

USSR

UDC 613.644

ANDREYEVA-GALANINA, Ye. Ts., KADYSKIN, A. V., and SUVOROV, G. A., Sanitary Hygiene Medical Institute, Leningrad

"Some Unresolved Aspects of the Noise Problem"

Moscow, *Gigiyena Truda i Professional'nyye Zabolevaniya*, No 10, 1971, pp 6-8

Abstract: Although the effects of industrial noise on the body have been extensively investigated, some matters of both practical and theoretical importance have received comparatively little attention. They include: (a) maximum permissible noise levels in relation to the age of the workers; (b) variations in the noise spectrum in relation to length of exposure and dominant frequency components; (c) effects of noise levels below the 63 to 8000 hz frequency range, including the infrasonic frequencies; (d) effects of pulsed noise; (e) effects of noise combined with other industrial factors; (f) possibility of noise having cumulative effects; (g) effects of noise on the female body; (h) effects of prolonged use of individual protective devices against noise.

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2/2 021

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0126150

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY USING STRAIN OR OF ASCITIC TUMOUR OF RATS CAUSING ACCUMULATION OF ASCITIC FLUID, THE AUTHORS OBTAINED IMMUNE HIGHLY SPECIFIC ASCITIC FLUIDS CONTAINING ANTIBODIES AGAINST BORDETELLA IN TITRES OF 1:10,240-1:81,920. A STUDY WAS MADE OF PHYSICAL INDICES, TOTAL NITROGEN AND PROTEIN NITROGEN IN THE ASCITIC FLUIDS, IN COMPARISON WITH THE SERA FROM INTACT AND VACCINATED RATS. ASCITIC FLUIDS RELEASED OF TUMOUR CELLS BY CENTRIFUGATION AND TREATED WITH MERTHIOLATE BECAME TURBID AFTER 10 TO 11 DAYS OF STORAGE. TO STABILIZE THE PHYSICAL INDICES A METHOD OF SIMULTANEOUS DEFIBRINATION AND TREATMENT OF ASCITIC FLUID WITH CHLOROFORM (1:10) WAS ELABORATED. THE CONTENT OF TOTAL NITROGEN AND OF PROTEIN NITROGEN WAS DETERMINED CALORIMETRICALLY WITH NESSLER'S REAGENT; GENERAL REGULARITIES ATTENDING ELEVATION OF PROTEIN CONTENT IN THE SERA SPECIFIC ANTIBODIES AGAINST BORDETELLA CAN BE USED FOR PRIMARY SEROLOGICAL SELECTION OF COLONIES GROWN ON SOLID MEDIA, AND FOR SPECIES IDENTIFICATION OF BORDETELLA.

FACILITY: GOSUDARSTVENNYY KONTROL'NYY INSTITUT MEDITSINSKIKH BIOLOGICHESKIKH PREPARATOV IM TARASEVICHA, MOSKVA.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--ASCITIC FLUIDS OF VACCINATED RATS AND THEIR PROPERTIES -U-

AUTHOR--(02)-BOCHAROVA, N.G., ANDREYEVA, Z.M.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 6,  
PP 108-112

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TUMOR, RAT, TISSUE FLUID, ANTIBODY, NITROGEN COMPOUND,  
SEROLOGIC TEST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3001/0395

STEP NO--UR/0016/70/000/006/0108/0112

CIRC ACCESSION NO--AP0126150

UNCLASSIFIED

USSR

UDC 576.3:612.17:615.5

ANDREYEVA, YE. N.

"The Effect of Dibazole and Also Certain Stimulants and Inhibitors of Protein Synthesis on the Heat Resistance of the Sartorius Muscle of Frogs," pp 36-45, Sintez Belka i Rezistentnost' Kletok, (Protein Synthesis and Cell Resistance), Leningrad, "Nauka," 1971, 104 pp

Abstract: It was established that under the effect of dibazole, the resistance of muscles to the damaging action of temperature increases. It was shown that an analagous result is achieved under the influence of biologically active substances (vitamin B<sub>12</sub>, 4-methyluracil, and 6-benzylaminopurine) which have protein synthesis stimulating properties. It was shown that inhibitors of protein synthesis (puromycin, chloramphenicol) and also actinomycin D reduced the heat resistance of the muscles. During a simultaneous influence of such substances on the muscles, a mutual weakening of the effect with a predominant influence of inhibitors is observed. On the basis of experimental data and also of some literature data it is possible to recognize the similarity of the effect of dibazole and protein synthesis stimulators. Apparently, in ensuring the resistance of the sartorius muscle of frogs to the effect of high temperatures, intensified protein synthesis is of substantial significance.

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USSR

UDC 576.3:612.017:615.5

ANDREYEVA, YE. N.

"The Effect of Actinomycin D, Chloramphenicol, and Dibazole on the Incorporation of C<sup>14</sup>-Leucine into the Skeletal Muscles of Frogs Under the Influence of Temperature", pp 46-49, Sintez Belka i Rezistentnost' Kletok, (Protein Synthesis and Cell Resistance), Leningrad, "Nauka," 1971, 104 pp

Abstract: It was established that in the initial period of the exposure of isolated mm. sartorii to a temperature of 36°C, the incorporation of labeled amino acids into the acid-insoluble fraction of the muscle homogenate increases. This phenomenon does not occur in the presence of inhibitors and is increased by protein synthesis stimulators. During the simultaneous action of stimulators and inhibitors or protein synthesis on the muscles, the inhibitor phenomenon was predominant. The question of the possible role of protein synthesis in the mechanism of cell resistance is discussed.

(2)

USSR

UDC 632.95

MANDEL'BAUM, Ya. A., ABRAMOVA, G. L., GOLEVLEVA, L. M., FEDOSEYENKO, L. G.,  
ANDREYEVA, Ye. I., and PRONCHENKO, T. S.

"Fungicides"

USSR Author's Certificate No 254254, Filed 8 Jul 68, Published 13 Mar 72  
(from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom (I, L-S), No 1(II),  
1973, Abstract No IN490P by T. A. Belyayeva)

Translation: Compounds of a general formula  $(RO)R'HNP(S)SR''$  (I) ( $R_1 = C_1 - C_3$ -alkyl or chloralkyl,  $R'$  and  $R'' = C_1 - C_4$ -alkyl) are suggested for use as fungicides. They were tested on pure cultures of phytopathogenic fungi and gummosis bacteria. The LD<sub>50</sub> for rice weevil of these compounds was determined. Compounds I are toxic for fungus mycelium, and compounds  $(EtO)PrHNP(S)SPr$  and  $(PrO)PrHNP(S)SPr$  (Ia) are effective against Verticillium cotton wilt and their increase the cotton yield 1.5 times.

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2/2 013

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0130939

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PREPNS. CONTG. LARGER THAN OR EQUAL TO 50PERCENT TETRAMETHYLTHIURAM DISULFIDE (TMTD) PROTECTED SEEDS AGAINST MOLDING DURING A 1-2 YEAR STORAGE PERIOD; THE GERMINATING ABILITY OF THE SEEDS WAS UNAFFECTED. USE OF COMBINED PREPNS. BASED ON 50PERCENT TMTD AND 20PERCENT GAMMA HEXACHLOROCYCLOHEXANE OR HEPTACHLOR ALLOWED THE STORAGE PERIOD TO BE INCREASED TO 40 MONTHS WITHOUT ADVERSE EFFECT. THE USE OF SEMIORY METHOD OF MORDANTING SEEDS DESIGNATED FOR LONG TERM STORAGE YIELDED BOTH BETTER DISEASE PROTECTION AND SOWING QUALITY OF CORN. FACILITY: VSES. NAUCH.-ISSLED. INST. KUKURUZY, DNEPROPETROVSK, USSR.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--EFFECT OF TMD BASED PREPARATIONS ON THE SOWING QUALITY OF CORN  
DURING LONG TERM STORAGE -U-  
AUTHOR-(02)-ANDREYEVA, YE.I., KULIK, T.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM. SEL. KHOZ. 1970, 8(3), 193-5

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FUNGICIDE, AGRICULTURE CROP SEED, CEREAL CROP, PLANT DISEASE CONTROL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3004/0180

STEP NO--UR/0394/70/008/003/0193/0195

CIRC ACCESSION NO--AP0130939

UNCLASSIFIED



USSR

UDC 632.95

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

"Concerning Liquid Organomercury Seed Disinfectants"

V sb. Khim. sredstva zaschity rast. (Chemical Agents for Plant Protection --  
collection of works), vyp 1, Moscow, 1970, pp 150-155 (From *Izh-Khimiya*, No 11,  
Jun 72, Abstract No 111027)

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

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USSR

UDC 632.95

VOLODKOVICH, S. D., ANDREYEVA, YE. I., GOLYSHIN, N. E., MOROVA, V. I., KAPLAN, G. I., PRONCHENKO, T. S., USMANOV, H. G., ABELENSEV, V. I., DVOYCHENKOVA, E. A., and SKAZKINA, T. P.

"Bromtan"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Protectants -- collection of works), vyp 1, Moscow, 1970, pp 116-129 (from Khl-Khimiya, No 13, 10 Jul 72, Abstract No 128501 by T. A. Belyayeva)

Translation: The preparation bromtan ( $\text{BrCCl}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{Cl}$ ) (I) is being tested as a soil fungicide and antiseptic for nonmetallic materials. I is as effective as carbathion in the control of melon fusarium wilt. I in a concentration of 0.8 percent is equivalent to DNOC in an 0.6 percent concentration with respect to hibernating forms of the causative agent of apple scab and brown spot. I is active in the control of cotton root rot and wilt at a consumption rate of 100-100 kg/ha.

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USSR

UDC 632.95

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

"Phenylmercury and Hexylmercury"

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

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

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USSR

UDC 632.95

ANDREYEVA, YE. I., MEL'NIKOV, N. N., PRONCHENKO, T. S., SKALCZUBOVA, A. V.,  
MATVEYEVA, G. N., OVSISHCHER, M. R., BEZUGLYY, S. F., and UDEANOV, E. T.

"Phenothiuram Seed Disinfectant"

V sb. Khim. Sredstva zashchity rast. (Chemical Agents for Plant Protection -- collection of works), vyp 1, Moscow, 1970, pp 135-145 (Izh-Khimiya, No 11, Jun 72, Abstract No 11N429)

Translation: The combination disinfectant phenothiuram (40% tetramethylthiuram disulfide, 10% copper trichlorophenoxide, and 20%  $\gamma$ -hexachlorocyclohexane; heptachlor or some other organochlorine insecticide may be substituted for the last component) has been tested and is recommended for treating cotton seeds (10-12 kg/ton) and the seeds of legume grain crops (3-4 kg/ton). Phenothiuram may also be used to treat seed corn, tree crop seeds, and the planting material for flowers, shrubs and trees. Phenothiuram is moderately toxic and is recommended as a substitute for organomercury disinfectants.

USSR

UDC 632.4

ANDREYEVA, YE. I., VNI All-Union Scientific Research Institute of Chemical Means of Plant Protection

"Preparations Against Wheat and Barley Smut"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 10, No 2(100), 1972, pp 32-36

Abstract: Wheat and barley smut are difficult to combat because the pathogens *Ustilago nuda* and *U. tritici* fungi are retained after infection of plants in internal tissues. Vitavax (2,3-dihydro-5-carboxyanilide-6-methyl-1,4-oxythiene) and less notably its sulfone-analog Plantvax (2,3-dihydro-5-carboxyanilide-6-methyl-1,4-oxythiene-4,4-dihydroxide) are mildly toxic to warm-blooded animals but have been found by many investigators to have varying degrees of effectiveness against smut according to the concentration of the fungicide and the types of infection.

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USSR

UDC 632.95'

GRAPOV, A. F., MEL'NIKOV, N. N., ANDREYEVA, YE. I., RASVODOVSKAYA, L. V., PRONCHENKO, T. S., USMANOV, M. T., MIKHAYLOVA, O. B., SMIRNOVA, K. F., and ZBARSKIY, F. SH.

USSR Authors' Certificate No 276572, Cl. Aol n 9/36, filed 13 Jan 69, published 11 Feb 72 (from RZh-Khimiya, No 20, 25 Oct 72, Abstract No 20N582 by T. A. Belyayeva)

Translation: In order to widen the assortment of effective fungicides for controlling cotton wilt, it is suggested that use as systemic fungicides be made of asymmetric diamides and amidohydrazides of alkylphosphonic and alkylthiophosphonic acids of the formula  $R'R''N(R)P(X)(NH)_nR'''(I)$  (R and R' = alkyl; R'' = H or alkyl; R''' = unsubstituted or substituted phenyl; n = 1 or 2; X = O or S). I is obtained from amines or hydrazides and alkylphosphonic or alkylthiophosphonic acid chlorides. The preparations were tested under field conditions on naturally infected plants. Experimental results showed that, as compared with control, I possesses definite systemic activity, suppressing the development of cotton wilt. Data are presented on tests of I in comparison with phosbutyl.

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USSR

UDC 632.952

ANDREYEVA, YE. I., and KABAKHIDZE, D. M.

"New Preparations with Systemic Activity"

Moscow, Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva imeni D. I. Mendeleev, Vol 18, No 5, 1973, pp 523-532

Abstract: A review with 124 references covering biological and chemical properties of the most familiar systemic fungicides (benzimidazoles, anilides, thiophonates, morpholines, pyrazoles, etc). Some attention is given to the mechanism of action of these compounds, as well as to the specific disease inducing activity of various classes of fungi. Toxicological data are reported in respect to the warm-blooded animals -- principally rats. Possibility of practical application of individual preparations is discussed.

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ANDREJEVA, YF A

30 JUL 71

96

FROM COLUMBIA

REF ID: A66000

56. USSR

ANDREJEVA, Y. A. and ANDREJEVA, Ye. A.

"General Vary Simple Mechanisms of Spatial Muscle Control"

Izdatel'stvo Professorov Dvuzhivnogo Vuzhivnogo Akademiya, Moscow, "Soviet Publishing House, 1970, pp 5-19"

Translation (of author's abstract): Model representations of simple muscle control systems and control systems for pairs of muscle-antagonists are given for precise maintenance of desired value of a joint angle and also for the movement by specific joints.

501 FOREIGN PRESS DISSEM  
30 JUL 71

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57. USSR

DOC 62-50

ANDREJEVA, Ye. A., ZHARAFOVA, L. M., LITVINOV, A. I., and GEROV, V. I.

"Muscle Twitches as Representative Acts of Muscle Activity"

Izdatel'stvo Professorov Dvuzhivnogo Vuzhivnogo Akademiya, Moscow, "Soviet Publishing House, 1970, pp 59-60"

Translation (of author's abstract): A method of interpreting an EMG [electromyogram] by passing it through a filter is proposed. This technique shows that EMG's functions are accompanied by twitches whose duration in the EMG traces is the duration of the force generated by the muscles in time intervals of the order of 100 msec.

The method used shows that the central part in the control of muscle activity is the instant of twitch initiation and that these instants are practically independent of filter characteristics.

The proposed method is convenient for studying muscle control processes.

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ANDREYEVA, YE A

30 Jul 71

58. USSR

97

PRO: OTHERS: LDC: 61-90

ANDREYEVA, YE. A. and GIBBEROV, V. I.

LDC 61-90

"Relationship Between Electrical Activity of Muscles and Muscle Strengthening in Isometric Conditions"

Intelektivnye Protsessy, Povolnyaya Psicheshoy Aktivnostiy, Moscow, "Nauka" Publishing House, 1970, pp. 12-25

Translation (of author's abstract): Results of experiments on animals and man establishing the relationship between local electrical activity of a muscle and its strengthening in the isometric case are described.

It is shown that the signal received from the muscle ENG by passing it through a detector through an inertial link with a time constant of 0.05 sec and with a time lag of 0.02 sec is found to show quite good agreement with the variation in muscle stretch in the frequency range from fractions of 1 hertz to 10 hertz.

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30 Foreign Press Digest

30 Jul 71

59. USSR

ANDREYEVA, YE. A. and GIBBEROV, V. I.

LDC 61-90

LDC 61-90

"Relationship between Joint Torque and Control of Joint Angle"

Intelektivnye Protsessy, Povolnyaya Psicheshoy Aktivnostiy, Moscow, "Nauka" Publishing House, 1970, pp. 60-73

Translation (of author's abstract): Results of an experimental study of the activity of a pair of muscle-antagonists in the maintenance of a given joint angle under different conditions are given.

The isometric component of the joint angle theorem is shown to result from the functioning of the appropriate sensor mechanism and the low-frequency component is a feature of random extraneous influences on the operation of this mechanism.

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USSR

UDC 8.74

AYZERMAN, M. A., ANDREYEVA, YE. A.

"Simplest Search Mechanism for Controlling Muscular Activity"

V sb. Avtomaty, gibrida. i upravlyayushch. mashiny (Automata, Hybrid and Control Machines, collection of works), Moscow, Nauka Press, 1972, pp 128-136 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V657)

Translation: A survey is presented for experimental papers aimed at discovering the general principles and laws used by the brain when controlling the muscles. The study was made on rats, rabbits and people. The special procedure for which the animate organism was included in the circuit encompassed by external feedback permitted creation of artificial conditions under which the brain was forced to solve the search problem imposed from the outside, using only one or two muscles. The control process with search for the minimum pain stimulation by means of one muscle or two muscles not connected to each other and the operation of a pair of antagonistic muscles was studied. On the basis of these experiments, model representations of the control laws implemented for the above-indicated search activity were developed.

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USSR

UDC 669.293.5'295'71:669.018.2:620.193.41

ANDREYEVA, V. V., ALEKSEYEVA, Ye. L., DONTSOV, S. N., and MOISEYEVA, I. S.

"Corrosion of Alloys of the Niobium-Titanium-Aluminum System"

V sb. Korroziya i zashchita met. (Metal Corrosion and Protection -- Collection of Works), Moscow, "Nauka," 1970, pp 49-54 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 I825 by the authors)

Translation: The article considers the mechanical properties, as well as the corrosion resistance of alloys of the Nb-Ti-Al system in 20% HCl and 40-75% H<sub>2</sub>SO<sub>4</sub> at 40 and 100°. The authors present potentiostatic current-density/potential and corrosion-rate/potential curves taken in 75% H<sub>2</sub>SO<sub>4</sub> at 140° using alloys with varying Ti and Al content. The corrosion resistance of the alloys is exponentially dependent on their atomic content of alloy components (Ti, Al), with Al most intensely affecting the deterioration of corrosion resistance. Three illustrations. Two tables. Bibliography of five titles.

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USSR

UDC 669.292.018.8.669.295

ANDREYEVA, V. V., STEPANOVA, T. P., DRUZHININA, I., VLADIMIRSKAYA, T. M.

"Influence of Titanium on Corrosion Resistance and Physical Mechanical Properties of Vanadium"

Nauchn. Tr. N-i. i Proyeckt. In-t. Redkomet. Prom-sti [Scientific Works of Scientific Research and Planning Institute for the Rare Metals Industry], 1971, Vol. 32, pp. 175-181. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 1706 by the authors).

Translation: Results are presented from studies of the physical and mechanical properties, structure, corrosion resistance, and electrochemical behavior of alloys in the system V-Ti with 10-90% Ti content. 4 figs; 3 tables; 4 biblio refs.

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USSR

ANDREYEVA, V. V., et al., Zashchita Metallov, No 4, 1972, pp 415-419

strength characteristics at high temperatures. Addition of chromium also increases the hardness of case alloys. Dendritic liquation occurs in alloys containing 30 and 40% Ti and 4-5% Cr. Addition of up to 5% chromium to Nb-Ti alloys does not worsen acid resistance, but increases mechanical characteristics.

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USSR

UDC 620.193.01"669.29

ANDREYEVA, V. V., GLUKHOVA, A. I., DONTSOV, S. N., MOISEYEVA, I. S., and  
HEL'NIKOVA, L. V., Institute of Physical Chemistry, Academy of Sciences USSR

"Corrosion Resistance and Electrochemical and Mechanical Properties of Ternary  
Nb-Ti-Ta and Nb-Ti-Cr Alloys"

Moscow, Zashchita Metallov, No 4, 1972, pp 415-419

Abstract: Binary alloys of Nb+Ta are highly resistant to solutions of strong acids. These alloys are quite promising for the manufacture of important parts of chemical apparatus. It was assumed that the presence of tantalum in binary Nb-Ti alloys should increase their corrosion resistance without reducing mechanical and technological characteristics. An experimental study was therefore made of the influence of the individual elements on the corrosion resistance and electrochemical and mechanical properties of certain ternary niobium-based alloys with titanium, tantalum, and chromium. The corrosion resistance of Nb-Ti-Ta alloys in solutions of sulfuric and hydrochloric acid at 100°C decreases with increasing titanium content, with tantalum content remaining constant. The addition of 1 to 5% chromium to niobium has no influence on its resistance to these acids, but reduces workability in the hot and cold states. Addition of chromium to Nb-Ti alloys can produce alloys with good technological properties. The chromium significantly increases the

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USSR

UDC 669.293.5.294.018.8.669.018.2

DONTSOV, S. N., MOISEYEVA, I. S., MEL'NIKOVA, L. V., GLUKHOVA, A. I., ANDREYEVA  
V. V., ALESHINA, L. V., STRICHEVSKAYA, L. G.

"Influence of Technological Factors on Corrosion Resistance and Mechanical Properties of Niobium-Tantalum Alloys"

Nauchn. Tr. N-i. i Proyektn. In-t Redkomet. Prom-sti [Scientific Works of Scientific Research and Planning Institute for the Rare Metals Industry], 1971, Vol. 32, pp. 152-160. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 1736 by the authors).

Translation: Influence of technological factors on the corrosion resistance of Nb-Ta alloys is studied. 4 figs; 5 biblio refs.

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USSR

ANDREYEVA, V. N., et al, Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenova, Vol 56, No 9, Sep 70, pp 1,193-1,207

differentiation were observed, but could be eliminated by training. The signal duration of 0.015-0.030 sec proved to be critical. Within that range the background EEG activity increased sharply, desynchronization reactions to all stimuli became protracted, conditioned reflex activity in most of the animals became disorganized, and manifestations of neurosis appeared. Normal reactions could be restored by raising the signal duration to the initial level, but training was ineffective at this stage.

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USSR

UDC 612.822.3+612.85

ANDREYEVA V. N., KRATIN, Yu. G., and KURBANOV, Sh., Group of the Neurophysiology of Central Analysis of Signals, Institute of Physiology imeni I. P. Pavlov, Academy of Sciences USSR, Leningrad

"Effect of the Duration of Sound Stimuli on the Analyzing Activity of the Brain"

Leningrad, Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenova, Vol 56, No 9, Sep 70, pp 1,193-1,207

Abstract: The effect of the duration of sound signals on EEG and behavioral responses in conditioned reflex activity was studied in cats. The sound signals were gradually shortened from 3 to 0.015 sec. Upon reduction of the signals to 0.5-1.0 sec, behavioral reactions remained unchanged but the general level of activation of the brain rhythm was raised, and the bioelectric reactions of the brain to positive stimuli and stimuli involving fine differentiation because of a moderate variation in the sound frequency were lengthened. In the 0.1-0.2 sec signal range, activation of the brain rhythm increased to a still greater extent and conditioned reflex activity was considerably disturbed. Prolonged successive inhibition and failures in fine

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ANDREYEVA, V. N.

SO: JPRS 53103  
12 MAY 71

SOME INTERFUNCTIONAL RELATIONSHIPS OF MEMORY

V. N. Andreyeva (Moscow)

PP 12-16

It studied the features of short-term memory (descriptive and verbal), long-term memory, and involuntary memory. It is shown that the features of short-term memory are related to the features of long-term memory, and that the features of involuntary memory are related to the features of short-term memory. The results of the study are discussed in terms of the theory of memory systems.

As we examine the relationship between memory and attention, we find a strong correlation between the two. Memory is a function of attention, and attention is a function of memory. The results of the study are discussed in terms of the theory of memory systems.

The results of the study are discussed in terms of the theory of memory systems. It is shown that the features of short-term memory are related to the features of long-term memory, and that the features of involuntary memory are related to the features of short-term memory. The results of the study are discussed in terms of the theory of memory systems.

The results of the study are discussed in terms of the theory of memory systems. It is shown that the features of short-term memory are related to the features of long-term memory, and that the features of involuntary memory are related to the features of short-term memory. The results of the study are discussed in terms of the theory of memory systems.

# ANDREYEVA, V. G.

SIRS 36499  
14 JULY 72

SS

Article by V. G. Polyakov and V. I. Kuznetsov, "Motion sickness during space flight," *Journal of Space and Astronautical Medicine*, Vol. 13, No. 1, 1972, pp. 20-23.

The objective of our investigation was a comparative evaluation of the level of vestibular stability of human subjects before and after their rotation on a centrifuge.

The subjects (seven astronauts) were given a 14-day flight in the Soyuz 7 spacecraft. Some subjects were to undergo acceleration of 1g with a duration up to 10 minutes or 6g with a duration of 15 seconds and a simultaneously motion about their own longitudinal axis with velocities of 15 and 600 deg/sec. The level of vestibular stability was determined by tolerance to a test with stimulation of Coriolis accelerations (V. I. Polyakov, 1967) which was conducted twice: a day prior to rotation on the centrifuge and

The time-lapse of onset of the effects of such exposure is determined not only by the test itself in the initial state (rotation 1g) but also by the level of vestibular stability at the time they were in the space flight. At the same time, symptoms of motion sickness developed immediately after exposure to descent accelerations (10g, 100g, 1000g and 10000g, 1967).

Acc. Nr.

AP0045431

Abstracting Service:  
CHEMICAL ABST.

5-70

Ref. Code

UR 0068

A

91290v Ash-containing styrene-indene resin-softener for reclaiming rubber. Andreeva, V. A.; Tsvetaeva, E. M. (USSR). *Koks Khim.* 1970, (1), 40-2 (Russ). Styrene-indene resins (I) contg. ~3% ash (mostly  $\text{Na}_2\text{SO}_4$ ), petroleum byproducts used mostly as thermal plant fuels, were used for rubber reclamation. In reclaiming tire rubber, 100 wt. parts rubber is 1st mixed with 35-7 parts softener (normally a mixt. of pyrolysis wood tar and heavy petroleum oil), heated at  $180-5^\circ$ , and rolled. The replacement of the std. softener with I gave reclaimed rubber of lowered tensile strength at break ( $\sigma$ ) and elongation at break ( $\epsilon$ ). However, when the std. softener was replaced with a 1:1 I-shale oil mixt. contg. 1% AcOH the reclaimed rubber vulcanizates contg. this softener had  $\sigma = 68 \text{ kg/cm}^2$  and  $\epsilon = 512\%$  compared to  $\sigma = 66 \text{ kg/cm}^2$  and  $\epsilon = 460\%$  using std. softeners. In both cases the rubber stock used consisted of butadiene-styrene copolymer contg. ~8% rayon fibers. CPJR -

-0

REEL/FRAME

19780376

7

2/2 012  
CIRC ACCESSION NO--AP0134681

UNCLASSIFIED

PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SELECTIVITY OF THE OXIDN. OF CYCLODECANOL (I) BY O DEPENDED MAINLY ON THE DEGREE OF CONVERSION OF I AND THE CONC. OF O IN THE OXIDN. GAS. AT LESS THAN OR EQUAL TO 10PERCENT CONVERSION OF I, THE SELECTIVITY OF THE REACTION APPRAOCHED 100PERCENT AND AT 45PERCETN, IT WAS 77PERCENT. THE PRODUCTS WERE TREATED WITH H SUB3 BO SUB3, AND THEN WITH BOILING H SUB2 O, AND THE ALCS. SEPD. BY EXTN. WITH ET SUB2 O. FACILITY: INST. NEFTEKHIM. SIN. IM. TOPCHIEVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--PREPARATION OF CYCLODODECANONE BY THE LIQUID PHASE OXIDATION OF  
CYCLODODECANOL -U-  
AUTHOR-(05)-SOKOVA, K.M., ANDREYEVA, T.P., ZELENAYA, G.A., KRUGLIKOVA,  
V.S., SHIRYAYEVA, V.YE.  
COUNTRY OF INFO--USSR  
SOURCE--NEFTEKHIMIYA 1970, 10(2), 236-41  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--CYCLIC GROUP, HYDROXYL RADICAL, OXIDATION, AROMATIC KETONE,  
ALCOHOL, CHEMICAL SYNTHESIS  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3006/0963 STEP NO--UR/0204/70/010/002/0236/0241  
CIRC ACCESSION NO--AP0134681  
UNCLASSIFIED

USSR

UDC: 621.383.2

ANDREYEVA, T. N., KARTASHEVSKAYA, V. Ye., All-Union Scientific Research  
Institute of Metrology imeni D. I. Mendeleev

"An Installation for Aging Photocells"

Leningrad, Issledovaniya v Oblasti Opticheskikh i Svetovykh Izmereniy,  
Trudy Metrologicheskikh Institutov SSSR, No 114(174), 1970, pp 124-127

Abstract: An installation consisting of a specially designed integrating photometer with twelve tubes and four incandescent light-measurement bulbs is used for studying changes in sensitivity (overall and spectral) of twelve photocells simultaneously. Uniform illumination of the cathodes of all photocells is provided by using opal glass in the photometer ports in front of the twelve tubes, and by lamps inside the ring shade for the photometer ports. Photocell illumination by white light or in separate regions of the spectrum is provided by a disc with several colors of light filters and one empty aperture. One of the incandescent bulbs is for constant illumination of the photocells during aging, and the other three are used for periodic illumination in photocurrent measurements. Three figures.

1/1



ANDREYVA T.L.

(H)

see/ucrl TRANS-10681-73  
UCRL-Trans-10681

A Q - SWITCHED IODINE LASER

BY

T.L. ANDREYVA, V.I. MALYSHEV, A.I. MASLOV, G.YA. SOLOV'EV  
AND V.N. SOROKIN

Translated (March 1973) from the Russian  
Issledovaniya Iodnogo Lazera s modulirovannym  
svetodopromet'nyu. Kvantitvye soobshcheniya  
po fizike, No. 10 (October 1970), pages  
71-77.

University of California  
LAWRENCE LIVERMORE LABORATORY  
Livermore, California

Translated from Russian by

edits TRANSLATIONS International  
post office box 4093  
Berkeley, California 94703  
(415) 851-1040

USSR

UDC 621.355.82

ALEKSEYEV, V. A., ANDREYeva, T. I., SOBEL'MAN, I. I.

"On the Theory of Nonlinear Resonances of Gas Laser Power"

Preprint No 175, Physical Institute of the Academy of Sciences of the USSR,  
Laboratory of Quantum Radio-Physics, Moscow, 1972, 22 pp, RZh-Fizika, No 9,  
Sep 73, Abstract No 9D717

Translation: The form of the Lamb shift as a function of pressure is theoretically examined, taking into account the effect of collisions on the external and internal degrees of freedom of the atoms. It is shown that a consideration of the change in velocity of the atoms in collision leads to a nonlinear expression for the width and extent of the Lamb shift as a function of pressure. Twelve bibliographic citations. Yu. M.

1/1

USSR

TROITSKIY, S. Yu., et al, Gigiyena i Sanitariya, No 9, Sep 70, pp 89-91

exposed to the action of phenol and formaldehyde vapors suffered from constant headaches. Pathological changes in the nervous system (neuritis, neurasthenic syndrome, cerebral angiodystonia, etc.) due to exposure to these vapors were found in 19 cases. Of those engaged in polishing and pressing, 12 had skin diseases and 14 had chronic atrophic rhinitis and folliculitis. Three employees in a mechanical workshop showed symptoms of pneumoconiosis. Increased mechanization and automation of operation, including transfer to a continuous process, will improve these working conditions and reduce the impairment of health. Introduction of automated discharge from the bottom of mixers, automatic opening of sacks with asbestos and feeding of asbestos into mixers, enclosed units for certain operations, and improved ventilation systems and local exhausts are important measures which should be taken.

2/2

USSR

UDC 613.6:/678.632:678:046.36

TROITSKIY, S. Yu., KUZ'MINYKH, A. N., ANDREYEVA, T. D., and BUNIMOVICH, G. I.,  
Sverdlovsk Scientific Research Institute of Labor Hygiene and Occupational  
Diseases

"Hygienic Aspects of Working Conditions in the Production of Phenol-Formalde-  
hyde Plastics With Asbestos Filler"

Moscow, Gigiyena i Sanitariya, No 9, Sep 70, pp 89-91

Abstract: Hygienic conditions at plants producing phenol-formaldehyde plastics with asbestos filler were investigated. Dust concentrations of 3.7-5 mg/m<sup>3</sup> were found in the air. The dust developed in connection with the charging of asbestos in mixers. In those sections of the plants in which the resin is heated, concentrations of phenol vapor in the air exceeded the maximum permissible limit. The concentration of formaldehyde in the air generally did not exceed 1 mg/m<sup>3</sup>, but in connection with such operations as the discharging of mixers and drying chambers, the highest concentrations exceeded the maximum permissible level by up to a factor of three. Ventilation systems were improperly designed. A medical examination of 103 workers employed in this type of production showed that 65 had various subjective complaints; 21 who were 1/2

2/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70  
CIRC ACCESSION NO--AP0123107  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VISCOSITY, D., ELEC. COND., N, AND  
PH OF AQ. SOLNS. OF LI AND NA NITRITES WERE DETD. AT 15, 25, AND  
35DEGREES. THE ENERGIES OF ACTIVATION OF VISCOSITY AND OF ELEC. COND.  
ARE PLOTTED VS. CONC. ASSOCNS. OF THE IONS IN SOLNS. INVOLVING ALSO H  
SUB2 O MOLLS. ARE INDICATED. DECREASE OF THE PH OF LIND SUB2 SOLNS. WITH  
INCREASING CONC. OF LIND SUB2 SUPPORTS THE SUPPOSITION OF THE FORMATION  
OF SUCH ASSOCIATES.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--PROPERTIES OF AQUEOUS SOLUTIONS OF LITHIUM AND SODIUM NITRITES AT  
15, 25, AND 35DEGREES -U-  
AUTHOR--(02)-ANDREYEVA, T.A., DRUCHINA, I.D. A  
COUNTRY OF INFO--USSR  
SOURCE--ZH. NEORG. KHIM. 1970, 15(4), 1080-3  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--LITHIUM COMPOUND, SODIUM COMPOUND, NITRITE, AQUEOUS SOLUTION,  
ACTIVATION ENERGY  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1999/1115 STEP NO--UR/0078/70/015/004/1030/1083  
CIRC ACCESSION NO--AP0123107  
UNCLASSIFIED

USSR

BYKOV, A. D., et al, Tr. Vses. N-i. i Proyechn. In-ta. Alyumin., Magn. i Elektrodn. Prom-sti, 1970, No. 72, pp. 5-10

Cl<sup>-</sup> anion in dolomite roasted at 1100° reached 0.35%. Removal of the Cl is facilitated by a high-temperature mode (1300° and higher). In evaluating dolomites as a raw material for the production of Mg or its alloys with certain light metals such as Li by the silicothermal method, one must consider the content of Cl along with the ordinary impurities. 2 tables.

2/2

USSR

UDC 669.721.053.28

BYKOV, A. D., RAZMYSLOV, V. I., ANDREYEVA, R. M.

"The Nature of Chlorine in Dolomites and Its Influence on the Technology of the Production of Magnesium and its Alloys"

Tr. Vses. N-i. i Proyechn. In-ta. Alyumin., Magn. i Elektrodn. Prom-sti [Works of All-Union Scientific Research and Planning Institute of the Aluminum, Magnesium and Electrode Industry], 1970, No. 72, pp. 5-10. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 G193 by the authors).

Translation: Using the dolomites of the Pravdinskiy deposit (Irkutsk Oblast) as an example, it is demonstrated that they may contain a slight quantity of Cl (up to 0.14%), bonded with the rock-forming mineral in the complex  $\text{Ca}_3(\text{Cl}, \text{CO}_3)_2$ . The presence of Cl in dolomites is explained by its assimilation from sea water during the process of dolomite formation. During vacuum thermal reduction of MgO in the 1100-1500° temperature interval, the Cl, in contrast to the F salts, acts as an anticatalyst, significantly decreasing the degree of reduction of Mg, particularly in the relatively low-temperature area (up to 1200°). The Cl goes over to the Mg in quantities depending on the Cl content in the initial raw material and the temperature of reduction. For the samples studied, the content of

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Acc. Nr: **AP0048275** - Abstracting Service:  
CHEMICAL ABST. 5-70

Ref. Code:  
**UR 0181**

**A**

103947e Single-ion anisotropy from the mechanism of indirect exchange in rare-earth metals. Kazakov, A. A.; Andreeva, R. T. (Ural Gos. Univ. im. Gor'kogo, Sverdlovsk, USSR). *Fiz. Tverd. Tela* 1970, 12(1), 240-6 (Russ). The Hamiltonian of the indirect exchange through cond. electrons was calcd. and it is described by a strong-bond approxn. On the basis of this Hamiltonian, the single-ion energy anisotropy was calcd. which, as is shown, coincides with the anisotropy of the cryst. field mechanism. By means of a mol. field approxn., the temp. dependence and the element no. dependence of the anisotropy consts. were calcd. A. Libackyj

1/1

REEL/FRA  
19791997

1814

USSR

UDC 669.822.004.2

ANDREYEVA, O. S.

"Problems of Radiation Safety when Processing Uranium Ores"

Vopr. gigiyeny truda na uranov. rudnikakh i obogatit. predpriyatiyakh -- V sb.  
(Problems of Hygiene of Labor in Uranium Mines and Beneficiation Enterprises  
-- collection of works), Moscow, Atomizdat Press, 1971, pp 18-23 (from RZh-  
Metallurgiya, No 4, Apr 71, Abstract No 4G268)

Translation: A study was made of the pollution of the air environment during mechanical processing of uranium ores. It is recommended that before processing the ore, it should be uniformly wet to 11-12%. The magnitude of the dust disperseness and composition is studied. Joint application of hydraulic dust removal, ventilation, and coverings for equipment lowers the uranium content in the air.  $Ra^{226}$  and  $Po^{210}$  are detected in the air. It is necessary to control the Ra content independently of the dust content but taking into account the U content. In order to control pollution of the air with radon, the presence of equipment covers, effective rates of air removal from equipment, and proper storage for radon-containing waste is necessary. The external  $\gamma$ - $\beta$  irradiation of working personnel is studied.

1/1

USSR

UDC 669.822.004.2

ANDREYEVA, O. S.

"Hygienic Evaluation of Various Methods of Storing Emanating Ores and Determination of Optimal Conditions for Storing Them"

Vopr. gigiyen. truda na uranov. rudnikakh i obogatit. predorivativakh -- V sb. (Problems of Hygiene of Labor in Uranium Mines and Beneficiation Enterprises -- collection of works), Moscow, Atomizdat Press, 1971, pp 28-32 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G270)

Translation: Specially designed warehouse facilities are required. The amount of ore must be calculated, taking into account the gross release of radon, the air exchange rate, and the emanation coefficient. It is expedient to store the packaged ore in open storage sheds. When storing ores with high Ra content outside the packaging, it is expedient to use closed bunkers or covers equipped with mechanical exhaust fans for preventing release of radon in the facility. There are 2 tables and a 5-entry bibliography.

1/1

2/2 011 UNCLASSIFIED PROCESSING DATE--11DEC70  
CIRC ACCESSION NU--AT0139815  
ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. EXAMN. OF A MONOCLINIC FORM OF  
PEPSIN CRYSTALS PREPD. AT PH 2 (MAX. ACTIVITY OF THE ENZYME IS AT THIS  
PH) SHOWED THAT THE UNIT CELL OF THE ENZYME HAD PARAMETERS OF: A EQUALS  
54.7ANGSTROM, B EQUALS 36.3ANGSTROM, C EQUALS 73.5ANGSTROM, AND BETA  
EQUALS 104DEGREES; THE UNIT CELL CONTAINS 2 MOLS. OF THE PROTEIN.  
ISOMORPHOUS DERIVS. WERE MADE BY ION DIFFUSION OF HG1 SUB3, HGBR SUB3,  
PT(C SUB2 U SUB4) SUB2 PRIME2 NEGATIVE, PTCL SUB4 PRIME2 NEGATIVE, AND  
PT(NU SUB2) SUB4 PRIME2 NEGATIVE. THE INTRODUCTION OF THESE HEAVY  
ATOMS WAS FOLLOWED BY DIFFRACTION ANAL. THE ENZYME CONTAINS DISTINCT  
ALTERNATING, FLAT LAYERS WITHOUT INTERNAL VOIDS BUT WITH A VERY COMPLEX  
RELIEF SURFACE. FACILITY: INST. MOL. BIOL., MOSCOW, USSR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--11DEC70  
TITLE--DETERMINATION OF THE THREE DIMENSIONAL STRUCTURE OF A PEPSIN  
MOLECULE AT 5.5 A. RESOLUTION -U-  
AUTHOR-(05)-ANDREYEVA, N.S., BORISOV, V.V., GOVORUN, N.N., MELIKADAMYAN,  
V.R., RAYZ, V.SH.  
COUNTRY OF INFO--USSR A  
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 192(1), 216-19  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--PEPSIN, MOLECULE, CRYSTAL  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY FICHE NO----FD70/605006/F02 STEP NO--UR/0020/70/192/001/0216/0219  
CIRC ACCESSION NO--AT0139815  
UNCLASSIFIED

2/2 028  
CIRC ACCESSION NO--AP0129983

UNCLASSIFIED

PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REGULAR SYNTHETIC POLYTRIPETIDES WITH GLYCINE IN THE 1ST AND AMINO OR IMINO ACIDS IN THE 2ND AND 3RD POSITION WERE STUDIED AS MODELS OF STRUCTURAL PECULIARITIES OF COLLAGEN PROTEINS. THE NECESSARY AND SUFFICIENT CONDITION FOR THE EXISTENCE OF COLLAGEN STRUCTURE IS THE OCCURRENCE OF GLYCINE IN THE 1ST AND OF AT LEAST ONE IMINO ACID IN THE 2ND OR 3RD POSITION IN THE TRIPLET. X RAY ANAL. OF CRYST. GLYCINE, IMINO ACID, AMINO ACID POLYMERS VERIFIED THE ROLE OF AGGREGATES OF THIS TYPE IN THE STRUCTURE OF COLLAGEN.  
FACILITY: INST. MDL. BIOL., MOSCOW, USSR.

UNCLASSIFIED

1/2 028 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--SYNTHETIC REGULAR POLYTRIPETIDES AND PROTEINS OF THE COLLAGEN  
CLASS -U-  
AUTHOR-(05)-ANDREYEVA, N.S., YESIPOVA, N.G., MILLIONOVA, M.I.,  
ROGULENKOVA, V.A., YUMANYAN, V.G.  
COUNTRY OF INFO--USSR  
SOURCE--BIOFIZIKA 1970, 15(2), 198-205  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY  
TOPIC TAGS--PEPTIDE, CHEMICAL SYNTHESIS, GLYCINE, AMINO ACID, COLLAGEN, X  
RAY ANALYSIS  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--3003/0918 STEP NO--UR/0127/70/015/002/0198/0205  
CIRC ACCESSION NO--AP0129983  
UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70  
 CIRC ACCESSION NO--AP0126793  
 ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. THE ANAL. MODIFICATION WAS OBTAINED OF THE PROBABILITY FUNCTION  $P$  SUBHKL (A, B), NECESSARY FOR THE CALCN. OF STRUCTURAL AMPLITUDES OF THE PROTEIN CRYSTAL BY MEASURING OF THE DISPERSION INTENSITY OF X RAYS IN ISOMORPHOUS CRYSTALS OF THE NATIVE PROTEIN CRYSTAL, THE SERIES OF PROTEIN DERIVS. POSSESSING SUBSTITUTIONS OF DIFFERENT ATOMS OF THE HEAVY METALS (THE METHOD OF POLYISOMORPHOUS SUBSTITUTION). THE GENERAL FORMUAL OBTAINED IF  $F$  SUBO EQUALS INTEGRAL TAKEN BETWEEN INFINITY AND NEGATIVE INFINITY INTEGRAL OF PHKL (A, B) (A PLUS IB)-DACB. THE CALCN. OF  $F$  SUBO BY COMPUTER IS DISCUSSED. THE APPLICATION OF THE ABOVE FORMULA YIELDS MORE EXACT RESULTS THAN PREVIOUS VARIATIONS OF THE FUNCTION  $P(A, B)$ . APPROXNS. OF THE ABOVE FORMULA ARE PRESENTED WHICH SIMPLIFY THE CALCNS. FACILITY: INST. MOL. BIOL., MOSCOW, USSR.

UNCLASSIFIED



1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--DETERMINATION OF THE FOURIER SERIES COEFFICIENTS OF THE ELECTRON  
DENSITY FUNCTION OF PROTEIN CRYSTALS -U-  
AUTHOR-(02)-RAIZ, V.SH., ANDREYEVA, N.S. *A*

COUNTRY OF INFO--USSR

SOURCE--KRISTALLOGRAFIYA 1970, 15(2), 246-51

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FOURIER SERIES, ELECTRON DENSITY, PROTEIN, CRYSTAL, X RAY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1191

STEP NO--UR/C070/70/015/002/0246/0251

CIRC ACCESSION NO--AP0126793

UNCLASSIFIED

USSR

POTEMKINA, A. M., et al., Problemy Prochnosti, No 5, May 73,  
pp 18-23

of discs is determined by circular stresses. Cases of considerable influence of temperature stresses on the supporting power of rotating discs were defined. Suggestions are given for projecting discs of modern high-temperature turbodynamos. Two figures, five tables, three formulas, six bibliographic references.

2/2

USSR

UDC 620.17

POTEMKINA, A. M., KODNER, M. Ya., KUSHNEROV, Ye. A., and  
ANDREYEVA, H. P., Moscow

"On the Problem of Strength of Irregularly Heated Rotating  
Discs"

Kiev, Problemy Prochnosti, No 5, May 73, pp 18-23

Abstract: Cases of failure of not uniformly heated rotating discs were studied at rotations which are 1.5 times lower than the rotations at failure of discs with radially uniform temperature and 2 times lower than the rotations at failure calculated from average circular stresses. For the investigation of the dependence  $n_f = (\Delta t)$ , where  $n_f$  = rotations at failure, and for the analysis of experimental data,  $n_f$  values of investigated discs and of experimental discs of other authors (Menson, I.A.Kozlov) were calculated. At failure of discs by radial stronsen, a sudden action of the radial temperature drop on the decrease of  $n_f$  at different plasticity  $\delta$  of the material was established. For  $\delta = 0.5-6\%$ , the temperature drop  $\Delta t = 755^\circ\text{C}$  decreased  $n_f$  from 55000 to 37000 rpm. The little effect of  $\Delta t$  on  $n_f$ , found by some authors, holds true in cases where the strength

1/2

USSR

UDC 669.293.5'294:620.193:669.231

GLUKHOVA, A. I., ANDREYEVA, N. N., DONTSOV, S. N., and MOISEYEVA, I. S.

"Niobium-Tantalum Alloys Doped With Platinum"

V sb. Korroziya i zashchita met. (Metal Corrosion and Protection -- Collection of Works), Moscow, "Nauka," 1970, pp 54-60 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 I824 by the authors)

Translation: Supplemental doping of Nb-Ta alloys with small quantities of Pt raises their corrosion resistance under highly corrosive conditions. In 75%  $H_2SO_4$  at 150° the corrosion rate of an alloy of Nb with 30% Ta doped with 0.2% Pt is 4-6 times less than the corrosion rate of this alloy without supplemental doping, with the corrosion rate of the alloy doped with 0.2% Pt not depending on the magnitude of the applied potential and equaling only 0.1 g/sq m·hr, whereas the corrosion rate of the alloy without supplemental doping increases with potentials more positive than + 1.7 v. Five illustrations. Bibliography of four titles.

1/1

USSR

MASHKOVSKIY, M. O., et al., Farmakologiya i Toksikologiya, Vol 34, No 4,  
Jul-Aug 71, pp 387-391

definitely lower activity. Transition from a tertiary amine derivative of  
(I) to a quaternary amine lowered its activity.

2/2

USSR

UDC 615.214:547.759

MASHKOVSKIY, M. O., GRINEV, A. N., ANDREYEVA, N. I., SHVEDOV, V. I., and ALTUKHOVA, L. B., Laboratory of Pharmacology and Laboratory of Synthesis, All-Union Scientific Chemical-Pharmaceutical Research Institute imeni S. Ordzhonikidze, Moscow

"Investigation of the Psychotropic Activity of 1,10-Trimethylenepyrazino [1,2-a]indole"

Moscow, Farmakologiya i Toksikologiya, Vol 34, No 4, Jul-Aug 71, pp 387-391

Abstract: Five novel derivatives of 1,10-trimethylenepiperazino[1,2-a]indole (I) and two derived from 1,10-trimethylenepyrazino[1,2-a]indole (II) were studied in respect to their psychotropic activity (reaction to the effect of phenamine and reserpine on mice and rats, cataleptic activity of these materials on rats, their effect on body temperature and overall state of mice). The derivatives of (I) were found to be more active, especially those without any substituents in the ring, those with a methoxy group in position 8 and methyl group in 2 and 8 position of the heterocycle. By their activity these substances resemble the antidepressants of the tricyclic structural type such as Imizines. Derivatives of (II) exhibited a 1/2

AP0113203

cluded from the expts. performed that the influence of the alkali oxides on phase transformations during firing of clays depends on the mineralogical compn. of the latter. The effect of alkali oxides on the formation process of cristobalite during the firing of kaolinite clays decreases in the following order:  $\text{Li}_2\text{O} > \text{Na}_2\text{O} > \text{K}_2\text{O}$ . The same order is observed with respect to mullitization.  
S. A. Mersol

$\frac{2}{2}$

*msw*

19930271

Acc. Nr.

AP0113203

Abstracting Service:  
CHEMICAL ABST.

6/70

Ref. Code

UR0072

ANDREYENA

135906g Influence of lithium oxide, sodium oxide, and potassium oxide additives on phase transformations taking place during the firing of clays of various mineralogical compositions. Paylov, V. E.; Bystrikov, A. S.; Andreeva, N. I. (USSR). *Steklo Keram.* 1970, 27(2), 38-40 (Russ). The results of investigating the effect of  $\text{Li}_2\text{O}$ ,  $\text{Na}_2\text{O}$ , and  $\text{K}_2\text{O}$  on phase transformations of clays are given. These addns. were introduced in 2% amts. The samples were fired in a shielded Silit furnace at a temp. of 1050-1300°, whereupon they were cooled in the furnace. The fired samples were investigated by x-ray diffraction with a URS-50I instrument and Cu-radiation (Ni-filter). Samples of rock kaolinite clay without addns. consist of an amorphous phase and quartz. Addn. of  $\text{Li}_2\text{O}$  produces intensification of the process of crystn. of mullite and cristobalite. The  $\text{Na}_2\text{O}$  addn. has a similar effect, except to a lesser degree. Similar results are obtained for clays of other compns. Samples with  $\text{K}_2\text{O}$  addns. do not show the presence of cristobalite. It is thus shown that addns. of  $\text{Li}_2\text{O}$ ,  $\text{Na}_2\text{O}$ , and  $\text{K}_2\text{O}$  have a marked effect on the mullitization process, by decreasing the temp. of formation of mullite and by somewhat increasing its content. It is thus con-

1/2

REEL/FRAME  
19930270



USSR

A

UDC 666.3.022.64

PAVLOV, V. F. (Candidate of Technical Sciences), BYSTRIKOV, A. S. (Candidate of Technical Sciences), and ~~ANDREYEVA~~, N. I. (Engineer), NIISTroykeramika

"Effect of Impurities  $\text{Li}_2\text{O}$ ,  $\text{Na}_2\text{O}$  and  $\text{K}_2\text{O}$  on Phase Transformations. During Firing of Clays of Different Mineralogical Composition"

Moscow, Steklo i Keramika, No 2, Feb 70, pp 38-40

Abstract: The article presents results of an investigation of the effect of alkali oxides on phase transformations during firing of clays of different mineralogical composition. The clays were of the following mineralogical composition: kamenskaya -- kaolinite; vladimirovskaya -- montmorillonite-kaolinite; tselinogradskaya -- kaolinite-hydromica. Impurities were introduced in the form of carbonates in 2% quantities converted to oxides. The impurities were thoroughly mixed with clay. Specimens in the form of disks 18 mm in diameter and 4-5 mm thick were formed from the prepared mixtures. The specimens were fired in a shielded silit (silicon carbide) furnace at the temperature 1050-1300° and they are cooled together with the furnace. It is shown that the cristobalitizing and mullitizing action of the impurities depends on the mineralogical composition of the clays. It is established that with the increase in the weight and radius of cation its cristobalitizing action decreases. The alkali cations have similar effect on the process of mullitization.

1/1

USSR

SHVEDOV, V. I., et al., Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 10, Oct 72, pp 14-17

and analogously from 2,3-dihydro-4-keto-8-methylthiopyrano [3,2-b] indole obtained 2,3-dihydro-10-methylpyrazino 1,2-a thiopyrano [3,2-b] indole, isolated as the hydrochloride. The reduction of XII, XIII, XV with sodium in boiling ethanol gives derivatives of piperazino [1,2-a] indole. It was also found that piperazino [1,2-a] indoles can be obtained by the reduction cyclization of N-acetamide derivatives of 1-keto-1,2,3,4-tetrahydrocarbazole with sodium in boiling ethanol.

Pharmacological investigations showed that derivatives of 1,10-trimethylene-piperazino [1,2-a] indole possess properties characteristic of substances with antidepressive activity (imizin etc.) and compounds with a neuroleptic effect (aminazin etc.). An affinity with antidepressants of the imipramine type is most characteristic of the studied derivatives. The corresponding derivatives of pyrazino [1,2-a] indole have a lower activity than those of piperazino [1,2-a] indole. The studied compounds are of comparatively low toxicity.

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USSR

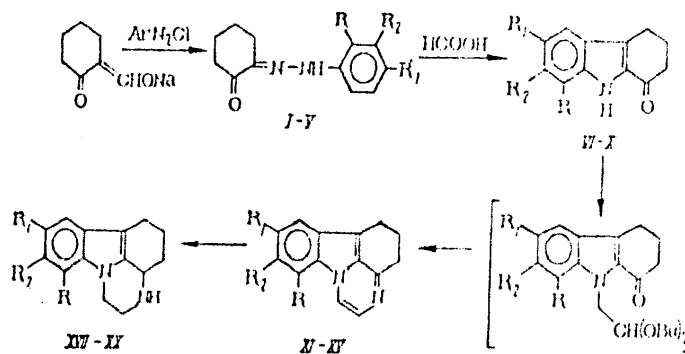
UDC 615.31:[547.861.3+547.751].01].1

SHVEDOV, V. I., ALTUKHOVA, L. B., ANDREYEVA, N. I., MASHKOVSKIY, M. D., and GRINEV, A. N., All-Union Scientific Research Pharmacochemical Institute imeni S. Ordzhonikidze, Moscow

"Pyrazino- and Piperazino[1,2-a]indole Derivatives"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 10, Oct 72, pp 14-17

Abstract: The authors synthesized some new derivatives of pyrazino[1,2-a]indole according to the scheme:



USSR

VASIL'YEV, A. G., and ANDREYEVA, N. G., Neurofiziologiya, Vol 3, No 2,  
Mar-Apr 71, pp 138-144

some neurons highly sensitive to 80 kilocycles have an almost equal sensitivity to 40 and 27 kilocycles. Neurons responding to 80-90 kilocycles display the greatest selectivity to frequencies.

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USSR

UDC 621.826.5

VASIL'YEV, A. G., and ANDREYEVA, N. G., Leningrad State University imeni A. A. Zhdanov

"Electrical Responses of Medial Geniculate Bodies in Vespertilionidae and Rhinolophidae to Ultrasonic Stimuli of Different Frequencies"

Kiev, Neurofiziologiya, Vol 3, No 2, Mar/Apr 71, pp 138-144

Abstract: Summated electrical responses and single action potentials of medial geniculate body neurons were investigated in Vespertilionidae and Rhinolophidae. Vespertilionidae are most sensitive to ultrasound frequencies of 10-40 and 65-80 kilocycles; this is the frequency of their natural sonar system. Rhinolophidae are most sensitive to frequencies of 10-70 and 81-86 kilocycles, while the basic frequency of their sonar system is 80 kilocycles, their threshold to this frequency is 15-30 decibels higher than to the above-mentioned range. The minimum thresholds for discontinuation of stimulation lie between 50 and 60 kilocycles for Vespertilionidae and between 78-80 kilocycles for Rhinolophidae. The single neuron response areas in both species are similar to those observed in other acoustic centers of these bats and in the medial geniculate bodies of other mammals. In Rhinolophidae, 1/2

2/2 025

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO---AP0100897

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONCENTRATION OF DISSOLVED OXYGEN AND THE RATE OF ITS CONSUMPTION PER BIOMASS UNIT DECREASED ALONG WITH BIOMASS GROWTH DURING BATCH CULTIVATION OF AZOTOBACTER VINELANDII. THE DECREASE OF THE OXYGEN CONSUMPTION RATE AT THE CONSTANT SPECIFIC GROWTH RATE WAS DUE TO A FALL OF ITS CONCENTRATION IN THE CULTURE. THE EFFECT OF OXYGEN CONCENTRATION ON THE SPECIFIC GROWTH RATE OF AZOTOBACTER VINELANDII DURING ITS CULTIVATION IN CHEMOSTAT UNDER CONDITIONS OF LIMITED OXYGEN SUPPLY COULD BE DESCRIBED BY THE MICHAELIS MENTEN EQUATION,  $K_{SUBS}$  BEING  $6.9 \cdot 10^{-6}$  M O<sub>2</sub>-L,  $\mu_{SUBM}$  UTILIZATION AS WELL AS OF THE RATE OF SUCCROSE CONSUMPTION PER BIOMASS UNIT AND THE POTENTIAL RATE OF OXYGEN CONSUMPTION MEASURED IN A BUFFER SOLUTION AT THE EXCESS OF ENERGY SUBSTRATE AND OXYGEN. THE EFFECT OF OXYGEN CONCENTRATION ON THE RATE OF ITS CONSUMPTION BY THE AZOTOBACTER CELLS DURING THEIR CONTINUOUS CULTIVATION AT  $D$  EQUALS  $0.2 \text{ hr}^{-1}$  COULD BE DESCRIBED BY THE MICHAELIS MENTEN EQUATION,  $K_{SUBM}$  BEING  $8.1 \cdot 10^{-6}$  M O<sub>2</sub>-L.

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0132047

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REFRACTORIES WERE PRODUCED BY MOLDING ZrO<sub>2</sub> SUB<sub>2</sub> INTERMEDIATES, ROASTING THEM IN VACUO, AND COOLING THEM. TO PRESERVE THE HIGH PURITY AND D. OF THE REFRACTORIES, ROASTING TOOK PLACE IN A VACUUM GREATER THAN OR EQUAL TO 5 TIMES 10<sup>-4</sup> TORR AT GREATER THAN OR EQUAL TO 2500DEGREESK FOR GREATER THAN OR EQUAL TO 1 HR AND COOLING TOOK PLACE AT A RATE OF 800-500DEGREES-MIN. FACILITY: LENSIVET TECHNOLOGICAL INSTITUTE, LENINGRAD AND ALL UNION INSTITUTE OF REFRACTORY MATERIALS.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--PRODUCTION OF REFRACTORIES -U-  
AUTHOR-(03)-ANDREYEVA, N.A., GROPYANOV, V.M., KOZLOVSKIY, L.V.  
COUNTRY OF INFO--USSR A  
SOURCE--U.S.S.R. 267,434  
REFERENCE--OTKRYTTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,  
DATE PUBLISHED--01APR70  
SUBJECT AREAS--MATERIALS  
TOPIC TAGS--CHEMICAL PATENT, ROASTING FURNACE, VACUUM TECHNIQUE, ZIRCONIUM  
OXIDE, REFRACTORY PRODUCT  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3004/1781 STEP NO--UR/0482/70/000/000/0000/0000  
CIRC ACCESSION NO--AA0132047  
UNCLASSIFIED



USSR

UDC: 621.396.69:621.319.4

ANDREYEVA, N. A., ZHUKOVSKIY, V. I., MIKHAYLOVA, I. P.

"Effect of Technological Design Factors on the Stability of the Capacitance of Condensers Made From Materials Based on the  $BaTiO_3$ - $Bi_4Ti_7O_{12}$  System"

Elektron. tekhnika. Nauchno-tekhn. sb. Radiodetali (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 1 (18), pp 15-19 (from PZh-Radiotekhnika, No 12, Dec 70, Abstract No 13V353)

Translation: Data are given which show that monolithic capacitors made from materials based on the system  $BaTiO_3$ - $Bi_4Ti_7O_{12}$  differ with respect to capacitance stability from disc and plate capacitors made from these same materials. In monolithic capacitors, the degree of difference increases with a reduction in dielectric thickness. It is shown that the basic cause for the observed changes in capacitance stability is the effect of the platinum black used for forming the electrodes of the monolithic capacitors. Bibliography of 5 titles. Ye. M.

USSR

UDC 547.466.64 + 577.164.12.074

BURDE, N. L., ALEKSEYVA, L. V., and ANDREYVA, N. A., Ural Scientific Center, Academy of Sciences, USSR, Institute of Chemistry

"Synthesis and Study of the Compounds with Potential Biological Activity. XI. Synthesis of Diastereoisomers of Pteroyl- $\gamma$ -hydroxy-D,L-Glutamic Acid and Their Antifolic Activity"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 9, No 5, May 73, pp 1007-1011

Abstract: The diastereoisomers of pteroyl- $\gamma$ -hydroxy-D,L-glutamic acid have been synthesized by the method of tricomponential condensation of 2,4,5-triamino-6-hydroxypyrimidine with  $\alpha$ ,  $\beta$ -dibromopropionic aldehyde and p-aminobenzoyl- $\gamma$ -hydroxy-D,L-glutamic acid (threo- or erythro- configuration). Methodology has been developed for the resolution of the diastereoisomers of the latter compound. Comparison of the antifolic activity of  $\gamma$ -hydroxyfolic acid with  $\gamma$ -fluorofolic acids based on the dihydrofolate reductase assay showed the fluoro derivatives to be more active.

USSR

UDC 537.533.2+537.534

ANDREYEVA, M. I., BORISOV, V. L., FYUKOV, V. K.

"Thermoelectron Emission of Certain Metals in Cesium Vapors"

Tr. Leningr. politekhn. in-ta (Works of Leningrad Polytechnical Institute),  
1970, No 311, pp 3-9 (from RZh-Fizika, No 12(I), Dec 70, Abstract No  
12Zh627)

Translation: The results of a study of thermoelectron emission of Mo, W, Re, and W-Re alloy (VR-15) in Cs vapors are presented. A distinct feature of the work is the relatively high values of the Cs pressure reaching, in the limiting case, 0.16 mmHg. The change in the work function of the Me-Cs system as determined by the total current method was traced over a broad range of emitter temperatures and Cs vapor pressures. It was shown that the smallest value of the work function, corresponding to an optimum coating of Cs and determined both by the total current method and by the Richardson line method, is observed in the case of Re and the W-Re alloy. The lowest values of the heat of vaporization of cesium atoms was obtained for these objects. 10 references. Authors abstract.

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USSR

UDC: 62-278.001.2

ANDREYEVA, L. Ye., Candidate of Technical Sciences, and BOGDANOVA, Yu. A.

"Designing Corrugated Diaphragms in Accordance With a Specified Characteristic"

Moscow, Pribory i sistemy upravleniya, No 6, 1972, pp 37-39

Abstract: In an earlier article published in this same journal (Metodika proyektirovaniya gofrirovannykh membran -- A Method of Designing Corrugated Diaphragms -- No 9, 1969) the first of the authors named above offered a method for designing such diaphragms in accordance with a characteristic specified by the stiffness and nonlinearity of the diaphragm. In the present article, the authors consider the more complex case in which the elasticity characteristic in the form of a function of the pressure, and its tolerated field, are both specified. The problem the article sets out to solve is to select a diaphragm geometry such that the demands of characteristic, tolerated voltages, and the dimensions of the sensitive element are satisfied. The method is primarily graphic, and the curves used in carrying it out are reproduced. The characteristic of experimental specimens prepared by this method was found to be in close agreement with the specified characteristic.

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2/2 023

UNCLASSIFIED

PROCESSING DATE--3000170

CIRC ACCESSION NO--AP0110762

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPTL. DATA WERE OBTAINED TO DETERMINE THE SENSITIVITY OF A THERMAL N DETECTOR WITH SPHERICAL POLYETHYLENE MODERATORS ( $P$  EQUALS  $0.94 \text{ G-CM PRIME}^3$ ) OF DIFFERENT DIMENSIONS ( $4.86\text{--}24.1 \text{ G-CM PRIME}^2$ ) IN THE N ENERGY RANGE FROM THERMAL TO  $10^6 \text{ eV}$ . THE MEASUREMENTS IN THE LOW ENERGY REGION WERE CONDUCTED IN A RESEARCH FAST REACTOR ACCORDING TO TIME OF FLIGHT AND IN THE HIGH ENERGY REGION IN A VAN DE GRAAFF ACCELERATOR. OPTIMUM DIMENSIONS WERE SELECTED FOR THE MODERATORS BASED ON THESE MEASUREMENTS. FACILITY--INSIT. BIOFIZ., MOSCOW, USSR.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--SENSITIVITY OF SPHERICAL DETECTORS FOR 0.4 EV-10 MEV NEUTRONS -U-  
AUTHOR--(05)-ANDREYEVA, L.S., KEIRIMMARKUS, I.B., USPENSKIY, L.N.,  
FILYUSHKIN, I.V., CHERNOV, YE.N.  
COUNTRY OF INFO--USSR  
SOURCE--PRIB. TEKH. (USSR), 1970, 1, 72-5  
DATE PUBLISHED-----70  
SUBJECT AREAS--PHYSICS  
TOPIC TAGS--NEUTRON DETECTOR, THERMAL NEUTRON, POLYETHYLENE, NEUTRON  
SPECTRUM, FAST NEUTRON, VAN DE GRAAFF ACCELERATOR  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FKAME--1991/1072 STEP NO--08/01207/19/001700-1700/2/6/11  
CIRC ACCESSION NO--AP0110762  
UNCLASSIFIED

USSR

UDC 542.938:661.718.1

ANDREYEVA, L. S., ANDRIANOV, A. A., BEL'SKIY, V. YE., VAVILOVA, M. F.,  
GURYLEV, E. A., and NIKONOROV, K. V., Institute of Organic and Physical  
Chemistry imeni A. Ye. Arbuzov, Academy of Sciences, USSR

"Hydrolysis of Dimethyl-(1-acetoxy-2,2,2-trichloroethyl)phosphonate"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 10, Oct 71,  
pp 2336-2338

Abstract: Chloracetophos -- dimethyl-(1-acetoxy-2,2,2-trichloroethyl)  
phosphonate -- is a fungistatic agent. It undergoes hydrolysis easily losing  
its physiological activity. There are three possible routes for its hydro-  
lysis, and it was established that all three occur simultaneously, the acetic  
acid, hydrochloric acid, and methanol being formed in the process. The  
hydrolysis is dependent on the temperature and pH -- it accelerates rapidly  
with the increase of pH. The overall rate constants for the initial reaction  
period were calculated to be  $1.2 \times 10^{-3}$ ,  $9.8 \times 10^{-3}$ , and  $4.9 \times 10^{-2} \text{ min}^{-1}$  at  
50, 70 and 90° respectively.

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USSR

UDC 541.127 + 542.938 + 661.718.1

BEL'SKIY, V. YE., ANDREYEVA, L. S., ALEKSANDROVA, I. A.,  
VINOKUROVA, G. M., Institute of Organic and Physical Chemistry  
imeni A. Ye. Arbuzov, Academy of Sciences USSR

"Kinetics of the Hydrolysis of Alkyl-bis-( $\gamma$ -chloropropyl)-  
phosphinates"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 6,  
Jun 70, pp 1418-1419

Abstract: The kinetics of hydrolysis in water and sodium hydroxide solution of several bis-( $\gamma$ -chloropropyl)-phosphinic acid esters was studied and compared with corresponding bis-(chloromethyl)-phosphinates. It was determined that the  $\gamma$ -chloropropyl compounds are hydrolyzed faster in water and much slower in alkaline medium in comparison to their chloromethyl counterparts. The ratio of rate constants for these esters decreases with an increase in the length and branching of the alcohol radical during alkaline hydrolysis, while the opposite is true for aqueous hydrolysis. This phenomenon agrees with the assumption that the chlorine in the  $\gamma$ -position catalyses intramolecularly the reaction with water.

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USSR

GOL'TSOV, V. A., et al, Fizika Metallov i Metallovedeniye, Vol 30, No 5, 1970, pp 957-962

in formation of the K-state sharply change the diffusion coefficient D and the solubility of hydrogen S in Kh20N80 alloy. D decreases significantly, while S increases significantly, as a result of which the hydrogen permeability  $p = D \cdot S$  is less sensitive to these changes in the structure of the alloys.

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USSR

UDC 669.15:548.526

GOL'TSOV, V. A., KOSHELEVA, V. Yu., KAGAN, G. Ye., ANDREYEVA, L. P.,  
AINOV'YEVA, G. P., and GEL'D, P. V., Ural Polytechnical Institute imeni S. M.  
Kirov

"Influence of the K-State on Diffusion and Solubility of Hydrogen and Mechanical  
Characteristics of Kh2ONiO Alloy"

Moscow, Fizika Metallov i Metallovedeniye, Vol 30, No 5, 1970, pp 957-962

Abstract: The temperature dependence of the modulus of elasticity and internal friction (300-650°), permeability, diffusion, and solubility of hydrogen (350-900°C) in Kh2ONiO alloy was studied. The effects discovered were compared with results produced earlier on the influence of long- and short-range order and the K-state in alloys on the behavior of the hydrogen dissolved in them. It was determined that the modulus of elasticity and internal friction are sensitive to the formation and disruption of the K-state in nichrome. The activation energy for formation of the K-state, calculated on the basis of results of measurements of internal friction, is 42 Kcal/mol. This value agrees well with the activation energy calculated from measurement of hydrogen permeability (about 40 Kcal/mol). It was established that the atomic regroupings resulting

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2/2 024

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0130472

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SPECIMENS OF AL SUB2 O SUB3 WERE PRODUCED BY COMPACTING POWDER (3.4 TIMES 10 PRIME8 N-M PRIME2) AND ANNEALING AT 1550-1600DEGREES FOR 2 HR. A D. C. POTENTIAL (300 V) WAS SUPERIMPOSED BY A PT ELECTRODE. THE SPECIMENS WERE HEATED 800-1200DEGREES IN NORMAL AND 0 ATMS. THE TIME DEPENDENCE OF CURRENT DROP, POTENTIAL DISTRIBUTION IN THE SPECIMENS (4 TIMES 5 MM AND 20 MM LONG) AND THE TEMP. DEPENDENCE OF RESISTANCE (SPECIMENS 5 TIMES 5 MM AND 2 MM THICK) WERE MEASURED. ONLY CATIONS TAKE PART IN COND. CURRENT DROP TAKES 30-60 MIN, AND THE FINAL VALUE IS 4-25PERCENT OF THE INITIAL. CURRENT DROP AT HIGHER TEMPS. IS LOWER THAN AT LOW TEMPS. POTENTIAL DROP IS STEEPEST NEAR THE PLATE, AND IT IS CAUSED BY THE NEG. LAYERS SITUATED NEAR THE PLATE. INCREASE OF THE RESISTANCE DURING HEATING IN O IS OBSD. ONLY AT LOWER TEMPS. FACILITY: SIB. MET. INST. IM ORDZHONIKIDZE, NOVOKUZNETSK, USSR.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--ELECTRICAL CONDUCTIVITY AND RELAXATION PROCESSES IN ALUMINUM OXIDE  
AT HIGH TEMPERATURE -U-  
AUTHOR-(02)-ANDREYEVA, L.P., ORESHKIN, P.T.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., FIZ. 1970, 13(3), 57-61

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--RELAXATION PROCESS, ELECTRICAL CONDUCTIVITY, ALUMINUM OXIDE,  
PLATINUM ELECTRODE, HIGH TEMPERATURE EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3003/1560

STEP NO--UR/0139/70/013/003/0057/0061

CIRC ACCESSION NO--AT0130472

UNCLASSIFIED

USSR

A

UDC 539.293.291.537

ORESHKIN, P. T., SPARCHENKOV, B. K., ANDREYEVA, L. P.

"Concerning Migration Polarization in Dielectrics and Semiconductor Elements"

Tomsk, Inventiva Fizika, No 5, 1970, pp 13-16

Abstract: It is shown that in migration polarization the relaxation time is determined by the lifetime of the carriers in a mixed state, by the thickness of the layer through which the migration takes place, and by the drift velocity. For ion migration a formula is obtained as a generalization of the ion-relaxation polarization formula. Experimental data are presented with regard to the determination of ion mobility in  $Al_2O_3$  by the Ioffe method, and a comparison was made with the values of mobility that were determined by the author's method with the use of formulas for the relaxation time. The necessity was pointed out for examining migration polarization when analyzing the mechanism of excess noise and some cases of current fluctuations in semiconductors, relaxation dielectric losses, polarization phenomena in active film elements, etc.

1/1

2/2 033 UNCLASSIFIED PROCESSING DATE--30OCT70  
CIRC ACCESSION NO--AP0121543  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THERMAL DIFFUSIVITY OF A SOLID  
SOLN. OF SI IN FE (UP TO 8.2 WT. PERCENT SI), OF SI IN CO (UP TO 3 WT.  
PERCENT SI), AND OF PURE CO WAS DETD. IN THE REGION OF THE CURIE TEMP.  
(T SUBC). IN EACH CASE, THE POLYTHERM OF THERMAL DIFFUSIVITY SHOWS A  
MIN. IN THE REGION OF T SUBC. AWAY FROM T SUBC, AN APPROX. LOGARITHMIC  
DEPENDENCE WAS OBSD. OF THERMAL DIFFUSIVITY ON T-T SUBC. THE  
DEPENDENCE IS MORE COMPLEX CLOSE TO T SUBC. A MIN. IN THE THERMAL COND.  
POLYTHERMS AT T SUBC ARE A RESULT OF A STRONG PHONON ELECTRON AND PHONON  
SPIN SCATTERING. THE MECHANISM OF SCATTERING AND TRANSFER IN  
FERROMAGNETIC SYSTEM IS DISCUSSED. FACILITY: URAL. POLITEKH.  
INST.IM. KIROVA, SVERDLOVSK, USSR.

UNCLASSIFIED

1/2 033 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--THERMAL DIFFUSIVITY AND THERMAL CONDUCTIVITY OF SOLID SOLUTIONS OF  
SILICON IN IRON AND COBALT -U-  
AUTHOR-(04)-KRENTSIS, R.P., ZINOVYEV, V.YE., ANDREYEVA, L.P., GELD, P.V.  
COUNTRY OF INFO--USSR  
SOURCE--FIZ. METAL. METALLOVED. 1970, 29(1), 118-23 A  
DATE PUBLISHED-----70  
SUBJECT AREAS--MATERIALS, PHYSICS  
TOPIC TAGS--THERMAL CONDUCTIVITY, SOLID SOLUTION, IRON ALLOY, COBALT  
ALLOY, SILICON CONTAINING ALLOY, CURIE POINT, THERMAL DIFFUSION, HIGH  
PURITY METAL, PHONON SCATTERING  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1998/0941 STEP NO--UR/0126/70/029/001/0118/0123  
CIRC ACCESSION NO--AP0121543  
UNCLASSIFIED

USSR

UIC: 100.014.015.01.1

KRENSIS, R. P., KALISEVICH, G. I., GIB'D, P. V., and CHERNIKOVA, L. P.

"Thermal Expansion of Chromium, Manganese, Iron, and Cobalt Silicides"

Tomsk, Investiya VSE--Fizika, No 1, 1977, pp 101-102

Abstract: This brief communication gives the results of measurements made by the authors of the coefficients of linear expansion of various specimens as a function of heat in a temperature range of 100 to 1000° K. The specimens were chromium, manganese, iron, and cobalt silicides having the same cubic structure of the B20 type. The specimens were made of 99.98% Cr by weight; 99.95% Mn; 99.95% Fe; 99.98 Co; and monocrystalline silicon, 99.99% Si in an induction furnace of the MYP-3M type, in an argon atmosphere. After alloying, the specimens were sucked up in quartz capillary tubes 3-4 mm in diameter. The errors made in the measurements did not exceed 2-3%, except for the lowest temperature region of 100-200° K, when the error amounted to 4-5%. Curves are given.

2/2 011

UNCLASSIFIED

PROCESSING DATE--02 OCT 70

CIRC ACCESSION NO--AP0112409

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IR SPECTRA OF 3 KNOWN DEPSIPEPTIDES AND THEIR DIPOLE MOMENTS SHOWED THAT THESE 10, 11, AND 12 MEMBERED RING SYSTEMS EXHIBIT VARIATION OF CIS TRANS FORMS THAT DEPENDS ON RING SIZE AND SUBSTITUENT STRUCTURE. IN THE 10 MEMBER RING THE CONFORMATIONS REALIZED ARE THOSE FAVORING INTRAMOL. INTERACTION OF AMIDE AND ESTER GROUPS AND THE POSSIBILITY OF TRANSANNULAR INTERACTION IS REALIZED IN THE EXCITED STATE; THESE EFFECTS ARE MUCH WEAKER IN THE LARGER RING SYSTEMS. THE DIPOLE MOMENTS OF THESE PEPTIDES RANGE FROM 3.4D TO 4.9D.



1/2 011 UNCLASSIFIED PROCESSING DATE--02JCT70  
TITLE--CONFORMATIONS OF MEDIAN DEPSIPEPTIDE RINGS. II. VIBRATIONAL SPECTRA  
AND DIPOLE MOMENTS -U-  
AUTHOR--(09)-ANDREYEVA, L.I., IVANOVA, T.M., YEFREMOV, YE.P., ANTONOV,  
V.K., SHEHYAKIN, M.M. A  
COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(2) 475

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PEPTIDE, DIPOLE MOMENT, EXCITED STATE, MOLECULAR INTERACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1992/1415

STEP NO--08/0079/70/040/002/0475/0480

CIRC ACCESSION NO--AP0112409

UNCLASSIFIED

USSR

UDC 621.385.39.032.11

ANDREYEVA, L.I., KAYDALOV, S.A., STEPANOV, B.M., TEREKHNOV, S.I.

"Use Of Laser For Study Of Pulse Characteristics of Coaxial Photocells"

V sb. Izvol'z. optich.kvant.generatorov v sovrem. tekhn. i med. Ch. 2-3 (Use Of Lasers In Contemporary Technology and Medicine. Parts 1-2--Collection Of Works), Len., 1971, pp 55-58 (from RZh:Elektronika i yeye primeneniye), No 2, Feb 72, Abs.2A197)

Translation: The technique is described as well as the results of measurements of the pulse characteristics of coaxial photoelements (PEK), the PEK-09A, PEK-14EP, and PEK-15M, with the aid of a laser operating in a regime of synchronization of modes at a wavelength of 1.06 micrometer. With the aid of an optical divider, one and the same signal was directed to a number of PEK and to the input of a Type PER-2 electrooptical photochronograph and a Type TPI-1 calorimeter. The results of the oscillography of the electrical pulses from the output of the PEK were compared with the photochronograms obtained with identical sweep duration  $\sim 30 \pm 10$  nsec. An analysis is made of the time resolution of the channel of oscillographic registration of pulses. 2 ill. 10 ref. R.I.

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2/2 011

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121047

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AMT. OF SOLASODINE (I) IN A CRUDE H SUB2 SO SUB4 HYDROLYZATE WAS DETD. BY USING THE CATIONIC RESIN SOV-3T, A SULFOSTYRENE DIVINYLBENZENE COPOLYMER, TO ISOLATE I. THUS, INTO A CHROMATOG. COLUMN (DIAM. 1.2 CM, HEIGHT 30 CM) HAVING AN UPPER RESERVOIR OF 25 ML CAPACITY WAS PLACED THE SWOLLEN RESIN THE H PRIME POSITIVE FORM AND THROUGH THE COLUMN WAS PASSED 20 ML OF THE H SUB2 SO SUB4 EXT. OF THE TITLE PLANT AT A RATE OF 1 ML-MIN-CM PRIME2. NEXT THROUGH THE COLUMN WAS PASSED 100 ML OF A 1PERCENT NH SUB4 OH SOLN. AT THE SAME RATE. THE RESIDUAL NH SUB4 OH WAS REMOVED FROM THE COLUMN BY VACUUM. AFTER CLOSING THE STOPCOCK, THERE WAS ADDED A MIXT. OF 80PERCENT ISO-PROH-25PERCENT NH SUB4 OH, THE RESIN WAS SHAKEN WITH THIS MIXT., AND 100 ML OF THIS SOLVENT MIXT. PASSED THROUGH THE COLUMN AT THE RATE OF 1 ML-MIN-CM SUB2. THE ELUATE WAS CONCD. UNDER VACUUM ON A WATER BATH. THE RESIDUE WAS DISSOLVED IN AL ALC.-H SUB2 O MIXT. (100:20) AND TITRATED WITH 0.1 N HCL USING A PH METER AND GLASS ELECTRODES, WITH 1 ML OF HCL SOLN. EQUIV. TO 0.04137 G OF I. THE RESULTS WERE RELIABLE WITHIN THE LIMITS PLUS OR MINUS 6PERCENT. FACILITY: VSES. NAUCH. ISSLED. KHIM. FARM. INST. IM. ORDZHONIKIDZE, MOSCOW, USSR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--ION EXCHANGE METHOD FOR DETERMINING SOLASODINE IN SOLANUM  
LACINIATUM -U-  
AUTHOR-(02)-ANDREYEVA, L.G., ROMANCHUK, M.A.  
COUNTRY OF INFO--USSR A.  
SOURCE--KHIM. FARM. ZH. 1970, 4(1), 43-5  
DATE PUBLISHED-----70  
  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--PROCESSED PLANT PRODUCT, SULFURIC ACID, HYDROLYSIS,  
CHROMATOGRAPHY, CHEMICAL PURIFICATION  
  
CONTROL MARKING--NO RESTRICTIONS.  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY KEEL/FRAME--1998/0359 STEP NO--UR/0450/19/004/001/0043/0045  
CIRC ACCESSION NO--AP0121047  
UNCLASSIFIED

Acc. Nr.: **AP0028771**

Ref. Code: UR 0050

PRIMARY SOURCE: Meteorologiya i Gidrologiya, 1970, Nr 1,  
pp 35-41

*A*  
MEASUREMENTS OF WIND VELOCITY AND DIFFUSION COEFFICIENT BY  
MEANS OF ARTIFICIAL LUMINOUS CLOUDS

L. A. Andreyeva, L. A. Katasev, D. B. Uvarov

Results of measurements of wind velocity and direction and diffusion coefficients are given in the article, based on the observations of artificial luminous clouds. Experiments were made in autumn of 1967 and in spring of 1968 over the island Haise by means of injecting appropriate reagents from rockets at a height ranging from 121 to 172 km.

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ANDREYEVA, L. A.

UDC 551.510.535.4

WIND IN THE STRATOSPHERE AND THE FORMATION OF THE SPORADIC E LAYER

Article by G. M. Gerasimov, Institute of Mathematical Sciences, L. A. Andreyeva, Director of Physical and Mathematical Sciences, A. A. Kutasev, V. V. Kozlov, Candidate of Physical and Mathematical Sciences, B. H. Gvarov and Yu. K. Chasavtina, Institute of Experimental Meteorology, Moscow, Meteorologiya i Klimatologiiya, Bulletin, No. 1, 1972, submitted 17 December 1971, pp 3-7

The profiles of the wind velocity and direction in the lower stratosphere obtained by observation data on artificial meteorium clouds on 19, 25 and 26 July 1965, at the Volgograd station are presented in this article. Some results of numerical modeling of the theory of formation of the sporadic E layer in the stratosphere under the effect of wave packet are discussed.

At Volgograd wind vanes were filled with a special mixture containing sodium which in the summer of 1965 in Volgograd to study the wind in the lower stratosphere. The experiments were performed on 19, 25 and 26 July at 2040 local time, 0100 and 0200 hours Moscow time, respectively.

The observed meteorium clouds formed were photographed synchronously from two angles. The profiles of the wind velocity and direction were obtained by the method of photographic registration. The procedure for processing these photographs is described in this paper.

The profiles of the wind velocity and direction in the stratosphere were obtained by the method of photographic registration. The procedure for processing these photographs is described in this paper.

The profiles of the wind velocity and direction in the stratosphere were obtained by the method of photographic registration. The procedure for processing these photographs is described in this paper.

USSR

UDC 616.2-036.11-027.6-078.73:576.8.073.4

KAPLAN, A. S., SVERDLOV, A. B., and ANDREYEVA, L. A., Virological Laboratory at the Leningrad Municipal Sanitary Epidemiological Station

"Use of the Immunofluorescent Method for Diagnosis of Acute Respiratory Infections"

Moscow, Voprosy Virusologii, No 5, Sep/Oct 72, pp 625-627

Abstract: The investigation was conducted on 426 adults and 580 children hospitalized with acute respiratory diseases. Nose swabs for immunofluorescent (IF) analysis were taken during the first 3 days of the disease, and blood samples for serological tests were collected twice: immediately and 7-14 days later. The IF method yielded positive results in 8.0-27.2% of the patients, depending on the age group and virus type. At the same time, serological tests yielded positive results in only 7.2-21.4%. The difference was especially large in the youngest children, whose immunological reactivity is generally weaker than that of adults. The results obtained by the two methods coincided in only 41.6% of the cases. The weighted result was in each case higher than either single result. For example, A2 influenza virus was identified in 14.3-21.3% by the serological method, in 17.3-23.0% by the IF method, and in 23.7-32.3% by the combined method. The same is true of influenza B, parainfluenza, and adenovirus. The combined method is recommended for early and correct diagnosis of respiratory infections of viral origin.

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2/2 018

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0132338

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLYACRYLONITRILE (I) FIBERS,  
TREATED WITH AQ. N SUB2 H SUB4 H SUB2 O SOLN., FOLLOWED BY HEAT  
TREATMENT UNDER N, ACQUIRED NEW PHYSICOCHEM. PROPERTIES. THE  
ELECTROKINETIC POTENTIAL (ZETA) AND GLASS TRANSITION TEMP. OF THE  
MODIFIED I FIBERS WERE PROPORTIONAL TO THE HEAT TREATMENT TEMP. A  
METHOD WAS PROPOSED FOR THE DETN. OF THE DEGREE OF CROSSLINKING FROM THE  
RELATIVE CHANGE IN ZETA. FACILITY: LITLP IM. KIROVA, LENINGRAD,  
USSR.

UNCLASSIFIED



1/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--ELECTROKINETIC POTENTIAL OF A POLYACRYLONITRILE FIBER MODIFIED WITH  
HYDRAZINE HYDRATE -U-  
AUTHOR--(05)-ANDROSOV, V.F., ANDREYEVA, K.I., BONDARENKO, V.S., ZHARKOVA,  
M.A., ROMANOVA, T.A.  
COUNTRY OF INFO--USSR

SOURCE--KHIM. VOLOKNA 1970, (2), 28-30

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--POLYACRYLONITRILE FIBER, HYDRAZINE HYDRATE, PHYSICAL CHEMISTRY  
PROPERTY, TRANSITION TEMPERATURE, ELECTRIC POTENTIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3005/0043

STEP NO--UR/0183/70/000/002/0023/0030

CIRC ACCESSION NO--AP0132338

UNCLASSIFIED

USSR

UDC 615:373.3:576.851.45].011.5

TARANENKO, T. M., BAKHRAKH, Ye. E., ANDREYEVA, I. P., and BOROVIKOVA, T. P.,  
"All Union Scientific Research Antiplague Institute, "Mikrob", Saratov

"Significance of Certain Functional Groups in the Biological Activity of Pestin  
PP"

Moscow, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 5, May 71,  
pp 134-137

Abstract: It is generally believed that the activity of allergens used for various diagnostic tests is associated with alpha-amino groups and with the phenol groups of cyclic amino acids. This study was performed to investigate the role of free amino groups and cyclic amino acids in the allergenic properties of pestin PP -- a preparation recommended for detecting immuno-allergic shifts in patients with plague. Formalinization, acetylation, and iodination of pestin PP obtained from plague vaccine strain EV considerably reduced the allergenic activity of the preparation, while deamination completely abolished this activity. These results indicate that the allergenic activity of pestin PP is associated with both free amino groups and phenol groups in aromatic amino acids.

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USSR

TARANENKO, T. M., Antibiotiki, Vol 18, No 3, 1973, pp 213-216 (2)

were used for the detection of lipids. MSA was found to be present in greater quantities in I than in II, and in both cases lipids were absent. MSA isolated from I and II contained glucose, galactose, and glucosamine; however, twice as much glucosamine was present in MSA derived from I than in that derived from II, while more galactose was present in the MSA derived from II than in that from I. In addition, MSA isolated from II also contained mannose, and a sugar with an  $R_f$  value close to that of fucose. Gel precipitation with equine antiplague serum and the first component of MSA showed that the titer of the preparation derived from I was 2.5 times as great as that of the preparation from II. No significant chemical differences were found between LPS derived from I and II; both preparations contained virtually identical amounts of reducing substances (about 19%), glucosamine (2-2.5%), and limited quantities of proteins and nucleic acids. IF spectra for both preparations were virtually indistinguishable. The obtained data indicate that streptomycin does not affect the LPS component of the *P. pestis* cell wall, but alters the metabolic processes involved in the formation of MSA.

2/2

USSR

UDC 576.851.49.097.22:615.332 (STREPTOMYCINUM) (2)

TARANENKO, T. M., VEYNBLAT, V. I., BAKHRAKH, Ye. E., MALININA, Z. Ye.,  
ORLOVA, L. S., and ANDREYEVA, I. P., All-Union Mikrob Antiplague Institute,  
Saratov

"Comparative Characteristics of Somatic Polysaccharides Isolated From Strain  
EV and Its Streptomycin-Resistant Variant"

Moscow, Antibiotiki, Vol 18, No 3, 1973, pp 213-216

Abstract: Chemical and immunochemical comparisons were made of the lipopoly-  
saccharide (LPS) and the main somatic antigens (MSA) isolated from the vaccine  
strain EV NIEG of the *P. pestis* (I), and its nonimmunogenic streptomycin  
resistant variant EV Str<sup>F61</sup> (II). The cells were grown on a solid nutrient  
medium for 48 h at 28°, and the antigenic preparations were obtained from  
acetone-dried cells. MSA was obtained by extraction with trichloroacetic  
acid, purified on a column of Biogel P-200, and MSA-containing fractions sel-  
ected on the basis of serologic reactivity and absorption at 280 nm. LPS was  
isolated by water-phenol extraction; phenol was removed by dialysis and MSA  
and nucleic acids by gel filtration on a Sepharise 2B column. For sugar  
analyses LPS and MSA were hydrolyzed with H<sub>2</sub>SO<sub>4</sub>, and the monosaccharides  
identified by thin-layer chromatography on silica gel. Infrared (IR) spectra  
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272 C23

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0135050

ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. THE TENSILE STRENGTH AT BREAK AND THE ELONGATION AT BREAK OF HIGH,D. POLYETHYLENE (1) FROM MINUS 40 TO PLUS 100DEGREES WERE MAX. FOR 1 SAMPLES WITH NARROW MOL.,WT. DISTRIBUTION AND CONTG. HIGH,MOL.,WT. FRACTIONS. THE ABSENCE OF FRACTIONS WITH MOL. WT. IS GREATER THAN OR EQUAL TO 10 PRIMO REDUCED THE CRACK RESISTANCE OF 1 EVEN WHEN THE MOL.,WT. DISTRIBUTION WAS NARROW. FACILITY: NAUCH.,ISSLED. INST. POLIM, PLASTMASS, Leningrad, USSR.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--20NOV70  
TITLE--RELATION BETWEEN THE MECHANICAL BEHAVIOR OF HIGH DENSITY  
POLYETHYLENE AND THE MOLECULAR WEIGHT DISTRIBUTION --  
AUTHOR--(05)--KARASEV, A.N., ANDREYEVA, I.N., DOMAREVA, N.K., KUSMATYKH,  
K.I., KARASEVA, M.G.  
COUNTRY OF ORIGIN--USSR  
SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(5), 1127-37  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY, MATERIALS  
TOPIC TAGS--POLYETHYLENE, TENSILE STRENGTH, MOLECULAR WEIGHT, CRACK  
PROPAGATION RATE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3006/1576 STEP NO--UR/0459/70/012/005/1127/1137  
CIRC ACCESSION NO--AP0145050  
UNCLASSIFIED

USSR

ANDREYEVA, I. N., and GRINEVA, G. M., Fiziologiya Rasteniy, Vol 17, No 5, Sep/Oct 70, pp 956-961

membranes. These changes in the membrane structure of the endoplasmic reticulum are regarded as a nonspecific response of the cells to an oxygen insufficiency, comparable to that occurring in plant and animal cells following exposure to other pathological factors.

2/2

USSR

UDC 581(17/12)

ANDREYEVA, I. N., and GRINEVA, G. M., Institute of Plant Physiology imeni K. A. Timiryazev, Academy of Sciences USSR

"Ultrastructure of the Endoplasmic Reticulum in Corn Root Cells Under Anaerobic Conditions"

Moscow, Fiziologiya Rasteniy, Vol 17, No 5, Sep/Oct 70, pp 956-961

Abstract: Two-week-old corn plants were exposed to hypoxia by periodically passing pure gaseous nitrogen through the nutrient medium containing the plants for 24 to 36 hours. The anaerobic conditions caused an increase in the number of membranes of the rough endoplasmic reticulum in the apical zone of the root cells. The membrane profiles were not scattered in disorderly fashion in the cells but were rather arranged in bundles containing 5 to 12 profiles parallel to one another. There were also concentric, multilayered, membrane-like bodies of rough reticulum containing mitochondria, Golgi bodies, and dense granulated cytoplasm matrices. Exposure to hypoxia for 48 to 72 hours produced more pronounced changes, including swelling of the cisterns of the reticulum, formation of numerous vacuoles in the cytoplasm, and appearance of large drops. The mitochondria were very close to the smooth reticulum

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USSR

UDC 634.0.414

ANDREYEVA, G. I., All-Union Scientific Research Institute of Silviculture and Forest Mechanization

"The Influence of Organophosphorus Insecticides on Conifer Leaf-Eating Pests of the Forest"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 10, No 5, 1972, pp 34-35

Abstract: Seeking a replacement for DDT (which was used as the standard), experiments were conducted in Rostovskaya and Moscow Oblasts against several types of caterpillars, and in Orenburgskaya Oblast against larvae of the star weevil. The following organophosphorus compounds and types were tested: 30% starch equivalent and 30% wetting powder benzophosphate, 20% starch equivalent and 30% wetting powder phthalophos, 80% wetting powder chlorophos, and 50% starch equivalent metathion. The star weevil larvae were killed even by the least insecticide concentration of .05%, but with all the variants it was determined that near 100% kill was obtained with insecticide concentrations of .5% and 1%. Chlorophos most quickly had a toxic effect for silkworm caterpillars. In natural conditions chlorophos and phthalophos quickly lost toxicity, while benzophosphate kept its toxic effect longest.

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Acc. Nr. **0055660** - **ANDREYEVA G.A.** Abstracting Service Ref. Code  
 CHEMICAL ABST. 6-70 480454

112029) reaction of polystyryllithium with poly(alkyl methacrylates) and synthesis of the graft copolymers of given composition and structure. Andreyeva, G. A.; Korotkov, A. A. (Inst. Vysokomol. Soedin., Leningrad USSR). Vysokomol. Soedin., Ser. A 1970, 12(1), 95-105 (Russ.) The grafting of poly(alkyl methacrylates) (I) (alkyl is Me, Bu, Ph, or *tert*-Bu) with polystyryllithium (II) gives  $[-CH_2CMe(COMeOLi)CPhCH_2CPh]_n$ , which eliminates MeOLi becoming  $[-CH_2CMe(COCHPhCH_2CPh)_n]$  (III). The condensation of III with a 2nd II mol. gives  $[-CH_2CMe(COLi)CPhCH_2CPh]_m[-CH_2CMe(COCHPhCH_2CPh)_n]$ , which is hydrolyzed to  $[-CH_2CMe(COH)CPhCH_2CPh]_m[-CH_2CMe(COCHPhCH_2CPh)_n]$ . In thermodynamically good solvents [tetrahydrofuran for all I, PhMe for I (alkyl is *tert*-Bu or Ph)] the reaction rate is diffusion controlled and there is an induction period. In a thermodynamically poor solvent [PhMe for I (alkyl is Me or Bu)] the reaction follows a 2nd order equation; the ester groups of I are shielded by the coiled polymer mols. (CPJB)

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ZASLAVKAYA, L. V., et al., *Metallovedeniye i Termicheskaya Obrabotka Metallov*, No 2, 1973, pp 39-42

tains more Cr, Ni, and probably also more Mo than the  $\alpha$ -phase. The austenite concentration with Cr, Ni, and with other elements in the  $\alpha \rightarrow \gamma$ -transformation process in Kh11N9-type steels is apparently one of the sources of austenite stabilisation of these steels in the tempering process at  $\alpha \rightarrow \gamma$ -transformation temperature. Two figures, one table, twelve bibliographic references.

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