"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

PRAVDYUK, N. F., PEREVEZENTSEV, V. N., and VIKHOROV, V. I.

UDC 539.67

"Study of Thermal Annealing of Radiation Damage in Metals by the Internal Friction Method"

Sb. "Vnutrenneye treniye v metallicheskikh materialakh" (Internal Friction in Metallic Materials), Moscow, Izd-vo "Nauka," 1970, pp 101-104

Abstract: The effect of neutron irradiation and subsequent isochronous annealing on internal friction and critical stress of copper and molybdenum was studied.

As a result of irradiation the amplitude independent internal friction of copper decreases, while that of molybdenum increases; the critical stress for both metals increases several times.

The variation of copper Q^{-1} is explained on the basis of the Granato-Lucke dislocation model, and that of molybdenum by the presence of "free" (not related to dislocations) point defects. The rise of copper and molybdenum critical stress is governed by the effect of radiation strengthening. 4 figures, 4 references.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 040 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--SYNTHESIS, STRUCTURE, AND BEHAVIOR OF POLYMERS OF THE METHYL ISOPRENECARBOXYLATE OBTAINED BY ANIONIC AND RADICAL POLYMERIZATION -U-

AUTHOR-(05)-ARBUZOVA, I.A., YEFREMOVA, V.N., YELISEYEVA, A.G., NIKITIN, V.N., SIDOROVICH, A.V.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(3), 697-704

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--ISOPRENE, CARBOXYLIC ACID ESTER, POLYMERIZATION, LOW TEMPERATURE EFFECT, ORGANOLITHIUM COMPOUND, POLYMER STRUCTURE, PHASE TRANSITION, IR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/0311

STEP NO--UR/0459/70/012/003/0697/0704

CIRC ACCESSION NO--AP0111505

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 040 UNCLASSIFIED

CIRC ACCESSION NO--AP0111505 PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ANIONIC POLYMN. OF H SUB2 C:CHCME:CHCO SUB2 ME (I), CARRIED OUT AT NEGATIVE60DEGREES TO NEGATIVE70DEGREES IN PHME SOLN. CONTG. 0.02 MOLE-L. BULI GAVE 80PERCENT I POLYMER (II) IN LESS THAN OR EQUAL TO 60 MIN. THE FREE RADICAL BULK POLYMN. OF I IN THE PRESENCE OF 0.2 WT. PERCENT (ON I) BZ SUB2 O SUB2 REQUIRED 90 HR AT 60-80DEGREES TO GIVE 75-8PERCENT I POLYMER (IIA). HEATING THE AMORPHOUS IIA CONVERTS IT TO A CRYST. FORM. I IS CRYST. AT ROOM TEMP. BOTH II AND IIA HAVE A PHASE TRANSITION POINT AT 90DEGREES AND GLASS POINT AT 20DEGREES. BY IR SPECTROSCOPY THEY BOTH HAVE 1,4 TRANS CONFIGURATION.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

PROBLEMS DEALING WITH LINKAGE OF MEDICAL RECORDS IN ACCORDANCE WITH DATA IN THE FOREIGN PRESS

UDC: 61:002.6

[Article by V.V. Kanep, N.A. Andreyev, R.A. Psavke, K.R. Vilana, D.Ya. Prilutskaya; Moscow, Sovetskoye Zdravookhraneniye, Russian, No 11, 1972, submitted 6 May 1972, pp 65-67]

One of the most important aspects of optimizing medical information is to solve the problem (with automated processing) of picking up data on hand or correlating data. The term correlation of medical data (medical record linkage, according to foreign authors) refers to integration of separately recorded (in different sources and at different times) information concerning the physical condition of an individual (or family). The actual concept of medical record linkage has been known since the last century. Selection of available facts was done manually to solve various public health and medical problems, however, in the case of manual data processing, linkage of data which requires quite laborious work to alphabetize large blocks of records was limited to simultaneous, specially organized works. Effective adoption in public health and medicine of modern computer technology opens up basically new opportunities and raises the matter of creating a system of medical record linkage (Dunn; Acheson).

One of the first and foremost tasks in computer processing and linkage of medical data is to work out a reliable and effective method of identification; in other words, each part of the information gathered should include an element that would permit referring it to a specific individual. These are the requirements of identification methods: uniqueness, that is 100 percent selectivity; universality, i.e. the possibility of application to all systems using demographic data; consistency, i.e. no variability for the lifetime of an individual; accessibility; economy (Acheson, 1968; Thierbach; Auger).

In the case of manual processing, complete surnames, names, date and place of birth, and several other tags are compared, and on their basis a conclusion is reached as to whether the entries refer to the record of a single individual. This means of identification is not applicable to

JPRS 57875
2 Jan 73

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

KOROBEYNICHEV, O. P., VIKTORENKO, A. M., TERESHCHENKO, A. G., KOLOMEYCHUK, N. N.,
Novosibirsk

UDC 541.128+662.222

"Mechanism of the Effect of a Catalyst on Condensed Combustion Systems"

Novosibirsk, Fizika goreniya i vzryva, Vol 8, No 4, 1972, pp 511-517

Abstract: A study was made of the mechanism of the effect of a catalyst on the combustion of condensed systems based on ammonium perchlorate. Results are presented from studying the catalysis of the combusion of ammonium perchlorate and mixtures based on it using an optical microscope and a scanning electron microscope. Data are also presented from the studies of the effect of the dispersiness of the catalyst on the combustion rate of ammonium perchlorate and the model system of ammonium perchlorate and polymethylmethacrylate. The data confirm that the catalyst operates very efficiently in the c-phase (the presence of sinks around the catalyst particles in the case of copper oxide). The formation of a skeleton of catalyst particles (in the case of Fe_2O_3) protruding 10-20 microns above the burning surface must also lead to an increase in the efficiency of its effect near the c-phase surface (as a result of an increase in the effective concentration of the catalyst in the vicinity of the gas phase by comparison with that which exists at distances greater than 10-20 microns from the c-phase surface). If the distance from the c-phase surface to the flame

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

KOROBEYNICHEV, O. P., et al., Fizika goreniya i vzryva, Vol 8, No 4, 1972, pp 511-517

area is 50-100 microns, it can be considered that the catalyst operates efficiently near the c-phase. If the flame area is 10-20 microns from the fuel surface, the c-phase (which can include the skeleton of catalyst particles) is in the flame area.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 532.74

VIKTORINA, M. M., DERYAGIN, B. V., Corresponding Member of the USSR Academy of Sciences, YERSHOVA, I. G., ZNAMENSKIY, B. V., and CHURAYEV, N. V.

"Paramagnetism of Modified Water (Water II)"

Moscow, Doklady Akademii Nauk SSSR, Vol 197, No 1, March-April 1971, pp 114-116

Abstract: This article contains a description of a microcapillary procedure for measuring the magnetic susceptibility of volumes of liquid on the order of 10^{-6} to 10^{-7} cm^3 which is a modification of the well-known Gouy method. The procedure was checked by measuring the magnetic susceptibility of a column of benzene; ordinary water (bidistillate) was used as the standard liquid. Analogous measurements were then made for modified water. On the basis of the preliminary experiments only a qualitative conclusion of paramagnetism of the anomalous component could be drawn. It was visually apparent that upon inclusion of the magnetic field, the columns of sufficiently concentrated modified water and the columns of ordinary water shifted to different sides in the capillaries. Results of one of the last series of experiments, in which some quantitative estimates could be made, are presented in a table. For columns of modified water with a low content of

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VIKTORINA, M. M., et al, Doklady Akademii Nauk SSSR, Vol 197, No 1, March-April 1971, pp 114-116

anomalous component, the magnetic susceptibility was greater than $-0.38 \cdot 10^{-6}$. The mechanism of the effect of the anomalous component is discussed in detail, and a formula is derived for using the presented data to make a rough estimate of the magnetic susceptibility of pure anomalous component (water II). Using this formula, a value of $7 \cdot 10^{-6}$ was obtained.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VIKTOROV, A. A., MASHKOVICH, V. P. UDC: 53.07/.08+53.001.5

"Gamma Radiation Accumulation Factors of Flat Sources for Two-Layered Heterogeneous Barriers"

V sb. Vopr. dozimetrii i zashchity ot izluch. (Problems of Dosimetry and Radiation Shielding--collection of works), vyp. 12, Moscow, Atomizdat, 1971, pp 107-111 (from RZh-Fizika, No 4, Apr 72, Abstract No 4A724)

Translation: The paper presents the results of a study of the energy accumulation factors for two-layered heterogeneous barriers exposed to flat unidirectional and isotropic sources of gamma radiation in the range of energies E_0 from 0.5 to 7-10 MeV. The accumulation factors were determined both experimentally, for gamma radiation energies $E_0 = 0.661$, 1.25, and 2.75 MeV, and also theoretically by a semi-empirical method based on using the accumulation factors in homogeneous barriers for flat sources of gamma radiation, with angular distribution of quanta in the range of source radiation energies of $0.661 \leq E_0 \leq 7$ MeV. Essentially, the semi-empirical method consists in determining the intensity of gamma radiation behind the second layer of the heterogeneous barrier exposed to an equivalent surface source of radiation formed behind the first layer exposed to the primary flat isotropic source. M. L.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

VIKTOROV, A.N.

EVALUATING THE EFFECT OF ATMOSPHERIC PURIFICATION AND REGENERATION SYSTEMS ON THE DEGREE OF CONTAMINATION OF THE ATMOSPHERE BY MICROBES IN TIGHTLY SEALED SPACES

/Article by A. N. Viktorov; Moscow, Aktual'nye Voprosy Kosmicheskoy Biologii i Meditsiny (Current Problems in Space Biology and Medicine), Russian, 1971, pp 57-58/

The confinement of human subjects in a tightly sealed room of restricted volume is usually accompanied by an increase in the level of microbial contamination of the air and internal surfaces. In addition, there are clearly expressed changes in the species composition of microflora in the occupied medium which are characterized by a "simplification" of the species composition and periodic variations in the content of pathogenic forms of microbes.

We established that a considerable role in the formation of the level of microbial population of the air during the prolonged isolation of human subjects in a sealed room is played by the atmospheric purification and regeneration systems. A temporary malfunctioning of these systems or a change in their operating regime can favor an accumulation of microorganisms in the atmosphere and a deterioration in the epidemiological conditions in the isolation chamber.

It was discovered by comparative investigations that during the period of operation of a system for the purification of air employing silica gel and synthetic zeolites the microbial contamination of the atmosphere in the isolation chamber was maintained at a lower level (on the average by a factor of two) than during the period of operation of an atmospheric regeneration system based on the use of peroxide compounds.

One of the specific characteristics of a pressurized room is the possibility for using several life support

JPRS 56,499
14 JULY 72

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

VIKTOROV, A.N.

ROLE OF THE ATMOSPHERE AS A FACTOR IN TRANSFER OF INFECTION DURING PROLONGED ISOLATION OF HUMAN SUBJECTS IN SEALED ROOMS

/Article by A. N. Viktorov; Moscow, Aktual'nyye Voprosy Kosmicheskoy Biologii i Meditsiny (Current Problems in Space Biology and Medicine), Russian, 1971, p 61/

It has been established that the prolonged isolation of human subjects in tightly sealed rooms is accompanied by the accumulation of microorganisms in the air. A considerable percentage of these microorganisms has pathogenic characteristics.

This circumstance can exert an unfavorable effect on the state of automicroflora on the human skin. In a year-long medical-engineering experiment we noted a statistically reliable ($P \leq 0.01$) direct correlation between the relative content of hemolytic Staphylococci in the atmosphere of an occupied compartment and in the nasal cavity of the subjects.

In another experiment, in which the experimental conditions provided for an exchange of compartments, during 20-day isolation one of the subjects gave rise to an atmospheric microflora whose distinguishing characteristic was a high content of hemolytic forms of Staphylococci.

When a second subject moved into this compartment there was a relative increase in the content of these forms in his nasal cavity.

These experimental results give basis for assuming that during the prolonged isolation of human subjects in a tightly sealed room there is a considerable increase in the role played by the atmosphere in transfer of infectious agents.

JPRS 56,499
14 July 72

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 629.78.015.076.8

VIKTOROV, B. V., OLEYNICHENKO, L. G., and UKOLOV, I. S.

"Investigation of a System of Variable Structure for Controlling Descent in an Atmosphere With Account Taken of Time Lag in Processing the Control Command"

Inform. Materialy. Nauch. Sovet po Kompleks. Probl. (Information Materials of the Scientific Council on Complex Problems). "Kibernetika." AN SSSR, No 6 (53), 1972, pp 47054 (from Referativnyy Zhurnal, Raketostroyeniye, No 5, 1972, Abstract No 5.41.136 by T. A. Ye.)

Translation: In a preliminary investigation of descent control systems, the ordinary trajectory motion of the descending craft is studied separately from the motion of the descending craft in relation to the center of mass. However, a lag in processing the control command exerts a substantial influence upon the quality of the control process. There is pointed out the necessity for simultaneous consideration of the total motion of the descending craft, and for determining the influence of comparatively rapid oscillations of the craft in relation to the center of mass upon the character of control of the parameters of trajectory motion. 5 figures. 5 references.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 533.652/.661.013

MIKHAYLOV, F. A., VIKTOROV, B. V., POKHVALENSKIY, V. L.

"Invariant Adaptive System for Longitudinal Stabilization of Aircraft"

V sb. Teoriya invariantn. i teoriya chuvsvit. avtomat. sistem. Ch. 1 (The Theory of Invariance and the Theory of the Sensitivity of Automatic Systems. Part 1 -- Collection of Works), Kiev, 1971, pp 320-335 (from RZh-Mekhanika, No 9, Sep 71, Abstract No 9B279)

Translation: The possibility of constructing an autopilot on the principle of compensation of perturbing effects which would maintain with high accuracy a constant angle of pitch of the aircraft under the action of vertical gusts of wind is discussed. Since an aircraft statistically neutral with respect to the angle of attack cannot undergo angular accelerations with changes in the angle of attack under the action of gusts, this problem is solved by imitation of such neutrality through the control system. It is assumed that a signal is supplied to the input of the autopilot drive, the components of which are proportional to the angle of pitch, the angular rate of pitch and acceleration with respect to the vertical axis of the aircraft. In total the system takes on invariance with respect to the angle of pitch to the action of a vertical wind under the condition

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

MIKHAYLOV, F. A., et al, Teoriya invariantn. i teoriya chuvsvit. avtomat. sistem. Ch.1, Kiev, 1971, pp 320-335

of continuous tuning of the coefficient for a vertical acceleration signal which must be achieved with adaption chains. Two possible designs of the adaption chain are discussed and the effect of a continuous change of the parameters of this chain on the accuracy of maintaining the angle of pitch is evaluated. Also evaluated are the effects of the drive parameters and the presence of additional components in the structure of the accelerometer signal when it is not installed at the center of gravity of the aircraft. Modeling of both adaption designs showed their suitability for application. However, in those cases when the dynamics of the adaption chain were insufficiently "slow" as compared with the dynamics of the basic circuit, autooscillations were observed in the modeling. G. S. Aronin.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VIKTOROV, D.V., KULAKOVA, A.F., ROZMAN, I.M.

UDC 621.382.3

"Effect Of Irradiation By 14 Mev Neutrons On Some Parameters Of P217V and 1T906A Transistors"

V sb. Radiats. fiz. nemet kristallov. T.3 Ch.2 (Radiation Physics Of Nonmetallic Crystals. Vol 3, Part 2--Collection Of Works), Kiev, "Nauk.dumka," 1971, pp 214-219 (from RZh--Elektronika i yeye primeneniye, No 12, Dec 71, Abstract No 12B532)

Translation: The paper investigates the dependences of the static transmission coefficient of the current V_{st} at the boundary of the saturation region and of the reverse current of the collector I_{co} with a disconnected output of the emitter, on the integrated neutron flux ϕ. It is found that with respect to V_{st}, a type 1T906A transistor is approximately eight times more resistant to irradiation than a type P217V transistor. The reverse current is comprised of the bulk current I_b and of the surface leakage current I_1: $I_{co} = I_b + U/R_1$. With an increase of the flux ϕ, I_b increases and R_1 (resistance for surface leakages) is decreased. After attainment of the flux $\phi = 4 \cdot 10^{12}$ cm^{-2}, R_1 almost does not change from one transistor to another, even if the initial values of their R_1 differ strongly. 6 ill. 3 ref. I.M.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VIKTOROV, G. A., Corresponding Member Academy of Sciences USSR, Institute of Evolutionary Morphology and Ecology of Animals, Academy of Sciences USSR

"Ecology and Biological Methods for the Control of Insects"

Moscow, Zashchita Rasteniy, No 2, Feb 73, pp 58-59

Abstract: One of the principal problems discussed at the 14th International Congress of Entomology was control of the number of insects. Information was presented on the study by means of radar of the migration of insects such as locusts and cutworms. The migration of individual insects over 1.5-2.5 km and accumulation of the insects at distances up to 70 km can be traced by this method. The method in question, which is of value from the standpoint of obtaining data on dynamics of the change in the number of insects, has been applied in Australia with respect to locusts. Study of the migration of insects with the view of obtaining data on the dynamics of their change in numbers would be of importance in the USSR with respect to the diamond-back moth, the cutworm moth, and the beet webworm. Considerable attention at the congress was paid to biological methods for the control of pests. The effectiveness of natural enemies of aphids infesting potato plants was increased by supplementary feeding with honey. In connection with work on the estimation of the numbers of harmful insects, modern mathematical methods and computation techniques have been applied extensively.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 632.937.1

VINOGROV, G. A., Professor, Institute of Evolutionary Morphology and Ecology of Animals, USSR Academy of Sciences

"Problems of Biological Control of Pests"

Moscow, Zashchita Rasteniy, No 2, 1971, pp 4-6

Abstract: Biological control implies the use of living organisms and products of their vital activity in pest control. In this sense, one includes the traditional use of natural enemies and pathogenic microorganisms, as well as the introduction of sterile species, suitable use of attractants, hormones, and other physiologically active natural and synthetic materials. Biological control also implies integrated control based on an optimized combination of agents and measures. In the Soviet Union biological pests control differs from location to location, depending on the prevailing species. Phytophages have not yet found widespread use, and it is recommended that more research be done in that area. Much remains to be done in the Soviet Union in regard to the study of analogs of juvenile hormone and their effects on insects; likewise, research in the field of insect attractants has only begun. The biological method for pest control must not be regarded as a panacea; other methods, including chemical ones, must not be neglected.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VIKTOROV, G. V. and MORGUNOV, G. M.

UDC 621.224-253.5.001.24

"Application of the Solution of an Inverse Problem of Cascade Profiles to the Designing of Blade Systems of Diagonal Turbines"

Tr. Mosk. Energ. In-ta (Works of the Moscow Power Engineering Institute), No 132, 1972, pp 103-117 (from Referativnyy Zhurnal--Turbostroyeniye, No 1, 1973, Abstract No 1.49.149)

Translation: For the first time in the practice of the calculation of hydraulic turbine impellers, use was made of a general method of solving the inverse problem for a cascade in a layer with an arbitrarily changing thickness. Upon testing, impellers D60-4020 and D45-4201 manifested high energetic and cavitational qualities. The cavitational qualities of model turbines, obtained on the basis of the calculation and on the basis of tests, were similar. The method may be recommended for extensive use in the calculation of hydraulic machines. There thus becomes available the possibility, for hydraulic machines with a flow-through part of arbitrary form, of substantially decreasing the time periods required for developing new blade systems, considerably decreasing the maximum number of experimental specimens. 5 figures. 3 references.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 033 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--AMPLIFICATION OF RAYLEIGH WAVES IN GALLIUM ARSENIDE CRYSTALS -U-

AUTHOR--VIKTOROV, I.A.

COUNTRY OF INFO--USSR

SOURCE--AKUSTICHESKII ZHURNAL, VOL. 16, JAN.-MAR. 1970, P. 37-41

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--RAYLEIGH WAVE, WAVE PROPAGATION, GALLIUM ARSENIDE SEMICONDUCTOR, DRIFT MOBILITY, ELECTRIC FIELD, ELECTRON MOTION, PHASE VELOCITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1560 STEP NO--UR/0046/70/016/000/0037/0041

CIRC ACCESSION NO--AP0106306

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 033 UNCLASSIFIED

CIRC ACCESSION NO--AP0106306 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE PROPAGATION OF A PLANE HARMONIC RAYLEIGH WAVE IN A SEMICONDUCTOR CRYSTAL OF GALLIUM ARSENIDE IN THE PRESENCE OF A CONSTANT ELECTRIC FIELD CAUSING AN ELECTRON DRIFT. FORMULAS FOR CALCULATING THE ELECTRON, AMPLIFICATION (ATTENUATION) COEFFICIENT AND THE PAHSE VELOCITY OF THE RAYLEIGH WAVE ARE OBTAINED. THE DEPENDENCES OF THESE PARAMETERS ON THE DRIFT FIELD STRENGTH, FREQUENCY, AND CRYSTAL PARAMETERS ARE CALCULATED.

FACILITY: AKADEMIIA NAUK SSSR, AKUSTICHESKII INSTITUT, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

LUNAR RESEARCH

VIKTOROV, S.V.

JPRS 61608

29 March 1974

(2)

UDC 523.044:543.422.8:523.30

CHEMICAL COMPOSITION OF THE LUNAR SURFACE IN THE 'LUNOKHOD-2' WORK REGION

[Article by G. Ye. Kocharov and S. V. Viktorov; Moscow, Doklady Akademii Nauk SSSR, Russian, Vol 214, No 1, 1974, pp 71-74, submitted 2 August 1973]

This article is devoted to an analysis of the experimental results obtained using the modernized RENTGEN-M X-ray fluorescent spectrometer carried aboard the "Lunokhod-2." In creating the modernized variant of the spectrometer specialists took into account the experience in operating instrumentation aboard the "Lunokhod-1" /1-3/ and the specific nature of the scientific problems to be solved by "Lunokhod-2."

Table 1

(1)Сравнение составов некоторых лунных и земных пород (вес.%)

Элемент (2)	Анортозит «Луна-20» (3)	Земной анортозит (4)	Реголит «Луна-20» (5)	Реголит «Луна-16» (6)	Отношение содержания элементов в реголите «Луна-16» к их содержанию в реголите «Луна-20» (7)
8) Магний	8.2	0.75	3.9	5.3	0.90
9) Алюминий	10.1	15.0	11.5	8.10	0.71
10) Кремний	20.0	23.5	21.4	19.0	0.91
11) Калий	0.30	0.61	0.08	0.06	1.00
12) Кальций	9.5	8.9	10.6	8.9	0.84
13) Железо	5.37	1.61	5.10	13.0	2.38

1) Comparison of Compositions of Some Lunar and Terrestrial Rocks (% by weight); 2) Element; 3) Anorthosite, "Luna-20,"; 4) Terrestrial anorthosite; 5) Regolith, "Luna-20,"; 6) Regolith, "Luna-16,"; 7) Ratio of content of elements in regolith, "Luna-16," to their content in regolith, "Luna-20,"; 8) Magnesium; 9) Aluminum; 10) Silicon; 11) Potassium; 12) Calcium; 13) Iron

[I - USSR - A]

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

Automatic Control: Instruments

USSR UDC: 621.317:681.26

VIKTOROV, V. A., Doctor of Technical Sciences, LUNKIN, B. V., Candidate of Technical Sciences, VOSTRIKOV, I. S., Engineer, FEDOROV, A. V., Engineer

"A Resonance Volume Gauge for Liquids and Dry Pourable Materials"

Moscow, Pribory i Sistemy Upravleniya, No 4, Apr 72, pp 26-27

Abstract: The paper describes a new method of volume measurement developed at the Institute of Problems of Control in Moscow. The procedure is based on using the resonance properties of electromagnetic systems with distributed parameters. The resonance frequency of such a system is an indirect parameter which characterizes the amount of material contained in the system. The pickup is made in the form of a continuous thin line uniformly distributed throughout the volume of the vessel whose contents are to be measured. The resonance frequency of the system formed by the line and the metal walls of the vessel is independent of the distribution of material filling the vessel. Expressions and curves are given for the resonance frequency of the system as a function of relative volume (the ratio of the volume of material to the volume of the vessel). Measurement error is ±1%. A block diagram of the volume gauge is shown in the figure.

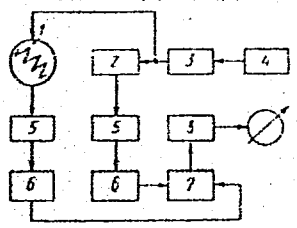
1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VIKTOROV, V. A. et al., Pribory i Sistemy Upr., No 4, 1972, pp 26-27



1--pickup; 2--reference tank circuit; 3--high-frequency wobbulator; 4--low--frequency square pulse generator; 5--detector; 6--shaping stage; 7--flip-flop; 8--integrating circuit

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 013 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--DOMAINS OF APPLICATION OF HIGH FREQUENCY METHOD OF MEASURING LEVEL AND VOLUME -U-

AUTHOR-(02)-VIKTOROV, V.A., LUNKIN, B.V.

COUNTRY OF INFO--USSR

SOURCE--AVTOMATIKA I TELEMEKHANIKA, 1970, NR 5, PP 199-203

DATE PUBLISHED-------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., PHYSICS

TOPIC TAGS--ELECTRIC CONDUCTIVITY MEASUREMENT, HIGH FREQUENCY CURRENT, DIELECTRIC MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/0920 STEP NO--UR/0103/70/000/005/0199/0203

CIRC ACCESSION NO--AP0113755

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 013 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0113755

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERE IS STATED A METHOD OF DETERMINING THE DOMAIN OF THE APPLICATION OF THE HIGH FREQUENCY METHOD OF MEASURING THE LEVEL AND THE VOLUME, THE METHOD CONNECTED WITH THE DETERMINATION OF THE DEPENDENCE OF THE SYSTEM QUALITY ON THE ELECTROMAGNETIC PROPERTIES OF THE MEDIA MEASURED. THERE ARE SUGGESTED THE RECOMMENDATIONS CONCERNING THE CHOICE OF THE PERMISSIBLE VALUES OF THE ELECTROCONDUCTIVITY OF DIELECTRIC AND ELECTROCONDUCTIVE MEDIA MEASURED.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 023 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--COMPUTER DESIGN OF ION EXCHANGE PROCESSES -U-

AUTHOR-(04)-VOLZHINSKIY, A.I., SMIRNOV, N.N., ROMANKOV, P.G., VIKTOROV, V.K.

COUNTRY OF INFO--USSR

SOURCE--TEOR. OSN. KHIM. TEKHNOL. 1970, 4(1), 118-22

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL REACTION KINETICS, MAGNESIUM, CALCIUM, ION EXCHANGE, SORPTION, COMPUTER APPLICATION, MODEL, ION EXCHANGE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1085 STEP NO--UR/0455/70/004/001/0118/0122

CIRC ACCESSION NO--AP0104483

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 023 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0104483

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SORPTION KINETICS OF MG PRIME2 POSITIVE OR CA PRIME2 POSITIVE IONS BY A SINGLE BEAD OF CATION EXCHANGE RESIN WERE TREATED BY A. I. VOLZHINSKII (1969) AND THE BEHAVIOR OF A COLUMN OF RESIN ONLY ONE BEAD DEEP IS SIMILAR. THE TREATMENT IS EXTENDED TO CALC. THE ELUTION CURVE FOR A COLUMN PACKED WITH THE RESIN, BY NUMERICAL INTEGRATION OF THE EQUATION DOWN THE COLUMN. THE WAY IN WHICH A COMPUTER PROGRAM WAS WRITTEN TO PERFORM THE INTEGRATION, APPROX. BY ITERATIVE SUMMATION, IS SHOWN IN A FLOW DIAGRAM. COMPARISON WITH EXPT. SHOWS A SMALL DISCREPANCY AT HIGH LEVELS OF SORPTION OF MG AND CA, WHICH IS EXPLAINED BY INTERNAL RESISTANCE TO DIFFUSION; AN IMPROVED VERSION OF THE KINETIC EQUATION FOR THE ELEMENTARY LAYER OF RESIN IS SUGGESTED.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 032 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--NONPLANAR VIBRATIONS OF THE ENOL FORM OF ACETYLACETONE -U-

AUTHOR--GASTILOVICH, YE.A., KOPTEVA, T.S., VIKTOROVA, N.M.

COUNTRY OF INFO--USSR

SOURCE--OPT. SPEKTROSK. 1970. 28(2), 241-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--KETONE, IR SPECTRUM, DIPOLE MOMENT, QUANTUM CHEMISTRY, VIBRATION FREQUENCY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/1909 STEP NO--UR/0051/70/028/002/0241/0247

CIRC ACCESSION NO--AP0100477

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 032 UNCLASSIFIED

CIRC ACCESSION NO--AP0100477 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROPORTION OF THE KETO AND ENOL FORMS OF ACETYLACETONE (I) AND ITS DEUTERO DERIV. (II) WAS ESTD. FROM THE IR BAND SEPN. THE FREQUENCIES AND THE SHIFTS FROM THE ATOM EQUIL. POSTIONS IN OUT OF PLANE VIBRATIONS WERE CALCD. BY ASSUMING C SUB2V SYMMETRY. THE DYNAMIC CONSTS. AND THE SINGLE BOND DIPOLE MOMENTS ARE TABULATED. THE DISTRIBUTION OF DIPOLE MOMENTUM VALUES AGREES WITH THE QUANTUM MECH. CALCNS. A DISCUSSION OF THESE FACTS IS PRESENTED.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 541.651+621.375.9

ARISTOV, A. V., VIKTOROVA, YE. N., MASLYUKOV, YU. S., REZNIKOVA, I. I., and CHERKASOV, A. S.

"Effect of Structure and Degree of Purity of Rhodamines on Their Oscillation Characteristics for Laser Pumping"

Minsk, Zhurnal Prikladnoy Spektroskopii, Vol 19, No 2, 1973, pp 250-253

Abstract: The authors find that there has been no investigation of the relative oscillation efficiency of the different rhodamines or of the effect of the degree of purity of the rhodamine on its oscillation efficiency. The present paper therefore presents the results obtained in oscillation tests, under identical conditions, of eleven rhodamines of different structures. Part of these specimens are commerical products, the remainder were specially synthesized by known methods. A listing of the nomenclature of the various specimens and a table of their relative oscillation characteristics are given. The latter shows that the rhodamine's oscillation ability is a function of the purity of the material. Also shown is a curve for the oscillation energy as a function of the optical density of the rhodamine solutions. The testing method is explained.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR UDC: 535.71

ARISTOV, A. V. and VIKTOROVA, Ye. N.

"Determining the Activation Energy of Radiationless Transitions from the Effect of a Solvent on the Luminescence Characteristics of Organic Phosphors"

Moscow, Izvestiya AN SSSR -- Seriya Fizicheskaya, vol 36, No 5, 1972, pp 1074-1077

Abstract: Asserting that a proper study of the mechanism of intramolecular radiationless deactivation of excited molecules cannot be made without determining the energy of activation E_a of radiationless transitions, the authors demonstrate how this can be done. The method they use is based on the correlation between the variation in fluorescence characteristics and the value of E_a for organic phosphors in solutions of different polarities. As objects of the study, they used derivatives of phthalamide and naphthalamide, benzophenozene, stilbene, and diphenyl. The fluorescent and absorption spectra, absolute fluorescent quantum output, and lifetimes of the excited states for these solutions were measured. Variations in these spectra were quite wide, on the order of 3000 cm^{-1}. The authors express their gratitude to T. V. Veselova and V. I. Shirokov for their help in the measurements.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR UDC 539.213

BREKHOVSKIKH, S. M., VIKTOROVA, Yu. N., GRINSHTEYN, Yu. L., and LANDA, L. M.

"Bases of Radiation Behavior of Glass and Ceramics"

Stroyizdat (Construction Publications) 1971, 256 pages, illustrated, price 1 ruble 52 kopeks (from RZh--Fizika, No 9, 1971, Abstract No 9E231K)

Translation: This is a monograph on the effect of radiation on glass and ceramics, designed for engineers and technicians. Principal attention is given to the dependence of the degree of radiation destruction on the structure, chemical, and phase state of the material. T. Kh.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 035 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--EFFECT OF THE DEGREE OF DISPERSION OF ANTIFRICTION ADDITIVES ON THE RHEOLOGICAL PROPERTIES AND COLLOIDAL STABILITY OF PLASTIC GREASES -U-

AUTHOR-(02)-SINITSYN, V.V., VIKTOROVA, YU.S.

COUNTRY OF INFO--USSR

SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (2), 17-19

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--GRAPHITE, GREASE, PLASTIC, MOLYBDENUM DESULFIDE, CHEMICAL BONDING, MOLECULAR STRUCTURE, RHEOLOGIC PROPERTY, ANTIWEAR ADDITIVE/(U)S1 GRAPHITE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1526 STEP NO--UR/0318/70/000/002/0017/0019

CIRC ACCESSION NO--AP0118513

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 035 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118513

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADDN. OF GRAPHITE AND MOS SUB2 OF 1-150 MU HAD A VERY SMALL EFFECT ON PLASTIC LUBRICANTS. SYNTHETIC GRAPHITE S-1 HAD SOME THICKENING EFFECT DUE TO ITS SOMEWHAT LOW TENDENCY TOWARD STRUCTURE FORMATION. MOS SUB2 AND GRAPHITE HAD NO THICKENING EFFECTS, AS THE BOND BETWEEN THE PARTICLES WAS RATHER WEAK AND NO STRUCTURAL SKELETON WAS FORMED. CHARACTERISTICS OF THE GREASES ARE TABULATED. 9 REFERENCES.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 029 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--THERMODYNAMIC ANALYSIS OF THE CHEMICAL EQUILIBRIUM OF THE SOLID SOLUTIONS AND THE GAS PHASE IN THE WUSTITE, METAL PART OF THE IRON,

AUTHOR--VIKTOROVICH, G.S.

COUNTRY OF INFO--USSR

SOURCE--ZHUR. FIZ. KHIM., JAN. 1970, 44, (1), 216-220

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--SOLID SOLUTION, PHASE ANALYSIS, IRON, NICKEL, OXYGEN, CHEMICAL EQUILIBRIUM, THERMODYNAMICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0245 STEP NO--UR/0076/70/044/001/0216/0220

CIRC ACCESSION NO--AP0124007

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 029

UNCLASSIFIED

CIRC ACCESSION NO--AP0124007 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EQUILIBRIUM BETWEEN SOLID SOLUTIONS OF O IN FE AND NI AND THE GAS PHASE IN THE WUSTITE METAL REGION OF THE FE, NI, O PHASE DIAGRAM WAS ANALYSED THERMODYNAMICALLY. COMPARISON BETWEEN THE CALCULATED VALUES OF PARTIAL O PRESSURE IN THE GAS PHASE OVER THE MOLTEN FE-NI ALLOY AND EXPERIMENTAL DATA INDICATED CONSIDERABLE DEVIATIONS FORM THE BEHAVIOUR OF IDEAL SOLUTIONS AT 700-1100 DEGREESC. IN PARTICULAR, THE INTERACTION BETWEEN THE FE AND THE NI IN THE MOLTEN ALLOYS WAS FAR MOR COMPLICATED THAN WOULD BE EXPECTED FOR REGULAR SOLUTIONS.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VIKULENKOV, V. P.

UDC 624.041.2

"Calculation of the Statics of an Indeterminate Elastoplastic System on Complex Loading"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Mashinostroyeniye, No 4, 1973, pp 16-21.

Abstract: The statics of an indeterminate rod system consisting of elements working by elongation-compression and panels loading the points of movement are calculated. The value, direction and position of the complex loading forces are arbitrarily varied. Stress distribution is found by successive loading. At each step the load increment is considered linear-elastic, and the solution is found by successive approximations, using the Castigliano's principle, column matrices and a computer. As an example a homogeneous console cylinder with two flexible ribs, loaded with a radial, reversible force of ± 12000 kg is considered. The calculations lead to the conclusion that rib plastic deformation is accompanied by an increase in tangential stress in the covering and a decrease in the moment of flexure of the ribs, increasing their carrying capacity, and that on altering the load from +12000 kg to -12000 kg the maximal rib moment increases by 15%.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC: 624.041.2

VIKULENKOV, V. P., Engineer

"Calculation of Statically Indeterminate Rod Systems Beyond the Limit of Elasticity"

Moscow, IVUZ, Mashinostroyeniye, No 1, 1971, pp 5-14

Abstract: A procedure is outlined for calculating statically indeterminate systems whose stressed state may be considered uniaxial (beams, frames, girders, reinforced thin-walled structures). The comparative simplicity of the procedure in combination with the rapid convergence of the process of successive approximations enables manual solution of the same problems which have been solved by the method of forces for systems within the limits of elasticity. Provision is made not only for determination of stresses, but also displacements, which may in many instances be determined by the maximum permissible load. With certain assumptions, the method can be used in the matrix formulation of linear algebra, which appreciably facilitates the use of digital computers in the calculations, and permits the solution of complex problems with a large number of unknowns. When a linear reinforcement diagram is used, a system of linear algebraic equations in the method of forces is

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VIKULENKOV, V. P., IVUZ, Mashinostroyeniye, No 1, 1971, pp 5-14

derived with compliance coefficients determined by successive approximations. For this purpose, the zones of plasticity (or the rods in the case of girders) are found where the stresses exceed the yield stress of the material. No consideration is given to relief in the elements during loading, but residual stresses and strains are determined fairly simply. The problems are solved in the linear geometric approximation. Some simple examples are given which show that the elastoplastic properties of the material must be taken into consideration when analyzing the forces in statically indeterminate systems, and especially when analyzing displacements.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR UDC: 621.382.3

VIKULIN, I. M. and PRESNOV, V. A.

"Controllable Two-Base Diode"

Leningrad, Fizika i tekhnika poluprovodnikov, Vol 4, No 10, October 1970, pp 1999-2000

Abstract: The two-base diode is a three-electrode semiconductor with two ohmic contacts at the ends of a filamentary semiconductor and a single injector contact between them. The primary parameter of the two-base diode is the ratio of resistance of one base to the sum of the resistances of both bases. The simplest method of controlling this ratio is by changing the resistance of the first base; such a change can be realized through the field effect. Other characteristics of the device are described in this brief communication. The accompanying diagram shows the connections of the device and its emitter volt-ampere characteristics for various load resistances. It is stated that p-n-p-n structures are being used since the two-base diode does not as yet exist.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC: 621.382.029.6

VIKULINA, L. F., GONYAYEV, G. S., LYUZE, L. L., FEDOROV, Ye, V., SHIROKOVA, L. S.

"Investigation of the 'Second Threshold' Effect in Gallium Arsenide Cavity Oscillators"

Moscow, Radiotekhnika i Elektronika, Vol 16, No 1, Jan 71, pp 131-133

Abstract: An attempt is made to explain the "second threshold" effect reported by Gunn in 1966. The essence of this phenomenon is that an abrupt change in the frequency of oscillations takes place with an accompanying reduction in the average current through some gallium arsenide specimens when the bias voltage exceeds a certain value. The following mechanism is proposed as an explanation of the effect. At bias voltages between the threshold value and the "second" threshold, the specimen is operating in a "resonance-drift" mode. The overall voltage during the negative part of the cycle of the variable component falls below the threshold value, which delays the time for generation of a new domain. Above a certain bias voltage, which differs for different specimens, the amplitude of the variable component may be too small, so that the overall voltage does not fall below the threshold value. Thus there

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VIKULINA, L. F., et al, Radiotekhnika i Elektronika, Vol 16, No 1, Jan 71, pp 131-133

is a jump to the drift mode of operation. The lower amplitude of the oscillations in this mode is due to the reduction in current pulse duration. Frequency jumps do not take place when the specimens are connected in higher-Q oscillator sections, or when the elements of the section are adjusted with a change in voltage.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 621.317.43

VIKULOV, A. P., FROLOV, A. M.

"EM1-5 Device for Measuring Ferrite Losses"

Elektron. tekhnika. Nauchno-tekhn. sb. ferrit. tekhn. (Electronic Engineering. Scientific and Technical Collection. Ferrite Engineering), 1970, vyp. 3 (25), pp 79-86 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4A298)

Translation: An instrument designed for measuring the components of the complex resistance of ferrite magnetic conductors with direct reading within the limits from 0.001 to 10 microhenries and from 0.0001 to 1 ohm, respectively, is investigated. The measurements are taken in harmonic fields at magnetization reversal frequencies up to 3 megahertz and regulatable excitation currents from 5 milliamps to 1 amp. The high speed and accuracy of the measurements are obtained as a result of using a three-terminal single-loop separating excitation circuit in the form of a device with space-distributed elements in combination with the transformer bridge. The instrument is suitable for laboratory research and shop quality control of magnetic circuits.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 030 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--CONDUCTING AEROSOL IMMUNIZATION UNDER FIELD CONDITIONS -U-

AUTHOR-(05)-VIKULOV, I.M., VORONTSOV, I.V., KREYNIN, L.S., SEVERTSOVA, M.K., KAVERINAFIRGANG, K.G.

COUNTRY OF INFO--USSR

SOURCE--VOYENNO-MEDITSINSKIY ZHURNAL, 1970, NR 1, PP 54-56

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--AEROSOL IMMUNIZATION, TYPHOID FEVER, MILITARY MEDICINE, BIOMEDICAL CHAMBER/(U)UST56 CHAMBER, (U)USB56 CHAMBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1314 STEP NO--UR/0177/70/000/001/0054/0056

CIRC ACCESSION NO--AP0136705

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 030 UNCLASSIFIED

CIRC ACCESSION NO--AP0136705 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION. AEROSOL IMMUNIZATION AGAINST TYPHOID WAS CONDUCTED IN THE UST-56 CHAMBER (VOLUME 48.5 M PRIME3, AREA 22 M PRIME2) AND THE USB-56 CHAMBER (VOLUME 138.3 M PRIME3, AREA 58.5 M PRIME2). PEOPLE WERE EXPOSED TO AEROSOL TYPHOID VACCINES OF SERIES 21-65 AND 1-67 FOR 12-15 MIN. THE TEMPERATURE IN BOTH CHAMBERS BEGAN TO RISE IMMEDIATELY AFTER ENTRANCE OF PEOPLE (SEE TABLE 1), AND REACHED 28-30 C IN SPRING AND SUMMER AND 22-24 C IN FALL AND WINTER. RELATIVE HUMIDITY DID NOT INCREASE, BUT DROPPED SLIGHTLY THREE MINUTES AFTER THE START OF IMMUNIZATION AND REMAINED FAIRLY CONSTANT AT 64-72PERCENT. THE CONCENTRATION OF AEROSOL IN CHAMBERS IS SHOWN IN TABLE 3. THE DISTRIBUTION OF AEROSOL IN CHAMBERS IS SHOWN IN TABLE 4. SINGLE AEROSOL IMMUNIZATION WITH BOTH VACCINES IN THE UST-56 CHAMBER PRODUCED A STATISTICALLY RELIABLE INCREASE IN ANTIBODY TITERS. THE SAME RESULTS WERE OBTAINED AFTER IMMUNIZATION IN AN ORDINARY ROOM. THE FREQUENCY OF FEVER REACTIONS IN IMMUNIZED PEOPLE WAS TWO TO THREEPERCENT IN 12 HRS AND ONE TO TWOPERCENT IN 24 HRS, BOTH IN GROUPS INOCULATED IN CHAMBERS AND IN A ROOM. THERE WERE NO STRONG REACTIONS. A GROUP OF 2166 PEOPLE WAS INOCULATED IN THE UST-56 WITH VACCINES OF SERIES 21-65, AND A GROUP OF 1248 WITH SERIES 1-67. TWO PEOPLE (A PHYSICIAN AND HELPER) WERE ABLE TO INOCULATE 1248 PEOPLE IN A UST-56 CHAMBER IN 2 HRS, 40 MIN, AS COMPARED WITH THE NORM OF 150 STANDARD INOCULATIONS IN THE SAME PERIOD CONDUCTED BY SIX MEN. FACILITY: MEDITSINSKAYA SLUZHBA.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 614.3/.4.07:658.387

VIL'CHEK, M. G., SHNEYDERMAN, V. E., and EADKEVICH, V. S., All-Union Institute of the Poultry-Processing Industry, Zelenograd, Moscow Oblast

"Role of Sanitary-Epidemiological Stations in Developing and Introducing Measures Relating to the Scientific Organization of Labor"

Moscow, Gigiyena i Sanitariya, No 10, 1973, pp 93-94

Abstract: Assembly-line technology has reduced the physical element in the work process but greatly increased stress. Mechanization has improved hygienic conditions while adversely affecting the workers' psychology and physiology. The monotony of many jobs and other unfavorable psychological and physiological factors require physiological research to study the level of performance during a shift and work week in order to provide a sound basis for developing programs to minimize the impact of negative factors on labor productivity and health. Sanitary-epidemiological stations are best suited for this work because of their trained staff and equipment.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 010 UNCLASSIFIED

TITLE--CONCERNING CHOICE OF COEFFICIENT OF FINE IN PROBLEMS OF LINEAR PROGRAMMING -U-

PROCESSING DATE--16OCT70

AUTHOR--VILCHEVSKIY, N.O.

COUNTRY OF INFO--USSR

SOURCE--AVTOMATIKA I TELEMEKHANIKA, 1970, NR 4, PP 121-126

DATE PUBLISHED--------70

SUBJECT AREAS--MATHEMATICAL SCIENCES

TOPIC TAGS--LINEAR PROGRAMMING, AUTOMATIC CONTROL THEORY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1727

STEP NO--UR/0103/70/000/004/0121/0126

CIRC ACCESSION NO--AP0118705

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 010 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118705

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLUTION OF THE PROBLEM OF LINEAR PROGRAMMING IS SOLVED BY MEANS OF THE METHOD OF FUNCTIONS OF FINE. IT IS SHOWN THAT THE COEFFICIENT OF FINE IS EXPEDIENT TO CHOOSE AS THE SOLUTION OF A CERTAIN AUXILIARY PROBLEM WITH THE METHOD OF FUNCTIONS OF FINE ALLOWING TO SOLVE THE PROBLEM OF LINEAR PROGRAMMING WITHIN THE FINITE NUMBER OF STEPS.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR UDC 547.26'118

ZEMLYANSKIY, N. I., VIL'DANOVA, G. G., GRITSAY, N. I., TURKEVICH, V. V., Lvov State University imeni Ivan Franko, Lvov, Ministry of Higher and Secondary Specialized Education Ukrainian SSR

"Reactions of O,O-Diphenyldithiophosphoric Acid Salts With Diazonium Salts"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70, pp 1976-1978

Abstract: It is reported that the potassium salt of O,O-diphenyldithiophosphoric acid reacts with aryl diazonium salts in aqueous medium to yield orange and red colored solid products. They decompose slowly on standing and faster in acetone solution when heated. Heated in dry state they explode. For example, to obtain O,O-diphenyl-S-p-nitrophenyldiazonium dithiophosphate, potassium O,O-diphenyldithiophosphate dissolved in water was added to a diazonium salt solution prepared from nitroaniline, concentrated HCl, and sodium nitrite in an acetate buffer solution. The reaction mixture was kept at pH 7-8. The precipitated product was washed

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

ZEMLYANSKIY, N. I., et al, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70, pp 1976-1978

and dried; its m.p. is 50° (decomposes). Diazonium solution based on p-aminobenzoic acid reacted with potassium O,O-diphenyldithiophosphate gave O,O-diphenyl-S-p-carboxyphenyldiazonium dithiophosphate, temp. of decomposition 81°. Analogously, O,O-diphenyl-S-o-carboxyphenyldiazonium dithiophosphate and its meta analogue were obtained.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 547.26'118

GRITSAY, N. I., VILDANOVA, G. G., BOKALO, G. A., ZEMLYANSKIY, N. I., Lvov State University imeni Ivan Franko, Lvov, Ministry of Higher and Secondary Specialized Education Ukrainian SSR

"Arylation Reaction of O,O-Diphenyl-S-alkenedithiophosphonic Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70, pp 1973-1976

Abstract: O,O-Diphenyl-S-alkenedithiophosphates (I) were obtained by reacting O,O-diphenyldithiophosphate with alkenyl bromide in acetone. To carry out the arylation reaction, a solution of diazonium salt prepared from 0.016 g-mole of an amine, 4.8 ml concentrated HCl and 0.016 g-mole of sodium nitrite was added dropwise to a cooled mixture of (I) and 0.57 g $CuCl_2 \cdot 2 H_2O$ in 50 ml acetone. Nitrogen evolution was observed at 3-4° in the case of the addition of p-nitrophenyl, at 16-18° with p-tolyl, and at 23° with phenyl diazonium chloride. After 2-3 hrs, when nitrogen evolution stopped, the oil was extracted with ether, the solvent evaporated, and the residue vacuum distilled. The product was chromatographed over alumina.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 669.71:539.370

VIL'DANOVA, N. F., NOSKOVA, N. I., and PAVLOV, V. A., Institute of Metal Physics, UNTs [expansion unknown] Academy of Sciences USSR

"Effect of Ultrasonic Vibrations on the Mechanical Properties and Fine Structure of Aluminum and an Al-Mg Alloy"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 36, No 1, 1973, pp 129-134

Abstract: Alloy grade AL27-1 (containing (in Wt %): 10-11 Mg, 0.1 Ti, 0.1 Zr, 0.1 Be) and pure aluminum (99.99%) were studied in order to determine the effect of ultrasonic action of low power (5-19 v/cm^2) on the structure and mechanical properties of these materials. Alloy AL27-1 had increased tensile strength and an exceptional increase in ductility after ultrasonic treatment (from 4 to 12% elongation). These improvements in mechanical properties are attributed to the formation of dislocations which interact to form a large number of vacancies. The appearance of a large number of dispersed precipitations is explained by acceleration of aging processes due to the large amount of vacancies. The somewhat lowered yield strength of the alloy after ultrasonic treatment is attributed to the presence of free dislocations formed by ultrasonics. Three figures, one table, fourteen bibliographic references.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

Transformation and Structure

USSR UDC 620.187

VIL'DANOVA, N. F., NOSKOVA, N. I., PAVLOV, V. A., BELOUSOV, N. N., and MIKHEYEVA, Ye. N., Institute of Metal Physics, Academy of Sciences USSR

"Electron Microscope Study of Al-Mg Alloys Cooled With Varying Rates From the Homogenization Temperature"

Sverdlovsk, Fizika Metallov i Metallovedeniye, No 6, Vol 30, Dec 70, pp 1264-1269

Abstract: Changes were investigated in the structure of alloys Al+Mg(11%) and Al+Mg(11%)+Ti, Zr, Be, Mn (0.1%) which result in connection with the use of different cooling rates after a homogenizing anneal. The cast and heat-treated alloys were rolled into plates measuring 20 x 50 x 0.2 mm and then subjected to a homogenizing anneal at 435° C for 20 hours with different cooling rates: quenched in cold water (+20), quenched in hot water (+90), and air cooled.

Thin foils of the alloys were investigated by electron microscopy. The foils were made from plates, which had been heat treated, by chemically thinning them in a 40% solution of sodium hydroxide with subsequent electropolishing

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VIL'DANOVA, N. F., et al, Fizika Metallov i Metallovedeniye, No 6, Vol 30, Dec 70, pp 1264-1269

in an electrolyte at +70 C. The investigation was conducted with an SEM-3 microscope.

It was shown that aging processes take place in these alloys independently of the cooling rate and grains are detected in the structure along the boundaries and in the volume of which there are precipitations. Complex alloying accelerates aging: in the structure of the alloy after cooling at the maximum rate practically no grains were observed without precipitates, but coagulation of the precipitated phases takes place. A decrease in the cooling rate leads to a fuller passage of aging processes and to phase coagulation in all the alloys.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

Masers

UDC 621.383.292

VIL'DGRUBE, G.S., DUNAYEVSKAYA, N.V., PODOKSINA, M.D., RONKIN, ZH.M., DALINENKO, N.K.

"Photomultiplier For Observation Of Coherent Radiation"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektronnoluch. i fotoelektr. pribory (Electronic Technology. Scientific-Technical Collection. Electron Beam And Photoelectric Devices), 1970, Issue 2(16), pp 3-5 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4A253)

Translation: The construction is described and the principal parameters are presented of the FEU [photomultiplier]--84 with multialkali photocathodes, intended for observation of the coherent radiation signals of a laser; the FEU-84 has the dimensions and basing of the FEU-15 and FEU-16. The spectral response of the photocathode at a wavelength of 700 nm amounts to 80 ÷ 270 microampere/lm. The multiplier system contains 12 louvered dynodes of CuAlMg alloy. The limiting output current is 5 ma in a static regime and 0.8 a in a pulsed. The anode sensitivity is 100 a/lm at a voltage of 1250--1600 v. The number of noise pulses at a plateau of the counter characteristic curve does not exceed $3 \div 7 \cdot 10^3$ sec^{-1}. The sensitivity threshold is $3\text{-}8 \cdot 10^{13}$ $lm/hz^{-1/2}$. 2 ill. 2 ref. N.S.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 621.383.292

AYNBUND, M.R., VIL'DGRUBE, G.S., DUNAYEVSKAYA, N.V., SEMENOVA, V.B.

"Miniature Channel Photomultipliers"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektronnoluch. i fotoelektr. pribory (Electronic Technology. Scientific-Technical Collection. Electron Beam And Photoelectric Devices), 1970, Issue 3(17), pp 3-5 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4A251)

Translation: The construction is described and the principal parameters are presented of miniature channel photomultipliers with head-on and lateral photocathodes. The length of the devices is 40 mm with diameters of 15 and 10 mm, respectively. The anode sensitivity of the specimens amounts to 1000 a/lm. Summary.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 539.1.075:621.383

VIL'DGRUBE, G. S., DUNAYEVSKAYA, N. V.

"New Louver-Type Photomultipliers for Spectrometric Scintillator Equipment"

Khar'kov, Monokristally, Stsintillyatory i Organicheskiye Lyuminofory -- Sbornik (Monocrystals, Scintillators, and Organic Luminophores -- Collection of Works), No 5, 1970, pp 319-327 (from Referativnyy Zhurnal, Metrologiya i Izmeritel'naya Tekhnika, No 12, 1970, Abstract 12.32.1560)

Translation: The results of research on the natural amplitude resolution of louver-type photomultipliers are presented. These results show that this parameter is practically the same for any system, and for the best specimens comprises 5% (standardized with respect to the brightness of a NaI (Tl) crystal). A report is given on the parameters of new louver-type photomultipliers being produced in experimental or series lots (FEU-70, FEU-81, FEU-81a, FEU-82, FEU-49b, FEU-1a), intended for operation in spectrometric scintillation equipment. 6 figures, 10 bibliographic entries.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 621.385.032.21(088.8)

VIL'DGRUBE, V.B., SHVARTS, E.G.

"Direct-Heated Wire Cathode"

USSR Author's Certificate No 268552, filed 6 May 68, published 25 May 71 (from RZh:Elektronika i yeye primeneniye, No 1, Jan 72, Abstract No 1A85P)

Translation: The proposed cathode differs from known direct-heated wire cathodes of the head-on [tortsevyy] type in the fact that it is made in the form of a calcium array, the mesh of which is formed by curved wires fastened one with another at the points of intersection and at the edges of the array, which increases the emitting surface and increases the mechanical stability. The crossings of the ends of the filaments are strengthened at the outer and inner supports of the cathode. The size and form oftho mesh are changed according to the radius of the array. As the edges of the array are approached, the sides of the mesh converge one to another, increasing the temperature of the edges of the array. In this manner uniform distribution of the temperature with respect to the surface of the cathode is assured. It is possible to use the proposed construction as the grid or heaters of the cathodes of electron devices. A.F.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 553.98:551.247:550.837.622.241(574.12/13)

ANISHCHENKO, G. N., DEMENT'YEVA, I. G., VILENCHIK, A. M., MITROFANOV, K. P., POGREBINSKIY, S. A., ROMANENKO, V. P., and FOMENKO, K. Ye., Trust for Special Geophysical Operations, Ministry of Geology, USSR

"Electrometric Research on the Border Zone of the Pre-Caspian Depression by the Method of Telluric Currents"

Moscow, Neftegazovaya Geologiya i Geofizika, No 5, 1972, pp 36-42

Abstract: The article summarizes the results of research in the pre-Caspian depression by the method of telluric currents. This method was used for mapping the elements of the salt tectonics in this territory on the basis of the acute difference between the specific resistence of the salt and that of the sediments of the persalt complex. The results, classified according to the regions of the investigated territory and the character of the relation with the cross-section, are briefly set forth. An analysis of the nature of the telluric anomalies is given. 4 figures.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VILENKIN, A.G., GUR'YEV, YE. A.

UDC 621.316.722.1 (088.8)

USSR Author's Certificate No 275163, filed 13 Feb 69, published 12 Oct 70 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 43695P)

Translation: A d-c voltage regulator is proposed which contains a switch [klyuchevoy] control element, a d-c amplifier, and a comparing divider. The regulator is distinguished by the fact that, with the object of decreasing the pulsations of the output voltage and improving the dynamic characteristics, a control transistor is used in it; the collector of the transistor is connected simultaneously to one of the outlets of the feedback winding of the transformer of the blocking oscillator of the control element and to a capacitor coupled with the input terminal of the regulator. The emitter is connected to the output terminal, and the base to the d-c amplifier. 1 ill.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VILENKIN, A. M.

UDC 624.07:534.1

"Resonance Conditions Under Transverse Oscillations in a System With Helical Cylindrical Springs"

V sb. Vibratsion. tekhnika (Vibration Technology -- Collection of Works), Moscow, 1972, pp 12-16 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V280)

Translation: Determining the flexible rigidity of a cylindrical spring - equivalent rod loaded by longitudinal and transverse forces is discussed. Expressions are obtained for the transverse rigidity, the natural frequency, and the condition for onset of transverse resonance. The transverse cross section of the coil may be circular or rectangular. M. V. Khvingiya.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

VILENKIN, A. V.

ACCESSION NR: AP4039795 S/0286/64/000/010/0045/0045

AUTHOR: Levitin, M. K.; Shekhter, Yu. N.; Kreyn, S. E.; Kalashnikov, V. P.; Bessmertnyy, K. I.; Gorynchova, V. I.; Lyakhovich, R. S.; Rozvadovskaya, I. N.; Khoroshilova, L. D.; Dol'berg, A. L.; Sheremet, M. I.; Romanovskaya, A. A.; Vilenkin, A. V.

TITLE: Method for obtaining a corrosion inhibitor for lubricating oils. Class 23, No. 162616

SOURCE: Byul. izobr. i tovar. znakov, no. 10, 1964, 45

TOPIC TAGS: lubricating oil, corrosion inhibitor, mineral oil, nitration, neutralization, calcium oxide, promoters, alkylphenol, sulfonic acid, synthetic fatty acid, acetic acid

ABSTRACT: This Author Certificate introduces a method of obtaining a corrosion inhibitor for lubricating oils by the nitration of mineral oil with the subsequent neutralization of the latter with metal hydroxide. To enhance the effectiveness of the corrosion inhibitor, the nitrated oil is neutralized with calcium hydroxide

Card 1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

ACCESSION NR: AP4039795

in the presence of the following promoters: an alkylphenol, a synthetic fatty acid, a sulfonic acid, acetic acid.

ASSOCIATION: none

SUBMITTED: 23Aug63 DATE ACQ: 19Jun64 ENCL: 00

SUB CODE: FP NO REF SOV: 000 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 018 UNCLASSIFIED

TITLE--THEORETICAL ANALYSIS OF THE MECHANISMS OF NERVE IMPULSE CONDUCTION ALONG A NONUNIFORM AXON. II. CONDUCTION OF A SINGLE IMPULSE THROUGH A

PROCESSING DATE--30OCT70

AUTHOR-(04)-KHODOROV, B.I., TIMIN, YE.N., VILENKIN, S.YA., GULKO, F.B.

COUNTRY OF INFO--USSR

SOURCE--BIOFIZIKA 1970, 15(1), 140-6

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SQUID, NEURON, MATHEMATIC MODEL, NARCOTIC, CALCIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0628

STEP NO--UR/0217/70/015/001/0140/0146

CIRC ACCESSION NO--AP0117854

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 018

UNCLASSIFIED

CIRC ACCESSION NO--AP0117854 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE NERVE IMPULSE CONDUCTION ALONG A FIBER REGION WITH ALTERED MEMBRANE PROPERTIES WAS STUDIED ON A MATH. MODEL OF SQUID GIANT AXON. THE EFFECTS OF TETRODOTOXIN, NARCOTICS, AND CA PRIME2 POSITIVE WERE CONSIDERED.

FACILITY: A. V. VISHNEVSKII INST. SURG., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VILENKIN, S. Ya., TRAKHTENGERTS, E. A.

"Control Computer Software"

Matematicheskoye Obespecheniye Upravlyayushchikh Vychislitel'nykh Mashin. [English Version Above], Moscow, Energiya Press, 1972, 392 pages (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V666K).

Translation: This book presents modern methods of organization of control computer software. Methods of multiprogramming, dynamic distribution of memory, formation of large files of information, construction of translators from programming languages and mathematical methods of program optimization are covered.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 681.3.06:51

MIKHAYLOV, V., VILENSKAYA, L., SAVVAKINA, A., KRUTYANSKIY, A.

"A Small Monitor for the Ural-14 Computer"

Elektronno-vychisl. Tekhn. i Programmir. [Electronic Computer Equipment and Programming -- Collection of Works], No 3, Moscow, Statistika Press, 1970, pp 5-11, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V619).

Translation: A monitor is described for the Ural-14 computer, providing for the running and printer output of one job during simultaneous input of a second job. The monitor organizes its work on the basis of operator requests input from the control panel, requests from the job, consisting of a special type of instructions, interrupt signals from punching devices and error signals.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 612.419

SEVAST'YANOVA, L. A., GOLANT, M. B., ADAMENKO, V. G., and VILENSKAYA, R. L., Institute of Experimental and Clinical Oncology, Academy of Medical Sciences USSR, and Scientific Research Institute of the Ministry of the Electronics Industry

"Effect of Microwaves on Change in the Number of Bone-Marrow Cells Caused by Antineoplastic Chemotherapeutic Agents"

Moscow, Biologicheskiye Nauki, No 6, 1971, pp 58-59

Translation: Experiments were performed on mice to study the effect of the antineoplastic agents sarcolysin [phenylalanine mustard] and chrysomallin [antibiotic 2703 - derived from Actinomyces fluorescens and containing 3 actinomycins] combined with microwave radiation on bone marrow. The radiation was found to weaken the effect of the compounds.

In an earlier work we investigated increased resistance to ionizing radiation following exposure of bone marrow to microwaves [1]. We showed that preliminary microwave irradiation weakens the effect of x-irradiation. When the order of the actions was reversed, the effect of x-irradiation was intensified. In both cases we used microwaves with a wavelength of 7.1 mm and x-rays at doses of 700, 1,400, and 2,100 r. We were unable to achieve a

1/4

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

SEVAST'YANOVA, L. A., et al., Biologicheskiye Nauki, No 6, 1971, pp 58-59

similar effect in an ultrahigh-frequency field with wavelengths of 5.8, 6.5, and 7.8 mm [2].

This article presents data on the effect of microwaves combined with antineoplastic chemotherapeutic agents on the number of bone-marrow cells.

The experimental animals were 120 male mice (C_{57}Bl XCBA)F_1 weighing 25 to 30 g. The animals were exposed to whole-body irradiation in a microwave field with the following parameters: wavelength 7.1 mm, magnetic field strength 2.5 mv/cm^2, duration of exposure 1 hour. The millimeter range microwave generator has already been described [1,2]. The first group consisted of animals that had not been exposed to microwaves and antineoplastic agents (control). The second included animals exposed to microwaves and given chrysomallin. The third received only chrysomallin. The fourth were irradiated and given sarcolysin. The fifth included animals that received only sarcolysin. The chemotherapeutic agents were administered once intraperitoneally immediately before irradiation: chrysomallin at the rate of 200 μg/kg and sarcolysin at the rate of 10 mg/kg. The number of nucleated cells (N) in the bone marrow of the right femur was counted 1, 3, 5 and 10 days after the experimental action of the microwaves and compounds or only of the compounds and in the control

2/4

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

SEVAST'YANOVA, L. A., et al., Biologicheskiye Nauki, No 6, 1971, pp 58-59

animals (N_o).

There was a change in the N/N_o ratio with time after the administration of chrysomallin. It decreased after 24 hours to 0.7 and after 3 days to 0.5 of the initial value. After 5 days the number of marrow cells increased, but the N/N_o ratio did not return to normal, constituting 0.7 of the initial value. Twenty-four hours after the combined action of the microwaves and chrysomallin, the N/N_o ratio decreased to 0.7 as was the case when chrysomallin alone was used. After 3 days its value rose to 0.8 and after 5 days was normal, whereas after treatment with chrysomallin alone, the N/N_o ratio remained 0.7.

There was also a change in the N/N_o ratio with time following the administration of sarcolysin. After 24 hours the ratio decreased to 0.4 and after 3 days to 0.1 of the initial value. After 5 days the number of cells increased; N/N_o was 0.4. After 10 days the number of marrow cells returned to normal. N/N_o did not drop as abruptly after the combined action of the microwaves and sarcolysin. The lowest N/N_o after 3 days was 0.3 instead of 0.1. After 5 days it was 0.6 of the initial value, but after 10 days the number of marrow cells returned to normal.

3/4

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

SEVAST'YANOVA, L. A., et al., Biologicheskiye Nauki, No 6, 1971, pp 58-59

The results of the experiments show that under the influence of microwaves with a wavelength of 7.1 mm combined with sarcolysin or chrysomallin, the number of bone-marrow cells does not decrease as sharply as when microwaves are not used. Moreover, the rate of restoration of the cell count increases after the combined action.

4/4

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 535.2:665.123

VILENSKAYA, R. L., GEL'VICH, V. A., GOLANT, M. B., and SMOLYANSKAYA, A. Z., Institute of Experimental and Clinical Oncology, Academy of Medical Sciences USSR, and Institute of the Electronic Industry

"Effect of Millimeter Radiation on Colicin Synthesis"

Moscow, Nauchnyye Doklady Vysshey Shkoly, Biologicheskiye Nauki, No 7, 1972, pp 69-71

Abstract: Exposure of the colicinogenic E. coli strain C600(E_1) to wavelengths ranging from 6.5 to 6.59 mm resulted in marked induction of colicin synthesis at 6.500, 6.530, 6.555, and 6.590 mm a lesser effect at 6.535, 6.560, and 6.575 mm, and induction almost indistinguishable from that of the control at 6.510, 6.540, and 6.570 mm. Thus, the relationship between the induction coefficient and wavelength was of a distinct resonance nature. Variation in the irradiation rate from 30 to 0.3 mwt, on the other hand, had almost no effect on the induction coefficient. (The biological effect was sharply decreased only when the irradiation rate was reduced to 0.03 mwt). The lack of relationship between the induction of colicin synthesis and the irradiation rate is cited as evidence for the nonthermal effect of millimeter electromagnetic oscillations.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

UDC 678.743.41:541.515.701:53

VILENSKIY, A. I., VIRLICH, E. E., STEFANOVICH, N. N., RADTSIC, V. A., VLADYKINA, T. N., and KROTOVA, N. A.

"The Effect of Peroxide Radicals on the Adhesive Properties of Fluoroplast-4"

Moscow, Plasticheskiye Massy, No 10, 1971, pp 43-45

Abstract: Results are reported of the study of the adhesive activity of polytetrafluoroethylene (PTFE) as a function of the concentration of peroxide radicals fenerated during the treatment of PTFE in silent discharge. It was determined that current density has no effect on the maximum concentration of free radicals; however, it does shorten the process. Thermal treatment of the activated PTFE films leads to the formation of polar -CO and -C;C-groups which lead to high adhesive strength. In such thermally treated samples hydrogen bonds may form between the C;O groups of the films and OH groups of the epoxy resin. The experiments have shown that the high adhesive strength of the fluoroplast-4 activated in silent discharge is determined by stable peroxide radicals formed during the activation, which interact with the adhesive forming hydrogen bonds of an electrostatic character.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR UDC: 533.6.001.5

~~VILENSKIY, F. A.,~~ VOLKONSKAYA, T. G., GRYAZNOV, V. P., PIRUMOV, U. G., Moscow

"Investigation of Nonstandard Flow Conditions in an Axisymmetric Annular Plug Nozzle"

Moscow, Izv. AN SSSR: Mekhanika Zhidkosti i Gaza, No 4, Jul/Aug 72, pp 94-101

Abstract: The paper presents the results of calculations and experimental study of nonstandard flow conditions in an annular plug nozzle when the external pressure p_{ex} exceeds the pressure p^o determined in the one--dimensional approximation from the ratio of the area of the output section of the nozzle to the area of the critical cross section. The method of characteristics is used to calculate the gas flow in the annular region enclosed between the free boundary and the edge of the plug under nonstandard conditions when $p_{ex} > p^o$. An experimental study is made of the flow, during which the static pressure was measured on the wall of the nozzle, and shadow photography was used to visualize the flow. The results of the experimental and theoretical study are given for a ring nozzle with $M^o = 3.71$ and an ideal gas with constant adiabatic exponent 1.4.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/3 031 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--A NONLINEAR EFFECT DURING IONOSPHERIC RADIO WAVE PROPAGATION -U-

AUTHOR--VILENSKIY, I.M.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, DOKLADY AKADEMII NAUK SSSR, VOL 191, NO 5, 1970, PP 1041-1043

DATE PUBLISHED--------70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, NAVIGATION

TOPIC TAGS--RADIO WAVE PROPAGATION, IONOSPHERE, RADIO WAVE SCATTERING, NONLINEAR EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1191 STEP NO--UR/0020/70/191/005/1041/1043

CIRC ACCESSION NO--AT0133197

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/3 031 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0133197

ABSTRACT/EXTRACT--(U) GP-0-- ABSTRACT. THIS PAPER DISCUSSES AN EARLIER UNKNOWN NONLINEAR EFFECT IN THEIONOSPHERE: THE FORMATION OF ARTIFICIAL GRADIENTS OF THE REFRACTIVE INDEX UNDER THE INFLUENCE OF PROPAGATION OF POWERFUL RADIO WAVES. THE APPEARANCE OF SUCH GRADIENTS CAN EXERT AN APPRECIABLE EFFECT ON THE SCATTERING (REFLECTION) OF RADIO WAVES PERTURBING THE IONOSPHERE OR PASSING THROUGH A PERTURBED REGION. THE SIMPLEST MECHANISM FOR THIS PHENOMENON IS AS FOLLOWS: UNDER THE INFLUENCE OF A POWERFUL WAVE THERE IS AN APPRECIABLE CHANGE IN ELECTRON TEMPERATURE, AND AS A RESULT, A CHANGE IN THE EFFECTIVE NUMBER OF COLLISIONS BETWEEN ELECTRONS AND HEAVY IONOSPHERIC PARTICLES (MOLECULES, IONS). THIS CAUSES CORRESPONDING CHANGES IN THE REFRACTIVE INDEX (REFERENCE IS TO THE LOWER IONOSPHERE AND LOW FREQUENCIES OF PROPAGATING RADIO WAVES WITH SATISFACTION OF THE CONDITION W APPROXIMATELY EQUAL TO ROOT SUBEFF; W IS THE FREQUENCY OF THE PROPAGATING WAVES; ROOT SUBEFF IS THE EFFECTIVE NUMBER OF COLLISION). SINCE THESE TEMPERATURE CHANGES OCCUR IN A RELATIVELY THIN LAYER OF THE LOWER IONOSPHERE, THE REFRACTIVE INDEX GRADIENTS FORMING IN THIS REGION CAN BE QUITE SIGNIFICANT. FOR ESTIMATING THE REFLECTION COEFFICIENT FROM IONOSPHERIC INHOMOGENEITIES ARISING IN THIS WAY ONE CAN USE THE FRESNEL FORMULAS. THEN IN THE SIMPLEST CASE OF QUASILONGITUDINAL PROPAGATION R SUBO,X SIMILAR TO OR EQUAL TO MINUS OMEGA PRIME2 SUBO OVER 4 OMEGA (OMEGA PLUS OR MINUS OM: SUBL MINUS IV SUBAPHI) (DELTAN OVER N PLUS I DELTA V SUBAPHI OVER OME: PLUS OR MINUS OMEGA SUBL IV SUBAPHI).

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

3/3 031

UNCLASSIFIED

CIRC ACCESSION NO--AT0133197 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(1) (3 PHI EQUALS EFFI; R SUBO,X IS THE REFLECTION COEFFICIENT FOR THE ORDINARY OR EXTRAORDINARY RADIO WAVE COMPONENTS; W EQUALS (4NE PRIME2 N-M) PRIMEONE HALF IS THE PLASMA FREQUENCY IN THE REFLECTION REGION (N IS THE ELECTRON CONCENTRATION IN THIS REGION); W SUBL EQUALS W SUBH COS D; W SUBH IS GYROMAGNETIC FREQUENCY; D IS THE ANGLE BETWEEN THE EARTH'S MAGNETIC FIELD AND THE DIRECTION OF WAVE PROPAGATION; DELTA N, DELTA AUBEFF ARE THE CHANGES IN THE CORRESPONDING (N, ROOT SUBEFF) VALUES AT THE WAVELENGTH. COMPUTATIONS SHOW THAT A CHANGE IN ROOT SUBEFF OCCURS PRIMARILY IN AN IONOSPHERIC LAYER WITH A THICKNESS OF SEVERAL KILOMETERS. THE CONTRIBUTION TO THE REFLECTION COEFFICIENT FROM ARTIFICIALLY CREATED INHOMOGENEITIES IS AT LEAST EQUAL TO THE CONTRIBUTION OF NATURAL INHOMOGENEITIES OF ELECTRON CONCENTRATION. IN SOME CASES POWERFUL WAVES CAN CAUSE EVEN SHARPER REFRACTIVE INDEX GRADIENTS WHICH SILL HAVE AN EVEN GREATER EFFECT ON RADIO WAVE REFLECTION. FACILITY: INSTITUTE OF GEOLOGY AND GEOPHYSICS, NOVOSIBIRSK.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 021 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--STRENGTH OF THE FIELD OF RADIO WAVES IN THE RANGE 150-1,500 KC-SEC PROPAGATING OVER GREAT DISTANCES FROM A TRANSMITTER, FIELD STRENGTH OF

AUTHOR-(03)-VILENSKIY, I.M., UDALTSOV, A.N., SHLYUGER, I.S.

COUNTRY OF INFO--USSR

SOURCE--GEOMAGNETIZM I AERONOMIYA, VOL X, NO 2, 1970, PP 262-267

DATE PUBLISHED----------70

SUBJECT AREAS--NAVIGATION, PHYSICS

TOPIC TAGS--RADIO WAVE PROPAGATION, IONOSPERIC PROPAGATION, LONG RANGE SIGNAL, RADIO COMMUNICATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1440 STEP NO--UR/0203/70/010/002/0262/0267

CIRC ACCESSION NO--AP0110938

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 021

CIRC ACCESSION NO--AP0110938 UNCLASSIFIED PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A PRECISE STUDY WAS MADE TO CONSTRUCT ACCURATE CURVES FOR PROPAGATION OF RADIO WAVES IN THE RANGE 150-1,500 KC-SEC TO CHECK ON THOSE RECOMMENDED BY THE INTERNATIONAL CONSULTATIVE COMMISSION ON RADIO COMMUNICATIONS FOR COMPUTING THE FIELD STRENGTH OF THE IONOSPHERIC WAVE IN THE EUROPEAN ZONE OF RADIO BROADCASTING. IT WAS FOUND THAT FOR PATHS UP TO 2,000 KM IN LENGTH THERE IS A GOOD CORRESPONDENCE TO THE MEASURED VALUES RECOMMENDED BY THE COMMISSION. FOR LONGER PATHS A CORRESPONDENCE IS OBSERVED ONLY AT LOW FREQUENCIES. FOR HIGHER FREQUENCIES THE MEASUREMENT RESULTS DEVIATE FROM THE PROPAGATION CURVE FOR THE CORRESPONDING FREQUENCY AND APPROACH THE LOW FREQUENCY CURVES. AN INCREASE IN ATTENUATION AT HIGH FREQUENCIES OVER THE TERRITORY OF THE USSR IS NOT CONFIRMED, AT LEAST FOR PATHS OF A LATITUDINAL DIRECTION. THE MAGNETIC INCLINATION CORRECTION CURVES AGREE WELL FOR PATHS UP TO 2,200 KM IN LENGTH. FOR LONGER PATHS IT IS PREFERABLE TO DETERMINE THE CORRECTION SEPARATELY FOR EACH HOP AND ADD THE RESULTS. THE DISTRIBUTION OF HOURLY MEDIANS IS CLOSE TO LOG NORMAL. DEVIATION OF THE QUASIMAXIMUM VALUE FROM THE ANNUAL MEDIAN IS PLUS 6 DB; DEVIATION OF THE QUASIMINIMUM VALUE IS 8 DB. THE SEASONAL VARIATION HAS TWO MAXIMA (MARCH AND OCTOBER) AND TWO MINIMA (SHALLOW IN JANUARY AND DEEPER IN MAY-JUNE). FACILITY: INSTITUTE OF GEOLOGY AND GEOPHYSICS, SIBERIAN DEPARTMENT ACADEMY OF SCIENCES USSR. FACILITY: NOVOSIBIRSK ELECTRICAL ENGINEERING COMMUNICATIONS INSTITUTE.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VILENSKIY, I. M. and PLOTKIN, V. V. UDC 621.371.029.51

"Effect of Artificial Gradients in the Ionosphere on Propagation in the Long-Wave Range"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl. Sekts. 1 (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses; Section 1--collection of works) "Nauka," 1972, pp 261-269 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10A326)

Translation: The mechanism of the origin of the gradients in complex dielectric permeability in the absorption of the extraordinary component of a wave whose frequency is close to gyromagnetic, in the ionosphere, and the influence of this effect on radio wave propagation, are considered. Three illustrations. A. L.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VILENSKIY, M. YA., Moscow Order of the Red Banner of Labor State Pedagogical Institute imeni V. I. Lenin

"An Experiment With the Planning of Training Loads to Optimize the Physical and Mental Performance of Students"

Moscow, Teoriya i Praktika Fizicheskoy Kul'tury, No 10, 1971, pp 55-58

Abstract: The experiment was designed to test the assumption that the acquisition of intellectual skills is a process similar in several respects to that involved in gaining mastery of athletic skills. Athletes (sprinters) and students of a foreign language (English) were given the same type of training program, which consisted of 4 cycles (3 3-week and a concluding 2-week) extending over 11 weeks. The load was increased the first 2 weeks of each 3-week cycle and decreased somewhat the 3rd week, but at a higher level from cycle to cycle. And the activities the first week of the concluding cycle were more strenuous the second week. By all the criteria used to assess the results (e.g., tests, competitions, etc.), those trained by the method of alternating gradually increasing and slightly decreased loads did significantly better than the control.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VILENSKIY, M. Ya., Moscow Order of the Red Banner of Labor State Pedagogical Institute imeni V. I. Lenin

"Comparative Characteristics of the Recovery Period After Strenuous Physical and Intellectual Work"

Moscow, Teoriya i Praktika Fizicheskoy Kul'tury, No 5, 1971, pp 46-49

Abstract: Study of the dynamics of physical and mental performance at various intervals of time following strenuous exercise showed the pattern of the recovery period to be largely the same in both types of activity. The level of performance of physical exertions (pedaling until exhaustion on a stationary bicycle) was 67 to 77% of the baseline after 24 hours, 82 to 88% after 48 hours, 84 to 96% after 72 hours, and 88 to 110% after 96 hours. The recovery period following intellectual work (mental arithmetic operations involving 2- and 3-digit numbers) was also phasic in character. Efficiency was 62 to 72% of the baseline after 24 hours, 73 to 88% after 48 hours, and 77 to 100% after 72 hours. Investigation of changes in various motor and autonomic functions after maximum physical and mental stress revealed heterochronism in their recovery but no correlation with the level of performance of either activity.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

GLORIA

TECHNICAL TRANSLATION

FSTC-HT-23- 1162-71

D-3

ENGLISH TITLE: Long-term Optical Memory Unit

FOREIGN TITLE: Dolgovremennoye opticheskoye zapominayushcheye ustroystvo

5503793

AUTHOR: (inventors: A. Z. Kan, L. A. Drachev, L. I. Brodolin, and P. L. Vilenskiy

(all -computers)

VILENSKIY, P.L.

SOURCE: Opisaniye Izobreteniya k Avtorskomu Svidetel'stvu No. 220315, filed 20 June 1966 (No 1084436/26-24) and published 16 Sep 1968

Translated for FSTC by Leo Kanner Associates, Redwood City, Ca. 94061

NOTICE

The contents of this publication have been translated as presented in the original text. No attempt has been made to verify the accuracy of any statement contained herein. This translation is published with a minimum of copy editing and graphics preparation in order to expedite the dissemination of information. Requests for additional copies of this document should be addressed to Department A, National Technical Information Service, Springfield, Virginia 22151. Approved for public release: distribution unlimited.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--INFLUENCE OF NATURAL RADIOACTIVE ATMOSPHERIC DUST ON THE RESIDENCE TIME OF PRIME210 PB IN THE TROPOSPHERE -U-

AUTHOR--VILENSKIY, V.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, FIZ. ATMOS. OKEANA; 6: 307-10

DATE PUBLISHED-------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, ATMOSPHERIC SCIENCES

TOPIC TAGS--TROPOSPHERE, RADIOISOTOPE, AEROSOL, DUST, LEAD ISOTOPE, RADIOACTIVE FALLOUT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1085 STEP NO--UR/0362/70/006/000/0307/0310

CIRC ACCESSION NO--AP0118235

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 020 UNCLASSIFIED

CIRC ACCESSION NO--AP0118235 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DEVIATION OF THE CONCENTRATION OF RADIOISOTOPES IN THE ATMOSPHERE FROM THE EQUILIBRIUM VALUE HAS BEEN USED AS A CRITERION FOR CALCULATING THE RESIDENCE TIME OF PRIEM210 PB AND OF NATURAL AEROSOLS IN THE TROPOSPHERE. IF THE PRIME226 RA CONTENT REFLECTS THE EQUILIBRIUM CONCENTRATION OF PRIME210 PB, IT MAY BE ASSUMED THAT THERE IS A CERTAIN EQUILIBRIUM CONCENTRATION ALSO IN FALLOUT. IN ORDER TO DETERMINE EXACTLY THE RATIO OF PRIME210 PB BOUND TO ATMOSPHERIC DUST PARTICLES AND THE PRIME210 PB FORMED BY THE DECAY OF PRIME226 RA, FALLOUT COLLECTED IN THE MOSCOW REGION WAS ANALYZED TO DETERMINE SIMULTANEOUSLY THE PRIEM210 PB AND PRIME226 RA CONCENTRATIONS. THE LATTER WAS OBTAINED BY THE ALPHA SCINTILLATION METHOD FROM THE ALPHA ACTIVITY OF PRIME226 RA AND ITS SHORT LIVED DECAY PRODUCTS, AND THE FORMER BY THE BETA EMISSION OF PRIME210 PB, AFTER PURIFYING THE LEAD WITH ION EXCHANGE RESINS. IT WAS FOUND THAT THE PORTION OF PRIME226 RA WAS NOT CONSTANT; IT RANGED FROM 2 TO 15PERCENT. THE RATIO OF PRIME210 PB: PRIME226 RA ALSO VARIED WITHIN WIDE LIMITS. IT WAS CONCLUDED THAT PRACTICALLY ALL OF THE PRIME210 PB IN THE LAYER NEAR THE EARTH AND IN THE ATMOSPHERIC FALLOUT ORIGNATES FROM ATMOSPHERIC DUST PARTICLES AND CANNOT BE USED TO ESTIMATE THE MEAN RESIDENCE TIME OF PRIME210 PB IN THE TROPOSPHERE. FACILITY: INST. OF GEOCHEMISTRY AND ANALYTICAL CHEMISTRY, MOSCOW.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VILENSKIY, YU.

"Scalpel of Light"

Kiev, Pravda Ukrainy, 30 Jul 72, p 3

Abstract: Following a resume of the history of laser development, an interview with A. M. Prokhorov, who recently visited the Institute of Problems of Oncology, Academy of Sciences Ukarainian SSR is presented. He met with the director of the Institute, academician of the Academy of Sciences Ukrainian SSR R. Ye. Kavetskiy, and other scientists who were conducting research in laser applications in biology and medicine. He visited the department of the biological effect of lasers and the first oncological laser clinic in our country.

This was a somewhat unusual tour for a physicist. The guest was offered the opportunity to perform a laser micro-operation on an isolated living cell. Then on the television scree, (this is the usual method of intervention) he observed the removal of a pre-cancerous skin growth. The operation lasts a fraction of a second and for this reason it is painless and easily endured by the patient. A considerable number of effective laser operations are conducted under outpatient conditions. Incidentally, R. Ye. Kavetskiy tested the effect of laser energy, as employed in the clinic, on himself. He noted that there is a sensation of slight burn which lasts

1/3

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VILENSKIY, YU. , Pravda Ukrainy, 30 Jul 72, p 3

only a short time. Treatment of cancer and other skin tumors by lasers produces positive results (already there are nearly 300 favorable cases, a number of which could not be helpted by any previous method). The guest discussed present and future experiments on the use of laser equipment in oncology with the Kiev researchers.

A lively interest was aroused by a film of current experiments by the head of the department of biological effects of lasers, candidate of biological sciences N. F. Gamal', and the American scientist D. Raunds. The laser acts centrally on the miniature intra-cellular structures which are involved in the power substation in cells. With wonderful precision, the light needle, with an edge as long as a micron, finds the desired places. Surgery of the living micro-world has become fact...

While touring the institute, academician A. M. Prokhorov kindly agreed to answer the questions of the correspondent of "Pravda Ukrainy."

Could you have guessed, 18 years ago ,at the birth of this new method which revolutionized physics and technology, that the laser would give rise to such creative enthusiasm among biologists?

"I would like to emphasize that I saw not only enthusiasms, but became convinced of the profound capability of physical processes and the possibility of lasers," said academician A. M. Prokhorov. "From the work on the cellular level, disclosing biological laws of the action of the ray,

2/3

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VILENSKIY, YU., Pravda Ukrainy, 30 Jul 72, p 3

to experimentation on test animals with induced cancers, and only then to clinical practice, this multi-step ladder leads to fruitfulness within the walls of one establishment. Those properties of quantum generated light, which had been little known, come to light. The laser has been put to use in many sciences, and hopefully will clarify as many details there as it has in the living organism."

One more question, Aleksandr Mikhaylovich. How do you evaluate the work of the Kiev Scientists?

"Extremely high. A strong "laser park" has been built, which allows a wide range of experiments. In short, it is apparent that Ukrainian biology came into being with cybernetics and radioelectronics specialists. This is a high-quality group."

"I have already been in touch with the institute scientists. After this meeting, of interest to both sides of the discussion, it seems to me, we will undoubtedly continue this contact. It is pleasant to help in this matter, which, if you please, can be called the function of laser No 1."

Parts of the visit of academician A. M. Prokhorov to the Institute of Oncology, Academy of Science Ukrainian SSR are to be included in a film on modern physics, made for television.

3/3

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR UDC 77

AVRAMENKO, L. F., VILENSKIY, YU. B., IVANOV, B. M., OL'SHEVSKAYA, I. A., POCHINOK, V. YA., SKRIPNIK, L. I., FEDOROVA, L. N., FEDOROVA, I. P.

"Synthesis of Tetrazoles, Triazoles, Triazenes, and Azo Compounds and a Study of Them as Additives to Silver Halide Photographic Emulsions. I. Synthesis, Structure, Chemical Properties, and Photographic Activity"

Uspekhi nauchn. fotogr. (Advances in Scientific Photography), 1970, Vol. 14, pp 5-11 (from RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1333)

Translation: Data on the synthesis, structure, and properties of over 300 organic compounds intended for stabilizing and defogging or depressing additives in AgHal emulsions are presented; in certain cases these substances were also optical sensitizers. Among the 40 tetrazoles not all were stabilizers of the photoemulsions; there was also established a difference in the chemical behavior in similar reactions. This duality is explained by the existence of azido-tetrazole tautomerism in many condensed tetrazoles; stabilization is caused by adsorption by ions

1/2

USSR

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

of the AgHal lattice of these azido forms in which there is an increased electron density on the heterocyclic N atom. Many stabilizers were observed among the triazoles, and not only condensed triazoles; among these many could be converted into cyanin dyes by combining stabilizers and optical sensitizers. It is shown that it is necessary for a stabilizer that three N atoms enter into the ring, as in triazoles: a considerable number of stabilizers of AgCl-emulsion was also found among the triazenes. These compounds are simultaneously optical sensitizers, defoggers, and depressers; in AgBr-emulsions only the last two properties are retained, in view of differences in the formation of ion-dipole compounds of AgCl and AgBr lattices with a polar triazene molecule. Of the azo compounds only nonsymmetric substances with heterocyclic radicals were photographically active. 31 references.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR UDC 77

AVRAMENKO, L. F., VILENSKIY, YU. B., IVANOV, B. M., OL'SHEVSKAYA, I. A., POCHINOK, V. YA., SKRIPNIK, L. I., FEDOROVA, L. N., FEDOROVA, I. P.

"Synthesis of Tetrazoles, Triazoles, Triazenes, and Azo Compounds and a Study of Them as Additives to Silver Halide Photographic Emulsions. II. Photographic Study of Material"

Uspekhi nauchn. fotogr. (Advances in Scientific Photography), 1970, Vol. 14, pp 12-23 (From RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1334)

Translation: Three indices are introduced to evaluate quantitatively various types of photographic activity of materials synthesized previously: (see RZh-Fizika, No12(I), Dec 70, Abstract No 12D1333): stabilizing, depressing, and defogging effects and certain combinations of these parameters in the kinetic curves for sensitivity and fogging in the second aging before and after introduction of the substances tested. If the substance was at the same time an optical sensitizer, the value of the depressing index was negative. Besides the testing of substances in AgCl- and AgBr(I)-emulsions, the kinetics of their adsorption by AgHal, the absorption spectrum in solution and after adsorption by AgHal, and the sensitization spectrum was studies. A correlation

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

AVRAMENKO, L.F., et al, Uspekhi nauchn. fotogr., 1970, Vol 14, pp 12-23

was found for condensed tetrazoles between the stabilizer and the irreversible adsorption of material and between the depressing and defogging agents and reversible adsorption; irreversible adsorption on a small portion of the AgHal surface was sufficient for total stabilization. The same was true for the stabilization of triazenes. Depression of fogging was apparently always associated with the slowing down of the appearance of reversibly adsorbed substances, although in many cases there simultaneously occurred desensitization or slowing down of aging. Certain connections were established between photographic activity and the structure and substitutes in molecules of triazoles and optical sensitizers on the basis of their quaternary salts and also in molecules of heterocyclic azo compounds. The formation of iono-dipole or coordinated compounds of the material with AgHal was necessary for stabilization, which requires the coincidence of their dipole distances; the latter partially explains the differences in the behavior of materials in AgCl- and AgBr(I)-emulsions. One must take into account, however, that in view of the large homeopolarity of the bond in AgBr, even in AgCl, the latter requires more polar stabilizers. 12 references.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 026 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--REACTIONS OF ATOMIC OXYGEN WITH METHANE DURING THE GAS PHASE PHOTOLYSIS OF AN OXYGEN METHANE MIXTURE AT 1925-1550 ANGSTROM -U-

AUTHOR-(02)-VILESOV, F.I., PRAVILOV, A.M.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VYS. ENERG. 1970, 4(3), 220-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--OXYGEN, METHANE, PHOTOLYSIS, METHANOL, FORMALDEHYDE, CARBON DIOXIDE, PRESSURE EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0862 STEP NO--UR/0456/70/004/003/0220/0225

CIRC ACCESSION NO--AP0137890

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 026 UNCLASSIFIED

CIRC ACCESSION NO--AP0137890 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FORMATION OF MEOH, CH SUB2 O, AND CO SUB2 WAS FOLLOWED DURING THE PHOTOCHEM. REACTION OF O WITH CH SUB4. MAX. QUANTUM YIELDS ARE GIVEN AND THEIR DEPENDENCE ON THE PRESSURE OF CH SUB4 INDICATES THAT MEOH AND CH SUB2 O ARE THE PRIMARY REACTION PRODUCTS. CO SUB2 IS A 3RD ORDER REACTION PRODUCT.

FACILITY: NAUCH. ISSLED. FIZ. INST., LENINGRAD. GOS. UNIV. IM. ZHDANOVA, LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--PHOTOIONIZATION OF ETHYL HALIDE VAPORS -U-

AUTHOR-(03)-AKOPYAN, M.YE., SERGEYEV, YU.L., VILESOV, F.I.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VYS. ENERG. 1970, 4(3), 213-19

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHOTOIONIZATION, CHLORINATED ALIPHATIC COMPOUND, BROMINATED ORGANIC COMPOUND, IODINATED ORGANIC COMPOUND, HALIDE, ALKYL RADICAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/005 STEP NO--UR/0456/70/004/003/0213/0219

CIRC ACCESSION NO--AP0140291

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

2/2 014 UNCLASSIFIED

CIRC ACCESSION NO--AP0140291 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A MASS SPECTROMETER EMPLOYING MONOCHROMATIC LIGHT FLUX OF ENERGY UP TO 14 EV WAS USED TO STUDY PHOTOIONIZATION OF ETI, ETBR, AND ETCL VAPORS. ANAL. OF PHOTOIONIZATION EFFICIENCY CURVES DISCLOSED BOTH THE IONIZATION POTENTIALS OF THE STUDIED MOLS. AND THE EXCITATION ENERGIES OF THE FORMED IONS. PREDISSOCN. TAKES PLACE IN THE REGION BETWEEN THE FIRST TWO IONIZATION POTENTIALS AND AT 11-12 EV. THE APPEARANCE POTENTIALS OF METASTABLE IONS AND THE MECHANISMS OF THEIR FORMATION ARE GIVEN.

FACILITY: NAUCH.-ISSLED. FIZ. INST., LENINGRAD. GOS. UNIV. IM. ZHDANOVA, LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 012 UNCLASSIFIED

TITLE--EFFECT OF POWDERED ADDITIVES ON THE PROPERTIES OF AMMONIUM NITRATE -U-

PROCESSING DATE--16OCT70

AUTHOR-(04)-GANZ, S.N., VILESOV, G.I., DOBROVOLSKIY, YE.I., KHARICHKOV, I.N.

COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. UKR. 1970, (1), P 10-11

DATE PUBLISHED--------70

SUBJECT AREAS--AGRICULTURE

TOPIC TAGS--AMMONIUM NITRATE, WASTE CHEMICAL CONVERSION, ZINC OXIDE, MAGNESIUM, CALCIUM CARBONATE, CALCIUM SULFATE, MINERAL FERTILIZER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/0385

STEP NO--UR/0436/70/000/001/0010/0011

CIRC ACCESSION NO--AP0113303

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

UNCLASSIFIED PROCESSING DATE--16OCT70

2/2 012

CIRC ACCESSION NO--AP0113303

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WASTE FROM PRODUCTION OF ZNO PIGMENT AND SLIME FROM MN MINES WERE DRIED AND MIXED IN THE RATIO OF 3 TO 2 AND AN EQUAL AMT. OF CACO SUB3 PLUS CASO SUB4 WAS ADDED. THIS MIXT., CONTG. ALL TRACE ELEMENTS REQUIRED FOR FERTILIZING, WAS ADDED TO NH SUB4 NO SUB3 (1, 3, 5, OR 6PERCENT) TO PROLONG THE STORAGE LIFE OF THE FERTILIZER. THE AGRONOMIC EFFECTIVENESS WAS INCREASED BY 8-15PERCENT. FACILITY: DNEPROPETROVSK. KHIM.-TEKHNOL. INST., DNEPROPETROVSK, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

USSR

VILEYSHIS, A. I., AMBRAZYAVICHYUS, A. B.

UDC 536.52.001.4

"Trichromatic Automatic Pyrometer Measuring of the Temperatures of Various Ceramics"

V sb. Mechanika, Mekhanika (Mechanics--collection of Works), Vil'nyus, 1970, pp 380-384 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 8, Aug 70, Abstract No 8.32.624)

Translation: Experimental measuring of the temperature of various ceramics with the help of trichromatic pyrometer, designed by the Institute of Physicotechnical Problems of Power Engineering of the Academy of Sciences of the Lithuanian SSR, is presented. The trichromatic, two dichromatic and the actual temperatures of the studied specimens are measured. It is established experimentally that the use of trichromatic pyrometer for measuring temperatures of various ceramics allows to reduce errors of dichromatic pyrometers resulting from selective radiation of ceramics in the used spectrum region. 2 ill., 3 bibl. entries.

V. S. K.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8

1/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--PREPARATION OF CARRIER FREE CALCIUM 47 -U-

AUTHOR-(03)-VILGELMOVA, L., NIKITYUK, L.N., RYBAKOV, V.N.

COUNTRY OF INFO--USSR

SOURCE--RADIOKHIMIYA 1970, 12(2), 407-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--CALCIUM ISOTOPE, IRRADIATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0108 STEP NO--UR/0186/70/012/002/0407/0409

CIRC ACCESSION NO--AP0132401

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203510019-8"