Type of Cell"

Moscow, Doklady Akademii Nauk SSSR, No 2, 1971, pp 457-459

Translation: Tickborne encephalitis virus treated with ethylenimine (1:10,000) was titrated in chick embryo (CE) and pig embryo kidney (PEK) cells. The survival rate of the virus was found to be one order higher in the PEK cells than in the CE cells, whereas the titers of control, untreated virus differed by no more than 0.1 to 0.2. Apparently some of the sublethal injuries to the virus caused by the mutagen are repaired in the PEK cells but not in the CE cells. The existence of a more active repair system in the PEK cells implies that the original viral characteristics are more stable in these cells or in the presence of

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

ZASUKHINA, G. D. and CHEKOVA, V. V., Doklady Akademii Nauk SSSR, No 2, 1971, pp 457-459

extracts from these cells. To test this assumption, mice were peripherally infected with a nonpathogenic strain of tickborne encephalitis virus. Spontaneous mutations with respect to the formation of a peripherally active phenotype occurred during 3 passages in CE cells but not in PEK cells or in CE cells in the presence of extracts from PEK cells.

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1/2 029 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--PHOTOMETRIC CHARACTERISTICS OF WHITE TITANIUM ENAMELS IN RELATION TO COOKING AND FIRING CONDITIONS -U-

AUTHOR-(03)-ZASUKHINA, L.Z., SMIRNOVA, G.P., PEYZNER, B.Z.

COUNTRY OF INFO--USSR

SOURCE--STEKLO KERAM. 1970, 27(2), 27-9

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--TITANIUM, ENAMEL, PHOTOMETRIC ANALYSIS, OPTIC BRIGHTNESS, MATERIAL TESTING EQUIPMENT/(U)FB2 PHOTOELECTRIC BRIGHTOMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1258 STEP NO--UR/0072/70/027/002/0027/0029

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2/2 029 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0116720

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PHOTOMETRIC CHARACTERISTICS OF A LARGE NO. OF TI ENAMELS OF KNOWN COMPNS. AS WELL AS AS A NO. OF OTHER COATINGS WERE STUDIED, BOTH OF DOMESTIC AND OF FOREIGN ORIGIN. THE MEASUREMENTS WERE MADE WITH A PHOTOELEC. BRIGHTOMETER FB-2, AND THE BRIGHTNESS COEFF. WAS MEASURED. FROM THE DATA OBTAINED IT FOLLOWS THAT THE DIFFUSE REFLECTION COEFF. CANNOT SERVE AS THE INDICATOR FOR THE WHITENESS OF ENAMEL COATINGS. THE CHARACTERISTICS OF SOME OF THE BEST DOMESTIC AND FOREIGN ENAMELS ARE NOTED. THE COLOR CHARACTERISTICS OF TI ENAMELS WERE MEASURED ALSO ON PLATELETS PREPD. FRLM FRITS OBTAINED FROM VARIOUS DOMESTIC AND FOREIGN FIRMS. IT IS OBVIOUS THAT THE HIGH WHITENESS AND THERMAL STABILITY OF THE COLOR INDEXES OF ENAMEL COATINGS CAN BE ACHIEVED ONLY BY A COMPLEX OF MEASURES: HIGH QUALITY RAW MATERIALS, STRICT CONTROL OF THE PRODUCTION CONDITIONS OF THE ENAMELS, AND THE FIRING CONDITIONS OF THE COATINGS. THERMAL STABILITY OF PHOTOMETRIC CHARACTERISTICS OF TI ENAMELS CAN BE ACCOMPLISHED BY THE INTRODUCTION OF CERTAIN STABILIZING MICRO ADDNS. FACILITY: LENINGRAD. TEKHNOL. INST. IM. LENSOVETA, LENINGRAD, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 030 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--THE TRANSPARENCE OF WINDOWS FROM LITHIUM FLUORIDE IN VACUUM ULTRAVIOLET RADIATION SOURCES -U-

AUTHOR-(02)-ZASYPKINA, M.A., KIRICHENKO, A.P.

COUNTRY OF INFO--USSR

SOURCE--LENINGRAD, OPTIKO-MEKHANICHESKAYA PROMYSHLENNOST', NO 2, FEB 70, PP 6-10

DATE PUBLISHED----FEB 70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--OPTIC WINDOW, LITHIUM FLUORIDE, UV RADIATION, LIGHT TRANSMISSION, SURFACE FILM, VACUUM OIL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1584 STEP NO--UR/0237/70/000/002/0006/0010

CIRC ACCESSION NO--AP0118567

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

2/2 030 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118567

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY WAS MADE OF CHANGES IN THE TRANSPAENCE OF WINDOWS FROM LITHIUM FLUORIDE IN THE SOURCES OF VACUUM ULTRAVIOLET. IT WAS ESTABLISHED THAT THE TIME DURING WHICH THE WINDOWS ARE TRANSPARENT IS BASICALLY DETERMINED BY THE FORMATION ON THEM OF AN OILY FILM AND A CHANGE IN ITS PROPERTIES UPON IRRADIATION. UNDER THE CONDITIONS WHERE THE INFLUENCE OF OIL IS EXCLUDED THE TRANSPARENCE OF THE WINDOWS IS SATISFACTORY FOR OVER 150 HOURS. IN THIS CASE THE MAIN REASON OF THE IMPAIRMENT OF TRANSPARENCE IS AN ULTRAVIOLET RADIATION WITH WAVELENGTHS SHORTER THAN 105 NMU.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

UNCLASSIFIED PROCESSING DATE--23OCT70

1/2 017

TITLE--KINETICS OF SODIUM DISSOLUTION IN A SODIUM CHLORIDE MELT DURING DILUTION OF THE METALLIC PHASE WITH LEAD -U-

AUTHOR-(05)-BUSSEMACHUKAS, V.B., KUBASOV, V.L., STATSENKO, S.I., MALANINA, I.B., ZATELSKIY, S.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(2) 280-4

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ELECTROLYSIS, SODIUM CHLORIDE, SOLUBILITY, SODIUM, LEAD, ELECTRIC CURRENT, CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/0915 STEP NO--UR/0080/70/043/002/0280/0284

CIRC ACCESSION NO--AP0053842

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

2/X 017 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0053842

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DISSOLN. RATE OF NA FROM NA-PB LIQ. MIXTS. OF A 1-10 WT. PERCENT NA CONCN. IN AN AGITATED NACL MELT WAS STUDIED EXPTL. IN THE PRESENCE OF CL AT 850DEGREES. THE DEPENDENCE OF THE CURRENT D. OF NA DISSOLN. (I) IN A-CM PRIME2 ON THE NA CONCN. IN THE NA-PB MIXT. IN WT. PERCENT (C) WAS DETD. AS I EQUALS 0.0095C PRIME2. THE CURRENT EFFICIENCY OF THE ELECTROLYSIS OF THE NACL MELT WITH A PB CATHODE IN PERCENT (A) WAS CALCD. AS A EQUALS 100-0.95C PRIME2-I SUBT, WHERE I SUBT IS THE TOTAL CURRENT D. IN A-CM PRIME2. THE CALCNS. AGREE WITH EXPT. PROVING THE FACT THAT CURRENT LOSSES ARE PRIMARILY DETD. BY THE REVERSE DISSOLN. OF NA IN THE NACL MELT AND BY THE REACTION WITH CL.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

UDC: 621.317.743

USSR

MOVCHAN, S. P., ZATENKO, N. A., and KONONENKO, K. I.

"Waveguide Gas Discharge Indicator of UHF Power Transmission"

Moscow, Radiotekhnika i Elektronika, Vol. 15, No. 3, 1970, pp 501-504.

Abstract: An experimental article describing a method for indicating microwave power based on the interaction of an electromagnetic field and a plasma gas discharge. By using an indicator in the form of a waveguide section hermetically sealed with mica or ceramic windows, the authors succeeded in avoiding the defects connected with the glass vessels used by earlier investigators. These defects are: additional reflection of uhf power from the glass; change of field structure in the waveguide strip; uhf power losses due to radiation in the gaps between the tube and openings in the waveguide wall; reduction in the limiting sensitivity of the gas discharge indicators due to uhf power losses in the glass envelope; the variation of the sensitivity with the a-

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

MOVCHAN, S. P., et al, Radiotekhnika i Elektronika, Vol 15, No 3, 1970, pp 501-504.

Abstract:

symmetry of the glass vessel and its method of preparation. A drawing of the external view and block diagram of the equipment is given. Three indicators of this type, differing in the distance between anode and cathode (40, 50, and 60 mm) were tested. The results of these tests and their explanation are given. The dependence of the indicator sensitivity on the magnitude of the discharge current was found for a discharge current variation from 0.1 to 10.0 ma in traveling as well as standing wave modes. Optimal sensitivity was observed at current discharge values of 250-750 μa for several gases in a pressure interval of 1-10 mm Hg. The sensitivity of the indicator depends on the type of gas and the pressure. Gases tested were neon and argon.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

UDC: 539.3:534.231.1

ZATEYEV, V. B.

"Experimental Study of the Diffraction of a Transverse S Wave of Stress on Circular Apertures"

Sb. Tr. Mosk. Inzh.-Stroit. In-t [Collected Works of Moscow Institute of Construction Engineering], 1972, No 104, pp 50-55 (Translated from Referativnyy Zhurnal Mekhanika, No 12, 1972, Abstract No 12V130, by V. D. Kubenko)

Translation: A method is studied for exciting shear stress waves in flat models of optically active materials and the diffraction of waves on circular apertures in a plate is studied. It is suggested that the S waves by produced by detonation of a microcharge (lead azide) at the end of a metal rod glued to the end of the thin plate. This excites a compression wave and a shear wave in the plate, which separate at some distance from the edge of excitation. In studies of the diffraction of shear waves on apertures, the distance between the leading edges of the P and S waves reached 2.5 λ_P (where λ_P is the length of the compressive wave). The radius of the aperture a varied from 10 to 30 mm, the characteristic parameter a/λ_H (where λ_H is the length of the loading phase of the wave) -- from 0.91 to 2.73, i.e., the

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

Zateyev, V. B., Sb. Tr. Mosk. Inzh.-Stroit. In-t, 1972, No 104, pp 50-55.

diffraction of relatively short waves was studied. Qualitative agreement of experimental results with known theoretical studies was achieved. Six biblio. refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR UDC 681.3.06:51

ANTONENKO, M. G., KOZHURIN, F. D., SHVETS, N. Ya., ZATINATSKIY, P. A., BALANDINA, Zh. I.

"One Method for Input of Information Files to Data Processing Systems"

Tsifr. Vychisl. Tekhnika i Programmir. [Digital Computer Equipment and Programming -- Collection of Works], No 6, Moscow, Sovetskoye Radio Press, 1971, pp 161-168, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V603 by the authors).

Translation: Problems are analyzed, related to the organization and input of information files to modern data processing systems. One method of external sorting is presented -- the method of characteristic phrases. Two algorithms are presented, based on the utilization of the ideas of the method of characteristic phrases. Formulas are produced for calculation of the number of runs through a file being sorted. The area of effective utilization of the algorithms is defined.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR UDC 621.382.3

ZVYAGIN, V.I., SUNEP, YU. I., ZATCLOKA, S.I., YEGOROV, A.I., AKMENTYN'SH, YA.YA., PUNDUR, P.A.

"Determination Of The Effectiveness Of Collecting Charge Carriers In Semiconductor Devices"

Elektron. tekhnika. Nauchno-tekhn. sb. Mikroelektronika (Electronic Technology. Scientific-Technical Collection. Microelectronics), 1970, Issue 2(23), pp 67-70 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4B233)

Translation: The method described for determination of the effectiveness of collection of non-equilibrium carriers in various regions of a silicon planar transistor involves measurement of the charge collected by a p-n junction. Corresponding measurements are conducted on a KT331 device before and after irradiation by nuclear radiation. Formulas are given which connect the effectiveness of collection with the volume life time of non-equilibrium charge carriers. Author's abstract.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

UDC: 533.697

ZATOLOKA, V. V., ZUDOV, V. N., SHUMSKIY, V. V., Institute of Theoretical and Applied Mechanics, Siberian Department of the Academy of Sciences of the USSR, Novosibirsk

"Engineering Analysis of Flat Asymmetric Nozzles in the Case of Supersonic Velocity at the Input"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Tekhnicheskikh Nauk, No 13(208), Issue 3, Oct 72, pp 42-46

Abstract: The authors discuss the design of asymmetric flat nozzles with supersonic velocity at the intake as used in hypersonic ramjet engines. Nozzles are considered which produce maximum thrust for a given length when used in engines with fuel combustion in a supersonic flow.

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EQUIPMENT
Aeronautical

UDC: None

USSR

ABRAMOV, Ye. I., BROTSKIY, A. N., BURTSEV, V. A., ZATOLOKIN, A. S., ZUBKOVA, T. I., and SMIRNOV, N. P.

"Hydraulic Damper for an Aircraft Flutter Model"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 27, 1971, p 119, No (11)351001

Abstract: The body of this device contains a rotor with a controlling valve and a charge-compensating device. By having this device in the form of an elastic membrane which converts into a sealing ring between the body and a hood filled with a transparent material, the size and weight of the damper can be reduced. A cross sectional drawing of the device is shown.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 022 UNCLASSIFIED

TITLE--VINYL ARYL ETHERS -U- PROCESSING DATE--13NOV70

AUTHOR-(04)-LEVCHENKO, A.I., MOROZ, R.A., ZATOLOKIN, E.I., SMINYCH, V.V.

COUNTRY OF INFO--USSR

SOURCE--GER. OFFEN. 1,802,602

DATE PUBLISHED--21MAY70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, CHEMICAL PATENT, ETHER, DIELECTRIC PROPERTY, POLYMERIZATION, NAPHTHENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/1771 STEP NO--GY/0000/70/000/000/0000/0000

CIRC ACCESSION NO--AA0132037

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

2/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0132037

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VINYL EHTERS OF AROMATIC COMPDS. WERE PREPD. BY REACTION OF AR(R)USBN (WHERE AR EQUALS ARYL; R EQUALS OH, SO SUB3 H, NH SUB2, OR HALOGEN; AND N EQUALS 1-2) WITH CAC SUB2 IN H SUB2 O AND AN ORG. SOLVENT AT 170-220DEGREES AND 20-70 ATM IN THE PRESENCE OF CUCL SUB2 (WHEN R EQUALS HALOGEN) AND KOH OR NAOH. THUS, 5 AMINOACENAPHTHENE 33.8, KOH 11.2, AND CAC SUB2 64 G IN 52 ML H SUB2 O AND 100 ML C SUB6 H SUB6 WAS HEATED TO 195-200DEGREES WITHIN 3 HR AND KEPT 18 HR AT 195-200DEGREES WHILE THE PRESSURE ROSE TO A MAX. OF 43 ATM AND THEN FELL TO 32 ATM. TO GIVE 71.4PERCENT 5 (VINYLOXY)ACENAPHTHENE. OTHER ETHERS PREPD. INCLUDED 5,6 BIS(VINYLOXY)ACENAPHTHENE, 3(VINYLOXY)PHENANTHRENE, AND 2,7 BIS (VINYLOXY)FLUORENE. ON HEATING, THE VINYL ETHERS EASILY FORM HEAT STABLE POLYMERS OF HIGH DIELEC. VALUES. FACILITY: KHARKOV POLYTECHNIC INSTITUTE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

Radiation Chemistry

USSR

UDC 541.15

MURATBEKOV, M. B., ZATONSKIY, S. V., and SARAYEVA, V. V., Moscow State University imeni ~~M. V. Lomonosov~~

"The Effect of Charged-Particle Acceptors on the Gamma-Radiolysis of 2,2,4--Trimethylpentane (Isooctane)"

Moscow, Khimiya Vysokikh Energiy, Vol 5, No 2, Mar-Apr 71, pp 134-139

Abstract: A study was carried out of the effect of addition of nitrous oxide (N_2O) as an acceptor of electrons, and of ammonia as an acceptor of protons, on γ-radiolysis of Isooctane. The results obtained led to a conclusion that during the decomposition of secondary excited molecules found in ion-electron neutralization in which the C-C bonds are broken, both free radicals and stable products are formed. The secondary excited molecules yield primarily atomic hydrogen and Isooctyl radicals, while the "molecular" isomeric octenes are the products of primary excited molecules. During radiolysis of Isooctane molecular ions incapable of transferring a proton to ammonia are formed in considerable quantities. It was assumed that such ions have their charge located on the quaternary carbon atom.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 034 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--FORMATION OF CHARGED AND EXCITED PARTICLES IN COLLISIONS BETWEEN NOBLE GAS IONS OR ATOMS AND HYDROGEN MOLECULES -U-

AUTHOR-(05)-POLYAKOVA, G.N., GUSEV, V.A., YERKA, V.F., FOGEL, YA.M., ZATS, A.V.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORI Y FIZIKI, 1970, VOL 58, NR 4, PP 1186-1196

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--EXCITATION CROSS SECTION, F COLLISION, GAS IONIZATION, HYDROGEN, EMISSION SPECTRUM, INERT GAS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1485 STEP NO--UR/0056/70/058/004/1186/1196

CIRC ACCESSION NO--AP0106241

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

UNCLASSIFIED PROCESSING DATE--23OCT70

2/2 034

CIRC ACCESSION NO--AP0106241

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTIVE CROSS SECTIONS FOR H SUB2 PRIME POSITIVE AND H PRIME POSITIVE PRODUCTION IN COLLISIONS BETWEEN 3-40KEV HE, NE AND AR IONS OR ATOMS AND H SUB2 MOLECULES ARE MEASURED BY THE MASS SPECTROMETER TECHNIQUE. THE EFFECTIVE CROSS SECTIONS FOR THE H SUBALPHA AND H SUBBETA EXCITED LINES OF THE BALMER HYDROGEN SERIES AND FOR SOME SPECTRAL LINES OF HE, NE AND AR ATOMS AND IONS ARISING IN COLLISIONS BETWEEN 0.1-30 KEV ATOMS AND IONS OF THE SAME NOBLE GASES AND H SUB2 MOLECULES ARE MEASURED BY THE MASS SPECTROSCOPIC TECHNIQUE. THE RESULTS OF THE MEASUREMENTS SHOW THAT MANY SIGNA (UPSILON) CURVES (SIGMA IS THE EFFECTIVE CROSS SECTION FOR A CERTAIN COLLISION PROCESS AND UPSILON IS THE RELATIVE VELOCITY OF THE COLLIDING PARTICLES) EXHIBIT PEAKS IN THE REGION OF SMALL IMPINGING PARTICLE ENERGIES. THE PEAKS CANNOT BE EXPLAINED ON THE BASIS OF THE MASSEY ADIABATIC CONDITION. POSSIBLE CAUSES OF THE PEAKS ARE DISCUSSED.

FACILITY: FIZIKO-TEKHNICHESKIY INSTITUT AN UKRAINSKOY SSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

UDC 531.781.2.088:681.33

USSR

LASEVICH, L. G., SHKOL'NIKOV, M. B., SHNEYDER, I. A., and ZATS, G. Ya.

"Algorithm of Primary Processing of Results of Multiple-Point Static Strain Measuring for the Electronic Digital Computer 'Minsk-22' "

Tr. Tsentr. N.-I. Avtomob. i Avtomotor. In-ta / Works of the Central Scientific Research Automobile and Automobile Engine Institute /, No 138, 1971, pp 47—61 (from Referativnyy zhurnal, Metrologiya i Izmeritel'naya Tekhnika, No 32. Single Issue No 1, 1972, Abstract No 1.32.585, Resume)

Translation : The algorithm of the program of automated processing of results of multiple-point static strain measuring on the electronic digital computer Minsk-22 is analysed. In the discussed program is realised a complex of mathematical and logical actions on readings of the tensometer by strain measuring of constructions. The automated processing permits: a). to calculate the magnitude of stresses recorded by each strain gage; b). to

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

USSR

LASEVICH, L. G., et al., Tr. Tsentr. N.-I. Avtomob. i Avtomotor. In-ta, No 132, 1971, pp 47-61

show and to compensate roughly erroneous measurements with assigned fiducial probability; c). to rate the source of insufficient accuracy of strain measuring with assigned fiducial probability; d). to calculate the rating of mathematical expectation of stresses recorded by each strain gaga; e). to calculate the fiducial interval of measured stresses. The use of electronic digital computer for processing of results of strain measuring permits to change radically the existing methods of processing. The rapid action of the electronic digital computer opens new potentialities for strain gaging and permits to carry out experiments on a higher level. Three illustr., five biblio. refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 019 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--ON THE ORIGIN OF COSMIC RAYS AT HIGH ENERGIES -U-

AUTHOR-(02)-BEREZINSKIY, V.S., ZATSEPIN, G.T.

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--ASTRONOMY,ASTROPHYSICS, ATMOSPHERIC SCIENCES

TOPIC TAGS--COSMIC RAY, METAGALAXY, PROTON, NEUTRINO

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605061/B07 STEP NO--HU/2506/70/029/000/0055/0058

CIRC ACCESSION NO--AT0144433

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

2/2 019 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AT0144433

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF HTE DIFFICULTIES FACED BY THEORIES ASSUMING ALL OBSERVED COSMIC RAYS TO BE OF METAGALACTIC ORIGIN. IT IS SHOWN THAT OBSERVED COSMIC RAYS AT ENERGIES APPROACHING OR EXCEEDING 3 TIMES 10 TO THE 18TH POWER EV CANNOT BE METAGALACTIC PROTONS. THE NEUTRINO HYPOTHESIS IS REVIEWED.

FACILITY: AKADEMIIA NAUK SSR, FIZICHESKII INSTITUT, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

1/2 030 UNCLASSIFIED

TITLE--LUBRICANTS FOR GLASS FIBERS FOR REINFORCEMENT OF LAMINATED PLASTICS -U- PROCESSING DATE--20NOV70

AUTHOR-(02)-GOLOSOVA, L.V., ZATSEPIN, K.S.

COUNTRY OF INFO--USSR

SOURCE--USSR. 265,369

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--05MAR70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--GLASS FIBER, ADHESION, LAMINATED PLASTIC, EPOXY RESIN, POLYVINYL ALCOHOL, WATERPROOFING, PATENT, GLASS LUBRICANT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1436 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128835

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5

UNCLASSIFIED PROCESSING DATE--20NOV70

2/2 030

CIRC ACCESSION NO--AA0128835

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. LUBRICANTS FOR GLASS FIBERS THAT INCREASE THEIR ADHESION TO VARIOUS BINDERS DURING PREPN. OF LAMINATED PLASTICS HAVE THE FOLLOWING COMPN.: H SUB2 O, SOL. EPOXY RESIN "89" 10-12, POLY(VINYL ALC.) (VISCOSITY 50-60 CP) 2.0-2.5, AN EMULSIFIER (E.G. TRIAMON) 1.4-1.6, WATERPROOFING COMPN. (E.G. NA ALUMINOMETHYLSILICONATE OF AL-SI RATIO 3:1) 0.8-2.0, AND H SUB2 O TO MAKE 100PERCENT BY WT.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720019-5"