"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 541.127 + 546.799

FROLOVA, L. M., TIMOFEYEV, G. A., and RYKOV, A. G.

"Kinetics of the Reaction of Uranium(IV)-Heptunium(VI) in Tributyl Phosphate Solutions"

Leningrad, Radiokhimiya, Vol 15, No 6, 1973, pp 867-868

Abstract: Results are reported of the study of reaction kinetics of the oxidation of uranium(IV) with neptunium(VI) ions. All of the reactions examined in TBP solutions showed that a change in the effective reaction rate constant with changing composition of the solvent is due to the change in entropy of activation. Going from aqueous solutions to the solutions of TBP only the apparent characteristics of the reaction are changed, not the energetic properties. It would seem that the reaction mechanism in water solutions and in TBP is identical.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR UDC 541.127 + 546.791.4

RYKOV, A. G., FROLOVA, L. M., and TIMOFEYEV, G. A.

"Investigation of the Oxidation-Reduction Reactions of Actinide Elements. XXIV. Kinetics of the Reaction Uranium(IV)-Iron(III) in Aqueous Isopropanol Solutions"

Leningrad, Radiokhimiya, Vol 15, No 6, 1973, pp 875-876

Abstract: The reaction rate of uranium(IV)-iron(III) is higher in aqueous isopropanol solution than in aqueous methanol or ethanol. The logarithm of the effective rate constant is related to the intensity of a band with charge transfer in the absorption spectrum of the cation oxidizer Fe^{3+}. The reduction-oxidation rate depends on the donor ability of the solvent -- the rate is higher with decreasing effective ionization potential of the solvent.

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USSR

UDC 537.591.5

VERNOV, S. N., GORCHAKOV, YE. V., TIMOFEYEV, G. A.

"Propagation of Solar Protons in an Environment With a Constant and Variable Transport Mean Free Path During Instantaneous Injection Near the Sun"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 12, Dec 71, pp 2423-2427

Abstract: Previous articles by the authors, using the Monte Carlo method, considered cases of the propagation of protons during their injection near the sun in an environment with a constant mean free path Λ = 0.1, 0.3, 1.0 AU. Now there are results of calculations with more statistics and for a larger set of values for Λ. These calculations, for Λ = 0.1, 0.3, 0.5, 0.75, 1.0 AU, confirmed the conclusion that long flares observed with a large anisotropy cannot be explained by instantaneous injection near the sun and subsequent propagation in an environment with a constant mean free path. If the transport mean free path depends on the distance, then even during instantaneous

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USSR.

VERNOV, S. N. et al, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 12, Dec 71, pp 2423-2427

injection the particles will be confined to the sun for a certain time. The attempt was made, by varying the value of β, to explain experimental data on low-energy proton flares. β values considered were 0.5, 1.0, 1.9. For all values the transport mean free path was taken to be equal to 1 AU at a heliocentric distance of 1 AU, permitting a large anisotropy. It was assumed that the regular magnetic field of the sun varies with distance as r^{-2}. The Monte Carlo method was used. The interaction of protons with inhomogeneities is described by giving the mean free path length and the mean inhomogeneity scattering angle.

The results indicate that with an increase in β there is an increase in the total duration of a flare and a delay in the onset of maximum intensity but, at the same time, a decrease in the anisotropy of the particle angle distribution. The most suitable

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VERNOV, S. N. et al, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 12, Dec 71, pp 2423-2427

variant of solar proton propagation to explain experimental data on long flares with a large anisotropy and prolonged growth front is one with a variable mean free path at $\beta = 1.9$.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC: 621.376.5

TIMOFEYEV, G. A.

"A Soft Submodulator for Test Stands"

Elektron. tekhnika. Nauchno-tekhn. sb. Tekhnol. i organiz. proiz-va (Electronic Technology. Scientific and Technical Collection. Production Techniques and Organization), 1970, vyp. 2(34), pp 97-100 (from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11D462)

Translation: The paper describes a soft submodulator for factory test stands. The device has a pulse amplitude of 0.2-2 kV and a pulse duration of 0.5-6 μsec. Triggering is by standard master oscillators type MGI-1, MGI-2, etc. The submodulator is designed for ignition by a current of 8-10 A by thyratrons in high-power linear modulators, and also for controlling the grid circuits of vacuum-tube modulators. Two illustrations. Resumé.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

UNCLASSIFIED

TITLE--ATMOSPHERIC EFFECT ON THE LONGITUDINAL DEPENDENCE OF ELECTRON INTENSITY IN AN ANOMALY REGION -U-

PROCESSING DATE--20NOV70

AUTHOR-(02)-GORCHAKOV, YE.V., TIMOFEYEV, G.A.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, GEOMAGNETIZM I AERONOMIYA, VOL X, NO 3, 1970, PP 423-427

DATE PUBLISHED--------70

SUBJECT AREAS--MATHEMATICAL SCIENCES, EARTH SCIENCES AND OCEANOGRAPHY, ATMOSPHERIC SCIENCES

TOPIC TAGS--DISTRIBUTION FUNCTION, ELECTRON, GEOMAGNETIC FIELD, KINETIC EQUATION, ADIABATIC APPROXIMATION, ATMOSPHERE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0530

STEP NO--UR/0203/70/010/003/0423/0427

CIRC ACCESSION NO--AP0132722

UNCLASSIFIED

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2/3 027

CIRC ACCESSION NO--AP0132722 UNCLASSIFIED PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A THEORETICAL STUDY WAS MADE OF CHANGE IN THE DISTRIBUTION FUNCTION OF ELECTRONS DRIFTING THROUGH THE GEOMAGNETIC FIELD ANOMALY FOR THE MAGNETIC SHELL L EQUALS 1.5. THE COMPUTATIONS WERE MADE FOR ELECTRONS WITH ENERGIES 0.5, 1.0 AND 2.5 MEV. THE PROBLEM WAS SOLVED USING A KINETIC EQUATION IN AN ADIABATIC APPROXIMATION. THE COLLISION INTEGRAL TAKES INTO ACCOUNT ONLY SMALL CHANGES IN THE ELECTRON PITCH ANGLE DURING AN ELEMENTARY EVENT. CHANGES IN ELECTRON ENERGY ARE NOT TAKEN INTO ACCOUNT BECAUSE SIMILAR COMPUTATIONS, MADE EARLIER, REVEALED THE ABSENCE OF SIGNIFICANT ENERGY CHANGES DURING THE TIME OF ELECTRON DRIFT THROUGH THE ANOMALY. THE INITIAL DISTRIBUTION USED IN THE COMPUTATIONS WAS A FUNCTION WITH A WELL EXPRESSED MAXIMUM (HALF WIDTH SIMILAR TO 200 KEV). AS TIME PASSED THE MAXIMUM WAS DISPLACED BY SIMILAR TO 20 KEV TOWARD THE HIGHER ENERGIES. THE COLLISIONS INTEGRAL WAS AVERAGED FOR THE PERIOD OF ELECTRON OSCILLATION ALONG A LINE OF FORCE. FIG. 3A IN THE TEXT SHOWS THE LONGITUDINAL DEPENDENCE OF THE ELECTRON DISTRIBUTION FUNCTION FOR FIXED H SUBMIN EQUALS 100, 200, 300 AND 500 KM FOR THE ENERGIES E EQUALS 0.5, 1.0 AND 2.5 MEV. IT IS SHOWN THAT THE DIFFERENCE IN THE DISTRIBUTION FUNCTION AT THE CENTER OF THE ANOMALY AND OUTSIDE IT IS DEPENDENT ON ELECTRON ENERGY AND THE PARAMETER H SUBMIN OF THE DRIFT TRAJECTORY. THE GREATEST DIFFERENCE IS OBSERVED FOR LOW ENERGIES AND ALTITUDES H SUBMIN.

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3/3 027 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132722

ABSTRACT/EXTRACT--FOR EXAMPLE, FOR E EQUALS 0.5 MEV THE DISTRIBUTION FUNCTION OUTSIDE THE ANOMALY EXCEEDS THE DISTRIBUTION FUNCTION AT THE CENTER OF THE ANOMALY BY A FACTOR OF 2.5, 5.5 AND 20 ON TRAJECTORIES H SUBMIN EQUALS 500, 300 AND 200 KM RESPECTIVELY. FOR E EQUALS 2.5 MEV THE DIFFERENCE BECOMES APPRECIABLE (BY A FACTOR OF SIMILAR TO 3) ON THE DRIFT TRAJECTORY H SUBMIN EQUALS 200 KM. THE GREATEST DIFFERENCE IS OBSERVED FOR THE DRIFT TRAJECTORY WITH H SUBMIN EQUALS 100 KM, WHERE THE DISTRIBUTION FUNCTION CHANGES BY AN ORDER OF MAGNITUDE IN THE LONGITUDE RANGE 10-15DEGREES. FIGURE 3B IN THE TEXT SHOWS THE DEPENDENCE OF THE ELECTRON DISTRIBUTION FUNCTION WITH E EQUALS 1 MEV FOR THE SAME DRIFT TRAJECTORIES, BUT IN A DIPOLE FIELD DISPLACED BY 500 KM IN THE EQUATORIAL PLANE. COMPARISON OF FIGURES 3A AND B REVEALS THAT THE MENTIONED CHARACTERISTICS OF THE LONGITUDINAL DEPENDENCE OF THE ELECTRON DISTRIBUTION FUNCTION ARE VALID FOR DIFFERENT ELECTRON DRIFT TRAJECTORIES. FACILITY: NUCLEAR PHYSICS INSTITUTE, MOSCOW STATE UNIVERSITY.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 621.317.7.087.92-932

DMITRIYEV, V. I., IVANOV, I. N., TIMOFEYEV, G. A.

"Convertors of Pulse Repetition Frequency to Direct Current"

USSR Author's Certificate No 293296, Filed 23/04/66, Published 18/03/71, (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, 1971, Abstract No 11 A188 P).

Translation: This invention can be used in measuring systems and automatic regulation systems containing sensors with a frequency output signal. A device is known which converts a frequency to a direct current, containing a dosing condensor connected to the switch of a circuit which limits the charge and with charging and discharging circuits of the condensor, one of which includes an integrating condensor and a parallel load resistor connected to it. The purpose of the invention is to increase the accuracy and speed of this device, eliminate the dependence of the output current on load resistance, increase the maximum power transmitted to the load, and produce an output signal consisting of a direct current voltage, regardless of the load impedence. This purpose is achieved by connecting a threshold element to the integrating condensor, connecting one input of a phase-sensing element to the output of the threshold device, connecting the second input to the output of the entire device, and connecting the output of the phase-sensing element through a

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USSR

UDC 621.317.7.087.92-932

DMITRIYEV, V. I., IVANOV, I. N., TIMOFEYEV, G. A., USSR Author's Certificate No 293296, Filed 23/04/66, Published 18/03/71.

resistor to the integrating condensor. In order to produce a linear functional characteristic, an amplitude comparater is used as the threshold element, the second input of which is connected to the output of the phase-sensing element through a feedback circuit. 1 Figure.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC: 621.318.57:621.382

TIMOFEYEV, G. D., State Union-Wide Planning Office for Computer Design

"A Transistorized Key"

USSR Author's Certificate No 251618, filed 20 May 68, published 3 Feb 70 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 70, Abstract No 11A33 P)

Translation: This Author's Certificate introduces a transistorized key based on inversely connected transistors. To reduce the output impedance and the residual voltage across the transistor, the key contains a second inversely connected transistor whose emitter is connected to the output of the key and, through a resistor, to the emitter of the first transistor, while the bases of both transistors are connected together. One illustration. V. M.

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USSR

TIMOFEYEV, G. I.

UDC 669.71.042.6

"Effect of the Gas Content of Alloys on the Nature of Risering"

Usadochn. protessy v splavakh i otlivkakh -- V sb. (Shrinkage Processes in Alloys and Castings -- Collection of Works), Kiev, Naukova dumka Press, 1970, pp 292-296 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G183)

Translation: The problems of the anomalous relation between the gas content, seal, and density of castings made of nonferrous alloys are investigated. Explanations of this phenomenon on the basis of investigation of the volumetric crystallization of aluminum-base alloy during formation of an equant structure are presented. There are 2 illustrations.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

TIMOFEYEV, I. A. [redacted]

UDC: 51:330.115

"Mathematical Calculation of Optimum Operation of Two Enterprises"

Nauch. tr. Mosk. inzh.-ekon. in-t (Scientific Works. Moscow Institute of Engineering Economics), 1971, vyp. 28, pp 74-79 (from RZh-Matematika, No 11, Nov 71, Abstract No 11V768)

Translation: The author considers a differential model for operation of two enterprises, one making the means of production, while the other makes consumer goods. The results are economically interpreted. D. Epshteyn.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

TIMOFEYEV, I. A.

UDC: 51:330.115

"Mathematical Calculation of Optimum Functioning of Two Enterprises"

Nauch. tr. Mosk. inzh.-ekon. in-t (Scientific Works. Moscow Engineering Economics Institute), 1971, vyp. 28, pp 74-79 (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V768)

Translation: The author considers a differential model of functioning of two enterprises, one of which makes means of production, while the other makes consumer goods. The results are economically interpreted. D. Epshteyn.

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USSR

TIMOFEYEV, K. N. and RUBIN, A. B., Soil Biology Faculty, Moscow State University

"Kinetics of the Photoinduced ESR Signal of the Photosynthesizing Bacterium Rhodospirillum Rubrum"

Moscow, Biofizika, No 1, 1971, pp 348-350

Abstract: The kinetics of intensification of the photoinduced ESR signal of Rhodospirillum rubrum was found to be two-phase: a rapid reaction immediately after the light was switched on, followed by slow intensification of the signal until a stationary value was achieved. A marked induction peak was observed in some cultures after the light was switched on. Sometimes the rapid component of signal intensification was absent or insignificant if the culture was kept for some time in the dark. If the dark interval between successive illuminations was decreased, the time required for the photo-induced signal to reach a stationary value also decreased. No induction effects were observed if oxygen was bubbled through the culture before measurement of the signal or if the culture was exposed to air for some time. It was concluded that the oxidized products of bacterial chlorophyll in response to light may react with the reducing agents that accumulate in the cells in the dark.

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UNCLASSIFIED

TITLE--EFFECT OF PATHOGENIC AGENTS ON ENERGY STORING PROCESSES AND THE ELECTRON PARAMAGNETIC RESONANCE SPECTRA OF PLANTS -U-

PROCESSING DATE--16OCT70

AUTHOR-(03)-LADYGINA, M.YA., RUBIN, B.A., TIMOFEYEV, K.N.

COUNTRY OF INFO--USSR

SOURCE--FIZIOLOGIYA RASTENIY, 1970, VOL 17, NR 2, PP 416-424

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PHOTOEFFECT, PHOSPHORYLATION, ADENOSINE TRIPHOSPHATE, EPR SPECTRUM, FUNGUS, ACTINOMYCES, PLANT PHYSIOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1982/1600

STEP NO--UR/0326/70/017/002/0416/0424

CIRC ACCESSION NO--AP0052796

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CIRC ACCESSION NO--AP0052796 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PHOTOPHOSPHORYLATION, ATP CONTENT AND ELECTRON PARAMAGNETIC RESONANCE SPECTRA WERE STUDIED AFTER INFECTION WITH TOBACCO MOSAIC VIRUS ERYZIPHE CICHORACEARUM OF LEAVES OF AN IMMUNE TOBACCO PLANT (NICOTIANA GLUTINOSA) AND A NONIMMUNE SPECIES (N. TABACUM); THE EFFECT OF AN ENDOGENOUS PRODUCT OF THE SAPROPHYTIC FUNGUS ACTINOMYCES STREPTOMYCINI (STREPTOMYCIN) ON LEAVES OF BARLEY SEEDLINGS WAS ALSO STUDIED. IRRESPECTIVE OF THEIR NATURE THE PHYTOPATHOGENIC AGENTS INDUCED SIMILAR SHIFTS IN ENERGY TRANSFORMATIONS AND EPR SPECTRA OF THE PLANTS. THE CHARACTER OF THE ALTERATIONS DEPENDED ON THE DEGREE OF STABILITY OF THE PLANTS. FACILITY: BIOLOGICAL DEPARTMENT, MOSCOW STATE UNIVERSITY.

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USSR

ZHILINSKAS, A. G., MOTSKUS, I. B., TIMOFEYEV, L. L.

"Bayes Method of Seeking Extreme with Limited Memory"

Avtomatika i Vychisl. Tekhn. [Automation and Computer Technology], 1972, No 6, pp 37-42 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V307, by the authors).

Translation: Assuming that the function to be optimized is a realization of a Gaussian homogeneous isotropic field, a Bayes method is studied for seeking the minimum with memory limited to two experimental results.

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USSR

UDC 62-506:519.83

ZhILINSKAS, A. G., MOTsKUS, I. B., and TIMOFEYeV, L.L.

"A Bayesian Method for Seeking an Extremum with Limited Memory"

Riga, Avtomatika i Vychislitel'naya Tekhnika, No. 6, 72, pp 37-42

Abstract: The problem is to find the minimum of a real function of many variables, assuming that at any step t in the solution only two previous results $(f(x_i), x_i)$ $(i=\overline{1\ t},)$ can be stored. The T-step method of searching for δ is described by rules for planning δ_t^1 $(t=\overline{1,T+1})$ and recording δ_t^2 $(\overline{t=2,T})$. The rule for storing results in this method cannot be expressed with the analytical simplicity possible in the case of a Bayesian method of search in which the memory is limited to one result, as is described by Zhilinskas and Motskus in No. 4 of this journal for 1972. In some cases, it may be expedient simply to postulate simple storage rules and find only the optimum rules of planning. Two quasi-optimal storage rules are suggested.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 512.25/.26+519.3:330.115

TIMOFEYEV, L. L.

"Method of Minimax Cross-sections. Search for the Minimax Point"

In-t. Fiz. I Mat. AN LitSSR, [Institute of Physics and Mathematics, Academy of Sciences, Lithuanian SSR], Vil'nyus, 1970, 26 pages, (Translated from Referativnyy Zhurnal Kibernetika, No 5, 1971, Abstract No. 5V534 DEP by the author).

Translation: This work is basically dedicated to the problem of finding the minimum points in convex figures, known in the literature as the Levin-Newman problem. The existence and uniqueness of the minimax point, necessary and sufficient conditions for minimax nature of a fixed point are proven, and algorithm is suggested for approximate search for the minimax point, and the minimax points of certain specific figures are investigated. Futhermore, a method is suggested for minimization of convex functions, based on calculation of the gradient at the minimax points, and a geometric evaluation of the number of gradient calculations is presented.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 669.14.018.85

TIMOFEYEV, M. M., Candidate of Technical Sciences, FANTAYEVA, M. I., Candidate of Technical Sciences, YEREMINA, V. P., Candidate of Technical Sciences, and SOROKINA, T. M., Engineer, Central Scientific Research Institute of Machinery Manufacture and Metalworking

"The Kh16N9M2 Steel for Steam Pipes With Ultra-High Parameters"

Moscow, Teploenergetika, No 10, Oct 73, pp 9-11

Abstract: The strength properties of steam pipes, 194x28 mm, 133x20 mm, and 76x10 mm in diam., of Kh16N9M2 brand austenitic Cr-Ni-Mo steel , used for a block of the Chelyabinsk Heat and Electric Power Plant, were investigated. The fatigue strength of the base metal of the investigated pipes, at 585, 600, and 650°C, was in accordance with the recommended strength for Kh16N9M2 steel: 14 kg/mm^2, 12 kg/mm^2, and 7 kg/mm^2, respectively. The metal of the pipes is characterized by high plasticity under prolonged tear conditions; the relative elongation of specimens, which desintegrated after 4-5 thousand hrs., was 14-40 %. The

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

TIMOFEYEV, M. M., et al., Teploenergetika, No 10, Oct 73, pp 9-11

strength properties were found sufficiently stable during up to 10 thousand hrs. aging at 600 and 650°C. An established order is recommended for the local electro-austenization of Kh16N9M2 steel steam pipes in the zone of welded joints. The changes of mechanical properties of the pipe metal during aging and of welded joints after thermal treatment are shown. Seven figures, three tables, five bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 621.791.019:546.17

ZUBCHENKO, A. S., L'vov Polytechnical Institute, TIMOFEYEV, M. M., KAZIMIROVSKAYA, YE. L., Central Scientific Research Institute of Technology and Machine Building, and KOLYADA, A. A., (VNIIPTKhimmach)

"Effect of Nitrogen on Cold Brittleness of Heat-Resistant Kh25Yu5 Steel"

Kiev, Avtomaticheskaya Svarka, No 9, Sep 70, pp 8-9

Abstract: The effect of nitrogen on the cold brittleness of 220 x 120 x 30 mm samples from a metal fused in an open induction furnace was investigated. The nitrogen content in the fused metal was controlled by introducing nitrided ferrochromium into the crucible. The chemical composition and mechanical properties of the tested metal are presented in tables. They show that an increase in nitrogen content in the Kh25Yu5 steel substantially reduces its strength and impact strength. The dependence of impact strength and mechanical properties on test temperature, and the effect of nitrogen on the critical temperature of the transition of the steel into the brittle state are shown in graphs. It can be assumed that the temperature of equilibrium nitrogen concentration in the solid solution of Kh25Yu5 steel coincides with the critical temperature of the transition of the steel into a brittle state.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR UDC 621.791.019

TIMOFEYEV, M. M., ZUBCHENKO, A. S., KOLYADA, A. A., PAKHURIDZE, V. S., and ROMANENCHUK,

"Cold Crack Formation in Ferrite Steel Welding"

Kiev, Avtomaticheskaya Svarka, No 10, Oct 70, pp 9-12

Abstract: Several types of steel are mentioned as being suitable for structures requiring high anti-corrosion and anti-thermal properties. These include the OKh23S2Yu and Kh25Yu5 types, the first of which is known in foreign countries under the name of Sikhromal-12. The defect of these steels is that they are poorly resistant to cold cracks under welding. The purpose of this paper is to investigate the causes of this defect and to study the mechanism of formation of the cracks. Specimens used for the research were these two types of steel, both of which were smelted in open induction furnaces under slag. The OKh23S2Yu was hammered after casting into sheets measuring 12 x 120 x 300 mm while the Kh25Yu5 specimens were studied in cast form. A table of the chemical compositions of both is given. The authors find a dependence between the temperature interval of the crack formation in welds of the two steels and the temperature transition of the steels to the brittle state. They propose

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

TIMOFEYEV, M. M., et al, Avtomaticheskaya Svarka, No 10, Oct 70, pp 9-12

a method of welding ferrite steel involving the use of preliminary and accompanying heating to a temperature exceeding the temperature of the transition to the brittle state near the welded seam. Tempering directly after the welding makes it possible to remove the remaining stresses which cause the formation of the cracks. They assert also that the critical temperature of the transition to the brittle state can serve as a criterion of the weldability of ferrite steels.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

1/2 015 UNCLASSIFIED

TITLE--WELDING OF STEEL OKH23S2YU -U- PROCESSING DATE--18SEP70

AUTHOR-(03)-ZUBCHENKO, A.S., TIMOFEYEV, M.M., BUDAYEV, G.P.

COUNTRY OF INFO--USSR

SOURCE--KHIM. NEFT. MASHINOSTR. 1970, (1) 23-4

DATE PUBLISHED-------70

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

TOPIC TAGS--CORROSION RESISTANT ALLOY, ALLOY DESIGNATION, SLAG, MECHANICAL PROPERTY/(U)OKH23SZYU CHROMIUM STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0005 STEP NO--UR/0314/70/000/001/0023/0024

CIRC ACCESSION NO--AP0102105

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/2 015

UNCLASSIFIED

CIRC ACCESSION NO--AP0102105 PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OKH23S2YU, A FERRITIC, OXIDN. RESISTANT STEEL OF THE FE-SI-CR-AL TYPE (CR 23, SI 1.8, AL 1.3PERCENT) CAN BE ARC WELDED, AFTER HEATING TO 200 TO 250DEGREES, WITH COATED ELECTRODES OF OKH27YU5A ALLOY, USUALLY USED FOR RESISTANCE HEATING ELEMENTS. THE ELECTRODE COATING CONTAINS AN INCREASED AMT. OF MARBLE (70PERCENT) AND A LOWER CONTENT OF FLUORSPAR, THUS DECREASING THE FLUIDITY OF THE SLAG. TI POWDER 2PERCENT IS ADDED TO REFINE THE WELD GRAIN AND 2PERCENT FERROSILICON SI4S TO FACILITATE THE SLAG REMOVAL. MECH. PROPERTIES OF THE WELD ARE EQUAL TO THOSE OF THE WELDED ALLOY; THE CORROSION RESISTANCE IS HIGHER DUE TO AN INCREASED CR CONTENT.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR UDC 621.762:669.245

BABICH, B. N., BERESTEN', N. Ye., LYUKEVICH, V. I., ROMANOVICH, I. V., TIMOFEYEVA, N. I.

"Influence of Distribution of Hardening Phase Particles in Powders on Thermal Stability of Dispersion-Hardened Nickel"

Kiev, Poroshkovaya Metallurgiya, No 8, Aug, 1972, pp 25-30.

Abstract: This article studies the structural stability and strength properties of compositions produced of powders made by various methods providing near-identical hardening phase particle dimensions but different distributions of these particles in the matrix. It was found that achievement in initial powders of the most even possible distribution of ultrafine particles of the hardening phase assures thermal stability of dispersion-hardened nickel. The level of high-temperature properties of dispersion-hardened nickel depends on the presence of a certain quantity of oriented recrystallization areas in the structure with total absence of equiaxial grains. Unevenness of particle distribution of the hardening phase particles in the initial powders causes an increase in the mean particle size when the compact material is produced and a change in the nature of recrystallization, with the formation of equiaxial grains. The tests were based on nickel powder with 2% hafnium dioxide. The powders were produced by carbonate precipitation of nitrate solutions and evaporation concentration. Following hot extrusion

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 621.762:669.245

BABICH, B. N., BERESTEN', N. Ye., LYUKEVICH, V. I., ROMANOVICH, I. V., TIMOFEYEVA, N. I., Kiev, Poroshkovaya Metallurgiya, No 8, Aug, 1972, pp 25-30.

and cold drawing, the batch with poorer distribution showed intensive particle growth, probably as a result of accumulation of particles into conglomerates.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 621.385.832.032.36:002 (088.8)(47):621.397.62:535.674

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BEZDELIN, YU. A., YERSHOV, YU. YE., KUKLEV, V. P., KRASNOLOBOV, YU. G., MIKHAYLOV, L. F., SKLYAROV, A. F., TIMOFEYEV, N. M., FILATOV, A. M., and KHODZHAYEV, V. D.

"Semiautomatic Device for Application of Phosphor on the Screen of Color Electron Beam Tubes"

USSR Author's Certificate No 226736, filed 13 May 67, published 30 Jan 69 (from RZh-Elektronika i yeye primeneniye, No 1, Jan 70, Abstract No 1A235)

Translation: The semiautomatic device is a conveyer machine which, unlike well-known designs, encompasses all the technological process for application of phosphor on the screen of color electron-beam tubes, including photoirradiation and automatic installation and removal of the shadow mask. The design of the semiautomatic device assures the feasibility of isolating the operating zone from the rest of space and to create a microclimate with prescribed parameters of the surrounding air. M. Sh.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

172 031

UNCLASSIFIED

TITLE--EFFECT OF AN ELECTRIC FIELD AND ILLUMINATION ON THE KINETICS OF THE PHOTOCONDUCTIVITY OF LEAD OXIDE LAYERS -U-

PROCESSING DATE--23OCT70

AUTHOR-(04)-GASANOV, O.K., IZOVOZCHIKOV, V.A., KOZLOV, V.A., TIMOFEYEV, O.A.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(3), 558-60

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--LEAD OXIDE, ELECTRIC FIELD, PHOTOCONDUCTIVITY, LAMINATED STRUCTURE, CRYSTAL ORIENTATION, PN JUNCTION, TIN OXIDE, SILVER, RELAXATION PROCESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0099

STEP NO--UR/0449/70/004/003/0558/0560

CIRC ACCESSION NO--AP0105185

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/2 031 UNCLASSIFIED

CIRC ACCESSION NO--AP0105185 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PBO LAYERS WITH AG STRIPE ELECTRODES WERE INVESTIGATED IN THE TRANSVERSE REGIME (LIGHT BEAM PERPENDICULAR TO THE ELEC. FIELD) ANS SNO SUB2-PBO-AG SANDWICH LAYERS IN THE LOGITUDINAL REGIME. THE PBO LYAERS WERE 1-10 MU THICK AND WERE EVAPD. IN VACUD AT LESS THAN 10 PRIME NEGATIVE2 MM HG. DURING THE VACUMMN ANNEAL, A P-N JUNCTION WITH A HIGH OHMIC INTRINSIC REGION WAS FORMED IN THE SANDWICH SAMPLES. APART FROM THE NORMAL PHOTOCOND. RELAXATION MECHANISM AFTER SWITCHING OFF THE LIGHT, THERE WAS A TYPICAL "OVERSHOOTING" IN THE INITIAL PART OF THE RELAXATION CURVES. IN THE TRANSVERSE SAMPLES, THIS OVERSHOOTING INCREASED WITH INCREASING VOLTAGE, WHILE IN THE LOGITUDINAL ONES IT DECREASED; IN STRONG FIELDS, THIS OVERSHOOTING BECAME S SHAPED. IN THE TRANSVERSE SAMPLES, THE OVERSHOOTING IS DUE TO CHARGE REDISTRIBUTION AMONG THE IMPURITY CENTERS DURING THE ILLUMINATION, AND THE S SHAPE IS A CONSEQUENCY OF TRAPING EFFECTS DURING THE GENERATION PROCESS. THE VOLTAGE DEPENDENCE OF THE EFFECT IS DUE TO THE VOLTAGE DEPENDENCE OF THE SPACE CHARGE D. AROUND THE ELECTRODES. IN THE LOGITUDINAL SAMPLES, THE MECHANISM IS EXPLAINED BY THE PECULIARITIES OF THEIR P-I-N STRUCTURE. FACILITY: LENINGRAD. GOS. PEDAGOG. INST. IM. GERTSENA, LENINGRAD, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC: 533.697

MEZHIROV, I. I., TIMOFEYEV, T. A., CHISTOV, Yu. I.

"Experimental Study of Axisymmetric Profiled Hypersonic Nozzles"

Uch. zap. Tsentr. aerogidrodinam. in-ta (Scientific Notes of Central Aero-hydrodynamics Institute), 1971, 2, No 6, pp 1-8 (from RZh-Mekhanika, No 5, May 72, Abstract No 5B444)

Translation: The paper presents the results of an experimental study of three axisymmetric profiled hypersonic nozzles designed with regard to the influence of viscosity on the production of uniform airflow with Mach numbers of $M = 10$, 12 and 14. The studies were done under conditions close to specifications, and also at Reynolds numbers greater than specifications. Satisfactory Mach number distributions are found in all investigated nozzles (under rated conditions the Mach number nonuniformity was within limits of ±1-2%). Bibliography of 5 titles. Resumé.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

1/2 017 UNCLASSIFIED

TITLE--REACTION OF RARE EARTH OXIDES WITH WATER -U- PROCESSING DATE--16OCT70

AUTHOR-(03)-TIMOFEYEVA, N.I., DROZDOVA, L.N., TIMOFEYEV, V.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 605

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--RARE EARTH COMPOUND, METAL OXIDE, CHEMICAL REACTION, WATER, X RAY TECHNIQUE, THERMOGRAPHIC ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0906 STEP NO--UR/0363/70/006/003/0605/0605

CIRC ACCESSION NO--AP0118075

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/2 017 UNCLASSIFIED

CIRC ACCESSION NO--AP0118075 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF RARE EARTH OXIDES (FROM LA TO LU, WITH THE EXCEPTION OF PM, AND Y) WITH BOILING H SUB2 O FOR 10-100 HR AND WITH H SUB2 O AT 350DEGREES FOR 24 HR WAS STUDIED BY X RAY STRUCTURAL, THERMOGRAPHIC, AND GRAVIMETRIC ANALYSES. LA SUB2 O SUB3, ND SUB2 O SUB3, SM SUB2 O SUB3, AND GD SUB2 O SUB3, WHEN IN CONTACT WITH BOILING H SUB2 O AND WITH H SUB2 O AT 350DEGREES ARE CONVERTED TO HYDROXIDES OF THE LN(OH)SUB3 TYPE. SESQUIOXIDES OF RARE EARTHS RANGING FROM HO TO LU AND Y FOR ALL PRACTICAL PURPOSES DO NOT REACT WITH BOILING H SUB2 O. IN H SUB2 O AT 350DEGREES THE RARE EARTH OXIDES FROM HO TO LU FORM MONOHYDRATES; CEO SUB2 DOES NOT INTERACT WITH H SUB2 O AT 100 AND 350DEGREES. PR SUB6 O SUB11 AND TB SUB4 O SUB7 REACT WITH SMALLER THAN 2 MOLS. OF H SUB2 O. LA(OH) SUB3, ND(OH)SUB3, SM(OH)SUB3, EU(OH)SUB3, AND GD(OH)SUB3 HAVE A HEXAGONAL UCL SUB3 TYPE STRUCTURE. ALL THE RARE EARTH OXIDES ARE ONLY SLIGHTLY SOL. IN H SUB2 O.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

TIMOFEYEV, V.

USSR
(Tractors)

USE OF TRACTORS

Article by F. Yalovenko, Candidate of Economic Sciences, and V. Timofeyev, Co-worker of the State Scientific Research Tractor Institute, in the Russian-language periodical Ekonomicheskaya Gazeta, No. 10, 7 Mar 64, p.16, Moscow.

SO: JPRS:24,652, USSR Indust. Dev. #125, 19 May 64, UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

BROUDE, V. L., TARTAKOVSKIY, I. I., TIMOFEYEV, V. B., Institute of Solid State Physics, Academy of Sciences of the USSR, Chernogolovka

"Kinetics of Luminescence of Free and Bound Excitons in CdS Crystals"

Leningrad, Fizika Tverdogo Tela, Vol 14, No 12, Dec 72, pp 3531-3539

Abstract: An investigation is made of the variation, with temperature of integral luminescence of cadmium sulfide crystals and of the bands due to annihilation of free and bound excitons. The probabilities of binding of electron-hole pairs into excitons, and of binding excitons into exciton-impurity complexes are determined on the basis of analysis of the resultant relations. Temperature intervals are determined within which quasi equilibrium can be assumed between different states of excitation of the crystal. (Quasi equilibrium takes place at temperatures above 80°K for electron-hole pairs and excitons, and above 50°K for excitons and exciton-impurity complexes on a neutral acceptor and on a neutral donor). It is shown that an increase in the intensity of exciton luminescence (A-band) in the interval of 40-130°K can be attributed in almost equal measure to an increase in the total number of excitons and to an increase in the effective quantum yield. It is shown that about 90% of the pumping is lost due to capture of free carriers at approximately 130°K and that the percentage falls to approximately 11.5% at low temperatures.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

BROUDE, V. L., TARTAKOVSKIY, I. I., TIMOFEYEV, V. B., Institute of Solid State Physics, Academy of Sciences of the USSR, Chernogolovka

"Kinetics of Luminescence of Free and Bound Excitons in CdS Crystals"

Leningrad, Fizika Tverdogo Tela, Vol 14, No 12, Dec 72, pp 3531-3539

Abstract: An investigation is made of the variation, with temperature of integral luminescence of cadmium sulfide crystals and of the bands due to annihilation of free and bound excitons. The probabilities of binding of electron-hole pairs into excitons, and of binding excitons into exciton-impurity complexes are determined on the basis of analysis of the resultant relations. Temperature intervals are determined within which quasi equilibrium can be assumed between different states of excitation of the crystal. (Quasi equilibrium takes place at temperatures above 80°K for electron-hole pairs and excitons, and above 50°K for excitons and exciton-impurity complexes on a neutral acceptor and on a neutral donor). It is shown that an increase in the intensity of exciton luminescence (A-band) in the interval of 40-130°K can be attributed in almost equal measure to an increase in the total number of excitons and to an increase in the effective quantum yield. It is shown

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USSR

BROUDE, V. L. et al., Fizika Tverdogo Tela, Vol 14, No 12, Dec 72, pp 3531-3539

that about 90% of the pumping is lost due to capture of free carriers at approximately 130°K and that the percentage falls to approximately 11.5% at low temperatures.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

1/2 026 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--RESOLUTION OF A THREE DIMENSIONAL HOLOGRAM AS AN OPTICAL IMAGING SYSTEM -U-

AUTHOR-(04)-ARISTOV, V.V., LYSENKO, V.G., TIMOFEYEV, V.B., SHEKHTMAN, V.SH.

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK SSSR, DOKLADY, VOL. 191, APR. 1, 1970, P. 795-798

DATE PUBLISHED--01APR70

SUBJECT AREAS--PHYSICS, METHODS AND EQUIPMENT

TOPIC TAGS--HOLOGRAM, ELECTROMAGNETIC WAVE DIFFRACTION, OPTIC IMAGE, PHOTOSENSITIVITY, MAGNETIC RECORDING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1800 STEP NO--UR/0020/70/191/000/0795/0798

CIRC ACCESSION NO--AT0125412

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/2 026

UNCLASSIFIED

CIRC ACCESSION NO--AT0125412 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONSIDERATION OF THE PROCESS OF RECORDING ON A THREE DIMENSIONAL PHOTOSENSITIVE ELEMENT THE WAVE FIELD FROM AN OBJECT LOCATED IN THE FAR FIELD. IT IS SHOWN THAT DURING THE "READING" OF A THREE DIMENSIONAL HOLOGRAM THE RESOLUTION IN THE IMAGE OF THE OBJECT POINTS IS DETERMINED BY BOTH THE TRANSVERSE DIMENSIONS AND THE THICKNESS OF THE PHOTOSENSITIVE LAYER. THE PROCESS OF RECONSTRUCTION OF THE IMAGE OF AN OBJECT POINT IS REDUCED TO THE DIFFRACTION OF THE "READING" WAVE, WHICH CONVERGES AT A CERTAIN POINT ON THE CORRESPONDING HARMONIC BLACKENING DISTRIBUTION. ACORDINGLY, THE INTENSITY DISTRIBUTION IN THE IMAGE OF AN OBJECT POINT CAB BE CALUCLATED ON THE BASIS OF THE THEORY OF ELECTROMAGNETIC WAVE DIFFRACTION BY THREE DIMENSIONAL PERIODIC STRUCTURES. FACILITY: AKADEMIIA NAUK SSSR, INSTITUT FIZIKI TVERDOGO TELA, CHERNOGOLOVKA, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

VASHCHENKO, V. I., and TIMOFEYEV, V. B., Spektroskopiya Atomov i Molekul [Spectroscopy of Atoms and Molecules -- Collection of Works] Kiev, Nauk. Dumka Press, 1969, pp 247-249 (translated from Referativnyy Zhurnal Fizika, No 6, 1970, Abstract No 6D540 by V. B. B.)

crystals. At 90°K an additional maximum is discovered in the BiI_3 spectrum, related to the elimination of degeneration in the upper p zone. The spectra of both crystals show a number of maxima in the UV area corresponding to deep interzone transitions. 4 biblio. refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

472 024

UNCLASSIFIED

TITLE--UMWEGANREGUNG IN HOLOGRAPHY -U-

PROCESSING DATE--30OCT70

AUTHOR-(04)-ARISTOV, V.V., LYSENKO, V.G., SHEKHTMAN, V.SH., TIMOFEEV, V.B.

COUNTRY OF INFO--USSR

SOURCE--PHYS. LETTERS, NETHERLANDS, VOL. 31A, NO. 4, P. 169-70, 23 FEB. 1970

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--HOLOGRAPHY, POTASSIUM CHLORIDE, OPTIC SPECTRUM, EXCITATION ENERGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/0502

STEP NO--NE/0000/70/031/004/0169/0170

CIRC ACCESSION NO--AP0111695

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/2 024 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0111695

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN EXPERIMENTAL SCHEME HAS BEEN CONSTRUCTED FOR PRODUCING THE RENNINGER EFFECT IN THE OPTICAL RANGE. COLORED KCL CRYSTALS HAVE BEEN USED AS PHOTOSENSITIVE ELEMENTS. THE UMWEGANREGUNG WAVE HAS BEEN REGISTERED IN THIS EXPERIMENT.

FACILITY: ACAD. SCI. USSR, CHERNOGOLOVKA.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

Acc. Nr: AP0043664

Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki. 1970, Vol 58, Nr 2, pp 460-474

ABSORPTION SATURATION IN THE ELECTRON-PHONON SPECTRUM OF CdSe

Dute, A. F.; Timofeyev, V. B.; Fayn, V. M.; Yashchin, E. G.

The dependence of the absorption coefficient in the exciton-phonon spectrum of semiconductors on intensity of the incident monochromatic radiation is analyzed theoretically. Two possible absorption saturation mechanisms are considered. One, which may be termed an integral mechanism occurs on conservation of the nonequilibrium exciton distribution in the band and when intraband relaxation is more rapid than escape of excitons from the band. The second, so-called differential saturation mechanism, is characterized by a nonequilibrium distribution of excitons in the band and takes place if the rate of exciton escape from any band point is greater than the rate of intraband relaxation. A Q-switched ruby laser was used for studying nonlinear absorption in the exciton-phonon spectrum in CdSe single crystals at 80÷120° K. The integral saturation mechanism is found to occur. The mean exciton lifetimes in the band are found; in the indicated temperature range they vary between 10^{-8} and $3 \cdot 10^{-9}$ sec.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 547.532-13:542.943:66.085.5

TIMOFEYEV, V. D., YUR'YEV, Z. N., KLAPISHEVSKAYA, Z. B., and BORISOV, YE. A., Scientific Research Physico-Chemical Institute imeni L. Ya. Karpov, Moscow, State Committee for Chemistry

"Vapor Phase Radiation-Thermal Oxidation of Benzene With Molecular Oxygen Under Fast Electron Irradiation"

Moscow, Neftekhimiya, Vol 10, No 1, Jan-Feb 70, pp 42-47

Abstract: The authors studied the radiation-thermal oxidation of benzene with molecular oxygen in terms of the effect of temperature on the yield of phenol -- the yield increases with temperature increase; the effect of the ratio benzene:oxygen -- a trend towards higher yields with more oxygen was observed; effect of the contact time -- inverse relationship of the yield to contact time. The yield of phenol in this reaction was found to be always higher than in the thermal reaction, maximal yield being 4 weight-%. The radiation-chemical yield of phenol at maximal concentration was 40 molecules per 100 ev of the absorbed radiation energy. The effective energy of activation for the formation of phenol was found to be 70 Kcal/mole for the thermal process and 49 Kcal/mole for the radiation-thermal process at 700-780°.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

472 034 UNCLASSIFIED

TITLE--VAPOR PHASE RADIATION THERMAL OXIDATION OF BENZENE BY MOLECULAR OXYGEN DURING IRRADIATION BY FAST ELECTRONS -U- PROCESSING DATE--30OCT70

AUTHOR-(04)-TIMOFEYEV, V.D., YURYEV, Z.N., KLAPISHEVSKAYA, Z.B., BORISOV, YE.A.

COUNTRY OF INFO--USSR

SOURCE--NEFTEKHIMIYA 1970, 10(1), 42-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--ELECTRON ACCELERATOR, THERMAL OXIDATION, PHENOL, CRESOL, CARBON MONOXIDE, CARBON DIOXIDE, BENZENE, ELECTRON RADIATION, ACTIVATION ENERGY, OXYGEN/(U)RUP400 ELECTRON ACCELERATOR, (U)U16 ELECTRON ACCELERATOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0574 STEP NO--UR/0204/70/010/001/0042/0047

CIRC ACCESSION NO--AP0119492

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/2 034

UNCLASSIFIED

CIRC ACCESSION NO--AP0119492 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TITLE PROCESS WAS STUDIED UNDER DYNAMIC CONDITIONS OF 1 ATM AND 50-3000 ML-HR AT SMALLER THAN OR EQUAL TO 800DEGREES USING ELECTRON ACCELERATORS RUP-400 AND U-16 (1.5 TIMES 10 PRIME15 AND 1.6 TIMES 10 PRIME17 EV-CM PRIME3-SEC, RESP.) FOLLOWED BY THE CHROMATOGRAPHIC ANAL. OF THE PRODUCTS PHOH, PH SUB2, CRESOLS, CO AND CO SUB2. IN RADIATION THERMAL OXION. (RTO), THE DEPENDENCE OF PHOH YIELD ON TEMP., C SUB6 H SUB6: O SUB2 RATIO, TIME OF CONTACT, AND CONCN. OF ADDED CYCLOHEXANE WAS STUDIED AND COMPARED WITH THERMAL OXION. (TO) UNDER THE SAME CONDITIONS. THE YIELD OF PHOH IN RTO WAS ALWAYS HIGHER THAN IN TO, THE MAX. PHOH CONCN. BEING 4 WT.PERCENT. THE QUANTUM YIELD WAS 40 MOLS.-100 EV AT MAX. CONCN. EFFECTIVE ACTIVATION ENERGY OF PHOH FORMATION WAS 70 AND 49 KCAL-MOLE FOR RTO AND TO, RESP. (MEASURED IN TEMP. INTERVAL 700-800EGREES). FACILITY: NAUCH.-ISSLED. FIZ.-KHIM. INST. IM. KARPOVA, MOSCOW, USSR. .

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UNCLASSIFIED

TITLE--WEAR RESISTANT GRINDING COMPONENTS OF CENTER RUN COAL GRINDING MILLS -U-

PROCESSING DATE--09OCT70

AUTHOR-(05)-TSYPIN, I.O., TRUBITSYN, N.A., KRYUCHKOV, P.P., TIMOFEYEV, V.L., ZOLOCHEVSKIY, G.L.

COUNTRY OF INFO--USSR

SOURCE--LITEINOE PROIZVOD. 1970, 2, 11-13

DATE PUBLISHED--------70

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

TOPIC TAGS--COAL, GRINDING MACHINE, WEAR RESISTANT FERROUS METAL, ALLOY DESIGNATION, HARD ALLOY, CAST IRON, ALLOY COMPOSITION, CHROMIUM CONTAINING ALLOY, MANGANESE CONTAINING ALLOY, MO YBDENUM CONTAINING ALLOY/(U)M1HARD CAST IRON, (U)300KH13G3M CHROMIUM MANGANESE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1378

STEP NO--UR/0128/70/002/000/0011/0013

CIRC ACCESSION NO--AP0116827

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

272 020

CIRC ACCESSION NO--AP0116827 UNCLASSIFIED PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FOLLOWING CAST IRONS WERE TESTED: NIKHARD, 300KH13G3M, AND CHILLED IRON WITH GLOBULAR GRAPHITE. THE BEST WEAR RESISTANCE WAS SHOWN BY THE NIKHARD AND 300KH13G3M; CHEM. COMPNS. OF THESE ALLOYS AS USED EXPTLY. AT 4 INDUSTRIAL COAL GRINDING MILLS ARE GIVEN AS FOLLOWS: (SHOWN ON MICROFICHE). THE WEAR RESISTANCE AFTER 3500 HR OF WORK OF 300KH13G3M WAS A FACTOR OF 1.6 HIGHER THAN THAT OF THE NIKHARD CAST IRON. A DECARBURIZED LAYER ON THE SURFACE OF 300KH13G3M (DUE TO AIR HARDENING) INITIALLY DECREASED THE WEAR RESISTANCE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 531.776.088:621.375.826

GUTMAN, G. B., ROLICH, V. I., TIMOFEYEV, V. M., TRET'YAKOV, V. E., and FILATOV, Yu. V.

"On Exactness Characteristics of a Measuring Annular Laser Transducer of Angular Speed"

Tr. Metrol. In-tov SSSR [Works of Metrological Institutes USSR], 1972, No 139(199), pp 3-9 (from Referativnyy Zhurnal, No 10, Oct 72. 32. Metrologiya i Izmeritel'naya Tekhnika. Single Issue. Abstract No 10.32.484)

Translation: The errors of a measuring transducer of angular speed, based on an annular gas laser, were experimentally investigated. Measurements were made for different time intervals when stabilizing the emission frequency of the annular laser and without stabilizing. It is demonstrated that the stabilization of emission frequency significantly increases the measuring accuracy of angular speed. The exactness characteristics of the apparatus were determined for different angular speeds when measuring mean and current values of angular speed. Six illustrations, four bibliographical references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC: 550.837

VAKUL'SKIY, A. A., KAMENETSKIY, F. M., LABZHINSKIY, S. I., LUTSYSHIN, A. S., MIZYUK, L. Ya., TIMOFEYEV, V. M., YAKUBOVSKIY, Yu. V., Institute of Physical Mechanics, Academy of Sciences of the Ukrainian SSR

"A Device for Aerogeoelectric Prospecting"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 9, Mar 72, Author's Certificate No 331356, Division G, filed 12 May 69, published 7 Mar 72, p 144

Translation: This Author's Certificate introduces a device for aerogeoelectric prospecting by the method of transient processes. The device consists of a current pulse generator which contains a source of direct current, a master multivibrator, a frequency divider, a power amplifier, a current commutator and an oscillator tank circuit; and a meter which contains a receiving tank circuit, a preamplifier, a gating module, an accumulator, a DC amplifier, a registration unit, and a circuit for control and synchronization of the gating module. As a distinguishing feature of the device, interference suppression is improved, the measurement error is reduced and the stability of compensation of transient processes caused by the conduc-

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

KUL'SKIY, A. A. et al., USSR Author's Certificate No 331356

tive fuselage of the aircraft is increased by connecting coincidence gates in the current pulse generator between the frequency divider and power amplifier. Some inputs of the coincidence gates are connected to the output of the master multivibrator, and the other inputs are connected to the outputs of the frequency divider. A band filter is connected in the meter between the preamplifier and the gating module, and a secondary gating block is connected between the pulse amplifier and the DC amplifier. The secondary gating block is connected to the control and synchronization circuit, and is made in the form of parallel-connected compensation and measurement strobe pulse multivibrators which are connected through a broad strobe pulse shaping multivibrator to the primary gating module. Multivibrators for delay and shaping of narrow strobe pulses [are connected] to coincidence gates with some inputs connected to the outputs of the oscillator frequency divider, while the other inputs are connected to the multivibrator for shaping narrow strobe pulses, and the outputs of these coincidence gates are connected to the secondary gating block.

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Electromagnetic Wave Propagation

USSR

T

UDC: 550.372

TIMOFEYEV, V. M.

"Device for Determining Soil Conductivity by the Polarization Method in the Long- and Medium-Wave Range"

Moscow, Elektrosvyaz', No. 5, 1970, pp 67-75

Abstract: The determination of the electrical conductivity of soil is an important procedure because the soil's electrical parameters in general profoundly affect the propagation of radio waves and must therefore be taken into account in the solution of many radio engineering problems such as the location of radio navigation devices and the design of antennas near or below the surface of the ground. Under the practically universal condition that $60\lambda\sigma \gg \varepsilon$, where λ is the wavelength in air, in meters, σ is the specific conductance of the soil in mhos per meter, and ε is the relative dielectric constant of the soil, the conductance is the only soil parameter worthy of attention. The polarization method for determining this factor is based on the fact that the parameters of the polarization ellipse of a radio wave electric field are functions of the soil conductance. In an important modification of this method, providing minimum measurement error, the estimate is made from the ratio of the semi-axes of the polarization ellipse as determined by a device consisting of a symmetrical

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

TIMOFEYEV, V. M., Elektrosvyaz', No 5, 1970, pp 67-75

dipole mounted on a tripod above the surface of the metrical dipole mounted on a tripod above the surface of the ground, feeding into a radio receiver. This article proposes a substitute device which is highly accurate and permits measurement with continuous movement of the device over the path checked. The instrument is extensively described, and the results of tests made with it in the Kirghiz Republic, where the soil is strongly salted, are given. The test measurements were made in an MI-4 helicopter at a frequency of about 188 KHz with one of the Soviet broadcasting stations.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

UDC 532.0

TIMOFEYEV, V. S., Engineer, Moscow Construction and Engineering Institute

"Experimental Study of the Thickness of Thin Fluid Films"

Izvestiya Vysshikh Uchebnykh Zavedeniy, Mashinostroyeniye, No 11, 1971, pp 64-68.

ABSTRACT: Experimental data produced using a photographic method and a contact probe method are used as a basis for production of an equation for determination of the mean thickness of a falling liquid film as a function of the Reynolds number. An analytic dependence of film thickness on kinematic viscosity is presented. An expression is found for determination of the hydraulic drag in the turbulent area with high Reynolds numbers. It is demonstrated that the influence of the kinematic viscosity of the sea water used in the experiment on mean thickness in the well developed turbulent mode is significantly less than in the subcritical flow area.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--PHASE EQUILIBRIUM IN A VINYL ACETATE ACETIC ACID WATER SYSTEM AT ATMOSPHERIC PRESSURE -U-

AUTHOR-(04)-TIKHONOVA, N.K., TIMOFEYEV, V.S., SERAFIMOV, L.A., TOLKACHEVA, N.L.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(2), 175-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHASE EQUILIBRIUM, VINYL COMPOUND, ACETATE, ACETIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0791 STEP NO--UR/0153/70/013/002/0175/0177

CIRC ACCESSION NO--AT0132889

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

CIRC ACCESSION NO--AT0132889 UNCLASSIFIED PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EQUIL. COMPNS. IN THE 2 LIQ. PHASE REGION AND ALONG THE BINODAL SOLY. CURVE FOR THE TERNARY SYSTEM VINYL ACETATE HOAC-H SUB2 O ARE GIVEN FOR 13 POINTS AT 200DEGREES, AND FOR 11 POINTS AT THE B.P., AND A TERNARY ISOTHERMAL ISOBARIC DIAGRAM IS PRESENTED. VAPOR LIQ. EQUIL. AND B.PS. ARE ALSO GIVEN FOR 27 TERNARY MIXTS. AT ATM. PRESSURE. THE SYSTEM IS DEFINED AS TYPE 4ALPHA CLASS I ACCORDING TO THE CLASSIFICATION METHOD OF GURIKOVA, AND THE CONCN. TRIANGLE IS SEPD. INTO 2 RECTIFICATION REGIONS.

FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

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KATHY

GYROSCOPE

SO: JPRS 57746
12 DEC 1972

INERTIAL GUIDANCE SYSTEMS

UDC 537.21:621.319.01.001

GENERATION OF FORCES IN ELECTROSTATIC GYROSCOPE (ESG) WITH SPHERICAL ROTOR

[Article by G. F. Drobyshev, V. V. Timofeyev, Moscow Higher Technical Institute imeni N. E. Bauman; Leningrad, Izvestiya VUZ, Priborostroeniye, Russian, No 9, 1972, submitted 9 July 1971, pp 91095]

Electrical suspension of a ball is examined in the article from the point of view of generation of forces with electrodes of different configuration. A finite equation for engineering calculations of the electrical forces, which takes into account the mutual effects of the potentials of adjacent electrode pairs, is derived as a result of the analysis.

Analysis of electrostatic suspension of the pilot ball of ESG in the framework of linear theory [1] may be inadequate for the action of considerable accelerations, when the deviation of the center of gravity of the sensor exceeds the tolerable limit.

Examined in the article is the procedure of calculating the electrical forces in ESG during possible displacements of the center of gravity of the rotor beyond the range of small deviations, in the direction of stabilization axes x, y, z (Figure 1) with consideration of the mutual influences of the potentials of the adjacent electrode pairs.

The forces are determined on the basis of calculation of the field intensity in the gap of the i-th rotor electrode, proceeding from the concept of surface density of forces. In an electrostatic field, per unit of area of a conductor of any shape, acts the force [4]

$$dF = f dS, \tag{1}$$

where $f = \frac{1}{2}\vec{E}\vec{D}$ is the surface density of forces; $\vec{n}$ is the exterior normal to element dS from the surface of the conductor. The scalar product of the vectors for an isotropic medium is $\vec{E}\vec{D} = \frac{1}{2}E^2$.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

Pathology

USSR

6

UDC 616.981.553-092.9

MATKOVSKIY, V. S., TSYBULYAK, G. N., ZUBIK, T. M., ZHUK, L. N., AKIMOV, G. A., GAREMIN, Ye. M., GOGLOZHA, R. L., KUSTOV, N. A., PASHKOVSKIY, E. V., and TIMOFEYEV, V. V., Chair of Infectious Diseases, Chair of Military Field Surgery, and Chair of Nervous Diseases, Military Medical Academy imeni S. M. Kirov, Leningrad

"The Pathophysiology of Experimental Botulism"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 3, 1971, pp 16-19

Abstract: A study was carried out of the disturbance of external respiration, gas content and acid-base state of blood, and of hemodynamic shifts with severe experimental intoxication with botulinus toxin. Fifty dogs were intoxicated with type A botulinus toxin. At the time of administration and at the peak of intoxication, the gas content of arterial and venous blood, hemoglobin, hematocrit, specific weight of blood and plasma, and content of sodium, potassium, lactic and pyruvic acid were determined. External respiration was studied by means of a type T35 spirometabolograph and circulation by the modified mechanical cardiographic method. Biocurrents of the cerebral cortex were recorded on a four-channel electroencephalograph. At the peak of

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

MATKOVSKIY, V. S., et al, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 3, 1971, pp 16-19

intoxication, a reduction of per minute respiration with a resulting lowered level of oxyhemoglobin in arterial blood, and respiratory acidosis were noted. EKG data revealed predominantly hypoxic shifts in the myocardium, and the EEG data -- inhibitory processes in the cerebral cortex. Intensified cardiac activity served as a compensatory mechanism for respiratory insufficiency. The secondary shifts in the function of organs and systems in connection with disturbances of a metabolic and functional nature played a vital role in the pathogenesis of botulinus intoxication. Morphological shifts in the CNS were apparently caused largely by disturbances in the microcirculation and were reversible. In treating severe botulinus intoxication, special attention should be paid to timely correction of external respiratory insufficiency, with artificial ventilation of lungs most expedient.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

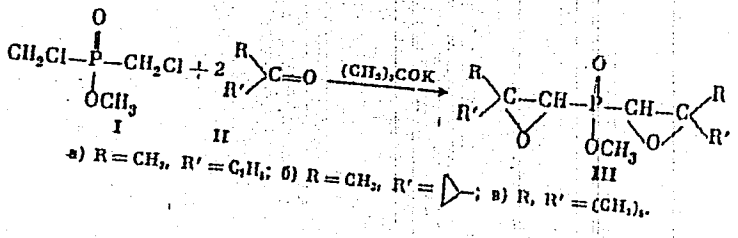
UDC 547.26'118

DORMIDONOV, I. A., MARTYNOV, V. F., and TIMOFEYEV, V. Ye., Institute of Applied Chemistry

"Bis(chloromethyl)phosphinic Acid Methyl Ester in the Darzens Reaction"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(103), No 2, Feb 72, pp 479-480

Abstract: Bis(chloromethyl)phosphinic acid methyl ester (I) reacts with ketones (II) under the influence of potassium tert.-butoxide to give bis(1,2-epoxyalkyl)phosphinic acid esters (III) which have not been previously described.



а) R = CH₃, R′ = C₂H₅; б) R = CH₃, R′ = ▷—; в) R, R′ = (CH₂)₄.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 535.37:621.375.8

BOL'SHOV, M. A., GUZEYEV, I. D., ZYBIN, A. V., KOLOSHNIKOV, V. G., MAYOROV, I. A., NEDLER, V. V., MANDEL'SHTAM, S. L., TIMOFEYEV, Ye. F., and FILIMINOV, L. N.

"Determining Small Na Concentrations by the Fluorescence Resonance Method Using Tunable, Pulsed Dye Lasers"

Minsk, Zhurnal Prikladnoy Spektroskopii, November 1973, pp 821-824

Abstract: The subject of this article involves the method of fluorescence resonance in the use of tunable radiation dye lasers for detecting small concentrations of elements. Experiments designed to demonstrate the possibilities of this method in the saturation mode of resonance transition with Na as the element to be detected are described. For the excitation of the Na vapor a rhodamine laser of the 6Zh type, pumped by the second harmonic radiation of a neodymium laser, was employed. The duration of the pulses was $2 \cdot 10^{-8}$ sec, their power was 10^5 W, the width of the fluorescence line was 1 Å, and the tunable range 5600-6200 Å, with an interval of 20-30 sec between scintillations. The FEU-3 was used as receiver. A block diagram of the equipment is given, together with a curve for the amplitude of the

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USSR

BOL'SHOV, M. A., et al., Zhurnal Prikladnoy Spektroskopii, November 1973, pp 821-824

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fluorescence signal varying with time. The authors find that using a laser with high scintillation repetition rates and increasing the light power increase the sensitivity of the element detection.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC: 621.372.061

TIMOFEYEV, Yu. A.

"Self-Cophasing of a Follow-up Filter Circuit in the Presence of Jitter"

V sb. Metody pomekhoustoychivogo priyema ChM i FM (Methods of Interference--Free FM and FM Reception--collection of works), Moscow, "Sov. radio", 1970, pp 102-105 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A150)

Transletion: The author describes an experiment to study the self-cophasing time of a follow-up filter circuit as a function of the signal-to-noise ratio at the input. Typical oscillograms of signals demodulated by the circuit are presented, and it is concluded that the self-cophasing time is practically independent of the input signal-to-noise ratio for all values of this ratio greater than one.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC: 621.372.061

PASKALOV, A. I., TIMOFEYEV, Yu. A.

"Results of Investigations of the Process of Self-Cophasing of a Follow-up Filter Circuit"

V sb. Metody pomekhoustoychivogo priyema ChM i FM (Methods of Interference--Free FM and PM Reception--collection of works), Moscow, "Sov. radio", 1970, pp 97-101 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A149)

Translation: The authors describe the process of self-cophasing of a follow--up filter in the case of locking on a wide-band FM signal. The method of mathematical modeling is singled out as the principal method which is applicable to analysis of the dynamic properties of the proposed circuit, and the conditions and idealizations under which this method is used are given. The follow-up filter circuit is described and its characteristics are given as well as standard oscillograms of signals demodulated by the circuit. In all cases where the passband of the equivalent frequency response was 3-6 times as great as that of the follow-up filter and the level of the FM signal at the input of the circuit was higher than the limit threshold, the circuit was reliably self-cophased. Resumé.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

TIMOFEYEV, YU. M.

UDC 551.509.314:551.571.7

POSSIBILITIES OF MORE EXACT DEFINITION OF THE MOISTURE CONTENT CHARACTERISTICS USING THE SOLUTION OF THE PROBLEM OF THERMAL SOUNDING OF THE ATMOSPHERE

[Article by Candidates of Physical and Mathematical Sciences Yu. M. Tirofeyev, O. M. Pokrovskiy, A. U. Kuznetsov, Leningrad State University; Moscow, Meteorologiya i Gidrologiya, Russian, No 3, 1972, submitted 28 April, 1971, pp 102-104]

A study was made of the statistical approach to the problem of reproducing the humidity profile and the total moisture content of the atmosphere on the basis of solving the thermal sounding problem. It was demonstrated that the proposed method permits reproduction of the humidity profile with high accuracy under winter conditions.

In recent years a great deal of attention has been given to the development of satellite methods of determining the physical parameters of the state of the Earth's atmosphere [2, 3]. Significant progress has been made in the matter of practical realization of indirect reproduction of the temperature, moisture and ozone profiles using interpretation of the precision measurements of outgoing thermal radiation in different absorption bands of atmospheric gases. In the statistical approach to the problems of restoring the vertical temperature profile (T) and moisture profile (q), usually the mean T and q profiles and also the autocorrelation matrices K_{TT} and K_{qq} are used as the a priori information about the desired solution [1, 7, 9]. In reference [5], a general statistical approach to the all-around solution of the inverse problems is proposed which is based on using all the available statistical information in particular, the mutual correlation matrices of the physical parameters of the atmosphere, for example, K_{Tq}.

As was shown in reference [5], one of the special cases of this approach is the problem of determining the vertical specific humidity profile q on the basis of determining the vertical temperature profile using the solution of the thermal sounding problem and using mutual correlations between T and q. The advantage of this approach is that it does not require special satellite equipment to measure the outgoing radiation in the water vapor absorption bands, and at the same time it permits more precise definition of our a priori information about the water content characteristics of the atmosphere.

JPRS 55899
5 May 72

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

1/3 035 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--EXPERIMENT IN THERMAL SOUNDING OF THE ATMOSPHERE FROM SATELLITES --U--

AUTHOR-(05)-KONDRATYEV, K.YA., NORDBERG, V., POKROVSKIY, O.M., TIMOFEYEV, YU.M., KHANEL, R.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, DOKLADY AKADEMII NAUK SSSR, VOL 191, NO 6, 1970, PP 1274-1276

DATE PUBLISHED--------70

SUBJECT AREAS--SPACE TECHNOLOGY, ATMOSPHERIC SCIENCES

TOPIC TAGS--TEMPERATURE, MEASUREMENT, INTEGRAL EQUATION, EARTH RADIATION, THERMAL RADIATION, SATELLITE DATA ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0050 STEP NO--UR/0020/70/191/006/1274/1276

CIRC ACCESSION NO--AT0129332

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/3 035 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0129332

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROBLEM OF THERMAL SOUNDING OF THE ATMOSPHERE ESSENTIALLY INVOLVES SOLUTION OF A FREDHOLM INTEGRAL EQUATION OF THE FIRST KIND: I(V) INTEGRAL FUNCTION OF K(GAMMA, P) PHI (P) DP. TWO METHODS ARE USED IN THIS STUDY FOR SOLVING INTEGRAL EQUATION (1): THE REGULARIZATION METHOD (A. N. TIKHONOV, DAN, 153, NO 1, 34, 1963) WITH CHOICE OF A QUASI OPTIMUM APPROXIMATION BY A METHOD PROPOSED BY ONE OF THE AUTHORS AND THE M. T. CHAHINE METHOD (J. OPT. SOC. AM., 58, NO 12, 1934, 1968), BASED ON MINIMIZING THE MEAN SQUARE DIFFERENCE BETWEEN THE MEASURED AND THEORETICALLY COMPUTED RADIATION VALUES. IN BOTH METHODS THE INITIAL INFORMATION, THE MAGNITUDE OF OUTGOING RADIATION, AND KERNEL OF THE EQUATION COINCIDED. COMPARISON OF THE TWO METHODS REVEALS A GOOD GENERAL AGREEMENT BETWEEN DIRECT AND INDIRECT TEMPERATURE DETERMINATIONS. HOWEVER, ERRORS IN DETERMINING TEMPERATURE FROM SATELLITE DATA IN SOME CASES ARE CONSIDERABLE, ATTAINING APPROXIMATELY 10DEGREES NEAR THE 100 MB LEVEL IN INTERPRETATIONS BY THE CHAHINE METHOD AND 8DEGREES BY THE REGULARIZATION METHOD. THE STANDARD DEVIATIONS FOR BOTH INTERPRETATION METHODS ARE APPROXIMATELY IDENTICAL AND CLOSE TO 3DEGREES. RELATIVELY LARGE ERRORS IN INDRIECT DETERMINATION OF TEMPERATURE CAN BE ATTRIBUTED TO A NUMBER OF FACTORS: ERRORS IN MEASURING RADIATION, ERRORS IN STIPULATING THE KERNEL OF EQUATION (1), ERRORS IN NUMERICAL SOLUTION OF THE INTEGRAL EQUATION (APPROXIMATION ERRORS, ERRORS IN ROUNDING OFF). THE PRINCIPAL SOURCES OF ERRORS ARE THE FIRST TWO. ERRORS IN STIPULATING THE KERNAL OF EQUATION (1) ARE PARTICULARLY IMPORTANT.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

3/3 035 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0129332

ABSTRACT/EXTRACT--DESPITE A HIGH MEASUREMENT ACCURACY THESE ERRORS CONSIDERABLY LOWER THE ACCURACY IN RECONSTRUCTING THE TEMPERATURE PROFILE. THE SINGLE EXAMPLE CITED IN THIS ARTICLE OF A COMPARISON BETWEEN THE TWO INTERPRETATION METHODS DOES NOT MAKE IT POSSIBLE TO DRAW SERIOUS CONCLUSIONS CONCERNING THE ADVANTAGES OF THE DIFFERENT APPROACHES TO SOLUTION OF THE PROBLEM. HOWEVER, THE REGULARIZATION METHOD MADE POSSIBLE A MORE PRECISE RECONSTRUCTION OF THE TEMPERATURE PROFILE IN THE REGION ABOVE 100 MB AND WAS SOMEWHAT POORER THAN THE CHAHINE METHOD IN THE PRESSURE RANGE FROM 100 TO 500 MB.

FACILITY: LENINGRAD STATE UNIVERSITY.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 621.3.032.35

KUTUKOV, L. V., MITROFANOVA, N. V., TIMOFEYEV, Yu. P., FRIDMAN, S. A., and SHCHAYENKO, V. V.

"Using Luminophores to Investigate the Heat in Electronic Circuits"

Moscow, Pribory i Tekhnika Eksperimenta, No. 3, 1971, pp 147-149

Abstract: Although infrared radiometry has been used for investigating thermal situations in electronic circuits, its results are not reliable. The purpose of this paper is to research further the recently applied luminophores for investigating temperature fields in electronic circuitry in printed circuit and integrated circuit form, a method free from many of the deficiencies involved in the use of infrared observations. The experiments described in this paper used as luminophores 5μ-thick coatings of ZnS, CdS + Ag, and Ni crystal phosphors, which emit visible radiation when excited by ultraviolet light. The intensity of this visible radiation drops sharply with small increases in temperature. Also used were nichrome resistance films covered with a protective layer of SiO. Among other results they obtained, the authors find that this method is convenient for direct visual tests and checks of operating integrated circuits. Curves of the ZnS, CdS + Ag, Ni luminophore sensitivity as a function of the temperature are given. The authors are in the Moscow Physical Institute, Academy of Sciences, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

1/2 028 UNCLASSIFIED

TITLE--EFFECT OF AN EXCESS OF ZINC AND SULFUR ON THE EDGE RADIATION OF ACTIVATOR FREE ZINC SULFIDE PHOSPHORS -U-

PROCESSING DATE--04DEC70

AUTHOR-(04)-LEVSHIN, V.L., ARAPOVA, E.YA., VORONOV, YU.V., TIMOFEYEV, YU.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(4), 674-81

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--UV RADIATION, ZINC, SULFUR, LUMINESCENCE, ZINC SULFIDE, ELECTRON BEAM EXCITATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1450

STEP NO--UR/0368/70/012/004/0674/0681

CIRC ACCESSION NO--AP0135121

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/2 028 UNCLASSIFIED

CIRC ACCESSION NO--AP0135121 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ZNS PHOSPHORS, WITH AN EXCESS OF ZN OR S, WERE PREPD. BY A PREVIOUSLY DESCRIBED METHOD (. ET AL. 1966) AND THEIR SPECTRA WERE RECORDED PHOTOELEC. WITH THE AID OF A QUARTZ MONOCHROMATOR AND A PHOTOMULTIPLIER, AFTER EXCITATION BY AN ELECTRON BEAM AND BY MONOCHROMATIC UV LIGHT AT 313 NM. THE EXCESS ZN AND S HAVE A QUENCHING EFFECT ON THE "EDGE" LUMINESCENCE. HENCE, THEY CANNOT ACT AS UV LUMINESCENCE CENTERS.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 621.374.5(088.8)

TYUSHEV, V. S., KONDRATOV, A. V., TIMOFEYEV, Yu. V., SHELUD'KO, O. V.,
Northwest Polytechnical Correspondence Institute

"A Wide-Band Ultrasonic Delay Line"

USSR Author's Certificate No 287101, filed 27 Apr 67, published 7 Apr 71
(from RZh-Radiotekhnika, No 11, Nov 71, Abstract No 11G335 P)

Translation: This Author's Certificate introduces a wide-band ultrasonic delay line whose ultrasonic channel is made in the form of a piezoelectric plate with damper devices on the ends of the plate and with metallic input and output electrodes vaporized on the plate. Connected between the input and output electrodes is a feedback circuit which contains a wide-band pulse generator. To extend the range of the delay time, a slave pulse generator is connected in the feedback circuit. This pulse generator is controlled through a switching device from a coincidence gate. The outputs of a time delay pickup and a pulse counter are connected to the input of the coincidence gate. One input of the pulse counter is connected to the output electrodes of the ultrasonic channel, while the other is connected to the coincidence gate. The delayed signal is taken off from the output of the coincidence gate. Resumé.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 575.23

TIMOFEYEV-RESOVSKIY, N. V., GINTER, Ye. K., GLOTOV, N. V., and IVANOV, V. I., Institute of Medico-Biological Problems, Ministry of Health USSR, Institute of Medical Radiology, Academy of Medical Sciences USSR, Obninsk, and Chair of Genetics and Selection, Moscow State University

"Genetic and Somatic Effects of X-rays and Fast Neutrons (Experiments on Arabidopsis and Drosophila"

Moscow, Genetika, No 4, 1971, pp 42-52

Abstract: Fast neutrons (average energy ~ 5.6 Mev, average LET ~ 30 to 35 kev/mcm, dose rate ~ 6 krad/hour) were more effective than x-rays (average energy ~ 0.1 Mev, average LET ~ 1.6 kev/mcm, dose rate ~ 6 krad/hour) in inducing visible sex-linked mutations and recessive sex-linked lethals, loss and nondisjunction of X chromosomes in Drosophila melanogaster and recessive embryonal and chlorophyll mutations in Arabidopsis thaliana seeds at high spontaneous levels, i.e., the radiation-genetic reactions caused by gene and chromosome mutations. At low spontaneous levels of nondisjunction of X chromosomes in Drosophila, the rate of nondisjunction tended to increase with the dose of both x-ray and neutron irradiation, but there were no significant

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

TIMOFEYEV-RESOVSKIY, N. V., et al, Genetika, No 4, 1971, pp 42-52

differences in the effectiveness of the two forms of irradiation. The values of the RBE of fast neutrons in their lethal effect on Arabidopsis and in inhibiting plant growth and development, in decreasing fertility, and in inducing embryonic and chlorophyll mutations were very similar.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 631.8 + 632.954:633

CHESALIN, G. A., FILIPPOVA, N. V., and TIMOFEYEVA, A. A., VIUA [An unknown abbreviation]

"The Role of Mineral Nutrition in Detoxification of Herbicides in Plants"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 11, No 10 (120), 1973, pp 47-50

Abstract: It has been shown that the absorption, accumulation, and detoxification of herbicides depended to a large extent on the conditions of mineral nutrition of the plants. The nutrition level affects the residual quantity of herbicides in the plant organs. In this fashion, regulating the nutrition of cultured plants, it is possible to lower the content of residual levels of herbicides in the crop and even to inactivate them completely in some plants during their period of vegetation.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR UDC 911.3.616.9:576.89(571.6)

TIMOFEYEVA, A. A.

"The Epidemiological Significance of Ixodes Ticks on Sakhalin and the Kurile Islands"

V sb. Vtoroye Akarologicheskoye soveshchaniye. Ch. 2. Tezisy dokl. (Second Acarological Conference. Part 2. Theses of Reports -- collection of works) Kiev, "Nauk. Dumka," 1970, pp 163-166 (from RZh-Meditsinskaya Geografiya, No 4, Apr 71, Abstract No 4.36.45)

[No abstract]

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 576.858.25.095.38:576.895.421

L'VOV, D. K., TIMOFEYEVA, A. A., GROMASHEVSKIY, V. L., and CHERVONSKIY, V. I., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR and Sakhalinskaya Oblast Sanitary Epidemiological Station, Yuzhno-Sakhalinsk

"Isolation of Arboviruses from Ixodes (Ceratixodes) putus Pick.-Cambr Ticks Collected in a Bird Colony on Tyuleniy Island in the Sea of Okhotsk"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 70, pp 440-444

Abstract: Forty-one strains of at least two different arboviruses were isolated from Ixodes (Ceratixodes) putus Pick.-Cambr ticks collected from the common guillemot, tern. penguin, and other aquatic birds nesting on Tyuleniy Island in the Sea of Okhotsk. The virus was isolated from females before oviposition from females that moulted in the laboratory engorged nymphs, from males (which do not feed on blood), and from nymphs. Suckling mice inoculated with a suspension of infected ticks developed paralysis of the extremities and clonic convulsions after a latent period of 5 to 14 days.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

1/2 014 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--DETERMINATION OF MOLECULAR WEIGHTS USING SEDIMENTATION, DIFFUSION, AND VISCOSITY DATA -U-

AUTHOR-(03)-TIMOFEYEVA, G.I., DUBROVINA, L.V., MENSHOV, V.M.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(6), 1374-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--MOLECULAR WEIGHT, POLYESTER RESIN, FLUID VISCOSITY, DIFFUSION COEFFICIENT, SEDIMENTATION SEPARATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1014 STEP NO--UR/0459/70/012/006/1374/1378

CIRC ACCESSION NO--AP0136441

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/2 014 UNCLASSIFIED

CIRC ACCESSION NO--AP0136441 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DETN. OF THE MOL. WTS. OF POLYESTERS PREPD. FROM SEBACOYL DICHLORIDE AND PHENOLPHTHALEIN OR TEREPHTHALOYL DICHLORIDE AND 9,9,DIS(4,HYDROXYPHENYL)FLUORENE BY THE COMBINED SEDIMENTATION VISCOSITY METHOD (P. I. FLORY, ET AL., 1952) GAVE MORE RELIABLE AND REPRODUCIBLE RESULTS THAN DETNS. BY THE VISCOSITY OR DIFFUSION METHODS. THE DIFFUSION COEFFS. AS DETD. BY CENTRIFUGING ARE SUBJECT TO CONSIDERABLE ERROR. FACILITY: INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 546.171.1:536.413.2

TIMOFEYEVA, I. I., and SHVEDOVA, L. K., Institute of Problems of Material Science, Academy of Sciences UkrSSR

"Microhardness and Thermal Expansion of Transition Metal Nitrides in the 80-300°K Temperature Interval"

Moscow, Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, Vol 8, No 6, Jun 72, pp 1169-1170

Abstract: An investigation was made of the microhardness and thermal expansion coefficient of titanium and zirconium nitrides in their homogeneity regions and of hafnium, vanadium, niobium, and tantalum monoitrides. The microhardness of nitrides was measured under a layer of cooling liquid at a 100-g indenter load on the PMTN unit. The thermal expansion coefficient was determined by the x-ray method by measuring the lattice parameter at liquid nitrogen and room temperatures. The character of the thermal expansion coefficient, the modulus of elasticity, and the Debye temperature in the homogeneity range is different for titanium and zirconium nitrides: with decreasing nitrogen content, the thermal expansion coefficient decreases for titanium nitride but increases somewhat for zirconium nitride. The microhardness of metallic compounds is basically determined by bonding forces

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

TIMOFEYEVA, I. I., and SHVEDOVA, L. K., Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, Vol 8, No 6, Jun 72, pp 1169-1170

of metal and nonmetal atoms, whereas the properties related to dynamics of the crystalline lattice are greatly affected by the bond between metal atoms. One illustration, one table, nine bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

Single Crystals

USSR

UDC 669-172

SINEL'NIKOVA, V. S., and TIMOFEYEVA, I. I.

"Production of Single Crystals of Niobium by Precipitation from a Vapor-Gas Mixture and Their Study"

Monokristally Tugoplavkikh i Redkikh Metallov [Single Crystals of Refractory and Rare Metals -- Collection of Works], Nauka Press, 1971, pp 13-16

Translation: Conditions are studied for the production of niobium single crystals by the method of precipitation from a vapor-gas mixture using the reaction of reduction of niobium pentachloride by hydrogen. The optimal temperature of the process and concentration of pentachloride in the reaction space are established for the production of crystals of true form. Epigrams taken from the single crystals are used to establish the direction of growth of the crystals. The microhardness is studied in various crystallographic planes of the crystals produced. 4 Figures; 11 Bibliographic References.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR UDC 661.665.2

SINEL'NIKOVA, V. S., and TIMOFEYEVA, I. I.

"The Possibility of Producing Single Crystals of Refractory Carbides"

Monokristally Tugoplavkikh i Redkikh Metallov [Single Crystals of Refractory and Rare Metals -- Collection of Works], Nauka Press, 1971, pp 16-18

Translation: A method is described for producing single crystals of refractory carbides, based on precipitation from a vapor-gas mixture using the reaction of reduction of chlorides with hydrogen, and its advantages are shown over the oridnary methods, which involve significant technological difficulties. X-ray structural and microstructural studies of single crystals of zirconium carbide produced by the new method are performed. 2 Figures; 19 Bibliographic References.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

1/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--DEASPHALTIZATION OF ACID SLUDGE -U-

AUTHOR-(05)-MIKHAYLOV, I.A., LEVINSON, S.Z., OROCHKO, D.I., IZOTOVA, P.P.,
TIMOFEYEVA, K.M.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 219,057
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--01APR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL-PATENT, ADSORPTION, PETROLEUM DEASPHALTING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0890 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0132980
UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0132980

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ACID SLUDGE UNDERWENT COUNTERCURRENT ADSORPTION TREATMENT IN SOLN. FACILITY: ALL UNION SCIENTIFIC RESEARCH INSTITUTE OF THE PETROLEUM INDUSTRY.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

1/2 CIO UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--REACTIONS OF ALPHA HALO KETONES. XXIII. CORRELATION BETWEEN REACTIVITY AND SENSITIVITY IN THE SOLVOLYSIS OF TERTIARY ALPHA BROMO

AUTHOR-(03)-KARAVAN, V.S., TIMOFEYEVA, L.A., TEMNIKOVA, T.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(5), 958-61.

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL REACTION KINETICS, SOLUBILITY, KETONE, BENZENE DERIVATIVE, BROMINATED ORGANIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1315 STEP NO--UR/0366/70/006/005/0958/0961

CIRC ACCESSION NO--AP0134989

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/2 C10 UNCLASSIFIED

CIRC ACCESSION NO--AP0134989 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLVOLYSIS KINETICS WERE STUDIED AT 25DEGREES IN 100, 98, 95, OR 90PERCENT ETOH OF PH SUB2 CBRCOC SUB6 H SUB4 X,P (I) AND (P,SC SUB6 H SUB4) PHCBRBZ (II) (X IS OME, ME, PH, H, OR CL). THE REACTIVITIES OF I AND II OBEY THE WINSTEIN EQUATION (E. GRUNWALD, ET AL., 1948). THERE IS A LINEAR RELATION BETWEEN THE SOLVOLYSIS RATE CONST. AND THE PARAMETER M. THE INCREASE IN REACTIVITY (IN MORE POLAR SOLVENTS) IS ASSOCD. WITH A DECREASE IN THE REACTIVITY PARAMETER P. FACILITY: LENINGRAD. GOS. UNIV., LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

USSR

UDC 669.011.7

SAMSONOV, G. V., KOVTUN, V. I., TIMOFEYEVA, I. I., ROGOZINSKAYA, A. A., And VINITSKIY, A. G., Institute of Problems of Material Science, Academy of Sciences Ukrainian SSR, Kiev

"Nature of the High Microhardness of Surfaces Hardened by Friction"

L'vov, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 9, No 4, 1973, pp 26-30

Abstract: Strengthening of surfaces by dry sliding friction in a vacuum was studied for refractory metals of groups IV-VIII of the periodic system. Microhardness of the samples rises to a rather high maximum value and then drops off. In addition to microhardness, lattice parameters, mosaic block size, type II distortion, and dislocation density of the metals were determined after undergoing friction. The data on the fine structure and dislocation density in the deformed layers do account for the high degree of metal hardening nor do they explain the variance in metal strengthening at the characteristic pressure equal to 25% of the tensile strength. It was shown that the decisive factor in the strengthening is the electron structure of the metals and the change in this structure during deformation by friction. 6 figures, 3 tables, 21 bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

1/2 013

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--ANAEROBIC SPLITTING OF CARBOHYDRATES AND THE ACTIVITY OF THE ENZYMES IN THROMBOCYTES DURING HEMORRHAGIC THROMBOCYTEMIA -U-

AUTHOR-(03)-CHERNYAK, N.B., TIMOFEYEVA, L.M., FRINOVSKAYA, I.V.

COUNTRY OF INFO--USSR

SOURCE--PROBL GEMATOL PERELIV KROVI 15(2): 44-49, 1970.

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ENZYME ACTIVITY, THROMBOCYTE, ADENOSINE TRIPHOSPHATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605015/B12 STEP NO--UR/9080/70/015/002/0044/0049

CIRC ACCESSION NO--AP0140561

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

2/2 013 UNCLASSIFIED

CIRC ACCESSION NO--AP0140561 PROCESSING DATE--04DEC[illegible]

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE THROMBOCYTES OF 13 PATIENTS SUFFERING FROM HEMORRHAGIC THROMBOCYTEMIA THERE WAS A LESS INTENSIVE ACCUMULATION OF THE LACTATE IN THE ANAEROBIC, AND, ESPECIALLY, IN THE AEROBIC CONDITIONS IN COMPARISON WITH DONOR THROMBOCYTES. THE ACTIVITY OF HEXOKINASE, GLUCOSO,6,PHOSPHATE DEHYDROGENASE, PHOSPHOGLYCERITE ALDEHYDE DEHYDROGENASE, AND OF LACTATE DEHYDROGENASE SHOWED NO SIGNIFICANT DEVIATION FROM THE NORMAL. THE CONTENT OF ATP WAS REDUCED OR WITHIN THE NORMAL RANGE, THE ADP CONTENT WAS REDUCED; IN THIS CONNECTION THE ATP-ADP RATIO WAS CONSIDERABLY INCREASED IN COMPARISON WITH THE NORMAL LEVEL. ENDOGENOUS ATP IN THE PATIENTS' THROMBOCYTES SPLIT IN INCUBATION MORE INTENSIVELY THAN IN THE THROMBOCYTES OF HEALTHY PERSONS. FACILITY: CENT. INST. HEMATOL. BLOOD TRANSFUS., MIN. HEALTH USSR, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310014-5

UNCLASSIFIED

TITLE--ADENYLIC SYSTEMS COMPONENTS CONTENT AND ENZYMATIC ACTIVITY IN THROMBOCYTES OF PATIENTS WITH THROMBOCYTEMIA -U-

PROCESSING DATE--16OCT70

AUTHOR--TIMOFEYEVA, L.M.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY MEDITSINSKOY KHIMII, 1970, VOL 16, NR 3, PP 240-244

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--THROMBOCYTE, ENZYME ACTIVITY, BLOOD PLATELET, ADENOSINE TRIPHOSPHATE, DEHYDROGENASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0256

STEP NO--UR/0301/70/016/003/0240/0244

CIRC ACCESSION NO--AP0120946

UNCLASSIFIED

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CIRC ACCESSION NO--AP0120946 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRONOUNCED CHANGES IN HEXOKINASE, GLYCEROALDEHYDE PHOSPHATE DEHYDROGENASE AND LACTATE DEHYDROGENASE ACTIVITIES IN PLATELETS OF PATIENTS WITH THROMBOCYTEMIA HAVE NOT BEEN DETECTED. AT THE PRIMARY THROMBOCYTEMIA THE DECREASE IN ATP AND ADP CONTENT IN THROMBOCYTES OF PATIENTS WAS OBSERVED. IN SOME CASES THE CONTENT OF THESE NUCLEOTIDES WAS HIGHER THAN IN THE CONTROL. AT THE SECONDARY THROMBOCYTEMIA ATP CONTENT WAS IN THE LIMITS OF CONTROL, BUT ADP CONTENT WAS DECREASED. ATP,ADP RATIO AT THE PRIMARY AS WELL AS SECONDARY THROMBOCYTEMIA WAS ELEVATED. IN PLATELETS OF PATIENTS ATP SPLITTING DOES NOT FOLLOWED BY ADP AND ANP ACCUMULATION. IN PLATELETS OF PATIENTS AS WELL AS IN THOSE OF HEALTHY INDIVIDUALS THE ACTIVATION OF AMP DEAMINASE OCCURS. FACILITY: THE LABORATORY OF BIOCHEMISTRY, CENTRAL INSTITUTE OF HAEMOTOLOGY AND BLOOD TRANSFUSION, MOSCOW.

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USSR

UDC 669.215.089.68:543.42

GUSARSKIY, V. V., FRIDMAN, G. I., and TIMOFEYEVA, L. N.

"Principles for the Synthesis of the Composition of Standard Specimens for the Spectral Analysis of Aluminum Base Alloys"

V Sb. "VII Ural'sk. Konf. po Spektroskopii, 1971. Vyp. 1" [In the Collection "Seventh Ural Conference on Spectroscopy, 1971. No 1"], Sverdlovsk, 1971, pp 84-86 (from Referativnyy Zhurnal, No 10, Oct 72. 32. Metrologiya i Izmeritel'naya Tekhnika. Single Issue. Abstract No 10.32.996 by V. S. K.)

Translation: The requirements are listed which have to be considered in projecting the compositions of standard specimens for spectral analysis: correspondence of real alloys by chemical composition, presence of the interval of concentrations beyond the scope of the All-Union State Standard of the actual alloy, stability of the sum of concentrations of the alloy components in all specimens of the complex, provision of the control of the maximum quantity of brands of alloys by means of the minimum number of types of standard specimens. Projecting the chemical composition of different standard specimens requires that the accompanying admixtures, which are not provided by the All-Union State Standard for the given series of alloys, also be considered. The composition is given of the 69 complex of the

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USSR

GUSARSKIY, V. V., et al., V Sb. "VII Ural'sk. Konf. po Spektroskopii, 1971. Vyp. 1" pp 84-86 (from Referativnyy Zhurnal, No 10, Oct 72. 32. Metrologiya i Izmeritel'naya Tekhnika. Single Issue. Abstract No 10.32.996 by V. S. K.)

standard specimen for spectral analysis of alloys of types D-20, AK-6, V-65, and D-18. The unique graduation graph for the determination of manganese is presented. Each point on graduation graphs represents the average of 10 parallel determinations. The investigation of prepared standard specimens has demonstrated the rightfulness of the "group" method of grouping standards for aluminum alloys. The standard specimens of the 69 complex and of the alloy Duralumin show for their analysis in all elements unique graduation graphs. One illustration, one table.

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TIMOFEYEVA, L. N.

JPRS 56002

16 May 1972

UDC: 669.14.018.44:539.4

STATISTICAL EVALUATION OF CHARACTERISTICS OF HEAT-RESISTANT MATERIALS FOR GAS-TURBINE ENGINES

[Article by I.P. Bulygin, N.I. Parfenova, L.N. Timofeyeva, and I.I. Trunin; Moscow, Problemy Prochnosti, Russian, No 10, 1970, pp 20-24]

Change of Dispersion of the Characteristics of Long-Term Strength and Creep As a Function of Test Temperature and Length

Characteristics of heat-resistance are among the random values, the precision of determination of which depends to a considerable degree on the quantity of experimental data. This fact can explain the tendency to determine those characteristics on the basis of the results of mass tests.

The results of statistical processing of mass tests for long-term strength and creep can be used to obtain additional information which contributes to increased reliability of evaluation of the working capacity of heat-resistant materials. One of those possibilities is study of the time and temperature dependence of certain statistical parameters of experimental sets.

In the present work, on the example of two typical heat-resistant materials (EP109VD nickel-based alloy and EI961 steel) an investigation was made of the change of dispersion of the characteristics of resistance to deformation and destruction during creep as a function of the test temperature and length.

Three industrial casts of each material were selected for the investigation in accordance with the principles given in [1], in which is shown the possibility of estimating the mean values and dispersion of the "mark" characteristics of long-term strength by statistical processing of the results of tests of three or four casts, selected with consideration of the actual distribution of a large number of casts with respect to durability.

On the basis of the smelting method, chemical composition, type of intermediates and conditions of heat treatment

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USSR

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UDC 911.3:616.9:576.895.771(47+57)

SHIPITSINA, N. K., ANUFRIYEVA, V. N., BANDIN, A. I., VINOGRADSKAYA, O. N., GORNOSTAYEVA, R. M., KUPRIYANOVA, Y. S., MARKOVICH, N. Ya., RASNITSYN, S. P., and TIMOFEYEVA, L. V.

"Study of the Biology of Blood-Sucking Diptera as Basis for Combating Vectors of Infection and Blood-Sucking Insects in the Soviet Union"

V sb. Materialy Nauchn. konferentsii posvyashch. 50-letiyu In-ta Med. parazitol. i tropich. Med. 1970 (Proceedings of the Scientific Conference Devoted to the 50th Anniversary of the Institute of Medical Parasitology and Tropical Medicine 1970 -- collection of works), Moscow, 1970, pp 48-49 (from RZh-Meditsinskaya Geografiya, No 2, Feb 71, Abstract No 2.36.48)

[No abstract]

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BIOLOGY

Agriculture

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USSR

UDC 614.449.57:615.285.7]:576.895.77+595.771

KRIVTSOVA, Ye. N., MITROFANOV, A. M., KOZIN, N. P., TIMOFEYEVA, L. V., TULUPOVA, A. M., VINOGRADSKAYA, O. N., YERMISHEV, Yu. V., PLOTNIKOVA, A. S. and RYAZANTSEV, V. A., Institute of Medical Parasitology and Tropical Medicine imeni Ye. I. Martsinovskiy, Ministry of Health USSR, and Institute of Agricultural and Specialized Application of Civil Aviation

"Testing of Some Organophosphorus Compounds and Carbamates against Larvae of Aedes Mosquitoes (Culicidae) in Experiments with Aerial Spraying"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 39, No 5, Sep/Oct 70, pp 599-603

Abstract: The use of organophosphorus compounds and carbamates against mosquito larvae was tested in the Yakut ASSR, in the area of the villages of Novy, Aikhal, and Mirny, and the Udachnaya deposits. Water reservoirs were treated by aerial spraying from an AN-2 plane. The following pesticides were tested: bytex, methylnitrophos, trolen, sevine, and dipterex; DDT was used as the reference. Comparatively uniform marshy territories with occasional forests and bushes were selected. Bytex was shown to be especially effective as a larvicide, a dose of 40 g/hectare proving to be sufficient. Methylnitrophos

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