USSR UDC 621.7.029

OBUKHOV, A. P., SOKOLOVA, T. V., and BARTENEV, S. S., Physico Technical Institute imeni A. F. Ioffe, USSR Academy of Sciences

"Study of Pore Size Distribution in Sprayed Coatings"

Poroshkovaya Metallurgiya, No 4, (100), Apr 71, pp 46-49

Abstract: Pore size distribution in solids can be determined by several methods. Mercury porosimeter and metallographic analysis methods were compared as a means of determining pore size distribution in aluminum oxide coatings. The coatings were prepared by gas flame spraying or plasma spraying. Determinations of pore size by hydrostatic suspension and the mercury porosimeter agreed well with each other but did not agree with the results obtained by microphotographic methods. Gas flame-sprayed coatings showed a porosity of 12.5 ± 0.5% by either hydrostatic suspension or porosimeter methods and 11.6 ± 0.5% by the microphotographic methods. Plasma spraying gave 9.3 ± 0.3% and 7.9 ± 0.5%, respectively. It was concluded that the porosimeter method measured the distribution of pore size by the "narrowing" of sizes and that analysis by microphotographic methods measured "edges." Therefore, because of the heterogeneous particle forms in the coating operation, the latter method is recommended.
1/1

USSR

UDC 539.32.001.24:669.14

GUSEV, B. M., and OBUKHOV, A. S., Candidates of Technical Sciences

"Selection of Calculated Values of Modulus of Elasticity of Steels at High Temperatures"

Moscow, Khimicheskoye i Neftyanoye Mashinostroyeniye, No 11, Nov 70, pp 14-15

Abstract: An analysis performed by the authors shows that all steels can be divided into two groups as concerns the nature of the dependence of the modulus of elasticity as a structurally insensitive characteristic on temperature: carbon and alloyed steels. The same at room temperatures, the moduli of elasticity of the two steels diverge at higher temperatures, that of alloyed steels being greater than that of carbon steels. Based on statistical analysis of experimental works, the dependence of modulus of elasticity on temperature is presented graphically for each of the two types of steels.

1/1

USSR

UDC 533.6.011.8

YALAMOV, Yu. I., OBUKHOV, B. A., and DERYAGIN, B. V., Corresponding Member of the USSR Academy of Sciences, Institute of Physical Chemistry, Moscow

"Diffusiphoresis of Large Nonvolatile Aerosol Particles"

Moscow, Doklady Akademii Nauk SSSR, Vol 207, No 4, 1972, pp 824-826

Abstract: An aerosol particle in a nonuniformly concentrated gas mixture experiences a diffusiphoretic force. In an earlier article (Yalamov, Yu. I., et al, ZhTF, No 5, 1972) expressions were obtained for the force and for the velocity of the particle by neglecting the inertial terms of the Navier-Stokes equations. In the present paper, the effects of the inertial forces are taken into account to find the diffusiphoretic forces. The analysis begins with the consideration, in a spherical system of coordinates, of a spherical particle of given radius which is large compared to the average length of the molecular free path. The system of equations for the relative concentration, the velocity, and the pressure of the binary gas mixture is presented. The expression found for the force acting on the particle shows it to be the sum of viscous and diffusiphoretic forces, vanishing for a uniformly moving particle. An expression is obtained for the velocity of the particle which coincides with that obtained earlier with the inertial forces not taken into account.

1/1

USSR

UDC 616.988.25-022.395.42.036.2(571.62)

VERETA, L. A., OBUKHOV, G. D., KOVALEVA, Ye. I., SKVORTSOVA, T. M., MOGILEV, V. Ye. VOROB'YEVA, R. N., NIKOLAYEVA, S. P., RUDAKOVA, T. M., and ROSLYAKOV, G. Ye., Khabarovsk Scientific Research Institute of Epidemiology and Microbiology, Khabarovsk

"Landscape-Epidemiological Subdivision of the Amur Territory With Respect to Tick-Borne Encephalitis"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 42, No 1, Jan/Feb 73, pp 28-32

Abstract: An evaluation of the danger of human infection with tick-borne encephalitis in territorial subdivisions of the Amur region differing with respect to natural characteristics has been carried out on the basis of a number of factors, principally the local density of Ixodid ticks. The index of probability of infection (a product of the ratio of persons who have visited forests by the ratio of those who observed the attachment of ticks by the ratio of ticks infected with the virus of the disease) based on data collected in 1969-71 was used as a criterion. Regions with a high incidence of the disease were located in the zone of coniferous-wide-leaved forests, those with a moderate incidence in the subzone of the southern tayga and in agriculturally developed areas in the zone of coniferous-wide-leaved forests, and those with

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USSR

VERETA, L. A., et al., Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 42, No 1, Jan/Feb 73, pp 28-32

a low incidence in the subzone of the middle tayga. Acute forms of the disease occurred both in regions with a high and a low incidence. The ratio of focal (meningoencephalitic) forms and the index of lethality, which corresponded to this ratio, showed some tendency of increasing from the south to the north.

2/2

OBUKHOV, N.V.

ferromagnetic films/RADIO ENGINEERING

JPRS 54704

22 December 1971

NONLINEAR AND MICROWAVE RADIO ENGINEERING SYSTEMS

Selected articles from the Russian-language book edited by L. D. Bakhrakh, corresponding member of the USSR Academy of Sciences and V. I. Samoylenko, candidate of engineering sciences: Nelineynyye i Sverkhvysokochastotnyye Radiotekhnicheskiye Sistemy, Trudy Moskovskogo Aviatsionnogo Instituta imeni Sergo Ordzhonikidze, Vol 2, No 215, 1970, signed to press 14 October 1970, Machine Building Press, Moscow.

CONTENTS

UDC 629.7.051:621.396.69.001

AN ANALYTICAL METHOD FOR SOLVING DYNAMIC EQUATIONS OF THIN FERROMAGNETIC FILMS FOR 'SLOW' SWITCHING FIELDS

Engineers E. G. Besyan and
N. V. Obukhov

Pages 166-173

The static characteristics of thin ferromagnetic films (TFF) have been studied in adequate detail by many authors, for example in references [1, 2]. Methods for the theory of coherent rotation, the hysteresis loops of films have been elaborated, as well as critical fields of irreversible magnetization jumps, etc. The static characteristics indicated are frequently used in dynamic inversion circuits, which cannot always be justified. On the other hand, in cases where purely dynamic regimes are considered, one also finds the switching pulse do not completely [illegible] which indicates the picture and does not make it possible to trace the nature of the variation of the switching process as the front of the switching pulse varies.

This work was performed for the study of the switching characteristics of TFF along a longitudinal axis (axis of easy magnetization) by sawtooth fields with various rates of rise on the basis of the solution of the equation of dynamics of a film for "slow" switching fields. The solution of the equation of dynamics of the film also made it possible to investigate the terms of the switching of TFF as a function of other parameters.

As the equation of dynamics of a TFF, the Landau-Lifshits equation was used, which in our case has the following form [reference 3]:

$$\frac{d\vartheta}{dt}+\alpha\sin\vartheta\frac{d\varphi}{dt}+\alpha\sin\vartheta\cos\vartheta\sin\varphi\cos\varphi\frac{dH_x}{dt}-\alpha\sin^2\vartheta\cos\varphi\frac{dH_y}{dt}+\alpha\sin\vartheta\cos\vartheta\cos^2\varphi\frac{dH_z}{dt}-H_x\sin\vartheta\sin\varphi+H_y\cos\vartheta\sin\varphi-H_z\cos\varphi=0, \quad (1)$$

$$\frac{d\varphi}{dt}+\frac{d\vartheta}{dt}\cos\vartheta\sin\varphi\cos\varphi+\frac{dH_x}{dt}\sin^2\varphi\cos\varphi-\frac{dH_y}{dt}\sin\varphi\cos^2\varphi-\frac{dH_z}{dt}\sin^2\varphi\cos\varphi+\alpha H_x\sin\vartheta\cos\varphi+\alpha H_y\sin\vartheta\sin\varphi-\alpha H_z\cos\vartheta=0,$$

where $\gamma = 1.76 \times 10^7$ (1/oersteds per second) is the gyromagnetic ratio; α is the attenuation factor; and H_k is the anisotropy field.

Having divided expression (1) by $\gamma H_k \alpha$, we obtain

$$\varepsilon\frac{d\vartheta}{dt}+\frac{d\varphi}{dt}+\frac{\gamma H_k}{\alpha}[\sin\vartheta\cos\vartheta+h_x\sin\vartheta\sin\varphi-h_y\cos\vartheta\sin\varphi-h_z\cos\varphi]=0, \quad (2)$$

where

$$\varepsilon=\frac{1}{\alpha\gamma H_k}$$

and its magnitude is equal to 10^{-8}.

USSR

YEL'CHANINOV, V. D., LAVROV, M. T., OBUKHOV, N. YA., SHMAKOV, V. A.

"Pneumatic Motor"

USSR Author's Certificate No 383861 (from Otkrutiya, Izobreteniya, Promyshlennyye obraztsy, Tovarnyye znaki (Discoveries, Inventions, Industrial Models, Trademarks), No 24, 1973, page 90)

Translation: This pneumatic motor which contains inside coupling gears with satellites and a reversible disc distributor with collectors in it for supply and discharge of the working medium is distinguished by the fact that in order to increase the efficiency and decrease the size, the distributor is located at the butts of the gears, and the collectors are arranged concentrically with respect to the housing axis and are coupled to the spaces between the teeth by the air distribution holes.

1/1

USSR

YEL'CHANINOV, V. D., LAVROV, M. T., OBUKHOV, N. YA., SHMAKOV, V. A.

"Pneumatic Motor"

USSR Author's Certificate No 383862 (from Otkrytiya, Izobreteniya, Promyshlennyye obraztsy, Tovarnyye znaki (Discoveries, Inventions, Industrial Models, Trademarks), No 24, 1973, page 90)

Translation: This is a pneumatic motor in accordance with USSR Author's Certificate No 182442 distinguished by the fact that in order to reduce the run-down time and exclude autocranking of the shaft when the supply of working medium is stopped the halfcoupling of a ball locking clutch is fitted rigidly to the shaft, the second halfcoupling of which is spring-loaded and made to move with the possibility of axial displacements and between the cover and the housing a control cavity is formed with a diaphragm in it which contacts the sliding halfcoupling at the central point.

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AA0052654 OBUKHOV N. Ya.

UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General, Derwent, 1-70

241851 SHAFT AND SEAL is reliable and provides a tight seal. It consists of a fixed chromium silicon steel ring 1, encased (3) rotation carbon ring 2 and an elastic gland 4 held on the shaft 5 by a sleeve 6. Crimped spring 7 fitted on the sleeve pushes the rotating clamp 8 and gland 4. The gland section represents a ring, neck 9, radiused portion 10 which projects by 0.3 mm in front of the ring face and a cylindrical part 11. During the assembly, the air is forced out of the space 12 and the gland is sucked towards the ring 2.

9.6.67. as 1163033/25-27, CHUGAEV, N.G. et al. (2.9.69) Bul. 14/18.4.69. Class 47c, Int. Cl. F 06d.

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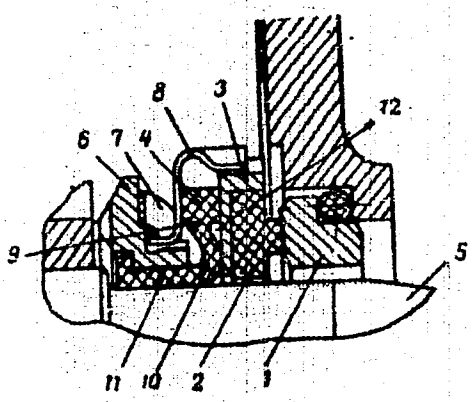
1/2

19821392

AA0052654

Klimov, L. Ya.; Obukhov, N. Ya.; Lavrov, M. T.; Antipenko, I. N.; Severtsev, S. A.



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19821393

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SHARMAN-
Not positions
CAROL:
JPRS 59821
16 August 1973
(3)

OBUKHOV, V.A.

4/4 - patents/inventions

UDC 608.002.6:167.2:62.001.6

THE USE OF PATENT DOCUMENTATION IN MEDIUM-TERM TECHNOLOGICAL FORECASTING

[Article by V. A. Obukhov, Deputy Director of TsNIIPI [Central Scientific Research Institute of Patent Information and Technical and Economic Research (of the State Committee for Inventions and Discoveries, USSR]for Scientific Work Yu. D. Dobronravin, Laboratory Manager of the Technical-Economic Research Section of TsNIIPI, and I. A. Berezina, Senior Scientific Worker of TsNIIPI; Moscow, Vopросy izobretatel'stva, Nr 8, 1970, pp 9-15]

Determination of the contemporary technological level and compilation of scientifically grounded forecasts of development of technology in the future with the aim of choosing the most rational directions of technological progress and proper formation of technological policy are possible only with a systematic study and careful analysis of sources of technological-economic information.

Among the important sources of information being used in technological forecasting is patent documentation, which contains information of a perspective nature.

Taking into account that technological forecasting largely is determined by branch characteristics, and often also by the peculiarities of narrow topical directions, the given article examines general criteria for selection and analysis of documents at individual stages of forecasting, focusing main attention on the place and role herein of patent documentation.

Technological forecasting is taken to mean scientifically grounded prevision of a change in socially necessary indicators of objects of technology in the future.

Technological forecasting is connected in the closest way with branch planning. It is a component of formation of technological policy. Forecasts do not decide all tasks arising in planning, nor do they substitute for plans, but they are a necessary preparatory stage, the results of which must be considered in the compilation of such plans. While a plan establishes what must be done and at what expense, a forecast determines what can be done and under what conditions.

Socially necessary indicators are an aggregate of technological-economic and exploitation characteristics meeting concrete needs under specific conditions of exploitation of an object of technology.

[III - USSR - 3]
[II - USSR]

UNCLASSIFIED PROCESSING DATE--23OCT70

1/2 016

TITLE--SOLID ROTOR -U-

AUTHOR-(05)-SCHASTLIVYY, G.G., SHEVCHENKO, V.I., LYCHKO, I.I., SUSHCHUKSI YUSARENKO, I.I., OBUKHOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--USSR 248053

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI NO 23

DATE PUBLISHED--05JAN70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--PATENT, ELECTRIC MOTOR, ALTERNATING CURRENT, THERMAL STABILITY, EDDY CURRENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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

PROXY REEL/FRAME--1998/1593

ACCESSION NO--AA0121970

UNCLASSIFIED

2/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AA0121970

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION. SOLID ROTOR USED FOR AN A. C. ELECTRIC MOTOR ACHIEVES A HIGHER THERMAL STABILITY OF DAMPING SYSTEM DURING STARTING AND IN ASYMMETRICAL OPERATION. THE ROTOR DAMPING SYSTEM INCLUDES TEETH (1) AND METAL WEDGES (2) IN SLOTS (3). THE SHORTING RINGS (4,5) ARE MADE BY FORMING A LAYER OF ELECTRICALLY MOLTEN COPPER ON THE END OF THE ROTOR AND IN A RECESS OF THE SHAFT; THE ROTOR SLOTS ARE MILLED AFTERWARDS. WEDGES (2) ARE IN CONTACT WITH THE SHORTING RING ALONG ITS THICKNESS (A). IN ASYMMETRICAL OPERATION EDDY CURRENTS ARE INDUCED IN THE TEETH AND WEDGES WHICH ARE SHORTED BY THE RINGS (4,5).

FACILITY: INSTITUT ELEKTRODINAMIKI AN UKRAINSKOY SSR, INSTITUT ELEKTROSVARKI IM. YE. O. PATONA I LYS*VENSKIY TURBOGENERATORNYY ZAVOD.

UNCLASSIFIED

USSR

UDC 621.375.82

OBUKHOV, V. I., BABITSKAYA, E. M., GOYDENKO, P. P., and BUYKO, L. D.

"Lasers in Semiconductor Monitoring Systems"

Kvantovyye generatory v sistemakh kontrolya poluprovodnikov (cf. English above), Minsk, "Nauka i Tekhn." (Science and Technology), 1972, 120 pp, ill., 55 kopecks (from RZh-Fizika, No 8, Aug 72, Abstract No 8D1157K)

Translation: The book describes methods and principles for the formation of automatic systems through the use of lasers to monitor such semiconductor parameters as thickness of epitaxial film and resistivity, as well as parameters characterizing surface state. The authors take up the peculiarities of the interaction of electromagnetic laser radiation with the semiconductor (reflection, absorption, refraction) and the methods and principles on which the monitoring is based (interference, holography etc.). Bibliography with 87 titles.

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USSR

UDC 621.039.5.16.25

BAT', G. A., GULIMOV, V. N., ZARUBIN, YU. V., OBUKHOV, V. K., and USHAKOV, YU.V.

"Temperature Effect in the Range of 20-250° C for Several Strictly Regular Heterogeneous U-H_2O Critical Assemblies"

Moscow, Atomnaya Energiya, Vol 30, No 4, Apr 71, pp 354-358

Abstract: A good description of the function $N_{cr}(T)$ is a sufficiently reliable proof of the adequacy of the computational method and the judiciousness of the simplifications employed in it for describing the design of a reactor. Unfortunately, however, there are few experimental data on the effects of reactivity in reactors, and it is usually assumed that about a 20% accuracy in predicting the temperature effect of the reactivity is adequate. The integral nature of the critical experiments makes it possible to obtain only minimal data on each specific assembly. However, if enough such experiments are carried out, it may be possible to supplement those data on the micro-parameters or even perhaps to change them considerably.

The authors describe the fuel elements and the test stands and provide a table showing the composition of the fuel in weight %. They include a section on the experimental procedure and cite the results from the tests.

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USSR

BAT', G. A., et al., Atomnaya Energiya, Vol 30, No 4, Apr 71, pp 354-358

Five graphs are given which show the critical mass versus other factors. The computational and the measured results agree satisfactorily.
The article contains 1 table, 5 figures, and a bibliography of 3 titles.

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USSR UDC 539.181.1

GOL'DANSKIY, V. I., Corresponding Member of the USSR Academy of Sciences, DZHURAYEV, A. A., YEVSEYEV, V. S., OBUKHOV, Yu. V., ROGANOV, V. S., FRONTAS'YEVA, M. V., KHOLODOV, N. I., Institute of Chemical Physics, USSR Academy of Sciences

"Atomic Capture of Negative Mesons in Compounds Containing Hydrogen"

Moscow, Doklady Akademii Nauk SSSR, Vol 211, No 2, 11 Jul 73, pp 316-318

Abstract: An attempt is made to find possible underlying regularities in the distribution of negative muons between the individual groups Z_mH_n and atoms Z' in substituted hydrogen-containing organic compounds and in hydrogen-containing compounds in general of the type $Z_mH_nZ'_k$ or $Z_mH_\nu Z'_kH_\nu$. A table is given summarizing the relative probabilities of capture of μ^--mesons by hydrocarbon and hydrogen-containing groups and by aromatic rings in compounds with ionic bonds, in alkyl chlorides, and in phenyl halides.

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USSR

UDC 541.12.012.2

ANDRIANOV, D. G., OBUKHOV, YU. V., FIRSOV, V. G., FISTUL', V. I., State Scientific Research and Development Institute of Rare Metal Industry, Institute of Theoretical and Experimental Physics, Moscow

"Dimensions of the Hydrogen Atom in Semiconductors and Dielectrics"

Moscow, Doklady Akademii Nauk SSSR, Vol 201, No 4, Dec 71, pp 884-886

Abstract: A theoretical discussion based on literature reports is carried out in an attempt to find correlations between the Si-H and Ge-H bond characteristics and dimensions of atomic μonium and atomic hydrogen (both by physical and chemical properties an atom of μonium is like a hydrogen atom). No original experimental work is reported. It is believed that the μonium (and consequently the atomic hydrogen) are located in the internodal spaces of the crystalline lattice of germanium and silicon. The μonium was found to have a decreased energy of superfine interactions which is believed to be due to its interaction with neighboring atoms in the crystalline lattice -- evidently the μonium electron belongs for a certain time concurrently to the μ+-meson and to the ligand. Geometrical characteristics of the internodal spaces in which the μonium and hydrogen are located in the

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USSR

ANDRIANOV, D. G., et al., Doklady Akademii Nauk SSSR, Vol 201, No 4, Dec 71, pp 884-886

Ge and Si lattices are about the same, analogously to the Ge-H, Si-H bond lengths. If the interaction of μonium with the ligands of silicon and germanium lattice resembles the interaction during formation of Si-H and Ge-H bonds, it is reasonable to expect that the μonium should be larger in the silicon lattice than in the germanium lattice. A conclusion is reached that the radius of hydrogen dissolved in silicon should be somewhat larger than in germanium.

2/2

1/2 022 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF THE CRYSTAL LATTICE OF SILICON ON THE HYPERFINE SPLITTING ENERGY OF MUONIUM -U-

AUTHOR-(05)-ANDRIANOV, D.G., MINAYCHEV, YE.V., MYASISHCHEVA, G.G., OBUKHOV, YU.V., ROGANOV, V.S.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL ERSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 6, PP 1896-1898

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--CRYSTAL LATTICE, SILICON, SINGLE CRYSTAL, LONGITUDINAL MAGNETIC FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1728 STEP NO--UR/0056/70/058/006/1896/1898

CIRC ACCESSION NO--AP0120440

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120440

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEPENDENCE OF MU E DECAY POLARIZATION ON LONGITUDINAL MAGNETIC FIELD STRENGTH IS MEASURED IN SILICON SINGLE CRYSTALS. THE HYPERFINE SPLITTING ENERGY OF THE MUONIUM ATOM IN THE CRYSTAL LATTICE DIFFERS FROM THE VACUUM VALUE AND CORRESPONDS TO A MUONUIM SIZE R EQUALS (9,719 PLUS OR MINUS 9,016) ANGSTROM.

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--30OCT70

1/2 018

TITLE--PASCHEN BACK EFFECT FOR THE MUONIUM ATOM -U-

AUTHOR-(05)-MINAYCHEV, YE.V., MYASISHCHEVA, G.G., OBUKHOV, YU.V., ROGANOV, V.S., SAVELYEV, G.I.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 5, PP 1586-1592

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LONGITUDINAL MAGNETIC FIELD, MAGNETIC FIELD INTENSITY, MAGNETIC POLARIZATION, MUON, SINGLE CRYSTAL PROPERTY, QUARTZ, CORUNDUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/0056/70/058/005/1586/1592

PROXY REEL/FRAME--3001/2236

CIRC ACCESSION NO--AP0127598

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--30OCT70

2/2 018

CIRC ACCESSION NO--AP0127598

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLARIZATION OF MU PRIME POSITIVE MESONS AS A FUNCTION OF LONGITUDINAL MAGNETIC FIELD STRENGTH IS MEASURED BETWEEN 0 AND 3 KOE IN SINGLE CRYSTAL QUARTZ AND CORUNDUM. FOR QUARTZ THE EXPERIMENTAL DATA ARE FOUND TO BE IN GOOD AGREEMENT WITH THE THEORY OF MUONIUM DEPOLARIZATION. THE EXPERIMENTAL VALUE OF THE CRITICAL MAGNETIC FIELD STRENGTH FOR MUONIUM IN QUARTZ EQUALS WITHIN THE EXPERIMENTAL ERRORS THE VALUE OBTAINED IN VACUUM. THE POSSIBLITIES WHICH THE METHOD AFFORDS FOR MEASURING THE SIZE OF MUONIUM IN VARIOUS MEDIA ARE CONSIDERED.

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--23OCT70

1/2 022

TITLE--EFFERENT CONNECTIONS OF THE ANTERIOR COLLICULI IN DOGS -U-

AUTHOR--OBUKHOVA, G.P.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 3, PP 612-618

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BRAIN, NEUROPHYSIOLOGY, INJURY, SPINAL CORD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/0247/70/020/003/0612/0168

PROXY REEL/FRAME--1997/1916

CIRC ACCESSION NO--AP0120569

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--23OCT70

2/2 022

CIRC ACCESSION NO--AP0120569

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EFFERENT PROJECTIONS OF THE ANTERIOR COLLICULUS WERE STUDIED ON SEVEN DOGS AFTER ITS LOCAL STEREOTAXIC INJURIES. THE MATERIAL WAS PROCESSED BY THE NAUTA METHOD. IT HAS BEEN SHOWN THAT WELL PRONOUNCED EFFERENT PATHWAYS PASS FROM THE ANTERIOR COLLICULUS TO DIFFERENT FORMATIONS ON THE INTERBRAIN (THE SUPRAGENICULATE NUCLEUS, THE POSTERIOR THALAMIC NUCLEUS, THE PRETECTAL AREA, THE PULVINAR) TO MIDBRAIN STRUCTURES (THE RETICULAR FORMATION, THE CAJAL AND DARKSCHEVICH NUCLEI, THE CONTRALATERAL ANTERIOR COLLICULUS), TO THE STRUCTURES OF THE STEM AND THE SPINAL CORD. THE EXISTENCE OF A LARGE NUMBER OF AFFERENT AND EFFERENT CONNECTIONS PERMIT TO ASSUME THAT THE DIFFERENT EFFECTS OF INJURIES OF THE ANTERIOR COLLICULUS RESULT NOT ONLY FROM ITS DISTURBED STRUCTURE, BUT ALSO FROM THE DISTURBANCE OF THOSE RELATIONS WHICH FORM DURING THE PERFORMANCE OF THE VISUAL FUNCTION BETWEEN DIFFERENT PARTS OF THE BRAIN THROUGH THE AFFERENT AND EFFERENT CONNECTIONS OF THE ANTERIOR COLLICULUS. FACILITY: PAVLOV PHYSIOLOGY DEPARTMENT, INSTITUTE OF EXPERIMENTAL MEDICINE, USSR ACADEMY OF MEDICAL SCIENCES, LENINGRAD.

UNCLASSIFIED

USSR

UDC 543.70

SUDAKOV, F. P., OBUKHOVA, L.A., and TSENSKAYA, T.I., Moscow State University imeni M. V. Lomonosov, Moscow, Ministry of Higher and Secondary Specialized E ucation USSR

"Photometric Determination of Phosphorus by Formation of Molybdophosphates in Mixed Solutions"

Moscow, Zhurnal Analiticheskoy Khimii, Vol 25, No 4, Apr 70, pp 765-771

Abstract: Formation of 12-molybdophosphate in aqueous solutions of dimethylformamide, dioxane, acetone and ethanol, with 30-50% of the organic component, results in an appearance of a well defined UV maximum at 310-320 mμ, not found in aqueous solutions. The absorbance in mixed solutions is higher than in aqueous solutions, the molar extinction coefficient is $2.4 \cdot 10^4$ (312 mμ), $2.1 \cdot 10^4$ (310 mμ), $2.5 \cdot 10^4$ (318 mμ) and $1.8 \cdot 10^4$ (310 mμ) for molybdophosphate in dimethyl formamide, dioxane, acetone and ethanol solutions respectively. The phosphate and molybdate require a lower excess of molybdate for a quantitative reaction in mixed solutions. This reaction can be used for photometric determination of phosphorus. It is as simple as the water method, but more sensitive.

1/1

Ref. Code: UR0463

Acc. Nr: AP0054284

PRIMARY SOURCE: Molekulyarnaya Biologiya, 1970, Vol 4, Nr 2, pp 205-212

FRACTIONATION OF VALINE ISOACCEPTOR tRNAs FROM BAKER'S YEAST

S. K. VASILENKO, F. F. DIMITROVA, L. V. OBUKHOVA, V. F. PODGORNYY and N. A. SEREBRO

Institute of Organic Chemistry, Siberian Branch of the Academy of Sciences, USSR, Novosibirsk

A new method for the chromatography of isoacceptor tRNAs^{Val} from baker's yeast is described. The chromatography is carried out on TEAE-cellulose columns at 38—40° in solution of 7 *M* urea and 0.1 *M* CH_3COOH, in NaCl linear gradient from 0,35 to 0,5 *M*. Mg^{+2} ions and EDTA in concentrations 0,005—0,01 *M* have a marked influence on the fractionation. tRNA^{Val} was fractionated into a few isoacceptor fractions. Structural difference of these fractions was confirmed by the analysis of guanylo-ribonuclease digests of ^{14}C-valyl-tRNA on TEAE-cellulose columns in linear gradient of HCOOH and NaCl in 7 *M* urea. The final purification of tRNA^{Val} was performed by the chemical method of periodate oxidation.

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REEL/FRAME
19831422

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UDC 632.95

USSR

MEL'NIKOV, N. N., ANDREYEVA, YE. I., PRONCHENKO, T. S., SKALOKHUBOVA, A. Y., SHKURATOVA, G. N., KURGANOVA, L. B., YURKOVA, A. G., OBUKHOVA, V. I., and NOVIKOVA, R. G.

"Concerning Liquid Organomercury Seed Disinfectants"

V sb. Khim. sredstva zashchity rast. (Chemical Agents for Plant Protection -- collection of works), vyp 1, Moscow, 1970, pp 150-155 (From RZh-Khimiya, No 11, Jun 72, Abstract No 11N427)

Translation: From the results of hothouse and small-plot field tests of non-Soviet and experimental Soviet samples of liquid organomercury fungicides, as well as with consideration to non-Soviet research and practical use in such fungicides, the authors conclude that liquid preparations deserve attention as promising forms for use as seed disinfectants in Soviet agriculture.

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UDC 632.95

USSR

YUKHTIN, N. N., ANDREYEVA, YE. I., MEL'NIKOV, N. N., SKALOZUBOVA, A. V., PRONCHENKO, T. S., SHKURATOVA, G. N., YURKOVA, A. G., KURGANOV, L. B., NOVIKOVA, R. G., and OBUKHOVA, V. I.

"Phenylmercury and Hexylmercury"

V sb. Khim. sredstva zashchity rast. (CHemical Agents for Plant Protection -- collection of works), vup 1, Moscow 1970, pp 145-150 (from RZh-Khimiya, No 11, Jun 72, Abstract No 11N426)

Translation: Seed disinfectant dusts -- hexylmercury (1% EtHgCl, 18-22% hexachlorobenzene, and up to 20% γ -hexachlorocyclohexane) and phenylmercury (1% EtHgCl and 18-22% hexachlorobenzene) -- are officially authorized in the Soviet Union for use against the same plant diseases as those controlled by granosan. About half the EtHgCl expended when granosan is used is expended when phenylmercury and hexylmercury are used. Phenylmercury can be used against fusarium wilt and helminthosporiosis. The new disinfectants show promise as agents for controlling dwarf wheat infections and wheat kernel smut. The most promising signal dyes for the disinfected grain are Rhodamine C, methylene blue, acid blue-black and direct red 2C.

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USSR UDC 776

DUBITSKIY, A. M., ILYALETDINOVA, S. G., and OBUKHOVA, V. M.

"Toxicity of Blue-Green Algae for Larvae of Blood-Sucking Mosquitoes of South-East Kazakhstan"

Alma-Ata, Vestnik Akademii Nauk Kazakhskoy SSR, No 2 (322), 1972, pp 65-67

Abstract: Of 13 species of algae tested, Microcystis aeruginosa, Hapalosiphon fontinalis, Anabaena variabilis, and Anabaena oscillarioides f. turkestanica, were toxic to larvae of Culiseta longiareolata, Aedes aegypti, Aedes caspius, and Culex pipiens. When exposed to the above algae, 44 to 99.7% of mosquito larvae perished. Microcystis aeruginosa was the most toxic, and Anabaena oscillarioides f. turkestanica, least toxic for larvae, with the remaining two species occupying an intermediate position. Analysis of the stomach contents of larvae showed that they contained 50-70% algae. However, mosquito pupae, which do not feed on algae, were not affected by any of the algae tested.

USSR UDC 576.858.25.097.2.077.3

GAYDAMOVICH, S. Ya., OBUKHOVA, V. R., MEL'NIKOVA, Ye. E., VOLOKHOVA, N. A., KIRYUSHCHENKO, T. V., KLISENKO, G. A., KRASNOBAYEVA, Z. N., LAVROVA, N. A., SHARIPOVA, Sh. A., and SHANOYAN, N. K., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Use of Ultrasound to Increase Arbovirus Antigen Activity in Serological Tests in Vitro"

Moscow, Voprosy Virusologii, No 3, May/Jun 1973, pp 356-360

Abstract: An ultrasonic technique to increase antigen activity was tested on five groups of arbovirus antigens. Antigens prepared from suckling mouse brain by the sucrose-acetone and freon methods, or in chick fibroblasts without preliminary processing, were subjected to 30-40 sec of 20,000-25,000 Hz ultrasonic treatment. Titers determined before and after treatment by hemagglutination inhibition (HAI), complement fixation (CF), and agar gel diffuse precipitation (AGDP) were compared. For group A and B arboviruses CF and HAI titers increase 4-8 times after treatment, while AGDF titers remained unchanged. In the Kemerovo-Bunyamvera-California group, the CF titers increased by 2-4 times, and no change was observed in HAI titers. CF titers increased 2-8 times for all but Neapolitan arbovirus of the Phlebotomus group. 1/2

USSR

GAYDAMOVICH, S. Ya., et al., Voprosy Virusologii, No 3, May/Jun 1973, pp 356-360

The only HAI response in this group was by Bujaru arbovirus, and only after treatment the AGDP titers increased in a few cases. Ultrasonic treatment had an especially favorable effect on CF and AGDP titers in the Uukuniemi group, while changes in HAI titers were less pronounced. Thus ultrasonic treatment normally facilitates antigen activity in CF and HAI reactions and has a variable effect on the AGDP reaction. Treated antigens did not lose specificity. It is concluded that ultrasonic treatment can be used not only to increase titers but also to reveal titers of relatively inactive antigens.

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USSR

UDC 576.858.25.01(478.9)

SKOFERTSA, P. G., GAYDAMOVICH, S. Ya., OBUKHOVA, V. R., KORCHMAR', N. D., YAROVOY, P. I., KLISENKO, G. A., and MEL'NIKOVA, Ye. E., Scientific Research Institute of Hygiene and Epidemiology, Kishinev, Moldavian SSR, and Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Isolation of Kharagysh Virus From the Kemerovo Group in the Moldavian SSR"

Moscow, Voprosy Virusologii, No 6, 1972, pp 709-711

Abstract: A virus isolated in 1971 from an Ixodes ricinus pool collected from sheep in the Moldavian SSR, named Kharagysh by the authors, was lethal to 2-4 day mice and not so to 3-4 week mice. The virus passed tarough a 100 nanometer pore filter but was retained at 50 nanometers. Sodium desoxycholate and ether had little effect on virus titers. Inasmuch as it was impossible to obtain a hemagglutinating antigen to the virus by usual methods, identification studies were carried out by the complement-fixation reaction. Tests with immune ascitic fluid reactive to several arboviruses were positive only for the Kemerovo group. Moreover, within that group the most pronounced cross-reaction was with the Tribech subgroup. Thus it is demonstrated that Kharagysh virus belongs to the Kemerovo-Tribech group. Apparently I. ricinus plays an important carrier role in the infection cycle.

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UDC 576.858.25

USSR

GAYDAMOVICH, S. YA., NIKIFOROV, L. P., GROMASHEVSKIY, V. L., OBUKHOVA, V. P., KLISENKO, G. A., CHERVONSKIY, V. I., and MEL'NIKOVA, YE. I., Institute of Virsology imeni D. I. Ivan ovskiy, USSR Academy of Medical Sciences, Moscow

"New Arbovirus Sumakh from the Uukuniemi Group"

Moscow, Voprosy Virusologii, No 1, Jan/Feb 71, pp 21-25

Abstract: Isolation of the arbovirus Sumakh in the USSR is described for the first time. The virus was obtained from the hearts and lungs of blackbirds (Turdus merula) collected in Azerbaydzhan. The virus was similar to but not identical with Uukuniemi, as shown in the agar gel diffusion test, but not by the complement fixation test. The isolated virus was pathogenic for suckling white mice. An incubation period of 11 days was found upon intracerebral, which in subsequent passages was reduced to 96 hours. Mice 1-3 days of age were most susceptible. An antigen for hemagglutination reactions was prepared from suckling mouse brains by the ucrose-acetone method. The titer of this antigen did not exceed 1:64. Subsequent workup with Tween-80 and ether raised the titer to 1:256-1:512. When the antigen was prepared by the freon method, the material was enriched with Tween-80 and ether and

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USSR

GAYDAMOVICH, S. YA., et al., Voprosy Virusologii, No 1, Han/Feb 71, pp 21-25

could serve for agglutination of erythrocytes in dilutions of 1:32-1:64. Optimum hemagglutination was achieved at pH 5.8 and at a temperature of 37°C. According to preliminary data on agar diffusion, the Sumakh virus is not identical with the Uukuniemi virus. A detailed study of the antigenic structure of Sumakh virus is under way.

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1/2 030 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--EFFECT OF INTENSITY OF THE DESADAPTING PHOTIC STIMULATION OF RESTORING THE LIGHT OF THE VISUAL CENTER IN HUMAN -U-
AUTHOR-(02)-SHOSTAK, V.I., OBUKHOVA, YE.A.

COUNTRY OF INFO--USSR

SOURCE--FIZIOLOGICHESKIY ZHURNAL SSSR IMENI I. M. SECHENOVA, 1970, VOL 56, NR 4, PP 558-562
DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--VISUAL PERCEPTION, MAN, LIGHT BIOLOGIC EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1983/1188 STEP NO--UR/0239/70/056/004/0558/0562

CIRC ACCESSION NO--AP0054087
UNCLASSIFIED

2/2 030 UNCLASSIFIED

CIRC ACCESSION NO--AP0054087 PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EFFECT OF LIGHT FLASHES OF 80-900 MICROSEC. DURATION ON LIGHT SENSITIVITY OF THE HUMAN VISUAL CENTER WAS STUDIED. THE ENERGY OF SUCH STIMULI WAS FOUND TO BE A PREDETERMINING FACTOR FOR THEIR EFFECT. HOWEVER, SHORTENING OF THE FLASHES ALTERS THE RELATIONS: THE CURVES OF THE DARKNESS ADAPTATION HAD ESSENTIAL DIFFERENCES IN THE INITIAL PERIOD AND EQUAL TIME OF COMPLETE RESTORATION OF THE LIGHT SENSITIVITY.

UNCLASSIFIED

2/2 029 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132231

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SAMPLE FILMS WERE HELD HORIZONTALLY BY A FORCE JUST ADEQUATE TO PREVENT SAGGING DUE TO GRAVITY. DURING HEATING THE HORIZONTAL POSITION WAS MAINTAINED BY THE DISPLACEMENT OF THE HOLDING CLAMPS. THE TEMP. VS. DEFORMATION (EPSILON) CURVES WERE OBTAINED FOR POLY(TETRAFLUOROETHYLENE) (FTOROPLAST 4M) FILMS ANNEALED AT VARIOUS TEMPS. THE FILMS ANNEALED AT 255DEGREES OR 280DEGREES HAD POS. EPSILON, AS WELL AS NEG. EPSILON (SHRINKAGE). THE FILMS ANNEALED AT 265DEGREES HAD ONLY POS EPSILON. FACILITY: NAUCH.-ISSLED. PROEKT. INST. POLIM. PLASTMASS, LENINGRAD, USSR.

UNCLASSIFIED

USSR UDC: 669.017.11.295.292

SHUSHKANOV, V. M., MOROZ, L. S., OBUKHOVSKIY, V. V., KAPITONOVA, N. P., IVANOVA, N. V., Leningrad

"Solubility of Vanadium in α Titanium"

Izvestiya Akademii Nauk SSSR, No 4, Jul-Aug 73, pp 221-224.

Abstract: Considering that vanadium is one of the most important alloying elements used in the production of titanium alloys, this work attempts to establish the true limit of solubility of vanadium in α titanium. The paramagnetic susceptibility and modulus of elasticity of four alloys in the Ti-V system containing 0.50, 0.92, 1.40 and 2.30 wt. % vanadium were studied in various initial states. Methods were selected for high sensitivity to changes in electron structure of the alloys studied and interatomic bonding forces, hoping to record the initial stage of the formation of a second phase. The studies showed characteristic breaks on composition versus property curves of the alloys at 0.92 wt. % V, indicating changes in the interatomic bond energies and electron structure at this point. X-ray structural analysis showed that the breaks on the composition versus property curves correspond to appearance of the β phase. Thus, the equillibrium limit of

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USSR

Shushkanov, V. M., Moroz, L. S., Obukhovskiy, V. V., Kapitonova, N. P., Ivanova, N. V., Izvestiya Akademii Nauk SSSR, No 4, Jul-Aug 73, pp 221-224.

solubility of vanadium in α titanium is not over 0.9 wt. % at 650-700° C.

Acc. Nr: AP0043699 Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1970, Vol 58, Nr 3, pp 929-936

THEORY OF NONLINEAR LIGHT SCATTERING IN CRYSTALS

Strizhevskiy, V. L.; Obukhovskiy, V. V.

A microtheory of nonlinear scattering (NS) of light by crystal vibrations is developed. In the general case of dipole active transverse vibrations the NS intensity is determined, firstly, by the nature of the mechanical phonon, secondly, by the interaction between the phonons and transverse electromagnetic field as a result of which the phonons change into polaritons and thirdly, by nonresonance processes of crystal polarization by the exciting field. Accordingly the scattered light flux can be represented as the product of three factors, of the phonon, polariton and nonresonance which reflect the physical causes mentioned above responsible for the nature of the scattering. NS by longitudinal phonons is also considered. A close relation between the NS

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19770103

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AP0043699

intensities by transverse and longitudinal phonons and also by polaritons is established. It is shown that for relatively small scattering angles, for which NS by mechanical phonons goes over to NS by polaritons, a very pronounced angular dependence of the scattering intensity arises. A relation between the scattering cross section and respective optical detection tensor, ratio of scattering intensities at large angles by transverse and longitudinal phonons and the dispersion characteristics of the crystal is derived. The general theory is illustrated in the case of GaP, ZnSe and ZnO crystals.

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19770104

USSR

UDC 621.382.9

OBUKHOVSKIY, Ya. A., FAYNER, M. Sh., SYSOYEV, L. A., and GRIGORENKO, G. D.

"Effect of the Parameters of the Source Material of Cadmium Sulphide on the Efficiency of Operation of Piezotransducers Using a Diffused Layer"

V sb. Monokristally i tekhnika (Monocrystals and Technics -- Collection of Works), Issue 3, Khar'kov, 1970, pp 207-210 (from RZh-Elektronika i yeye primeneniye, No 7, July 1971, Abstract No 7B454)

Translation: The dependence is found of the efficiency of operation of piezotransducers using a diffused layer in CdS, operating in the 30-300 MHz frequency range, on the concentration of impurities in source material of various brands and the concentration of the donor impurities Al, In, Ca, introducable in the process of growth. It is shown that annealing of the source material of CdS and the introduction of Al in a concentration $\sim 5 \times 10^{-2}$ percent by weight during growth increases the efficiency of operation of the piezoconverter by 20-30 db. Summary.

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USSR

UDC 621.382.9

OBUKHOVSKIY, YA.A., SYSOYEV, L.A., FAYNER, M.SH.

"Use Of Melted Monocrystals Of Cadmium Sulfide For Ultrasonic Transducers"

V sb. Monokristally i tekhnika (Monocrystals And Technology---Collection Of Works), Issue 1, Khar'kov, 1970, pp 24-26 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4B385)

Translation: A method is described for producing a piezotransducer, using the diffusion of lithium. The distinctive characteristic of the method described is its simplicity and the high stability of the parameters of the transducers. Summary.

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UDC 546.48'22:548.55:539.4

USSR

ATROSHCHENKO, L. V., SYSOYEV, L. A., ORLIKHOVSKIY, YA. A., and KOSHKIN, V. M., All-Union Scientific Research Institute of Single Crystals

"Effect of the Orientation of the Second Phase on the Anisotropy of Brittle Failure in Single Crystals of CdS Alloyed With Lithium"

Moscow, Neorganicheskiye Materialy, Vol 6, No 11, Nov 70, pp 1917-1921

Abstract: A study was mad of the anisotropy of brittle failure in single crystals of cadmium sulfide alloyed with lithium as a function of concentration. A metallographic investigation of sections, the cleavage structure structure, and the pattern of brittle failure of the crystals around the impressions made by microindentor loading showed that at Li concentrations of the order of $0.5 \cdot 10^{-2}$ wt% the cleavage plane of cadmium sulfide is modified. If nonimpurity CdS single crystals undergo cleavage only along the {100} or {110} planes, then brittle failure can occur in cadmium sulfide strongly alloyed with lithium only along the basal planes {001}. This effect is associated with the segregation of the second phase as plates arranged in layers, parallel to the {001} planes of the matrix crystal. It was experimentally shown that the plates are the compound Li_3S.

UDC 546.48'22 : 548.55

USSR

OBUKHOVSKIY, YA. A., and SYSOYEV, L. A., All-Union Scientific Research Institute of Single Crystals, Scintillation Materials and Ultrapure Chemicals, Khar'kov

"Treatment of CdS Single Crystals in Salt Melts"

Moscow, Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy, Vol 6, No 10, Oct 70, pp 1784-1786

Abstract: The authors studied changes in the properties of undoped CdS single crystals grown from melt after annealing at 900° C in salt melts (LiCl, NaCl, KCl). It was found that there is no change in the electrical properties and microhardness of the crystals as a result of annealing in NaCl and KCl melts. Annealing in the LiCl melt increases the resistivity from 1 to 10^{10} ohms/cm. The introduction of Ag, Cu, In, Na, and Cd during annealing in the LiCl melt leaves the dark resistance of the crystals practically unchanged. This indicates that the high lithium concentration of the melt ($3 \cdot 10^{-4}$ wt. percent)

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USSR

OBUKHOVSKIY, YA. A., and SYSOYEV, L. A., Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy, Vol 6, No 10, Oct 70, pp 1784-1786

compensates for the electron conductivity of the crystal, and the aforementioned additions of salt in conjunction with LiCl have no significant effect on the properties. A decrease in the Li concentration of the melt to 3-4 percent by diluting it with the eutectic mixture NaCl + KCl lowers the dark resistance by ~2 orders with a light resistance of $1 \cdot 10^4$ ohms/cm. A further decrease in the LiCl concentration to 1 percent increases the dark conduction with invariant light conduction. There is no change in the electrophysical properties of CdS crystals as a result of annealing in a melt with low LiCl concentrations. The photosensitivity of the crystals is increased by adding 10^{-3} percent $CuInS_2$ in addition to 3 percent LiCl. Dark resistance is then lowered by ~1-2, light resistance by 2-3 orders. The resultant crystals are suitable for ultrasound amplification.

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USSR UDC 576.851.42

ISPENKOV, A. Ye., ROVNEYKO, Z. P., and OB"YEDKOV, G. A., Belorussian Institute of Veterinary Medicine

"Protein, Protein Fractions, and Nucleic Acids in Calves Experimentally Infected with Brucellosis, Pathogen, Br. abortus bovis strain, No 544"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Sel'skokhozyaystvennykh Nauk, No 4, 1972, pp 97-101

Abstract: The dynamics of protein, protein fractions, and nucleic acids in 4- to 5-month-old calves experimentally infected with Br. abortus bovis strain No 544 and 2260 were studied. The microorganisms were injected subcutaneously in the neck region 3 times in doses of 100,000, 2 billion, and 3 billion cells at 20- to 30-day intervals. The animals developed a latent form of brucellosis, with no clinical symptoms of the disease and with mild immunobiological reactions. The maximum mean agglutinin titer was not recorded until the 28th day after the second infection, 1:110. Complement-fixing antibodies were not detected at any time during the study.

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USSR

OB'YEDKOV, G. A.

Patogenez i Diagnostika Brutselleza Krupnogo Rogatogo Skota (Pathogenesis and Diagnosis of Brucellosis in Cattle), Minsk, "Urozhay," 1970, 168 pp

Translation: Annotation: The book gives new data on the pathogenesis, diagnosis, and immunogenesis of the disease, analyzes the effectiveness of diagnostic methods, and considers the significance of specific antibodies in protecting the organism during brucellosis. The search for methods of differentiating the processes induced by pathogenic and vaccinal strains of Brucella is also described.

Introduction:

Brucellosis is a dangerous disease for human beings and farm animals. Preventing the disease in humans is directly linked with eradicating brucellosis in farm animals.

A number of scientific research institutions in the USSR practicing veterinary specialists, in developing and applying various methods of preventing and eliminating brucellosis in animals. In the last 10 years in the Belorussian SSR, the rate of brucellosis infection in cattle has been significantly reduced, while the number of cattle on farms not protected against brucellosis has been decreased 12-fold. Individual livestock farms remote

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USSR

OB'YEDKOV, G. A., Patogenez i Diagnostika Brutselleza Krupnogo Rogatogo Skota, Minsk, "Urozhay," 1970, 168 pp

from the central regions and located in distant rayons of the Poles'ye (low-lying forest region) still remain unsafe. Success in the fight against brucellosis has been won by comprehensive use of general veterinary-sanitation measures and specific prophylaxis. However, the use of specific prophylactic means (vaccines) is still complicated because, using existing diagnostic procedures (serological and allergic) the practicing doctor cannot distinguish the contaminated animal from one which has been immunized. It becomes necessary to study the interaction of the organism and Brucella strains of varying virulence more deeply, i.e. immunogenesis and pathogenesis in the broad sense must be emphasized.

Historically, after discovery of the infectious nature of a particular disease, first priority went to developing means of combating the pathogen and prophylactic methods, while study of the interaction between macro- and microorganisms was put in third place. During severe infections the methods of therapy and prophylaxis which were developed were effective, but with chronic infections, where the interaction between the macroorganism and the pathogen are not apparent, they turned out to be insufficient. This is true of brucellosis in cattle.

USSR

OB'YEDKOV, G. A., Patogenez i Diagnostika Brutselleza Krupnogo Rogatogo Skota, Minsk, "Urozhay," 1970, 168 pp

The reaction of the macroorganism during brucellosis was studied primarily through the phagocytic activity of macrophages, synthesis of antibodies, and sensitization. In recent times the arsenal of methodological procedures has increased significantly, and it has become possible to develop more profound knowledge of reactive changes in the organism under the influence of wild-type and vaccinal strains of Brucella.

Brucellosis involves not only the behavior of the agent in the organism, but also the morphological and cytological changes in affected organs, which comprise the pathological component in the pathological-immunological process. Functional and biochemical (especially cytochemical) changes activating phagocytosis, weakening and destroying the pathogen, are also important. Analysis of these changes using various research methods is possible with the living animal, which is of interest for disease diagnosis and the immunological state of the animal.

This book describes results of study of the functional state of immunized animals and animals with brucellosis using methods. Along with study of agglutinins and complement-fixing antibodies, attention was directed to the dynamics of the spectrum of serum proteins (which were studied by the method of electrophoretic fractionation), the quantitative and qualitative composition

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USSR

OB'YEDKOV, G. A., Patogenez i Diagnostika Brutselleza Krupnogo Rogatogo Skota, Minsk. "Urozhay," 1970, 168 pp

of leukocytes, their phagocytic activity, blood opsonins, the RNA content of lymphocytes, and the quantitative composition of nucleic acids in the peripheral blood of cows with brucellosis and vaccinated cows. The fluorescent antibody method is also treated. Descriptions are given of the initial symptoms of brucellosis, its clinical, and diagnostic methods.

The book is designed for veterinarians, veterinary assistants, laboratory assistants at veterinary hospitals and laboratories, and stuients at veterinary departments and institutes.

Table of Contents:

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USSR

OB'YEDKOV, G. A., Patogenez i Diagnostika Brutselleza Krupnogo Rogatogo Skota, Minsk, "Urozhay," 1970, 168 pp

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UNCLASSIFIED PROCESSING DATE--20NOV70

1/2 023

TITLE--QUENCHING OF THE FLUORESCENCE OF NITROGEN CONTAINING HETEROCYCLIC COMPOUNDS BY ANTHRACENE DERIVATIVES -U-

AUTHOR-(03)-UBYKNOVENNAYA, I.YE., REZNIKOVA, I.I., CHERKASOV, A.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(3), 594-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--FLUORESCENCE, HETEROCYCLIC NITROGEN COMPOUND, ANTHRACENE, NAPHTHALENE, QUINOLINE, LUMINESCENCE QUENCHING, EXCITED STATE, COMPLEX COMPOUND, ELECTRON ACCEPTOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/0048/70/034/003/0594/0598

PROXY REEL/FRAME--2000/2051

CIRC ACCESSION NO--AP0125639

UNCLASSIFIED

2/2 023 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0125639

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF ANTHRACENE (I), ITS 9-ME, 9-PR, 9,10-DI-ME, AND 9,10-DI-PR HOMOLOGS, 9,ACETYLANTHRACENE, 9,BROMOANTHRACENE, 1,2,BENZANTHRACENE, ACRIDIEN(II), NAPHTHALENE (III), AND QUINOLINE (IV) ON THE FLUORESCENCE OF 9,AMINOACRIDINE, 3,6,BIS(DIMETHYLAMINO)ACRIDINE (IN THE PRESENCE OF 10 PRIME NEGATIVE2 MOLE-L. HCL OR KOH), AND RIBOFLAVINE (V) IN ETOH WAS STUDIED, AND THE ABS. QUENCHING CONSTS. ARE TABULATED. NEITHER THE FLUORESCENCE NOR THE ABSORPTION SPECTRA OF THE LUMINOPHORS UNDER STUDY ALTERED ON THE ADDN. OF I DERIVS. MOST OF THE OTHER COMPDS. SHOWED PRONOUNCED QUENCHING EFFECT. THE FLUORESCENCE YIELD B DECREASED AS A FUNCTION OF THE QUENCHING AGENC CONCN. (A SUB2) IN ACCORDANCE WITH THE STERN FOLMER VAVILOV RELATION B SUB0-B EQUALS 1 PLUS K(A SUB2). THE SIMULTANEOUSLY OBSD. DECREASE IN THE DURATION OF FLUORESCENCE WITH INCREASING (A SUB2) SUGGESTED AN INTERACTION BETWEEN THE QUENCHING AGENT AND LUMINOPHOR MOLS. IN AN EXCITED RATHER THAN GROUND STATE. THE QUENCHING CONSTS. OF THE 9-PR AND 9,10-DI-PR HOMOLOGS OF I WERE ALWAYS LOWER AS COMPARED WITH THE RESP. ME COMPDS. ALSO THE INTERMEDIATE COMPLEXES FORMED BY THE INTERACTION WERE PRESUMED TO POSSESS A SANDWICH STRUCTURE. THE TRICYCLIC MOLS. OF THE ANTHRACENES AND II THAT STERICALLY CORRESPONDED TO THE AMINOACRIDINES UNDER STUDY ALSO HAD CONSIDERABLY STRONGER QUENCHING EFFECT THAN THEIR BICYCLIC ANALOGS III AND IV. THE QUENCHING EFFECT WAS MORE PRONOUNCED IN THE ACIDIC FORMS THAN IN THE ALK. FORMS OF THE AMINOACRIDINES, AND THE STRONGEST QUENCHING BY THE ANTHRACENES WAS OBSD. IN V, WHICH POSSESSES A DISTINCT ELECTRON ACCEPTOR CHARACTER.

UNCLASSIFIED

USSR

OBYSOV, A., Doctor of Medical Sciences, and NIKOLAEV, V., Doctor

"The Mechanical Strength of Biological Tissues"

Moscow, Meditsinskaya Gazeta, 26 May 72, p 3

Abstract: In experiments on newly deceased subjects it was found that as ribs develop to twice their original size, their exponent of mechanical strength decreases two-fold. The distensibility of the aorta in middle-aged people was 94-100% and 60-70% among the elderly. Compact parts of hip bones have a pressure limit of 15-30 kg/mm^2, while cancellous parts have a limit of 0.7-1.5 kg/mm^2. In humans the coefficient of elasticity in the intervertebral disks increases 4 times in 50 years. Various studies of mechanical strength have been made in relation to: (a) the development of artificial hearts through the determination of the strength of the tendinous threads of heart valves; (b) legal medicine and the determination of the weights which destroy tissues and organs; (c) injury as a result of strain in sports; (d) extreme conditions in space.

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USSR

KABANOVA, YU. G., and OCHAKOVSKIY, YU. YE., Institute of Oceanology imeni P. P. Shirshov, Academy of Sciences USSR, Moscow

"Dependence of Primary Phytoplankton Production on Biogenic Elements and Light"

Moscow, Doklady Akademii Nauk SSSR, Vol 201, No 5, 1971, pp 1,227-1,230

Abstract: The effects of nutrients (P, N, Si, Fe, Mn, and Co) and light on the growth of plankton were investigated in the southeast part of the Caribbean Sea. The results indicate that in small samples, the most important factor determining the growth rate is the initial quantity of the phytoplankton, while light is of secondary and nutrients of tertiary importance. In a population of natural density, photosynthesis is promoted by additional nutrients more than by additional light. In a population of markedly increased density, light exerts a greater effect. However, for any given quantity of light energy delivered, plankton production and photosynthesis increase with increasing supply of nutrients. It is concluded that in the area investigated, there is a deficit of nutrient elements which inhibits plankton growth and photosynthesis.

USSR UDC 537.529:534.222.2

OCHERETIN, V. N., Nikolayev

"Study of Shock Wave Formation in the Detonation of Wires in Water"

Kishinev, Elektronnaya Obrabotka Materialov, No 5, Sep-Oct 71, pp 39-41

Abstract: With the aid of high speed photographing using an SFR-2M camera and oscillographing of the electrical parameters of a discharge, the process of energy liberation in the discharge channel and formation of the resultant shock wave was studied. Detonation of copper and steel wires measuring 0.15 mm in diameter and 90 mm long at an initial 50 kv voltage and 1 microfarad capacitance was investigated. Recommendations are given for industrial use and selection of the material for detonating wires. 3 figures, 6 bibliographical references.

1/1

USSR

OCHERETIN, V. N.

"Modeling of Brittle Rupture of an Object During Electro-hydraulic Treatment"

Kishinev, Elektronnaya Obrabotka Materialov, No 3, 1970, pp 58-59

Abstract: In planning electrohydraulic devices for breaking of rods, it is necessary to select the R, L and C elements of the discharge circuits to provide the necessary parameters of the hydrodynamic pulse which breaks the rod. The authors performed a study to determine the way in which rods broke in such an apparatus to help in this selection. Initial experiments using rods were unsuccessful, since the mass of bubbles formed near the surface of the rod made it impossible to determine whether the initial shock wave or slower but more powerful subsonic movement of the medium actually performed the breaking. Model experiments were therefore performed on glass plates whose impact toughness was equivalent to that of the rods to be broken. These experiments indicated that the actual brittle rupture of the 1/1 plates was performed by the shock wave.

USSR

UDC 624.043:519.2:681.3

OCHERETYANNYY, S. M., Candidate of Technical Sciences, Central Scientific Research, Planning and Experimental Institute of Industrial Buildings and Structures

"Optimal Planning of Complex Construction Projects"

Moscow, Stroitel'naya Mekhanika i Raschet Sooruzheniy, No 3, June 1973, pp 18-22

Abstract: Complex construction projects represent structures employed for multiple purposes under various conditions. Characteristic examples of complex construction projects are standard designs of buildings and structures, designs of industrial aggregates, large complexes such as the Volga Motor Vehicle Plant, etc. The class of problems pertaining to the optimal planning of complex construction projects is formulated. A solution of two problems from this class is presented. 3 figures. 1 table. 4 references.

1/1

USSR

UDC: 581.5:681.3.06

OCHERETYANNYY, S. M.

"Solving a Combinatorial Problem by Means of the 'GRAD-5' Program"

V sb. Mashiny dlya inzh. raschetov (Machines for Engineering Calculations--collection of works), vyp. 4, Kiev, 1971, pp 64-70 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V964)

Translation: The "GRAD-5" program is designed for solving the following combinatorial problem.

Let there be given the vector $y=y_0, \ldots, y_N$, whose components are a sequence in order of increasing number from the segment $[a, b]$, $y_i \in [a, b]$, $y_0=a$, $y_N=b$. It is required to isolate from y the vector of lowest dimensionality $x=x_{11}, x_{12}, \ldots, x_{1j}, \ldots, x_{mn_m}$ corresponding to the minimum of the function

$$E=\sum_{i=1}^{m}\sum_{j=1}^{n_i}[t(x_{ij})+g(x_{ij}, x_{in_i})]\times p(x_{ij}, x_{i,j-1}). \quad (1)$$

Here t, g are given nonnegative functions; p is some number which indicates the "weight" (frequency, probability of application) of component x_{ij}.

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USSR

UDC 577.391.612.112.92.086.3

BYCHKOVSKAYA, I. B., and OCHINSKAYA, G. K., Laboratory of Experimental Cytology and Histology, Roentgenological and Radiological Institute, Leningrad

"Correlation Between the Dynamics of Postirradiation Death of Amoeba and the Irradiation Dose"

Leningrad, Tsitologiya, Vol 14, No 1, 1972, pp 137-140

Abstract: Amoeba proteus, cultivated in individual lines, were irradiated with 190 kv X-rays in doses ranging from 0.1 to 400 kr. The mortality of the cells was not strictly proportional to the dose. After 0.1-40 kr, 50% of the cells were dead in 40 days, and 85-100% were dead in 80 days, regardless of the dose. In nonirradiated controls, only 7% died in 80 days. In the middle range of 60-120 kr, the mortality rate increased with increasing doses. In the high range of 150-400 kr, the correlation was absent again: most cells died in 2 days, with only a few surviving up to the 8th day. Additional determinations revealed that the cells survived up to the 27th generation after low irradiation, up to the 7th generation after medium irradiation, and only one generation after high irradiation. The results indicate that, contrary to the prevailing belief, Amoeba proteus is very sensitive to X-rays, since even doses

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USSR

BYCHKOVSKAYA, I. B., and OCHINSKAYA, G. K., Tsitologiya, Vol 14, No 1, 1972, pp 137-140

as low as 0.1 kr are lethal though the damage caused by the X-rays may be transmitted over many cell divisions to become lethal only in the 27th generation.

2/2

UNCLASSIFIED PROCESSING DATE--09OCT70

1/3 008

TITLE--IN THE INTERESTS OF CIVIL DEFENSE -U-

AUTHOR--OCHKIN, B.

COUNTRY OF INFO--USSR

SOURCE--KRASNAYA ZVEZDA, JULY 2, 1970, P 2, COLS 5-8

DATE PUBLISHED--02JUL70

SUBJECT AREAS--MILITARY SCIENCES

TOPIC TAGS--CIVIL DEFENSE, COMMUNIST PARTY, CIVIL DEFENSE PERSONNEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/9008/70/000/000/0002/0002

PROXY REEL/FRAME--1993/0055

CIRC ACCESSION NO--AN0113044

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--090CT70

2/3 008

CIRC ACCESSION NO--AN0113044

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN HANDLING CIVIL DEFENSE PROBLEMS, THE SOVIET PARTY AND GOVERNMENT AGENCIES ARE GUIDED BY THE DIRECTIONS OF THE 23RD PARTY CONGRESS WHICH PROCLAIM THAT THE ENTIRE MEMBERSHIP OF THE PARTY, THE SOVIET SOCIETY, AND PARTY AND GOVERNMENT AGENCIES MUST PARTICIPATE IN THE ADVANCEMENT OF CIVIL DEFENSE. SOME IMPORTANT DECISIONS DIRECTED AT THE IMPROVEMENT OF THE PROMOTION OF CIVIL DEFENSE HAVE BEEN MADE BY THE PARTY BUREAU OF THE ESTONIAN REPUBLIC AND PARTY COMMITTEES OF THE MOSCOW, VORONEZH, AND SOME OTHER REGIONS. THE ARTICLE CLAIMS THE IMPORTANCE OF CIVIL DEFENSE HEADQUARTERS. FOR EXAMPLE, THE CIVIL DEFENSE HEADQUARTERS OF THE BELORUSSIAN S.S.R. CHIEF OF STAFF GENERAL MAJOR A. S. TSIKHUN, COMPLYING WITH THE INSTRUCTIONS OF THE BELORUSSIAN CENTRAL PARTY COMMITTEE AND OF THE CHIEF OF THE CIVIL DEFENSE OF THE U.S.S.R., IS IMPLEMENTING MEASURES WHICH PREPARE THE POPULACE FOR ROCKET NUCLEAR WARFARE. THE TASKS OF CIVIL DEFENSE ARE EXPLAINED IN OBLASTS REGIONS AND CITIES OF THE BELORUSSIA. 1200 ARTICLES ON CIVIL DEFENSE HAVE BEEN PUBLISHED IN LOCAL NEWSPAPERS AND JOURNALS OF THE REPUBLIC DURING 1969. OVER THE SAME PERIOD REPUBLICAN AND REGIONAL TV STATIONS PRESENTED 45 PROGRAMS DEALING WITH THIS TOPIC. THE CITY AND REGIONAL RADIO STATIONS BROADCAST MORE THAN 1000 TALKS AND REPORTS ALSO ON CIVIL DEFENSE TOPICS. THE AUTHOR PRAISES A. N. ALOV, DIRECTOR OF THE MOSCOW PLANT IMENI IL, ICHA, N. YE. GALKIN, DEPUTY DIRECTOR FOR CIVIL DEFENSE, AND M. S. STEPANOV, CHIEF OF STAFF, FOR DOING CONSTRUCTIVE CIVIL DEFENSE WORK. HOWEVER, THE AUTHOR IS CRITICAL OF CIVIL DEFENSE ORGANIZATIONS IN RURAL AREAS.

UNCLASSIFIED

3/3 008 UNCLASSIFIED PROCESSING DATE--090CT70

CIRC ACCESSION NO--AN0113044

ABSTRACT/EXTRACT--THERE ARE INSTANCES WHEN THE POPULATION OF A TOWN THAT DOES NOT HAVE A SUBWAY IS URGED TO USE SUBWAY IN CASE OF AN ATOMIC ATTACK. OCHKIN STRESSES THE IMPORTANCE OF PRINTED WORK IN PROMOTING CIVIL DEFENSE. CLAIM IS MADE THAT 25 POPULAR TYPE BROCHURES ON CIVIL DEFENSE WERE PUBLISHED IN THE LAST TWO YEARS. PLANS FOR 1970 CALL FOR THE PUBLICATION OF 20 MORE BROCHURES AND COLOR POSTERS. THE NEWSPAPER, "VOSKHOD", PUBLISHED BY THE KORSAKOV CITY PARTY COMMITTEE, HAS MERITED PARTICULAR PRAISE BY OCHKIN FOR ITS COVERAGE OF CIVIL DEFENSE TOPICS.

FACILITY: DEPARTMENT OF PROPAGANDA, CIVIL DEFENSE, U.S.S.R.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230009-1"

USSR

UDC: 621.375.82

MIKABERIDZE, A. A., OCHKIN, V. N., SOBOLEV, N. N.

"On the Population of Lower Laser Levels in a Carbon Dioxide Laser"

Moscow, Kvant. elektronika--sbornik (Quantum Electronics--collection of works), No 1(13), "Sov. radio", 1973, pp 41-46 (from RZh-Fizika, No 8, Aug 73, abstract No 8D1061 by the authors)

Translation: The vibrational temperatures of deformation vibrations of CO_2 molecules are measured by the method of rotating spectral lines in the 15-μm region. Comparison of the resultant vibrational temperatures with the calculated gas temperatures shows that the population of the lower laser levels is equilibrium in nature. Parallel measurement of the vibrational temperatures for antisymmetric vibrations of CO_2 molecules enables determination of the absolute population of the laser levels and inversion. The results are compared with measurements by the method of laser signal amplification. Bibliography of 20 titles.

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USSR

NOVGORODOV, M. Z., OCHKIN, V. N., SOBOLEV, N. N. (Lebedev Physics Institute, USSR Academy of Sciences, Moscow)

"Measurements of the Oscillatory Temperatures in CO_2 Lasers"

Leningrad, Journal of Technical Physics, June 1970, pp 1268-1275

Abstract: The authors suggest a method for determining the oscillatory levels of N_2, CO_2, and CO molecules in their ground electron states by measuring the relative intensities of the electron oscillation bands (0.2) 2^+ of nitrogen. A comparison of the distribution functions of the nitrogen molecules with respect to the oscillation levels in the ground state $X^1\Sigma_g^+$ and in the electron-excited state $C^3\Pi_u$ is made. The dependence of the oscillatory temperatures of the ground state in the discharge in various mixtures of CO_2, N_2, and He on the discharge current and gas pressure is found. Variations in the band intensity as a function of these same parameters are determined.

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USSR

UDC 621.382.81

MOShKAROV, B. S. and OCHKOV, A. S.

"An Information Measurement System"

Elektron. Tekhnike, Nauch.-Tekhn. Sb. Mikroelektronika (Electronic Technology. Scientific-Technical Collection. Microelectronics), 1972 Edition 2(36) pp 117-120 (from RZh-Avtomatika Telemechanika i Vychislitel'naya Tekhnika, No 3, Mar 73, Abstract No 3 A297 by the authors)

Translation: This work considers the requirements for information measurement systems and the basic problems which must be solved in their design. There is a discussion of the application of magnetic control contacts as commutating devices, and a relationship is given between measurement error and the time of establishment of a transient process in the input circuit of the apparatus. There is data on an information measurement system which has been developed and accepted for production. One table, two bibliographic entries.

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1/2 016 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--USE OF X RAY FLUORESCENCE ANALYSIS WITH RADIOISOTOPE FOR DETERMINATION OF CHEMICAL COMPOSITION OF ROCK ND ORES IN MOTION -U-

AUTHOR-(04)-PSHENICHENYY, G.A., OCHKUR, A.P., PLOTNIKOV, R.I., GOGANOV, D.A.

COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. (USSR); 28: 67-8 JAN. 1970

DATE PUBLISHED----JAN70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--MINERAL FORMATION ANALYSIS, FLUORESCENCE SPECTRUM, RADIOACTIVE ISOTOPE, ZIRCONIUM ORE, TITANIUM OXIDE, METALLURGIC PROCESS CONTROL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0212 STEP NO--UR/0089/70/028/000/0067/0068

CIRC ACCESSION NO--AP0105288

UNCLASSIFIED

2/2 016 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0105288

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESCRIPTIONS ARE GIVEN OF THE DESING AND PERFORMANCE OF A RADIOISOTOPE X FLUORESCENCE METHOD FOR ORE SAMPLE ANALYSIS ON A CONVEYOR BELT. TESTS WERE MADE OF CONTINUOUS SAMPLE CONTROL OF TI AND ZR ON THE CONVEYER AND COMPARED WITH THE LABORATORY DATA. SOURCE OF COMBINED PRIME55 FE (5.9 KEV) AND PRIME109 CD (22 KEV) WERE USED FOR EXCITATION OF THE K SERIES OF TITANIUM (TIK SUBALPHA EQUALS 4.5 KEV) AND ZIRCONIUM (ZRK EQUALS 15.7 KEV). RESULTS OBTAINED SHOWED THE METHOD SUITABLE FOR DETERMINING THE ORE CONTENT OF ELEMENTS WITH ATOMIC NUMBER OF 20 HIGHER, WHOSE LUMINESCENCE IS SUFFICIENTLY STRONG TO PENETRATE 5 TO 10 CM THICK AIR LAYERS.

UNCLASSIFIED

USSR

TOLUBINSKIY, V. I., KOSTANCHUK, D. M., OCTROVSKIY, Yu. N.,

"Influence of Smoothness of Heating Surface on Intensity of Heat Transfer During Boiling of Water"

Vopr. Tekh. Tellofiz. Vyp. 3, [Problems of Engineering Heat Physics No 3], Kiev, Nauk. Dumka Press, 1971, pp 12-14. (Translated from Referativnyy Zhurnal Mekhanika, No 1, 1972, Abstract No 1B883 by Yu. E. Pokhvalov).

Translation: An experimental study was performed in a circular channel with internal heating. The internal heated tubes, made of stainless steel, had the following dimensions: Diameter 6 mm, wall thickness 0.25 mm (precise, class 6 smoothness) and 6 mm and 0.25 mm (cold drawn, averaging class 4 smoothness), 5 mm and 0.2mm (polished, class 11 smoothness). The external tube was made of organic glass 28 mm in diameter (wall thickness 4 mm); channel length was 50 mm. The limits of change of the modes of the parameters were: heat flux $q=0.2\text{-}2$ Mw/m^2, pressure P=2-6 bar, underheating $\Delta t_{ll}=20^\circ$, water speed at input to channel V=0.2 m/sec. The divergence in intensity of heat transfer α on the technical surfaces was found not to be too great, while on the polished surface α was 25% or more lower, even at high heat fluxes. This effect is related to the impoverishment of the polished surface in vapor formation centers. The experimental data were processed as a criterial dependence, suggested

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USSR UDC 547.525.2'023'245:542.957.2

ODABASHYAN, G. V., ROMASHKIN, I. V., and PASHCHENKO, L. Ye.

"A Study of the Reaction of p-Dibromodimagnesiumbenzene with Fluoroalkyl-(Aryl)chlorosilance"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 11, Nov 1971, pp 2,454-2,457

Abstract: Although the bifunctional Grignard reagents have become widely used in the synthesis of various organosilicon compounds, very little information has been published on their possible use in obtaining organofluorosilicone monomers.

In this connection, the reactions of p-dibromodimagnesiumbenzene with certain alkyl(aryl)chlorosilanes, containing 3,3,3-trifluoropropyl and m-trifluoromethylphenyl radicals, were studied, especially as regards the effect of various substitutions for the silicon atom in the chlorosilane. Also investigated was the optimal ratio of p-dibromobenzene and magnesium and the reaction time for assuring high yield of p-dibromodimagnesiumbenzene.

Thirteen monomers were produced with yields ranging up to 50%. Physical data are given for these, along with details of laboratory procedures.
1/1

USSR

ODARICH, O. M., and SHEVELO, V. M. (Institute of Cybernetics, Ukrainian Academy of Sciences, Institute of Mathematics, Ukrainian Academy of Sciences)

"Asymptotic Behavior of Monotonic Solutions of Nonlinear, Second-Order Differential Equations with Delay"

Kiev, Dopovidi Akademii Nauk Ukrains'koi RSR: Seriya A - Fizyko-Tekhnichni ta Matematychni Nauky, December 1971, pp 1072-1075

Abstract: Necessary and necessary and sufficient conditions for the existence of monotonic solutions with different asymptotic behiavior, for $t \to \infty$, are found for the equation

$$y''(t) + p(t) y^{\alpha}(\tau(t)) = 0, \quad t \geqslant t_0 \geqslant 0, \tag{1}$$

$$(0 \leqslant p(t) \in C,\ \tau(t) \in C,\ \tau(t) < t,\ \alpha = \frac{r}{s}$$

r and s are positive odd integers).

The effect of delay on the asymptotic behavior of nonoscillating solutions is explained by a comparison of these conditions with corresponding conditions

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USSR

ODARICH, O. M., and SHEVELO, V. M., Dopovidi Akademii Nauk Ukrains'koi RSR: Seriya A - Fizyko-Tekhnichni ta Matematychni Nauky, December 1971, pp 1072-1075

for an ordinary differential equation [equation (1) with $\tau(t) \equiv t$]. The regularity of the simultaneous existence (coexistence) of nonoscillating solutions with different asymptotic behavior is established, and a comparison with the corresponding regularity in the case of ordinary equations is made. Examples are given which illustrate the significant qualitative effect of delay on the asymptotic behavior of the solutions.

There are five references.

1/2 017 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--APPLYING THE BEATTIE CONN METHOD FOR MEASURING OPTICAL CONSTANTS OF N AND I SEMICONDUCTORS IN THE REGION OF SELF ABSORPTION -U-
AUTHOR--ODARICH, V.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKLAD. SPEKTROSK. (USSR), VOL. 12, NO. 1, P. 264-7 (JAN. 1970)
DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SEMICONDUCTOR MATERIAL, OPTIC CONSTANT, MEASUREMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/1728 STEP NO--UR/0368/70/012/001/0264/0267

CIRC ACCESSION NO--AP0122058
UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--27NOV70

2/2 017

CIRC ACCESSION NO--AP0122058

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. GENERAL EXPRESSIONS FOR ERRORS IN CALCULATING OPTICAL CONSTANTS OF N AND I TYPE SUBSTANCES BY THE BEATTIE CONN METHOD DERIVED WHEN TAKING INTO CONSIDERATION THE INACCURACIES OF READINGS ARE DESCRIBED. THE READINGS COVERED MEASUREMENTS OF RADIATION INTENSITY, POLARIZER AZIMUTH, AND ANALYSER AZIMUTH. IT WAS ESTABLISHED THAT THE TWO FIRST TYPES OF ERRORS ATTAINED 100-200PERCENT WHEN MEASURING SMALL COEFFICIENTS OF ABSORPTION WITH I IS APPROXIMATELY EQUAL TO 1 WHICH CHARACTERIZE INTRINSIC SEMICONDUCTORS. THE PROPOSED METHOD OF REDUCING THE INACCURACIES DOWN TO 2-4PERCENT IS BASED ON THE SELECTION OF ANALYSER AZIMUTH WHICH SHOULD CORRESPOND TO THE MINIMUM OF THE MENTIONED ERROR.

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--27NOV70

1/2 022

TITLE--ANALYSIS OF THE CORRELATIONS BETWEEN GEOLOGICAL AND GEOPHYSICAL PARAMETERS OF THE EARTH'S CRUST IN SOUTHERN TURKMENISTAN -U-

AUTHOR-(05)-ODEKOV, O.A., ZAKHAROVA, L.T., KESELMAN, S.I., MURADOV, CH., YUVSHANOV, A.

COUNTRY OF INFO--USSR

SOURCE--ASHKHABAD, IZVESTIYA AKADEMII NAUK TURKMENSKOY SSR, SERIYA FIZIKO-TEKHNICHESKIKH, KHIMICHESKIKH I GEOLOGICHESKIKH NAUK, NO 3, 1970,

DATE PUBLISHED-------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--EARTH CRUST, MOHOROVICIC DISCONTINUITY, GRAVITATION FIELD, MAGNETIC FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0396 STEP NO--UR/0202/70/000/003/0083/0090

CIRC ACCESSION NO--AP0137488

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--27NOV70

2/2 022

CIRC ACCESSION NO--AP0137488

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN SOUTHERN TURKMENISTAN THE DEPTH TO THE MOHOROVICIC DISCONTINUITY CORRELATES WELL WITH THE GRAVITY FIELD AND AGREES POORLY WITH THE MAGNETIC FIELD; IT AGREES SATISFACTORILY WITH RELIEF OF THE EARTH'S SURFACE. THE BEST CORRELATION WITH DEPTH TO THE MOHO IS WITH THE GRAVITY AND MAGNETIC FIELDS TOGETHER; RELIEF OF THE EARTH'S SURFACE IN COMBINATION WITH THE GRAVITY FIELD ALSO IMPROVES THE CORRELATION, BUT TO A LESSER DEGREE THAN IN THE PRECEDING CASE, BUT IN COMBINATION WITH THE MAGNETIC FIELD THE STANDARD DEVIATION IS BETTER THAN WHEN ONLY THE MAGNETIC FIELD IS TAKEN INTO ACCOUNT. IN A GEOSYNCLINAL REGION THE CLOSEST CORRELATION BETWEEN DEPTH TO THE MOHO IS OBSERVED WITH THE RELIEF OF THE EARTH'S SURFACE. AFTER COMPARING THE MEAN SQUARE ERRORS AND VARIATIONS OF DEPTH TO THE MOHOROVICIC DISCONTINUITY ONE CAN NOTE THAT IN THE GEOSYNCLINAL REGION THE DEPTH TO THE MOHO CAN BE PREDICTED FROM RELIEF OF THE EARTH'S SURFACE; IN PLATFORM REGIONS AND IN A ZONE OF DOWNWARPING IT CAN BE PREDICTED FROM THE GRAVITY FIELD. WITH RESPECT TO OPERATORS OBTAINED BY COMBINING GEOPHYSICAL PARAMETERS, IN ALL GEOTECTONIC REGIONS A SATISFACTORY PREDICTION CAN BE MADE WHEN THE GRAVITY AND MAGNETIC FIELDS ARE TAKEN TOGETHER. FACILITY: INSTITUTE OF PHYSICS OF THE EARTH AND ATMOSPHERE.

UNCLASSIFIED

1/2 036 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--INTERCRYSTALLITE CORROSION TENDENCIES OF TWO PHASE STEEL 1KH18N2AG5 -U-

AUTHOR-(02)-ODESSKIY, D.A., SOKOL, I.YA.

COUNTRY OF INFO--USSR

SOURCE--KHIM. NEFT. MASHINOSTR. 1970, (2), 21-2

DATE PUBLISHED-------70

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

TOPIC TAGS--INTERGRANULAR CORROSION, STAINLESS STEEL, COLD ROLLING, SHEET METAL, ALLOY DESIGNATION, NITROGEN CONTAINING STEEL, AUSTENITIC STEEL, PLASTIC DEFORMATION, X RAY TECHNIQUE, METAL HEAT TREATMENT, MAGNETOMETER/(U)KH18N10T STAINLESS STEEL, (U)1KH18N2AG5 STAINLESS STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1308 STEP NO--UR/0314/70/000/002/0021/0022

CIRC ACCESSION NO--AP0109392
UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--020CT70

2/2 036

CIRC ACCESSION NO--AP0109392

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COLD ROLLED SHEETS OF 1KH18N2AG5 (C 0.07, CR 18.45, NI 2.3, TI 0.0PERCENT) HIGH STRENGTH, NONCORROSIVE AUSTENITE (GAMMA PHASE) CLASS STEEL, RECOMMENDED FOR REPLACING CR-NI STEEL KH18N10T AND OTHERS IN CHEM. MACHINERY MANUF. OWING TO ONE-FIFTH THE NI CONTENT AND HIGHER MECH. STRENGTH OF 1KH18N2AG5 WAS TESTED FOR INTERCRYST. CORROSION AFTER ANNEALING AT 650-1200DEGREES WITH AIR AND WATER QUENCHING AND WITH AND WITHOUT PREPLASTIC DEFORMATION IN THE COLD (0-45PERCENT). CORROSION WAS ABSENT IN CONDITIONS AS DELIVERED AND FOR 20-45PERCENT DEFORMATION AND ANNEALING AT 650DEGREES FOR 2 HR AND IS ATTRIBUTED TO FORMATION IN DEFORMATION OF INCREASING AMTS. OF LOW C MARTENSITE (ALPHA PHASE) (25.6PERCENT FOR 45PERCENT DEFORMATION), AS LAYERS SLIPPED BETWEEN GAMMA GRAINS; THIS IS CONFIRMED BY X RAY AND MAGNETOMETRIC MEASUREMENTS AND INCOMPLETE ALPHA YIELDS GAMMA REVERSION DURING THERMAL TREATMENT.

UNCLASSIFIED

USSR

UDC: 669.15:621.785.79

BERNSHTEYN, M. L., ODESSKIY, P. D., KORNEYEVA, G. B., Moscow Institute of Steel and Alloys

"Thermomechanical Treatment of Low-Alloy Steels Under Deformation in the Intercritical Temperature Range"

Moscow, Izvestiya VUZov: Chernaya Metallurgiya, No 11, 1972, pp 145-149

Abstract: The authors examine the prospects of using quenching from the intercritical temperature range both after deformation and without deformation to harden low-carbon low-alloy structural steel. The study specimens are 30 mm sheets of rolled martensite steels grade St. 3sp, 15G2Fsp and 15G2Fps. Eight heat-treat cycles were studied. It is found that quenching from a point 50°C below the Ac_3 temperature followed by annealing at 650°C gives class S40 properties in rolled 15G2F steel (yield stress above 40 kg/mm^2, ultimate strength above 56 kg/mm^2) combined with high ductility (relative lateral contraction after fracture greater than 80%). Quenching preaustenized steels of this grade after deformation in the intercritical temperature range with subsequent annealing at 650°C gives class S50 strength properties in the rolled stock (yield stress above 50 kg/mm^2, ultimate strength above 60 kg/mm^2) com-

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USSR

BERNSHTEYN, M. L. et al., Izvestiya VUZov: Chernaya Metallurgiya, No 11, 1972, pp 145-149

bined with high ductility (relative lateral contraction after fracture more than 75%) and impact strength at subzero temperatures. Such treatment also considerably increases the cold-shortness of such steels.

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USSR

UDC: 621.372.01

ODESSKIY, V. Ya.

"On Selecting Basis Functions for a Corrector of Phase-Frequency Responses in Channels of Primary Groups"

Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR (Works of Academic Institutes of Communications. Ministry of Communications of the USSR), 1970, vyp. 51, pp 104-110 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5A53)

Translation: The article points out the singularities of correcting group channels. The author presents the computational sequence and the results of calculations carried out for a complexity comparison of a harmonic and a Chebyshev corrector for phase-frequency channels of primary groups with optimum corrector in the case of a square-law test for the correction error. Resumé.

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1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--2H FORM PBI SUB2 CONVERSION UPON HEATING -U-

AUTHOR-(04)-ODIN, I.N., BALEK, V., POPOVKIN, B.A., NOVOSELOVA, A.V.

COUNTRY OF INFO--USSR

SOURCE--VESTN. MOSK. UNIV., KHIM. 1970, 11(1), 115-17

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--X RAY DIFFRACTION, LEAD COMPOUND, IODIDE, PHOTOCONDUCTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/1473 STEP NO--UR/0189/70/011/001/0115/0117

CIRC ACCESSION NO--AP0120260

UNCLASSIFIED

2/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120260

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONVERSION OF THE 2H FORM OF P8I SUB2 INTO A "MIXED" STRUCTURE UPON HEATING IS SHOWN BY THE EMANATION THERMAL METHOD AND BY X RAY DIFFRACTION. THE CONVERSION TAKES PLACE AT A HEATING RATE OF 3-5DEGREES PER MIN AT 140-400DEGREES. THIS CONVERSION IS ONE OF THE REASONS FOR THE INCREASED PHOTOCOND., RESULTING FROM THE MANY DEFECTS.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--LEAD SULFIDE LEAD IODIDE SYSTEM -U-

AUTHOR-(04)-NOVOSELOVA, A.V., ODIN, I.N., FEDOSEYEVA, E.N., POPOVKIN, B.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(1), 135-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--LEAD SULFIDE, IODIDE, EUTECTIC, TELLURIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0846 STEP NO--UR/0363/70/006/001/0135/0137

CIRC ACCESSION NO--AP0118022
UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--16OCT70

2/2 009

CIRC ACCESSION NO--AP0118022

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE M.P. DIAGRAM OF THE PBS-PBI SUB2 SYSTEM WAS CONSTRUCTED FROM HEATING CURVES FOR ANNEALED SAMPLES. THE TEMPS. OF THE EFFECTS IN THE SYSTEM, AS OBTAINED FROM THE HEATING AND THE COOLING CURVES PRACTICALLY COINCIDE. THE EUTECTIC POINT OCCURS AT 17 MOLE PERCENT PBS. ONLY THE SYSTEM CONTG. 40 MOLE PERCENT PBS IS SINGLE PHASE, THE REMAINING SYSTEMS BEING 2 PHASE. THE COMPD. IN THE SYSTEM, MELTING INCONGRUENTLY AT 415DEGREES, HAS THE FORMULA 2PBS.3PBI SUB2. IN ADDN. TO THE LINES OF THIS COMPD., THE 2H PBI SUB2 LINES WERE ALSO PRESENT ON X RAY DIFFRACTION PATTERNS OF SAMPLES OF COMPNS. OF 5 AND 25 MOLE PRECENT PBS. THE FORMATION OF THE POLYTYPIC FORM 6R PBI SUB2 DURING THE CRYSTN. OF THE EUTECTICS IN THE PBSE-PBI SUB2 AND PBTE-PBI SUB2 SYSTEMS IS PROBABLY ASSOCD. WITH THE SIMULTANEOUS CRYSTN. OF PB CHALCOGENIDE, WHICH STABILIZES THIS FORM. IN THE PBS-PBI SUB2 SYSTEM THE EUTECTIC IS FORMED BY LEAD IODIDE AND THE COMPD. 2PBS.3-BI SUB2. THE SOLY. OF PBI SUB2 IN SOLID PBS AT 415DEGREES WAS ALSO DETD. THE SYSTEMS WERE ANNEALED FOR 780 HR. THE SOLY. BOUNDARY, AS DETD. BY THE METHODS USED, CONSTITUTES 0.8 PLUS OR MINUS 0.3 MOLE PERCENT PBI SUB2. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA. MOSCOW, USSR.

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--SECTIONS IN THE LEAD TELLURIUM IODINE TERNARY SYSTEM -U-

AUTHOR-(03)-ODIN, I.N., POPOVKIN, B.A., NOVOSELOVA, A.V.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 482-5

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--LEAD COMPOUND, TELLURIUM COMPOUND, IODINE COMPOUND, ELECTRIC PROPERTY, PHASE DIAGRAM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0836 STEP NO--UR/0363/70/006/003/0482/0485

CIRC ACCESSION NO--AP0118012
UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118012

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THERMAL ANAL. METHOD WAS USED TO STUDY SOME SECTIONS IN THE TERNARY PB-TE-I SYSTEM. THE QUASIBINARY PBI SUB2-TE SECTION WAS STUDIED AND PHASE DIAGRAMS ARE PRESENTED FOR THE PB-PBI SUB2 SYSTEM AND FOR THE POLYTHERMAL PBTE-(PB PLUS PBI SUBW) (1:1) SECTION. BY USING THE MICROSTRUCTURAL ANAL. METHOD AND ON THE BASIS OF MICROHARDNESS, ELEC. RESISTIVITY, AND THERMAL EMF. MEASUREMENTS OF ANNEALED ALLOYS, THE BOUNDARIES OF THE SOLID SOLNS. BASED ON PBTE AT 398DEGREES WERE DETD. UPON ALLOYING OF PBTE WITH THE MIXT. PB PLUS PBI SUB2 IN THE 3 PHASE REGION THE ELEC. PROPERTIES OF THE ALLOYS VARY AS A FUNCTION OF THE COMPN., WHILE IN THE 2 PHASE REGION OF THE PBTE-PBI SUB2 SECTION THEY REMAIN CONST. THIS IS APPARENTLY ASSOCD. WITH THE PRESENCE OF THE METALLIC PB PHASE, WHICH CONTRIBUTES TO THE ELEC. PROPERTIES OF THE ALLOYS. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--PHYSICOCHEMICAL STUDY OF LEAD CHALCOGENIDE AND LEAD BROMIDE SYSTEMS -U-

AUTHOR-(03)-NOVOSELOVA, A.V., ODIN, I.N., POPOVKIN, B.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2) 257-61

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHYSICAL CHEMISTRY PROPERTY, X RAY ANALYSIS, EUTECTIC MIXTURE, PHASE DIAGRAM, LEAD COMPOUND, BROMIDE, SELENIUM COMPOUND, CRYSTAL STRUCTURE, TELLURIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0559 STEP NO--UR/0363/70/006/002/0257/0261

CIRC ACCESSION NO--AP0105544

UNCLASSIFIED

2/2 024 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105544

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY USING DTA AND X RAY PHASE AND MICROSTRUCTURAL ANAL. METHODS, COMPDS. EXHIBITING A CONSIDERABLE HOMOGENEITY REGION WERE OBSD. IN THE PBS MINUS PBBR SUB2 AND PBSE MINUS PBBR SUB 2 SYSTEMS, NAMELY PB SUB7 NEGATIVEX S SUB2 NEGATIVE2X BR SUB10 POSITIVE2X (0 SMALLER THAN OR EQUAL TO X SMALLER THAN 0.3) AND PB SUB7 NEGATIVEX SE SUB2 NEGATIVE2X BR SUB10 POSITIVE2X (0 SMALLER THAN X SMALLER THAN 0.25). THE COMPDS. MELT INCONGRUENTLY: PB SUB7 S SUB2 BR SUB10 M. 394DEGREES AND PB SUB7 SE SUB2 BR SUB10 M. 383DEGREES. THE POSITIONS OF THE EUTECTIC POINTS IN THE SYSTEMS ARE AT 349DEGREES AND 9 MOLE PERCENT PBS, AND AT 353DEGREES AND 6 MOLE PERCENT PBSE. PB SUB7 S SUB2 BR SUB10 IS HEXAGONAL WITH ALPHA 12.28 AND C 4.33 ANGSTROM; ZETA EQUALS 1, AND THE X RAY D. IS 6.79. THE FUSIBILITY DIAGRAM OF THE PBTE MINUS PBBR SUB2 SYSTEM CORRESPONDS TO A SYSTEM WITH A EUTECTIC OF THE DEGENERATE TYPE, AT 368DEGREES.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--PHYSICOCHEMICAL STUDY OF LEAD CHALCOGENIDE AND LEAD BROMIDE SYSTEMS -U-

AUTHOR-(03)-NOVOSELOVA, A.V., ODIN, I.N., POPOVKIN, B.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2) 257-61

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHYSICAL CHEMISTRY PROPERTY, X RAY ANALYSIS, EUTECTIC MIXTURE, PHASE DIAGRAM, LEAD COMPOUND, BROMIDE, SELENIUM COMPOUND, CRYSTAL STRUCTURE, TELLURIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0559 STEP NO--UR/0363/70/006/002/0257/0261

CIRC ACCESSION NO--AP0105544

UNCLASSIFIED

2/2 024 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105544

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY USING DTA AND X RAY PHASE AND MICROSTRUCTURAL ANAL. METHODS, COMPDS. EXHIBITING A CONSIDERABLE HOMOGENEITY REGION WERE OBSD. IN THE PBS MINUS PBBR SUB2 AND PBSE MINUS PBBR SUB 2 SYSTEMS, NAMELY PB SUB7 NEGATIVEX S SUB2 NEGATIVE2X BR SUB10 POSITIVE2X (0 SMALLER THAN OR EQUAL TO X SMALLER THAN 0.3) AND PB SUB7 NEGATIVEX SE SUB2 NEGATIVE2X BR SUB10 POSITIVE2X (0 SMALLER THAN X SMALLER THAN 0.25). THE COMPDS. MELT INCONGRUENTLY: PB SUB7 S SUB2 BR SUB10 M. 394DEGREES AND PB SUB7 SE SUB2 BR SUB10 M. 383DEGREES. THE POSITIONS OF THE EUTECTIC POINTS IN THE SYSTEMS ARE AT 349DEGREES AND 9 MOLE PERCENT PBS, AND AT 353DEGREES AND 6 MOLE PERCENT PBSE. PB SUB7 S SUB2 BR SUB10 IS HEXAGONAL WITH ALPHA 12.28 AND C 4.33 ANGSTROM; ZETA EQUALS 1, AND THE X RAY D. IS 6.79. THE FUSIBILITY DIAGRAM OF THE PBTE MINUS PBBR SUB2 SYSTEM CORRESPONDS TO A SYSTEM WITH A EUTECTIC OF THE DEGENERATE TYPE, AT 368DEGREES.

UNCLASSIFIED

UDC 632.95

USSR

ODINETS, A. A., TONYSHEVA, V. S., and AZIZOV, N. A.

"Carbophos as a Larvicide in Controlling Sinanthropic [sic] Flies"

Tr. VNII dezinfektsii i sterliz. (Works of the All-Union Scientific Research Institute of Disinfection and Sterilization), 1971, vyp. 21, t. 2, pp 89-94 (from RZh-Khimiya, No 18, Sep 72, Abstract No 18N424)

Translation: Using carbophos considerably reduces the fly population as a result of the effective action of the chemical on the preimaginal stages of development of the insects. In order to destroy larvae in farm livestock manure, it is recommended that 0.3-0.5% water emulsions of a carbophos (10-12 liters per cu. m) be used with an interval of 10 days between applications for conditions in the Central Asian republics. T. A. Belyayeva

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1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--ON FAUNA AND BIOLOGY OF BLOOD SUCKING MOSQUITOES IN THE VICINITY OF BELY YAR VILLAGE OF TYUMEN REGION BY OBSERVATION OF 1965 -U-

AUTHOR-(02)-VINOGRADSKAYA, O.N., ODINETS, A.A.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL 39, NR 3, PP 329-334

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--MOSQUITO, INSECTICIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0236 STEP NO--UR/0358/70/039/003/0329/0334

CIRC ACCESSION NO--AP0123998

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--30OCT70

2/2 017

CIRC ACCESSION NO--AP0123998

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FAUNA AND BIOLOGY OF MOSQUITOES UNDER CONDITIONS OF A TAIGA ZONE OF THE RIGHT BANK OF THE OB RIVER IN THE LOCALITY SITUATED IN LATITUDE 61DEGREES 15MINUTES NORTH AND LONGITUDE 73DEGREES 30MINUTES EAST WERE STUDIED. THE FOLLOWING SPECIES OF MOSQUITOES OF THE GENUS ACEDES WERE FOUND IN THE LARVAL STAGE: HEXODONTUS DYAR, EXCRUCIANS WALK, PUNCTOR KIRBY, IMPIGER WALK, NIGRINUS ECK, RIPARIUS, D. K. AS WELL AS ANOPHETES MACULIPENNIS. TRANSITIONAL AND HIGHLAND MARSHES ON TERRACES AND WATERSHEDS SERVED AS THE MAIN BREEDING PLACES FOR AEDES MOSQUITOES. FLOODLAND AND ASSOCIATED WATER RESERVOIRS DURING FLOODS PRODUCE INSIGNIFICANT EMERGENCE OF AE. EXCRUCIANS W. BEFORE FLOODS AND AN. MACULIPENNIS MG AFTER FLOOD. THE PAPER PRESENTS PHENOLOGICAL DATA AND THE SEASONAL PREVALENCE OF LARVAE OF DIFFERENT SPECIES DEPENDING UPON THE TYPE OF WATER RESERVOIRS. TIME OF TREATMENT WITH NON RESIDUAL INSECTICIDES IS INDICATED.

FACILITY: TSENTRAL'NYY NAUCHNO-ISSLED. DEZINFEKTSIONNYY INSTITUT, MOSKVA.

UNCLASSIFIED