"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

PASHINKIN, A. P., et al, Zhurnal Obshchey Khimii, Vol 40, No 1, Jan 70, pp 28-30

Formation of (II) was also observed in these reactions. The reactions with aniline are more complex. Dialkylphosphorous acid and anilides of carboxylic acids were obtained in low yields only.

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USSR UDC: 547.183.325+547.387

GAZIZOV, T. Kh., PASHINKIN, A. P., and PUDOVIK, A. N.

"Thermal Isomerization of a Mixed Anhydride of Diethylphosphorous and Acrylic Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 1, Jan 70, pp 31-32

Abstract: An investigation of the product of thermal isomerization of the anhydride confirmed the formation of 1,3-di(diethoxyphosphonyl)propenyl acrylate (I) according to the proposed two-step reaction scheme. Presumably, (diethoxy)phosphonylmethylketene (II) formed in the first step of isomerization subsequently reacts with the starting anhydride to give I. Heating the final product of thermal isomerization of the title anhydride with excess absolute ethanol and two drops triethylamine gave 48% diethylphosphorous acid and 61.3% ethyl beta-diethylphosphonylpropionate. The result was explained as alcoholysis of the ester function in I followed by breaking of the P-C bond in the presence of the ethoxide anion. Passing ketene through the title anhydride at 20° yielded about 60% alpha-diethoxyphosphonylvinyl acrylate, identified by its physical constants and IR spectrum. The above reactions were seen as confirmation of the proposed thermal isomerization scheme of the mixed anhydride.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR UDC: 547.26+547.233+546.185.325

PASHINKIN, A. P., GAZIZOV, T. Kh., and PUDOVIK, A. N., Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, Kazan', Academy of Sciences USSR

"Rupture of the Phosphorus-Carbon Bond in Alpha-Ketophosphonates"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 1, Jan 70, pp 28-30

Abstract: Reactions of esters alpha-ketophosphonic acid (I), where R is methyl, isopropyl, ter. butyl, or phenyl, with nucleophilic agents, such as alcohols and amines, proceed under relatively mild conditions and result in rupture of the P-C bond. Nucleophilic substitution is thought to be the mechanism of the bond rupture. The composition of the reaction products is greatly affected by the ratio of the reactants. Thus, heating a 1:10 mixture of (I) with ethanol without a catalyst, gave diethylphosphorous acid (yield 92%), and ethyl acetate. The same mixture but in the presence of 3-4 drops triethylamine gave at room temperature an 85% yield of ethanol and ethyl acetate. Adding 2-3 drops of triethylamine to a 1:1 mixture of (I) and ethanol gave diethylphosphorous acid (yield 31.9%) and diethyl (alpha-diethylphosphonethyl) phosphate (II) (yield 55.5%). Apparently, II was formed by phosphonate-phosphate isomerization under the influence of the basic catalyst. Formation

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USSR

PASHINKIN, A. P., et al, Zhurnal Obshchey Khimii, Vol 40, No 1, Jan 70, pp 28-30

of (II) may be minimized by the presence of a large excess of the nucleophilic agent. The reactions with primary aliphatic amines proceed similarly but much easier, and the exothermic effect is significantly higher than with ethanol. Dialkylphosphorous acid and an amide of the corresponding carboxylic acid are formed. Formation of (II) was also observed in these reactions. The reactions with aniline are more complex. Dialkylphosphorous acid and anilides of carboxylic acids were obtained in low yields only.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR UDC 547.1'13 + 621.793.1

GRIBOV, B. G., RUMYANTSEVA, V. P., TRAVKIN, N. N., PASHINKIN, A. S., KOZYRKIN, B. I., and SALAMATIN, B. A.

"Study of Metallic Films Obtained by Pyrolysis of Chromium and Molybdenum π-Complexes in the Gas Phase"

Moscow, Doklady Akademii Nauk SSSR, Vol 194, No 3, 1970, pp 580-582

Abstract: The article describes results of a study of the properties of metallic chromium and molybdenum films obtained by the pyrolysis of organic chromium and molybdenum compounds. The organometallics used were bis-benzene-, bis-toluene-, bis-ethylbenzene-, bis-xylene-, bis-mesitylene-, bis-diphenylchromium, their iodides, aniline-, dimethylaniline- and mesitylenechromium tricarbonyl, mesitylenemolybdenum tricarbonyl and bis-ethyl-benzenemolybdenum. The resultant metallic films possess considerable mechanical strength and hardness, elevated corrosion and acid resistance, and high adhesion. In order to study the properties of the pyrolytic chromium and molybdenum films, electro-

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

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GRIBOV, B. G., et al., Doklady Akademii Nauk SSSR, Vol 194, No 3, 1970, pp 580-582

physical parameters were measured and the structure and properties of the films determined by the electron diffraction method and electron microscopy. The results indicate that a number of peculiarities in metallic films obtained by the pyrolysis of organometallics are explained by the character of their formation during thermal decomposition, and their composition and properties depend on the conditions under which the thermal decomposition is carried out, as well as on the initial organometallics.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

355

UDC 533.601.155

Antonov, A. M., Pashinskiy, A. I., Kiev State University

"Asymmetrical Triangular Plate With Blunt Edges in Hypersonic Flow"

Kiev, Dopovidi akademii nauk ukrains'koy RSR, fiziko-tekhnichni ta matematichni nauki, No 12, 1971, pp 1083-1086

Within the framework of the simplest two-layer scheme, the problem is solved for a hypersonic flow of gas past an asymmetrical triangular plate with blunt edges. The calculations confirm the accepted assumptions.

The divergent gas flow at small slip angles into the high-entropy layer near the flow velocity vector has a persistent influence on the distribution of parameters within the layer.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 021 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--EFFECT OF ANTINEOPLASTIC DRUGS ON SOME FUNCTIONAL CHARACTERISTICS OF THE KIDNEYS IN RATS WITH SARCOMA 45 -U-

AUTHOR--PASHINSKIY, V.G.

COUNTRY OF INFO--USSR

SOURCE--FARMAKOL. TOKSIKOL. (MOSCOW) 1970, 33(3), 360-1

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTINEOPLASTIC DRUG, KIDNEY, RAT, SARCOMA, SEROTONIN, HEXAMINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605004/C09 STEP NO--UR/0390/70/033/003/0360/0361

CIRC ACCESSION NO--AP0139624

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 021 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139624

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DIURESIS INCREASED IN RATS WITH SARCOME 45 WHEN THE ANIMALS WERE GIVEN SEROTONIN (10 MG-KG S.C.) OR MEXAMINE (10 MG-KG S.C.), WHEREAS IF THEY WERE GIVEN SARCOLYSINE (1.5 MG-KG I.P.) WATER UPTAKE WAS REDUCED. ALL 3 ANTIBLASTIC COMPOS. DECREASED THE WATER BALANCE AND INCREASED THE CONTENT OF NA AND K IN THE URINE. 6,MERCAPTOPURINE (25 MG-KG I.P.) HAD NO EFFECT ON EITHER THE SARCOMA OR THE RENAL FUNCTION. ALL 4 COMPOS. HAD NO EFFECT ON THE RENAL FUNCTION OF HEALTHY RATS WITHOUT TUMORS. FACILITY: LAB. KHIMIOTER. RAKA, NOVOKUZNETSK. NAUCHN-ISSLED. KHIM.-FARM. INST., NOVOKUZNETSK, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--RENAL EXCRETION OF WATER, SODIUM AND POTASSIUM IN MICE AND RATS WITH TRANSPLANTED TUMOURS -U-

AUTHOR--PASHINSKIY, V.G.

COUNTRY OF INFO--USSR

SOURCE--PATOLOGICHESKAYA FIZIOLOGIYA I EKSPERIMENTAL'NAYA TERAPIYA, 1970, VOL 14, NR 3, PP 63-65

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TISSUE TRANSPLANT, KIDNEY FUNCTION, DIURESIS, EXCRETION, POTASSIUM COMPOUND, SODIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1927 STEP NO--UR/0396/70/014/003/0063/0065

CIRC ACCESSION NO--AP0127328

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127328

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RENAL EXCRETION OF WATER, SODIUM AND POTASSIUM WAS STUDIED IN THE PROCESS OF GROWTH OF ASCITIC EHRLICH TUMOUR IN MICE AND OF SARCOMA 45 AND M-1 IN RATS. THERE WAS NOTED A RETENTION OF FLUID IN THE ORGANISM OF THESE ANIMALS, ASSOCIATED WITH REDUCED DIURESIS AND WITH INCREASED WATER INTAKE. EXCRETION OF SOLDIUM AND POTASSIUM WITH THE URINE PROGRESSIVELY DECREASED DURING THE GROWTH OF THE TUMOURS. THE TERMINAL PERIOD OF TUMOUR DEVELOPMENT WAS ACCOMPANIED BY A MARKED AGGRAVATION OF RENAL FUNCTION: A FALL OF DIURESIS AND FILTRATION, AND A REDUCTION TO THE MINIMUM OF SOLDIUM AND POTASSIUM EXCRETION. FACILITY: LABORATORIYA KHIMIOTERAPII RAKA NOVOKUZNETSKOGO NAUCHNO-ISSLED KHIMIKO-FARMATSEVTICHESKOGO INSTITUTA.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

PASHINTSEV, V. T.

JPRS 54729
17 Dec 71

UDC 519.95

ON THE PROPERTIES OF A FIELD OF EXTREMALS IN ONE OPTIMUM CONTROL PROBLEM

/Article by V. P. Illarionov and V. T. Pashintsev, Central Institute of Aerohydrodynamics imeni N. Ye. Zhukovskiy, Moscow; Moscow, Doklady Akademii Nauk SSSR, Russian, Vol 200, No 6, 1971, pp 1291-1293/

Within the limits of the energy method /1,2,3/, the problem of determining the flight of an airplane over a given distance (l), with a minimum expenditure of fuel, reduces to the minimization of the functional

$$I = \int_{l_0}^{l_1} f(h, E, P)\, dl \tag{1}$$

with the additional condition of constraint

$$\frac{d}{dl} E = \frac{1}{G}[P - X(h, E)], \quad E(l_0) = E_0, \quad E(l_1) = E_1, \tag{2}$$

where the integrand $f(h,E,P)$ in /1/ /sic --probably (1)/ = fuel consumption per unit of flight distance ; E = specific mechanical energy ($E = h + v^2/2g$); h,v = height, velocity; P = engine thrust; X = aerodynamic drag; G = airplane's weight = constant.

The controlling functions in (1) and (2) and P and h. Let us assume that functions f and X, along with their partial derivatives, are continuous for independent variables h, E, and P.

In this article, we will establish the properties of the family of extremals, in the plane (h,E), which are realized in the open area of the set of permissible values of P and h. We will use the conditions necessary for the optimality of controls $P(l)$ and $h(l)$ that arise from L. S. Pontryagin's maximum principle /4/:

Aerohydrodynamic

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 629.78.076.8

PASHINTSEV, V. T.

"Approximate Optimal Control of the Angle of Roll in the Problem of the Return of Hypersonic Aircraft"

Uch. zap. Tsentr. aerogidrodinam. in-ta (Scientific Notes of the Central Aerohydrodynamic Institute), 1972, Vol. 3, No. 4, pp 136-144 (from RZh-41. Raketostroyeniye, No 11, Nov 72, Abstract No 11.41.98)

Translation: The problem of the return of hypersonic aircraft to a given region in the passive segment of motion in the atmosphere is discussed. A convenient form for recording conditions for selecting the optimal angle of roll minimizing the functional in problems of the spatial maneuver in the atmosphere is presented, which makes it possible to express in explicit form certain characteristic properties of the optimal control. A simplified control program for the angle of roll is presented on the basis of an approximate qualitative analysis of the optimal control; this program is described by a function of the current values of the phase coordinates and an inherent variable parameter. 4 ill., 4 ref. Resume.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

PASHINTSEV, YU. I.

Microelectronics

JPRS 57333

25 October 1972

MICROELECTRONICS

Excerpts from Russian-language book edited by F. V. Lukin; Mikroelektronika, No 5, 1972, Sovetskoye Radio Publishing House, Moscow, UDC 621.382:621.396.6-181.5.

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[I - USSR - F]

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

This article concerns questions of constructing integrated internal memories on supplementing MDP transistors from uniform subsystems. The article examines methods of optimal division for uniform subsystems of the internal memory structure with centralized and distributed control. The article cites a comparative analysis of different methods of constructing an internal memory based on speed of response and required power. The article examines the characteristics of the structure of integrated subsystems for an internal memory with distributed control. On the basis of the comparative analysis of different types of memory cells cited in the article the best circuit for the cell is selected. The structure and the theoretical circuit is given for the memory subsystem developed for integrated execution. Based on the results of the analysis and the experiment, the basic parameters of the integrated internal memory are evaluated.

The article contains 10 figures and 15 bibliographic references.

UDC 621.38.001

Allowing for Nonuniformity in the Distribution of Defects in Evaluating the Yield Probability of Suitable Integrated Semiconductor Circuits. Valiyev, K.A., Kotko, A.P., Satonnov, G.G., and Batalov, B.V. In the Collection Mikroelektronika, edited by F.V. Lukin, No 5, p 151, Sovetskoye Radio Publishing House, 1972.

A method is suggested for predicting the yield of suitable circuits by allowing for the nonuniform distribution of defects. It is shown that with increase in the complexity of the circuits and increase in the average number of defects on the circuit that accompany it, the influence of the nonuniformity of their distribution on the percent of yield of suitable circuits also grows.

The article contains 1 figure, 2 tables, and 7 bibliographic references.

UDC 621.382.8→621.396.6-181.3

Subnanosecond Memory Element on the Basis of the Gunn Effect in Gallium Arsenide. Valiyev, K.A., Kravchenko, L.N., Orlikovskiy, A.A., Panasenko, F.V., and Pashintsev, Yu.I. In the Collection Mikroelektronika, edited by F.V. Lukin, No 5, p 151, Sovetskoye Radio Publishing House, 1972.

The article examines a subnanosecond memory element on the basis of the Gunn effect in gallium arsenide for use in superoperational memory devices with random sampling during

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recording and readout. The memory element consists of two four-electrode Gunn instruments, the first of which serves for recording and storage, the second of which serves for readout of the stored information. The time of the recording-readout cycle is about 0.5 nsec. The power computed in storage mode 1 is about 100 mW; in storage mode 0 it is about 115 mW.

The article contains 4 figures and 3 bibliographic references.

UDC 681.142 → 621.374.3

Diode-Transistor Logic Circuit With Feedback. Naumov, Yu.Ye. and Puchkov, I.F. In the Collection Mikroelektronika, edited by F.V. Lukin, No 5, p 166, Sovetskoye Radio Publishing House, 1972.

The article gives a theoretical analysis of the electrical parameters of a circuit with feedback; its advantages are analyzed in comparison to the diode-transistor circuit without feedback. It is shown that the use of a feedback circuit is especially effective in designing micropower circuits. An experimental investigation is given for the circuit with feedback in the micropower band a comparison is given with the microcircuit "Mikrovatt-1".

The article contains 11 figures, 1 table, and 6 bibliographic references.

UDC 621.382.029.64

Logic Elements on Gunn Diodes. Veronkova, G.M., Orlova, L.K., Starosel'skiy, V.I., and Sapel'nikov, A.M. In the Collection Mikroelektronika, edited by F.V. Lukin, No 5, p 182, Sovetskoye Radio Publishing House, 1972.

The article describes the properties of experimental samples of planar Gunn diodes. On 200-μm long samples the authors make a current impulse shaper and memory elements of two types.

The article contains 6 figures, 1 table, and 5 bibliographic references.

UDC 621.375.001.24:621.382.32

Static Analysis of the Simplest Differential Cascade on MDP Transistors. Stepanenko, I.P. In the Collection Mikroelektronika, edited by F.V. Lukin, No 5, p 190, Sovetskoye Radio Publishing House, 1972.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 621.382.002

YEMEL'YANOV, A.V., PAVLOVA, YE.YE., PASHINTSEV, YU.I.

"Alloy Contact Of Tin--Gallium Arsenide"

Elektron. tekhnika. Nauchno-tekhn. sb. Poluprovodn. pribory (Electronic Technology. Scientific-Technical Collection. Semiconductor Devices), 1970, No 1(51), pp 182-188 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12B443)

Translation: The possibility is investigated of obtaining, at temperatures of 250 ÷ 450° C, a low-resistance ohmic contact of tin with gallium arsenide which is used for production of Gunn diodes. It is shown that the minimum resistance of the contact and 100 percent wetting of gallium arsenide is obtained by fusing in of tin with of tin chloride as a flux at temperatures of 350° C and above. 7 ref. Summary.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

PASHINTSEVA, L. P.

SO:JPRS 54153
29 SEP 91

UDC: 616-006.44-07:616.153.1:577.153.3

ACTIVITY AND ISOZYMES OF ALKALINE PHOSPHATASE IN HEMOPOIETIC SYSTEM NEOPLASMS

[Article by L.P. Pashintseva, Medicine/ Oncology N.I. Krusanova, Institute of Experimental and Clinical Medicine, USSR Academy of Medical Sciences, Moscow; Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, Russian, No 7, 1971, pp 81-84]

Investigation of alkaline phosphase in the blood serum of oncological patients has long since drawn the attention of researchers. An important stimulus for such interest was the rise in activity of this enzyme in the serum of patients suffering from some types of tumors, and establishment of the heterogeneity of alkaline phosphatase due to the presence of isozymes (osseous, hepatic, placental, intestinal, and others). It has been shown that in the presence of osteoblastic form of osteogenic sarcoma, obstructive jaundice and metastases to the liver, there is increased activity of alkaline phosphatase in serum (Roberts; Kay; Fraussen et al.) and that this is due, in the first case, by an increase in osseous alkaline phosphatase content, and in the second and third cases by an increase in the hepatic type of this enzyme (Reiding; Rosenberg; Neije and Jong). Of considerable interest are the data pertaining to the discovery of a placentoid isozyme of alkaline phosphatase in tumor tissue and blood serum of a patient with pulmonary carcinoma (Fischman et al.). Further investigation revealed the presence of this isozyme in 1.5 percent of the patients with diversely located tumors (Stolbach and Fischman).

Investigation of alkaline phosphatase and of its isozyme spectrum could serve as a valuable ancillary means of detecting metastases in osteoblastic bone, of evaluating the nature of osteogenic sarcoma, of differentiation between jaundices, and of detecting metastatic lesions and tumors of the liver. In spite of the fact that some advances have been made in the study of alkaline phosphatase isozymes in oncological patients, several problems require more investigation. In particular, it would be interesting to study the alkaline phosphatase isozyme spectrum in patients with some types of neoplasms of the hemopoietic system.

The present work deals with alkaline phosphatase and its isozyme spectrum in patients suffering from lymphogranulomatosis, acute leukemia, and reticulosarcoma.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 022 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--SOME BIOCHEMICAL FINDINGS ON PATIENTS WITH PRIMARY CANCER OF THE LIVER AS RELATED TO CHEMOTHERAPY -U-

AUTHOR--PASHINTSEVA, L.P., KRUSANOVA, N.I., ASSEKRITOVA, I.V.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK AKADEMII MEDITSINSKIKH NAUK SSSR, VOL 25, NO 2, 1970, PAGES 39-43

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CANCER, LIVER, BLOOD SERUM, CHEMOTHERAPY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0725 STEP NO--UR/0248/70/025/002/0039/0043

CIRC ACCESSION NO--AP0102695

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 022 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102695

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PURPOSE OF THE PRESENT WORK WAS TO INVESTIGATE THE DYNAMICS OF SOME BIOCHEMICAL BLOOD SERUM INDICES OF PATIENTS WITH PRIMARY CANCER OF THE LIVER UNDER THE INFLUENCE OF CHEMOTHERAPY.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 023 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--A METHOD OF RELATIVE SEMIQUANTITATIVE SPECTRAL INVESTIGATION OF THE SEMINAL FLUID -U-

AUTHOR-(03)-SMOLYANINOV, V.M., PASHINYAN, G.A., ZAYSEV, V.V.

COUNTRY OF INFO--USSR

SOURCE--UROLOGIYA I NEFROLOGIYA, 1970, NR 3, PP 36-38

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--REPRODUCTIVE SYSTEM, SPECTRUM ANALYSIS, SPERMATOGENESIS, PHOSPHORUS, IRON, CALCIUM, COPPER, SODIUM, ALUMINUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0170 STEP NO--UR/0606/70/000/003/0036/0038

CIRC ACCESSION NO--AP0120870

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 023 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120870

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS REPORT A METHOD OF SPECTRAL EMISSION ANALYSIS AS APPLIED TO THE STUDY OF INORGANIC COMPOSITION OF NORMAL AND PATHOLOGICALLY CHANGED HUMAN SEMINAL FLUID. DETERMINATION OF 6 MACRO AND TRACE ELEMENTS OF THE EJACULATE (PHOSPHORUS, IRON, CALCIUM, COPPER, SODIUM AND ALUMINIUM) IS PRESENTED AS AN EXAMPLE. THE RESULTS OF THESE INVESTIGATIONS WERE TREATED STATISTICALLY. THE METHOD IS RECOMMENDED FOR DIAGNOSIS OF SOME CONDITIONS OF THE EJACULATE IN CLINICAL PRACTICE. FACILITY: KAFEDRA SUDEBNOY MEDITSINY II MOSKOCSKOGO MEDITSINSKOGO INSTITUTA IM. N. I. PIROGOVA.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR UDC: 537.312.62

PASHITSKIY, E. A. and ROMANOV, Yu. A.

"Plasma Waves and Superconductivity in Quantized Semiconducting (Semimetallic) Films and Laminated Structures"

Kiev, Ukrainskiy Fizicheskiy Zhurnal, Vol. 15, No. 10, October 1970, pp 1594-1606

Abstract: The authors consider the problem of acoustical and surface plasma waves through the use of the Green temperature functions. By means of these functions, the collective or dynamic effects of delay and Coulomb interaction of the plasma particles can be correctly considered, and an explicit, if approximate, expression can be obtained for the critical temperature of the superconducting transition in quasi-two-dimensional laminated structures. The authors begin their analysis by considering the collective oscillations of a degenerate electron plasma -- or a hole plasma in a p-type semiconductor -- in a thin film bounded on both sides by a uniform medium with a specified dielectric constant and give the dispersion equation for the oscillations in such a system. This

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USSR

PASHITSKIY, E. A., et al, Ukrainskiy Fizicheskiy Zhurnal, Vol. 15, No. 10, October 1970, pp 1594-1606

equation is simplified by assuming that the spatial dispersion in the transverse direction with respect to the plane of the film can be neglected. The specific non-phononic superconduction mechanism for films and "sandwich" structures is examined.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 669.71.022

PASHKEVICH, L. A., DANTSIG, S. YA.

"Thermography As Applied to Nephelines"

Tr. Vses. n.-i. i proyektn. in-ta alyumin., magn. i elektrodn. prom-sti (Works of the All-Union Scientific Research and Planning and Design Institute of the Aluminum, Magnesium and Electrode Industry), 1970, No 73, pp 5-21 (from RZh-Metallurgiya, No 7, Jul 71, Abstract No 7G198)

Translation: The results of thermographic and mineralogical analysis of rock-forming and certain secondary and auxiliary minerals typical of nephelines are discussed. The heating curves of cancrinite carbonate, sodalite, aegirite-augite, and titanium-augite are presented. The phase variations recorded on the thermograms of nephelines from certain deposits are decoded. The conclusion of the expediency of applying the method of thermography when studying the composition of nephelines in addition to crystal-optical x-ray micrographic and chemical methods of analysis is drawn. By the method of thermography it is possible in a short time to obtain the primary characteristic of nepheline: to establish the degree of its variation, detect the ore minerals, and to determine the temperature intervals of occurrence of the liquid phases in low-melting minerals. There are 22 illustrations and 1 table.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

Aluminum and Its Alloys

USSR

UDC 669.712:541.183

PASHKEVICH, L. A., GOPIYENKO, G. N., and ZAVARITSKAYA, T. A.

"Effect of the Proportioning of Mineralization Agent on the Transformation of Aluminum Oxide Into α-Modification"

Moscow, Tsvetnyye Metally, No 2, Feb 71, pp 37-39

Translation: Aluminum fluoride in the quantity of 2-10% with vapors of aluminum hydroxide produces hydroxofluoride which is detected on the differential curves by heat effects of formation (570-585°C) and decomposition (1200-1300°C). Increase in the quantity of mineralization agents leads to a decrease of the temperature of α-Al_2O_3 formation. However, boric acid, unlike AlF_3, produces moderate reduction of the temperature of phase transformation of Al_2O_3 into α-Al_2O_3.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC: 8.74

VIDUGIRITE, V. P., PASHKEVICHUTE, N. V., YARASHYUNAYTE, B. Yu.

"Using the Razdan-3 Digital Computer for Programming Analog Procedures"

V sb. Vychisl. tekhn. v. 2 (Computer Technology--collection of works. Vol 2), Kaunas, 1971, pp 584-590 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V1060)

Translation: The paper describes the basic principles of using the "Razdan 3" digital computer to compile block diagrams of systems of linear algebraic equations solved on the MN-14 analog computer at the Computing Center of Kaunas Polytechnical Institute. Authors' abstract.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 8.74

PASHKEYEV, S. D., MINYAZOV, R. I.

"Operational Planning for Nonhomogeneous, Specialized Computer Systems"

Novosibirsk, Vychisl. sistemy--sbornik (Computer Systems--collection of works), vyp. 48, 1971, pp 108-113 (from RZh-Matematika, No 1, Jan 73, abstract No 1V822 by A. Krasilov)

Translation: The problem of planning involves development of an optimum schedule in accordance with the criterion

$$T_{BC} = \min \{\max_j T_j\},$$

where T_j is the busy time of the j-th computer in processing groups of problems. A solution for the problem is proposed which is simpler, faster, and more efficient with respect to storage volume and speed than dynamic programming, utilizing the criterion

$$Q^i = \lambda_1 \tau^i_{\text{пр}} + \lambda_2 \tau_0{}^i + \lambda_3 D_{j\text{ч}\text{баз}} - \lambda_4 \sum_{k=i+1}^{m} a_{1k} \tau_{k\text{ср}} - \lambda_5 \tau_{j\text{ч}} - \lambda_6 \sum_{k=i+1}^{m} a_{1k} \tau_{0kj},$$

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

PASHKEYEV, S. D., MINYAZOV, R. I., Vychisl. sistemy--sbornik, vyp. 48, 1971, pp 108-113

where $\tau^{i}_{\Pi p}$ is the idle time of the computer on the i-th problem; τ^{i}_{C} is exchange time; τ_{icp} is the mean time of realization of the i-th problem on various computers; τ_{OKi} is the input power of the k-th problem which is informationally related to the i-th problem; $\tau_{i\nu\sigma a3}$ is the busy time of the i-th computer of ν-th type with the i-th problem; λ_i are the weighting coefficients for adaptation of the algorithm for various groups of problems. A block diagram of the algorithm of operational planning is presented.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

PASHKEYEV, S. D., MINYAZOV, R. I.

"Operative Planning for Heterogeneous Specialized Computer Systems"

Vychisl. Sistemy. [Computer Systems -- Collection of Works], No 48, Novosibirsk, 1971, pp 108-113 (Translated from Referativnyy Zhurnal, Kibernetika, No 1, 1973, Abstract No 1 V822 by A. Krasilov).

Translation: The problem of planning is selection of the optimal schedule according to the criterion

$$T_{BC} = \min \{\max_{j} T_j\},$$

where T_j is the time the j-th computer is occupied performing a group of tasks. A simplified, accelerated and more effective as to speed and memory solution of the problem is suggested, using the criterion

$$Q^i = \lambda_1 \tau^i_{\text{пр}} + \lambda_2 \tau_c{}^i + \lambda_3 D_{j\text{v}\text{бaз}} - \lambda_4 \sum_{k=i+1}^{m} a_{1k} \tau_{k\text{cp}} - \lambda_5 \tau_{l\text{v}} - \lambda_6 \sum_{k=i+1}^{m} a_{1k} \tau_{\text{ок}i},$$

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

PASHKEYEV, S. D., MINYAZOV, R. I., Vychisl. Sistemy., No 48, Novosibirsk, 1971, pp 108-113.

where $\tau_{\pi p}$ is the downtime of a computer on the i-th task, τ_0^i is the exchange time, τ_{icp} is the mean time required to perform the i-th task in various computers, τ_{oki} is the input size of the k-th task, informationally related to the i-th task, $\tau_{i\nu\text{баз}}$ is the time the i-th computer of ν-th type is busy with the i-th task, λ_i are the weight factors for adaptation of the algorithm from various groups of tasks. A block diagram of an operative planning algorithm is presented.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 8.74

PASHKEYEV, S. D.

"Fundamentals of Multiprogramming for Specialized Computer Systems"

Osnovy mul'tiprogrammirovaniya dlya spetsializirovannykh vychislitel'nykh sistem (Fundamentals of Multiprogramming for Specialized Computer Systems), Moscow, Soviet Radio Press, 1972, 184 pp, ill. (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V629K)

No abstract

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 621.373:530.145.6

GUREVICH, G.L., PASHKIN, V.M.

"A Steady-State Regime Of Mode Locking In A Laser With A Saturable Absorber"

Izv.VUZ:Radiofizika, Vol XV, No 2, Feb 1972, pp 221-226

Abstract: It is shown that there exists a simple conformity between the form of radiation in a steady-state regime of mode locking and the well-known solution of the single-mode problem. The statement developed concerning the correspondence of the forms of single-mode and multimode solutions is also correct for a saturable absorber for which inertia is important. The form of the emission pulses is determined, giving rise to a solution which in turn depends on an arbitrary constant -- the amplitude of the pulses. The characteristics of the absorber only affects this amplitude. Consequently, at the same amplitude, pulses in the laser have the same duration, both with an inertial and a noninertial absorber. The time lag of a saturable absorber affects only the absorber quantity necessary to obtain a pulse of a given amplitude. 1 fig. 4 ref. Received by editors, 16 June 1971.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 010

UNCLASSIFIED

TITLE--ACCURACY OF WIGNER'S APPROXIMATION -U-

PROCESSING DATE--27NOV70

AUTHOR--PASHKIN, YU.G.

COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. 1970, 28(2), 147-8

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--WIGNER EFFECT, ERROR CORRECTION, NUCLEAR RESONANCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2252

STEP NO--UR/0089/70/028/002/0147/0148

CIRC ACCESSION NO--AP0125830

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 010 UNCLASSIFIED

CIRC ACCESSION NO--AP0125830 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE CALCN. OF THE EFFECTIVE RESONANCE INTEGRAL BY USING WIGNER'S APPROXN., THE ERROR (WITH RESPECT TO EXACT CALCNS.) CAN BE AS LARGE AS 10PERCENT; THIS ERROR CAN BE REDUCED TO SIMILAR TO 2PERCENT BY USING SOME MODIFIED EXPRESSIONS FOR THE INTEGRAL AND FOR THE DISADVANTAGE FACTOR, AND BY TAKING LARGER VALUES (E.G., 4-5) FOR THE EXPONENT N.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 627.842:624.191.8

PASHKIN, YE. M.

"Preliminary Plugging of Rock when Cutting Hydroengineering Tunnels Under Complex Geological and Hydrogeological Conditions"

Energ. str-vo za rubezhom (Power Engineering Construction Abroad), 1970, No 5 (52), pp 31-35 (from RZh-Elektrotekhnika i Energetika, No 2, Feb 71, Abstract No 2 D167)

Translation: The technological process and examples of realizing plugging operations when cutting tunnels under complex conditions are described. There are 6 illustrations and a 5-entry bibliography.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 539.3

ABOVSKIY, N. P., AZARKHIN, A. M., YENDZHIYEVSKIY, L. V., PAS'KO, D. A., SHOYEVA, Ye. T.

"On the Calculation of Convex Polyhedra With Plane and Curved Ribbed Panels"

V sb. Prostranstv. konstruktsii v Krasnoyarsk. kraye (Three-Dimensional Structures in the Krasnoyarsk Region -- Collection of Works), Krasnoyarsk, 1972, pp 20-27 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V116)

Translation: Variational formulations of the problem in displacements and in mixed form using stress and bending functions are discussed for convex multi-sided surfaces considering discrete displacement of the ribs. Each ribbed panel of the system is represented as a variety of a shell of variable thickness. Authors' abstract.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 681.142.334(049.1)

STEPANOV, A. YE., PASHKO, D. I., SHAYKEVICH, V. D., and POCHTMAN, YU. M.

Kvazianalogovyye Metody Modelirovaniya Krayevykh Zadach Dlya Differentsial'nykh Uravneniy v Chastnykh Proizvodnykh (Quasi-Analog Methods of Boundary Value Problem Simulation for Partial Differential Equations, Kiev, "Naukova Dumka," 1973, 174 pp

Abstract: The mooograph contains original results of research in the area of developing and using specialized quasi-analog simulation machines to solve applied problems of mathematical physics described by partial differential equations. In particular, methods of simulating two-dimensional problems in the applied theory of elasticity and non-equilibrium problems of thermal conductivity and underground hydraulics are described, as well as the principles of constructing specialized quasi-analog, mathematical machines for solving these equations.

The book is intended for scientific workers, engineers, graduate students, and students interested in electronic simulation and its theory.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

STEPANOV, A. YE., et al., Quasi-Analog Methods of Boundary Value Problem Simulation for Partial Differential Equations, Kiev, "Naukova Dumka," 1973, 174 pp

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

STEPANOV, A. YE., et al., Quasi-Analog Methods of Boundary Value Problem Simulation for Partial Differential Equations, Kiev, "Naukova Dumka," 1973,174 pp

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

STEPANOV, A. YE., et al., Quasi-Analog Methods of Boundary Value Problem Simulation for Partial Differential Equations, Kiev,"Naukova Dumka," 1973, 174 pp

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

STEPANOV, A. YE., et al., Quasi-Analog Methods of Boundary Value Problem Simulation for Partial Differential Equations, Kiev,"Naukova Dumka," 1973, 174 pp

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

STEPANOV, A. YE., et al., Quasi-Analog Methods of Boundary Value Problem Simulation for Partial Differential Equations, Kiev,"Naukova Dumka," 1973, 174 pp

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 681.332.65

KRAMSKOY, V. V., PASHKO, D. I., STEPANOV, A. Ye., Institute of Cybernetics, Academy of Sciences, Ukrainian SSR

"Device for Solution of Differential Equations"

USSR Author's Certificate Number 323782, 23 March 1970, Opkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 1, January (a) 1972, pp 190-191

Translation: The authors present a device for solution of partial differential equations containing a one-dimensional block of capacitor memories, divided into groups, which are connected, by means of switches activated by the control device, to feedback circuits of dc amplifiers, a switching matrix, conductors simulating the coefficients of the finite-difference operator, and sources of current to simulate the right side of the equation and boundary conditions. It has the special feature that, in order to expand the range of problems solved, it contains a multidimensional block of capacitor memories connected through switches in parallel with the dc amplifiers, the inputs of the amplifiers being connected through other switches to the outputs of the dc amplifiers of the one-dimensional block of capacitors, and also through the switching matrix to the code-controlled conductors to simulate the coefficients with the derivatives in their spatial coordinates and time, a

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

KRAMSKOY, V. V., et al., USSR Author's Certificate Number 323782, 23 March 1970, Opkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 1, January (a) 1972, pp 190-191

code-controlled current supply to simulate the right side of the equation and boundary conditions, and also an additional direct current amplifier to realize negative coefficients of the finite-difference operator.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 678.746.2-136.622-9:66.094.532.2

PASHKOV, A. B., SLABKAYA, L. D., LYUSTGARTEN, YE. I., and LEGOTINA, A. B.

"Phosphoric Acid Cation Exchange Resins of Macroporous Structure"

Moscow, Plasticheskiye Massy, No 7, Jul 70, pp 9-11

Abstract: The authors investigated the process of the phosphorylation of macroporous copolymers of styrene with divinylbenzene of varying porosity. A kinetic study of the phosphorylation of copolymers of gel and macroporous structure showed the advantage of the latter for polymer-analogous transformations. The phosphorus-containing groups were introduced into the copolymer matrix by the Friedel-Crafts reaction by phosphorylation of the copolymer with phosphorus trichloride in the presence of anhydrous $AlCl_3$ in a tetrachloroethane medium with subsequent oxidative hydrolysis of the product with a copolymer:$AlCl_3$:PCl_3 molar ratio of 1:1:3. The optimal phosphorylation conditions were established. The phosphorus content of the phosphorylated copolymer specimens was determined calorimetrically by YE. N. ZELENINA.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 014 UNCLASSIFIED

TITLE--AN ION EXCHANGER -U-

PROCESSING DATE--13NOV70

AUTHOR-(05)-ILIN, V.A., SAMBORSKIY, I.V., GRACHEV, L.L., PASHKOV, A.B., DOMNINA, L.A.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 231,800
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--09MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ION EXCHANGE RESIN, CHEMICAL PATENT, POLYCONDENSATION, PLOYETHYLENE, POLYAMINE, RESORCINOL, HEXEMETHYLENETETRAMINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1442 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128841

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0128841

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ION EXCHANGER WITH GREATER CAPACITY FOR MOLYBDATE AND TUNGSTATE IONS IS PREPD. BY POLYCONDENSATION OF POLYETHYLENE POLYAMINE, RESORCINOL, AND HEXAMETHYLENETETRAMINE.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--ION EXCHANGER -U-

AUTHOR-(05)-ILIN, V.A., SAMBORSKIY, I.V., GRACHEV, L.L., PASHKOV, A.B., DOMNINA, L.A.
COUNTRY OF INFO--USSR

SOURCE--USSR 231,799
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--09MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ION EXCHANGE RESIN, CHEMICAL PATENT, TUNGSTATE, MOLYBDATE, POLYETHYLENE, POLYAMINE, RESORCINOL, FORMALDEHYDE, ORGANIC SULFUR COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1455 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128854

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AA0128854

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ION EXCHANGER WITH IMPROVED CAPACITY FOR MOLYBDATE AND TUNGSTATE IONS IS PREPD. BY POLYCONDENSATION OF POLYETHYLENE POLYAMINES, RESORCINOL AND HCHO, AND CONTAINS TETRAMETHYLTHIURAM DISULFIDE.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 010 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--GEL SORBENTS FOR ENZYME PURIFICATION -U-

AUTHOR-(04)-ILIN, V.A., SHULMAN, M.S., PASHKOV, A.B., SAMBORSKIY, I.V.

COUNTRY OF INFO--USSR

SOURCE--PRIKL. BIOKHIM. MIKROBIOL. 1970, 6(3), 289-96

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--AMYLASE, DEXTRAN, GEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605004/C07 STEP NO--UR/0411/70/006/003/0289/0296

CIRC ACCESSION NO--AP0139620

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 010 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139620

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. GELS WERE OBTAINED FOR EXTG. AMYLASE FROM ORIZIN PC PREPNS. THE CONDENSATION OF DEXTRAN (I) WITH EPICHLOROHYDRIN OLIGOMER (II) (A. F. CHETVERIKOV, ET AL., 1970), I WITH II AND POLYETHYLENE POLYAMINE (III), OR I, II, AND III FOLLOWED BY THE REACTIONS WITH BZCL, DINITROCHLOROBENZENE, OR FURFURAL GAVE GELS WITH ADSORBENT AND ION EXCHANGE CHARACTERISTICS. THE EFFECTS OF THE GEL COMPN. ON ITS ION EXCHANGE, ADSORPTION, AND SWELLING PROPERTIES WERE DETD. THE GELS WITH LOWERED N BASICITY WERE BEST FOR THE EXTN. OF AMYLASE. FACILITY: RES. INST. PLAST., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

ARSEN'YAN, T. I., et al., Izv. VUZ: Radiofizika, Vol XV, No 8, Aug 1972, pp 1228-1232

is determined by the turbulence intensity on the trace. A strong dependence is shown of the phase variations on the meteorological conditions along the trace, in particular on the tranverse velocity and trace length. 1 fig. 2 tab. 9 ref. Received by editors, 2 Aug 1971.

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UDC 535.853.4:525.7

FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

ARSEN'YAN, T.I., PASHKOV, F.F., SEMENOV, A.A., TISHCHENKO, A.A., RIMSKIY, N.A.
[Moscow State University]

"Interferometric Investigation Of Phase Fluctuations Of Coherent Optical Radiation In The Atmosphere"

Izv.VUZ: Radiofizika, Vol XV, No 8, Aug 1972, pp 1228-1232

Abstract: The results are presented of an investigation of the phase fluctuations of coherent optical radiation propagating in a randomly inhomogeneous troposphere. The equipment used included an interferometric system based on a Zhamen type interferometer and a special apparatus for quick-response measurement of temperature pulsations. A laser (λ = 0.63 micron) operating in a regime of axial oscillations was used as the radiation source. The radius of the beam equalled 1.2 cm. An analysis is made of averaged interference patterns as a function of the diversity base of the interfering beams. The interference patterns were obtained under various meteorological conditions which were characterized by various values of the structural constant of the refractive index. It is shown that the difference between the theoretical and experimental dependences $D\Phi(\rho)$

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--HYDRATION AND HARDENING OF SLAGS ACTIVATED BY ALKALIES -U-

AUTHOR--PASHKOV, I.A.

COUNTRY OF INFO--USSR

SOURCE--KOPOV. AKAD. NAUK UKR. RSR, SER. B 1970, 32(3), 264-6

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CHEMICAL REACTION MECHANISM, BLAST FURNACE SLAG, HARDNESS, HYDRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1270 STEP NO--UR/0442/70/032/003/0264/0266

CIRC ACCESSION NO--AT0128684

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 018 UNCLASSIFIED

CIRC ACCESSION NO--AT0128684 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MECHANISM OF THE HYDRATION AND HARDENING OF BLAST FURNACE SLAGS IN THE PRESENCE OF NAOH, NA SUB2 CO SUB3, AND K SUB2 CO SUB3 AS ACTIVATORS IS DISCUSSED.

FACILITY: KIIV. INZH.-BUDIVEL'NII INST., KIEV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 621.172:62-408.3

PASHKOV, P. O., YAVOR, A. A., SAVCHENKOV, E. A., KOTOV, N. V., SKLYAROV, N. M., MIKHEYEV, A. A., and PLATONOV, A. A., Volograd Polytechnic Institute, All Union Scientific Research Institute of Aviation Materials

"Properties of High-Strength Clad Sheet Steel in Tension"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 12, 1973, pp 37-40

Abstract: Specimens of VKS-1 steel, 1.5 mm thick, clad with the corrosion-resistant KhN78T (EI435) alloy, 13-15% of sheet thickness, were tested for mechanical properties by the method: axial tension - static bending - biaxial tension - tensile fracture (crack sensitivity). The investigation results indicate that VKS-1 clad steel possesses higher strength and plasticity in comparison with steel without cladding and higher resistance to rupture. The strength of VKS-1 steel in biaxial tension comes up to maximum values; besides, the strength in axial tension is 20-25% higher than the strength of homogeneous VKS-1 steel. The application of electroslag remelting contributes to increased plasticity under tension for high-strength clad steel, but to a smaller degree than for homogeneous steel. Three figures, two tables, seven bibliographic references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 669.15:539.89

GELUNOVA, Z. M., PASHKOV, P. O., and CHEPRASOV, D. P., Volgograd Polytechnic Institute

"Change in the Properties and Structure of Steel 2Kh15N5AM3 After Severe Impact"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 35, No 2, Feb 73, pp 370-374

Abstract: Previously hardened sheet samples of 2Kh15N5AM3 steel measuring 100 x 150 mm were subjected to impact loading from a plane wave, created by detonating a charge over the sample secured in a sealed tub of liquid nitrogen, in an interval of pressures of 200-500 kbar and to a sliding load with a pressure of almost 140 kbar from the frontal wave. Prior to testing, the samples had an austenite structure with 25-27% martensite. The process of testing samples subjected to sliding impact load consisted of aging the hardened samples at 400°C for four hours, cooling in liquid nitrogen, aging again, impacting at room temperature from the 140 kbar load, aging, cooling in liquid nitrogen, and again impacting at room temperature (140 kbar), aging, cooling as before and impacting (140 kbar) at liquid nitrogen temperature, and aging. Mechanical properties were measured after each step in the process, 1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

GELUNOVA, Z. M., et al, Fizika Metallov i Metallovedeniye, Vol 35, No 2, Feb 73, pp 370-374

from which it was found that strength increases for each step while elasticity and reduction in area jump up and down with the higher values existing after each aging step. Microhardness also increased after each step. The same type of pattern in mechanical properties was found in samples subjected to plane wave impacts although the treatment varied a little. 3 figures, 2 tables, 10 bibliographic references.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC: 539.4

BUKATIN, O. V., KATIKHIN, V. D., LOZINSKIY, M. G., PASHKOV, P. O., TANANOV, A. I.

"Microstructural Study of Fatigue Destruction of a Multilayered Composition Made by Using High-Velocity Deformation"

V sb. Teoriya i prakt. vysokoskorost. deformatsii metal. materialov (Theory and Practice of High-Velocity Deformation of Metallic Materials--collection of works), Moscow, 1971, pp 22-23 (from RZh-Mekhanika, No 5, May 72, Abstract No 5V1036)

Translation: Methods of high-temperature metallography are used to study plastic deformation and fracture under conditions of a bending load on a sandwich panel made up of EI435 + 42Kh2GSNM + EI435. The experiments were done on the IMASh-10-68 machine in the temperature range from 20-800°C. An investigation was made of the effect of longitudinal and transverse bending loads on the rate and nature of fatigue crack propagation. It is shown that destruction of a layer of high-strength steel takes place with insignificant development of the deformation microrelief. The microrelief of the cladding is characterized by the formation of nonuniform and interrupted slip bands.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 051 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--CHARACTERISTICS OF THE HARDENING OF COPPER ON SUBJECTION TO SHOCK WAVES -U-

AUTHOR-(03)-MANTAROSHIN, A.P., NAGORNOV, G.M., PASHKOV, P.O.

P

COUNTRY OF INFO--USSR

SOURCE--FIZIKA METALLOV I METALLOVEDENIE, FEB. 1970, 29,(2), 370-374

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--COPPER, METAL CREEP, CRYSTAL STRUCTURE, METAL HARDENING, SHOCK WAVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0203 STEP NO--UR/0126/70/029/002/0370/0374

CIRC ACCESSION NO--AP0129459

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 051 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0129459

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF VARIOUS CONDITIONS OF SHOCK LOADING (SHOCK WAVES) ON THE HARDENING OF CU WERE STUDIED AND INTERPRETED IN TERMS OF THE STRESSED STATE CREATED IN THIS MATERIAL BY THE PASSAGE OF SHOCK WAVES. THE STABILITY OF THE DISLOCATION STRUCTURE FORMED UNDER VARIOUS CONDITIONS WAS INVESTIGATED BY ANALYSING THE SHORT TERM CREEP CHARACTERISTICS. THE STABILITY OF THE DISLOCATION STURCTURE WAS VERY SENSITIVE TO THE SHOCK WAVE PARAMETERS (AMPLITUDE, PULSE LENGTH), AND BY VARYING THESE PARAMETERS A WIDE RANGE OF MECHANICAL CHARACTERISTICS WAS OBTAINED.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 052 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--THE ACTION OF PULSED SHOCK WAVES ON POLYMERS -U-

AUTHOR-(04)-VINOGRADOVA, N.G., PAVLOV, A.I., PASHKOV, P.O., KHARDIN, A.P.

COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970, 6(1) 76-80

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, CHEMISTRY, PHYSICS

TOPIC TAGS--SHOCK WAVE, POLYMETHYLMETHACRYLATE, NYLON, TEFLON, VIBRATION EFFECT, COMPRESSIVE STRESS, ANISOTROPY, POLYMER PHYSICAL PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/0329 STEP NO--UR/0374/70/006/001/0076/0080

CIRC ACCESSION NO--AP0111523

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 052 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0111523

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLY(ME METHACRYLATE), NYLON 6, OR TEFLON WERE COVERED WITH A STEEL PLATE AND SUBJECTED TO A SINGLE SHOCK WAVE IMPACT OR MULTIPLE, VIBRATIONAL IMPACTS. IN THE LATTER CASE A CHARGE WAS EXPLODED ON THE STEEL PLATE COVERING THE POLYMER, WHICH WAS SUPPORTED BY ANOTHER STEEL PLATE. DUE TO THE DIFFERENCES IN THE ACCOUSTICAL D. OF STEEL AND PLASTICS THE SHOCK WAVE WAS REFLECTED AND THE PLASTIC SUBJECTED TO REPEATED COMPRESSIONS. THE METHOD PERMITTED TO APPLY SMALLER THAN OR EQUAL TO 350 KILOBARS PRESSURE TO THE POLYMERS WITHOUT DESTRUCTION. SUCH SHOCK WAVES DECREASED THE ANISOTROPY OF POLYMERS AND THEIR D.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 031 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--MOSSBAUER STUDY OF THE THERMOMAGNETIC TREATMENT OF TICONAL ALLOYS -U-

AUTHOR-(05)-POVITSKY, V.A., GRANOVSKY, YE.B., FRIDMAN, A.A., MAKAROV, YE.F., PASHKOV, P.P.

COUNTRY OF INFO--USSR

SOURCE--FIZIKA METALLOV I METALLOVEDENIE, FEB. 1970. 29, (2), 247-251

DATE PUBLISHED----FEB70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--ALLOY, MOSSBAUER EFFECT, MOSSBAUER SPECTRUM, SPECTROSCOPIC ANALYSIS, MAGNETIC PROPERTY, METAL HEAT TREATMENT, X RAY ANALYSIS/(U)TICONAL ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0212 STEP NO--UR/0126/70/029/002/0247/0251

CIRC ACCESSION NO--AP0129463

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 031 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0129468

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF THERMOMAGNETIC TREATMENT (ISOTHERMAL QUENCHING IN A MAGNETIC FIELD) ON THE STRUCTURE AND PROPERTIES OF TWO TICONAL ALLOYS WERE STUDIED BY A TECHNIQUE BASED ON THE MOSSBAUER EFFECT. MOSSBAUER SPECTROSCOPY WAS EMPLOYED IN CONJUNCTION WITH X RAY DIFFRACTION TO TRACE THE BEHAVIOUR OF THE ALLOYS AT VARIOUS STAGES OF HEAT TREATMENT. IN THE FIRST STAGE OF AGEING AFTER QUENCHING IN A MAGNETIC PHASES OF THE ALLOY TOOK PLACE; IN THE SUBSEQUENT STAGE THE DEGREE OF ORDER OF THE WEAKLY MAGNETIC PHASE STARTED INCREASING.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

ZVEREV, G. M., NAUMOV, V. S., PASHKOV, V. A.

"Self-Focusing of Ultrashort Laser Pulses in Solid Dielectrics"

Leningrad, Fizika Tverdogo Tela, Vol 15, No 2, Feb 73, pp 575-576

Abstract: The authors observed the formation of fine threadlike flaws in k-8 glass, leucosapphire, and fused and crystalline quartz under the effect of an isolated ultrashort laser pulse. The master oscillator was a neodymium glass laser with self-synchronization of axial modes which emits ultrashort pulses with a recurrence period of 17 ns. A single pulse was isolated from the emitted train by a Pockels electro-optical shutter and a nitrogen-filled gas discharger with laser ignition. The pulse was boosted by a two-stage amplifier to an energy of 0.03 J in a single transverse mode. The pulse length was estimated at 4.5 ns. Self-luminescence of the "threads" was photographed during pulse passage. Isolated bright spots on the fluorescing "threads" increase in number with pulse power. An increase in the length of the flaws in the direction toward the beam was also observed with increasing incident pulse power. Differences between damage by isolated pulses and pulse trains are discussed.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC: 621.378.325

ZVEREV, G. M., LEVCHUK, Ye. A., PASHKOV, V. A., PORYADIN, Yu. D.

"Laser Destruction of the Surface of Lithium Niobate and Lithium Tantalate Single Crystals"

Moscow, Kvantovaya Elektronika, Sbornik Statey, No 2(8), 1972, pp 94-96

Abstract: The research was done in the mode of free emission ($\lambda = 1.06$ μm) and in the monopulse emission mode on $\lambda = 1.06$ and 0.53 μm from a single-mode neodymium glass laser. Threshold of destruction is the same on both wavelengths -- 120 MW/cm² for lithium niobate, and 240 MW/cm² for lithium tantalate. It is found that the destruction threshold in the free emission mode increases with a reduction in the diameter of the light spot, and remains constant in the monopulse mode. Mechanisms of surface destruction are discussed. It is suggested that the reduction process $Nb^{5+} \rightarrow Nb^{4+}$ is responsible for destruction of the surface of lithium niobate. Three illustrations, bibliography of five titles.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 040 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--THERMAL SELF FOCUSSING OF LASER RADIATION IN SUBSTANCES WITH NEGATIVE DN,DT -U-

AUTHOR-(04)-ZVEREV, G.M., LEVCHUK, YE.A., MALDUTIS, E.K., PASHKOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--PIS'MA, ZH. EKSP. TEOR, FIZ, 1970, 11(3), 117-81

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LASER PULSE, LASER SELF FOCUSING EFFECT, THERMAL EFFECT, DIELECTRIC MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/0150 STEP NO--UR/0386/70/011/003/0177/0181

CIRC ACCESSION NO--AP0103829

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 040 UNCLASSIFIED

CIRC ACCESSION NO--AP0103829 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT WAS SHOWN THEORETICALLY THAT IN SOLID BODIES WITH DN,DT SMALLER THAN 0 THERMAL SELF FOCUSSING IS POSSIBLE FOR LASER PULSES OF ANY DURATION. THIS WAS CONFIRMED EXPTL. WITH DIELECS., 20 TIMES 20 CM, HEATED WITH AN ND LASER, BEAM DIAM 1.5 MM.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 621.375.82

ZVEREV, G. M., LEVCHUK, Ye. A., PASHKOV, V. A., PORYADIN, Yu. D.

"Breakdown of the Surface of Lithium Niobate and Lithium Tantalate Single Crystals Under Laser Radiation"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No. 2, Moscow, "Sov. radio", 1972, pp 94-96 (from RZh-Fizika, No 10, Oct 72, Abstract No 10D1011)

Translation: The radiation of a single-mode neodymium glass laser was investigated in a free oscillation mode (λ = 1.06 μ) and a single-pulse mode (λ = = 1.06 and 0.53 μ). The breakdown threshold for the 1.06 and 0.53 μ waves coincide and are 120 Mw/cm^2 for $LiNbO_3$ and 240 Mw/cm^2 for $LiTaO_3$. Surface breakdown occurs after several bursts. It was established that in a free oscillation mode the breakdown threshold rises with a decrease in the diameter of the light spot and remains constant in a single-pulse mode. Surface breakdown mechanisms are discussed. It is hypothesized that the reduction process $Nb^{5+} \rightarrow Nb^{4+}$ is responsible for the breakdown of the $LiNbO_3$ surface. Authors abstract.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 539.4.019.3

GUMEN, N. M., and PASHKOV, V. I., Khar'kov

"Effect of Heat Treatment on the Internal Friction of Cobalt Ferrite"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 72, pp 47-53

Abstract: The internal friction of cobalt ferrite was investigated in relation to the intensity of the longitudinal and lateral magnetic field, temperature, and mode of heat treatment. It was found that the magnitude of internal friction Q^{-1} depends to a significant degree on heat treatment. As a result of extended annealing and subsequent quenching from different temperatures, the state of the samples was fixed for which Q^{-1} differed by more than a factor of five. Magnetomechanical hysteresis makes the greatest contribution to the magnitude of Q^{-1}. Consequently, the relationship of Q^{-1} to T_q is determined mainly by the change in the magnetic properties of the ferrite (magnetostriction saturation and hysteresis constant). The relationships of Q^{-1} to T_q at $H = 0$ and in fields corresponding to Q^{-1}_{max} differ only as a constant term. Consequently, both magnitudes Q_o^{-1} and Q^{-1}_{max} are determined by one and the same processes of change in orientation of magnetization vectors

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

GUMEN, N. M., and PASHKOV, V. I., Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 72, pp 47-53

under the action of elastic stresses. For the temperature relationship of Q^{-1}, a discontinuity at T = -110°C and a maximum at T = -40°C were observed which should correspond to the anomalies of the magnetic properties of cobalt ferrite at the indicated temperatures. Four figures, 16 bibliographic references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 034 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--DIFFUSION OF ANTIMONY, PHOSPHORUS, AND BORON INTO SILICON FOR DIFFERENT SURFACE CONCENTRATIONS OF THE DIFFUSANT -U-

AUTHOR-(04)-USKOV, V.A., PAVLOV, P.V., KURILCHIK, E.V., PASHKOV, V.I.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(5), 1504-10

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--SEMICONDUCTOR MATERIAL, BORON, ANTIMONY, PHOSPHORUS, SILICON, PHYSICAL DIFFUSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0159 STEP NO--UR/0181/70/012/005/1504/1510

CIRC ACCESSION NO--AP0129415

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 034 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0129415

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DIFFUSION OF SB, P, AND B IN SI WAS STUDIED AND THE RESULTS COMPARED WITH THEORY. LIMITS ARE ESTABLISHED FOR APPLICABILITY OF THE AV. FIELD METHOD IN THE CASE OF IMPURITY DIFFUSION INTO A SEMICONDUCTOR. FACILITY: GOR'K. GOS, UNIV. IM. LOBACHEVSKOGO, GORKI, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

1/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--SURFACE TENSION OF KRYPTON, METHANE, DEUTEROMETHANE, AND OXYGEN -U-

AUTHOR-(04)-BLAGOY, YU.P., KIREYEV, V.A., LOBKO, M.P., PASHKOV, V.V.

COUNTRY OF INFO--USSR

SOURCE--UKR. FIZ. ZH. (RUSS. ED.) 1970, 15(3), 427-32

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SURFACE TENSION, KRYPTON, METHANE, OXYGEN, DEUTERIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0948 STEP NO--UR/0185/70/015/003/0427/0432

CIRC ACCESSION NO--AP0136379

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

2/2 018 UNCLASSIFIED

CIRC ACCESSION NO--AP0136379 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DIFFERENTIAL METHOD OF CAPILLARY RISE WAS USED TO DET. THE TEMP. DEPENDENCE OF THE SURFACE TENSION, SIGMA, FOR KR, CH SUB4, CD SUB4 AND O SUB2 OVER THE ENTIRE RANGE OF TEMPS. AT WHICH THEY EXIST IN THE LIQ. FORM. THE RESULTS ARE TABULATED AND SHOWN GRAPHICALLY ALONG WITH THE OTHER EXPTL. DATA. THE RESULTS CAN BE DESCRIBED BY THEVAN DER WAALS EQUATION. THE DEVIATIONS WERE DISCUSSED FROM THE LAW OF CORRESPONDING STATES FOR A LARGE NO. OF SUBSTANCES AND THE REASONS FOR THE DEVIATIONS WERE CONSIDERED.

FACILITY: FIZ. TEKH. INST. NIZKIKH TEMP., KHARKOV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 615.916:546

PASHKOVA, G. A.

"Peculiarities of Effect Cresol and Phosphorous Oxychloride on the Endocrine Glands"

Sb. nauch. tr. Kuybyshev. NII gigienya. (Collected Scientific Works of the Kuybyshev Scientific Research Institute of Hygiene) 1972, vyp. 7, pp 203-204 (from RZh--Farmakologiya. Khimioterapevticheskiye Sredstva. Toksikologiya, No 3, Mar 73, Abstract No 3.54.682

Translation: The chronic inhalation effect of phosphorous oxychloride in a concentration of three mg/m^3 tricresol in a concentration of 4 mg/m^3 led to lengthening of the "estrus" stage in female rats, an increase in the estral cycle time and shortening during the first months of the "quietness" stage. Morphologically, acceleration of the atresia processes of the primary follicules and premature aging were noted in the ovaries. An increase in the gonadotropic activity of the hypophysis was also detected which was expressed in accelerated sexual maturity of the rats. USSR, Kuybyshev, Scientific Research Institute of Hygiene.

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USSR

UDC 595.373.31.:578.088.6

USHAKOV, B. P. and PASHKOVA, I. M., Institute of Cytology, Academy of Sciences USSR, Leningrad

"Dynamics of Individual Variation in Heat Resistance of Woodlouse Muscle Tissue During Heat Acclimation"

Moscow, Zhurnal Obshchey Biologii, No 4, 1972, pp 387-396

Abstract: A woodlouse (Asellus aquaticus L.) population was kept in a cold chamber at 2 to 3°C (close to the natural temperature), after which the extremities were removed and immersed in Bowler's solution heated to 36°. Heat resistance of the muscle tissue was evaluated from the length of time it took for the muscles to become refractory to an electric current. Two types of change in tissue resistance during acclimation were noted. In about one-fourth of the individuals, an initial decrease was followed by an increase and plateau which gave way to a phase of secondary decrease. In the others, the reaction started directly with an increase in resistance and ended with a decrease. The process of temperature acclimation can be divided into two distinct stages: (a) primary acclimation when the level of tissue resistance undergoes changes and (b) secondary acclimation when the cells return to the original or basal level. The latter indicates that the process of adaptation to a new temperature regime has been completed.

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USSR

UDC 620.193.5

BALAKIN, E. I., ZHUK, N. P., MEYERSON, G. A., CPARA, B. K., and PASHKOVA, O. A., All Union Scientific Research Institute of Hard Alloys, Moscow Institute of Steel and Alloys

"The Method of Producing Ni + ThO_2 Composites and Its Hardening Oxide Content and Their Effect on Heat Resistance"

Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 3, 1973, pp 130-133

Abstract: The heat resistance of Ni with 2, 3.5, and 4.5% by vol ThO_2 was investigated on specimens of dispersion-hardened Ni produced by the method of joint precipitation of Ni and Th from its salt solutions (1) and by the method of precipitation of Ni salt on particles of preliminarily prepared ThO_2 sol (2). Subsequently, the mixes of precipitates were subjected to filtration, drying, and NiO calcination up to Ni in a hydrogen stream followed by compression of the powder-like material and burning of the bruquettes. The baked billets were hot-extruded at 1000° in one operation with 94% reduction. The composition Ni+3.5% by vol ThO_2 produced by method 1 was found to possess a heat resistance 1.1-2.0 times higher than the same composition produced by method 2. The stability decrease of ThO_2 in Ni with increasing temperature is demonstrated. Method 2,

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USSR

BALAKIN, E. I., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 3, 1973, pp 130-133

characterized by a slowly developing process of coagulation, is recommended as the most effective method from the standpoint of heat resistance. Two figures, six bibliographic references.

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JPRS 58779
18 Apr 73

(5)

PASHKOVA, O.A.

HEAT RESISTANCE OF PRECIPITATION-HARDENED NICKEL

UDC 620.193.5

[Article by E.I. Balakin, N.P. Zhuk, G.A. Meyerson, B.K. Opara and O.A. Pashkova; Department of Corrosion, Moscow Institute of Steel and Alloys; Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, Russian, No 3, 1971, submitted 18 June 1970, pp 101-105]

The contradictions found in literature data on the scale-resistance of precipitation-hardened materials reduce the practical significance of these data and hamper understanding of the oxidation mechanism of these materials. On the basis of these data it is still not possible to foresee the effect of heat-resistance change in nickel while hardening it with different oxides. Table 1 gives the materials and their characteristics as investigated in this work.

Table 1. Composition and characteristics of initial materials.

(a) Материал	(b) Содержание упрочняющего окисла, об. %	(c) Относительная плотность, %	Количество частиц (%) (d) размером (Å) (f) до 100	100 — 500	500 — 1000	(g) свыше 1000	Средний размер частиц, Å (h)	(e) Среднее расстояние между центрами частиц, мкм
Ni	0	99.9	—	—	—	—	—	—
Ni + ThO_2	3	99.7	18	69	12	1	238	0.29
Ni + ZrO_2	3	99.8	6	48	32	14	430	0.42
Ni + HfO_2	5	99.6	4	38	30	20	620	0.51
Ni + TiO_2	1	99.7	2	31	42	25	517	0.53
Ni + Al_2O_3	3	99.7	2	35	47	16	645	0.47

Key: a--Material
b--Content of hardening oxide, volume %
c--Relative density, %
d--Quantity of particles (%) with size (Å)
e--Average distance between particle centers, microns
f--Less than
g--Greater than
h--Average particle size, Å

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USSR

UDC 621.374.33

PASHKOVA, T. M., LITVINOVA, A. R., POTROSOV, V. V., and EKSLER, A. A.

"Classification and Comparative Analysis of Threshold Units Based on Semiconductor Devices"

V sb. Tunnel'n. diody v vychisl. i izmerit. tekhn. (Tunnel Diodes in Computer and Measurement Technology -- collection of works), Riga, "Zinatne", 1972, pp 15-36 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 G181)

Translation: Existing types of classification are studied. The authors propose a new type of classification and conduct analysis of threshold units based on semiconductor devices. A prospective group of threshold units is singled out which is based on tunnel diodes and methods are given for expanding the application of tunnel diodes in threshold units. Original article: seven bibliographic entries. Resume.

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USSR

UDC 617.735+617.721.6]-085.849.19-092.9

LINNIK, L. A., Candidate of Medical Sciences, and FAVORIN, V. N. and PASHKOVA, V. V., Engineers, Odessa Scientific Research Institute of Eye Diseases and Tissue Therapy imeni V. P. Filatov

"Effect of Irradiation by Helium-Neon and Argon Gas Lasers on Eye Tissues and Prospects of Their Utilization in Ophthalmology"

Odessa, Oftal'mologicheskiy Zhurnal, Vol 26, No 6, 1971, pp 422-426

Abstract: Pigment variety rabbits were used in two series of experiments conducted to determine the effect of helium-neon and argon gas radiation on eye tissues. Energy doses not exceeding 0.5 milliwatts were used in series 1 of the experiments. The animals of this series were divided into two groups, with group 1 irradiated with helium-neon light in the form of a single beam, and group 2 -- with a diffused light, both directed toward the fundus oculi. Half of the animals in each group were irradiated respectively for 30 and 60 minutes. Prior to the experiments all of the animals were given 2 ml of a 1% solution of morphine intramuscularly. In the course of the experiments the eyes were irradiated with Ringer-Locke solution in order to reduce damage to the corneal membrane. It was found that a single application of the beam for 1/2

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USSR

LINNIK, L. A., et al., Oftal'mologicheskiy Zhurnal, Vol 26, No 6, 1971, pp 422-426

a period of 30 minutes causes no permanent changes in the eye tissues. Repeated applications negatively affect the retinal membrane and the small vessels of the vascular system. The negative effect of the beam is more pronounced in the animals exposed to irradiation for a period of 60 minutes. Irradiation with the diffused light induces damages which are less manifested than those caused by the beam of light. The effect of argon on eye tissues was determined in the second series of the experiments. Energy doses within the range of 10-300 milliwatts were used. It was found that argon has pronounced coagulating properties when applied in doses of 25-45 milliwatts. In larger doses and particularly in doses of 100 or more milliwatts it causes considerable damage to eye tissues such as cell destruction, dilated vascular membranes, and edema of the retinal membrane.

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Pesticides

USSR

UDC 614.72+614.777/-074:632.954

SAMOSVAT, L. S., and PASHKOVSKAYA, I. I., Kiev Institute of Advanced Training for Physicians, Kiev

"Application of N-Halogenation for Rapid Determinations of Herbicides in Water and in the Air"

Moscow, Gigiyena i Sanitariya, No 1, 1973, p 115

Abstract: A rapid method was developed for the determination of residual amounts of some N-containing herbicides in air and water which is based on the ability of these herbicides to undergo N-halogenation on treatment with gaseous Cl_2 and to form colored spots in thin-layer chromatograms after spraying with KU starch reagent. The method is applicable to urea derivatives (kotoran, tenoran, patoran, neburon, meturin, gerban), thiocarbamates (eptam, tillam, yalan), picloram, and pyramine. The herbicide is extracted from air or water with an organic solvent, whereupon the resulting solution (dried on extraction from water) is evaporated and the sample subjected to chromatography on a silica gel - gypsum or Al_2O_3 plate. The chromatogram is treated with Cl_2 and then with the KU starch reagent. The sensitivity of the method is 0.5-1 gamma and 1-2 gamma for determinations in air and water,

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USSR

SAMOSVAT, L. S., and PASHKOVSKAYA, I. I., Gigiyena i Sanitariya, No 1, 1973, p 115

respectively. The solvents for the extraction from air and water of individual herbicides, the composition of the mobile liquid phase in chromatography, depending on the herbicide, and the Rf values of herbicides are listed in a table.

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USSR

UDC: 681.327

ASTSATUROV, R. M., KONDRAT'YEV, A. P., MAL'TSEV, N. A., PASHKOVSKAYA, R. B.

"A Device for Checking an Operational Memory"

USSR Author's Certificate No 333559, filed 9 Jul 70, published 7 Jun 72 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 1, Jan 73, abstract No 1B378 P)

Translation: The proposed device pertains to the field of computer technology. It can be used for checking an immediate-access memory. Devices for checking an immediate-access memory are known which can be used to monitor mod-2 readout data. The known devices for monitoring an immediate--access memory do not provide for checking the correctness of operation of the address decoding channel through which data reading takes place (access to the memory).

The proposed device uses an additional shaping circuit for forming a mod-g control code. This circuit simultaneously "displaces" the data and memory address registers. Also incorporated in the proposed device is a control code conversion unit. These modifications not only provide a more effective check on data readout, but also verify correspondence between the

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ASTSATUROV, R. M. et al., USSR Author's Certificate No 333559

readout data and the address with respect to which the reading has occurred; i. e., the operation of the address decoder can be monitored. Besides this, the device provides further monitoring of readout data with respect to a modulus of two, in order not to violate the principle of "continuous" monitoring.

Since increasing the effectiveness of monitoring requires using an additional shaping modulus greater than two (usually $g \geqslant 3$), the memory word must have at least two control digits for storing a mod-g control code. In modern computers, several data units are stored simultaneously in a memory (with their own control digits), so there is no need to add memory digits to realize the proposed monitoring device.

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Mechanical Properties

USSR UDC 620.18

KOPETSKIY, CH. V., ORZHEKHOVSKIY, V. L., RASHKOVSKIY, A. I., AMOSOV, V. M., BOBKOVA, N. N., and PAVLOVA, YE. I., Moscow

"Influence of Carbon on the Mechanical Properties and Structure of Molybdenum Crystals"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 2, Mar-Apr 71, pp 67-74

Abstract: The structure and properties of molybdenum crystals with orientation of the <110> <100> growth axes, containing 0.02 and 0.03 wt. % carbon, are studied in the 77-293°K temperature interval. A decrease in the carbon content within these limits causes a sharp increase in plasticity of the crystals, particularly at low temperatures, a decrease in the yield point, and a decrease in the dependence of yield point on test temperature, as well as more even distribution of dislocations and superior crystal structure. The strong dependence of yield point, relative elongation, relative reduction in area, and nature of rupture of crystals on the orientation of the rupture axis is confirmed.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

UDC 669.27.-172

KOPETSKIY, CH. V., ORZHEKHOVSKIY, V. L., PASHKOVSKIY, A. I., and CHUZHKO, R. K., Moscow

"Influence of Carbon on the Structure and Mechanical Properties of Tungsten Single Crystals"

Moscow, IAN SSSR, Metally, No 2, Mar-Apr 71, pp 124-129

Abstract: Although the literature contains a number of works dealing with the investigation of the mechanical properties of tungsten crystals, the influence of carbon on these characteristics has not as yet been studied in detail. This work presents a study of the influence of various quantities of carbon on the structure and mechanical properties of tungsten crystals, with unchanged content of other impurities. The structure and mechanical properties were studied in extension in the 77-473°K temperature interval, using tungsten crystals with orientation of the growth axis < 110 > and < 100 >, containing 0.01 and 0.001 wt. % C. A decrease in the carbon content in tungsten causes: a) an increase in the ductility of the tungsten crystals, particularly at low temperatures; b) a decrease in the yield point; c) a decrease in the dependence of the yield point on temperature; d) more even distribution of dislocations and enlargement of subgrains in the tungsten crystals. The strong dependence of yield point, necking down, relative

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

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KOPETSKIY, CH. V., et al., Moscow, IAN SSSR, Metally, No 2, Mar-Apr 71, pp 124-129

elongation, and nature of rupture of tungsten crystals on the orientation of the extension axis was confirmed.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

Mechanical Properties

USSR

UDC 620.18

KOPETSKIY, CH. V., ORZHEKHOVSKIY, V. L., PASHKOVSKIY, A. I., AMOSOV, V. M., BOBKOVA, N. N., and PAVLOVA, YE. I., Moscow

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USSR

UDC 669.27.-172

KOPETSKIY, CH. V., ORZHEKHOVSKIY, V. L., PASHKOVSKIY, A. I., and CHUZHKO, R. K., Moscow

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Moscow, IAN SSSR, Metally, No 2, Mar-Apr 71, pp 124-129

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KOPETSKIY, CH. V., et al., Moscow, IAN SSSR, Metally, No 2, Mar-Apr 71, pp 124-129

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330006-3

USSR

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 TIHOFEYEV, 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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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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Acc. Nr.: AP0031636 Ref. Code: UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i Meditsiny, 1970, Vol 69, Nr 1, pp 20-23

CEREBRAL MICROCIRCULATION CHANGES IN ACUTE BLOOD LOSSES AND PROLONGED HYPOTENSION

Filatov, A.I.; Pashkovskiy, E.V.; Tsybulyak, G.N.
S. M. Kirov Military Medical Academy

Cerebral microcirculation was studied in dogs (31 experiments) with acute blood loss and subsequent protracted hypotension after Wigers. Investigations showed that in a massive loss of blood (averaging 41.3±2.2 ml/kg of the body weight) and subsequent hypotension (40 mm Hg) the pial arteries were seen to dilate, the relative degree of their dilatation depending upon the caliber of the arteries. The enlargement of pial arteries fails to compensate for the deranged cerebral circulation, this being witnessed by marked disorders of the carbohydrate metabolism and decelerated rhythm on the EEG, which continue even after an adequate repletion of the blood loss and restoration of the morphological microcirculation picture.

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USSR

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

BILEN'KIY, B. F., GERASIMCHUK, R. V., PASHKOVSKIY, M. V.,
SAVITSKIY, V. G., FILATOVA, A. K.

"Structure and Optical Characteristics of Thin HgTe-CdTe Film Systems"

Vil'nyus, V sb. Tonkiye plenki soyedineniy tellura s metallami podgrupp tsinka i galliya (Thin Films of Tellurium Compounds With Metals of the Zinc and Gallium Subgroup -- collection of works), 1970, pp 192-196 (from RZh-Fizika, No 11, 1971, Abstract No 11E1165)

Translation: Optical transmission spectra (OTS) of thin (0.03-0.5 μ) Cd and Hg telluride films as well as of their solid solutions are investigated. The films were obtained by the method of discrete vaporization of $Hg_xCd_{1-x}Te$ monocrystals (x = 0, 0.75, 0.80, 0.85, 0.90, 1.0). The OTS detected bands E_2 (5.40 ev) and $E_1 + \Delta_1$ (4.05 ev) in CdTe films. OTS of HgTe films and solid HgTe-CdTe solutions have a clear absorption band $E_2 + S$, whose position does not change with an increase in content of the second

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USSR

BILEN'KIY, B. F. et al, Tonkiye plenki soyedineniy tellura s metallami podgrupp tsinka i galliya, 1970, pp 192-196

component. It is assumed that the fundamental absorption spectra in the case of complex systems of the type investigated can be used for controlling the composition of corresponding films.

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1/2 025 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--MECHANISM OF ELECTRICAL CONDUCTIVITY IN A CESIUM IODIDE CRYSTAL -U-

AUTHOR-(03)-PASHKOVSKIY, M.V., SPITKOVSKIY, I.M., TKACHUK, A.D.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(5), 1317-22

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--ELECTRIC CONDUCTIVITY, CESIUM, IODIDE, CRYSTAL, CRYSTAL IMPURITY

CONTROL MARKING--NO RESTRICTIONS

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