"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 581.133(4+5)

VOLODIN, B. B., Institute of Hydrobiology, Academy of Sciences Ukrainian SSR, Kiev

"Specific Characteristics of the Utilization of Macroergic Elements by Some Blue-Green Algae"

Moscow, Fiziologiya Rasteniy, Vol 18, No 3, May/Jun 71, pp 526-531

Abstract: The synamics of resorption by the blue-green algae Microcystis aeruginosa Kuetz. emend. Elenk, Anabaena variabilis Kuetz., and Anacystic nidulans (Ralfs) of the elements S and P, which are carable of forming macroergic bonds, and the distribution of these elements in the cells of the algae were studied on addition of $Na^{35}SO_4$ and $Na_2H^{32}PO_4$ to the nutrient medium. In some experiments Na_2S was introduced into the medium. The type of response of the species of algae to the introduction of S and P depended on the Biological characteristics of the species, the concentration of S and P in the medium, and the form in which S was present in the medium (sulfate or sulfide). S in the form of sulfide stimulated the vital processes of M. aeruginosa, including propagation, to a greater extent than S in the form of sulfate. M. M. aeruginosa, presumably by reason of being a phylogenetically older species, resorbed S^{35} more intensively

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VOLODIN, B. B., Fiziologiya Rasteniy, Vol 18, No 3, May/Jun 71, pp 526-531

than P^{32}, while the younger species A. variabilis incorporated P^{32} at a higher rate than S^{35}. A. nidulans occupied an intermediate position, incorporating to a greater extent the element which was present in a higher concentration. With a deficit of P in the medium, M. aeruginosa utilized S more effectively, showing an increase in the content of SH groups by 30%, while in A. variabilis under the same conditions the content of SH groups decreased by 36%. Apparently M. aeruginosa had the capacity to replace P with S as a macroergic element, while A. variabilis lacked this capacity.

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USSR

UDC 534.222.2:533.27

TOLOKONNIKOV, L. A., and VOLODIN, G. T., Tula Polytechnical Institute

"Calculation of a Point Explosion in Various Active Media"

Kiev, Prikladnaya Mekhanika, Vol 9, No 1, Jan 73, pp 15-19

Abstract: Consideration is given to the calculation of a point explosion in various active media, that is to say, in media with the release or absorption of finite energy at the shock-wave front. The solution is conducted over the entire range of the change of intensity of the shock wave, from a strong shock wave to one that is degenerating into a sonic wave, and is conducted for plane, cylindrical, and spherical symmetry within a wide range of the adiabatic exponent and the density of the energy released or absorbed at the shock-wave front. The numerical calculations were conducted on the "Minsk-22" electronic digital computer. 1 figures, 6 references.

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USSR

VOLODIN, I. N.

"Planning of Experiments with Comparison of Parameters of Two Normal Sets"

Teoriya Veroyatnostey i Eye Primeneniya [Theory of Probability and its Applications], 1973, Vol 18, No 1, pp 206-211 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V119, by the author).

Translation: For two normal sets with parameters (m_1, σ_1) and (m_2, σ_2), three pairs of hypotheses are studied: 1) $H_0: m_1 - m_2 = 0$, $H_1: m_1 - m_2 \geq \Delta$; 2) $H_0: m_1 - m_2 = 0$, $H_1: |m_1 - m_2| \geq \Delta$; 3) $H_0: \sigma_1^2/\sigma_2^2 \leq k$, $H_1: \sigma_1^2\sigma_2^2 \geq k\ (1 + \Delta)$. for the first two pairs of hypotheses, two-step procedures are studied. An expression is given for the number of observations which must be performed in addition to the available (n_0, N_0) observations in order to provide fixed errors of first and second kind α and β. These procedures are produced by application of the procedure of Stein to the criteria of Bartlett-Sheffe and Student.

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USSR

UDC 519.281

VOLODIN, I. N., POMERANETS, B. M., SHIL'NIKOVA, V. D.

"Asymptote of Distribution of Sampling Correlation Coefficient and Its Statistical Applications"

Uch. Zap. Kazan. Un-t. [Scientific Writings of Kazan' University], Vol 130, No 3, 1970, pp 3-17 (Translated from Referativnyy Zhurnal Kibernetika, No 3, 1971, Abstract No 3 V145 by Ye. Markova).

Translation: Asymptotic formulas are produced for the distribution of the sampling correlation coefficient r and the Fisher transform of its coefficient $L = \frac{1}{2} \ln \frac{1+r}{1-r}$, similar to the asymptotic Edgsor-Kramer expansions for sums of independent random quantities. From these expansions, we can easily find asymptotic formulas for the quantiles of the distributions of r and L, asymptotic formulas for the confidence limits of correlation coefficient ρ and asymptotic formulas to estimate the number of observations necessary to differentiate two hypotheses $H_0(\rho \leq \rho_0)$ and $H_1(\rho \geq \rho_1)$ with fixed probabilities of errors of the first kind (ε) and second kind ($\bar{\omega}$). The principal results of the work are formulated as two lemmas, two theorems and five results. Calculation of the necessary number of

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VOLODIN, I. N., POMERANETS, B. M., SHIL'NIKOVA, V. D., Uch. Zap. Kazan. Un-t., Vol 130, No 3, 1970, pp 3-17.

observations for the most commonly used ε and ω are presented in a table appended to the article.

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USSR

UDC 632.938 (477.73)

VOLODIN, N., Chief of Nikolayevskaya Oblast Plant Protection Station and
VETROVA, O., Station Agronomist

"Biolaboratory Operating Experience"

Moscow, Zemledeliye, No 6, 1970, pp 52-53

Translation: For the first time in 1969, kolkhozes of our oblast treated 21,500 hectares of seeded and fallow land with Trichogramma against the turnip moth and other plant-chewing cutworms.

Of course, this figure is still very inconsequential, but in the next two or three years the farms of the oblast plan to treat hundreds of thousands of hectares with entomophages.

It is hardly necessary to prove the necessity of extensively using this method of fighting agricultural pests, and further developing and improving it.

In the southern, steppe rayons where many species of chewing outworms, cornborers, and Eurygaster are widespread, a chemical attack on them is not always effective. The use of entomophages there is very promising.

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VOLODIN, N., et al, Zemledeliye, No 6, 1970, pp 52-53

Taking this into consideration, in November 1968 the executive committee of the Nikolayevskaya Oblast Soviet of Workers' Deputies adopted a resolution establishing 16 interkolkhoz and six intersovkhoz biolaboratories, one for each administrative rayon, during 1969-1970. Fourteen interkolkhoz biolaboratories are already in operation.

Expertise in organizing them was borrowed from Kirovogradskaya Oblast, where such laboratories existed already in the prewar period.

Biolaboratories are cost accounting organizations. They are directed by a rayon Soviet which is selected by a meeting of authorized kolkhozes. As a rule, the chairman of the Soviet is the chief agronomist of the rayon agricultural production administration, or the head of the biolab.

The interkolkhoz biolaboratory services the kolkhozes of the rayon. State farms may also enter into it.

The fixed capital of the biolaboratory in the first stage is from fees paid by the kolkhozes, collected at an average rate of 30 kopecks per hectare of tillable land.

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USSR

VOLODIN, N., et al, Zemledeliye, No 6, 1970, pp 52-53

At the beginning of 1969, the Kirovogradskaya Oblast biolaboratory produced base material for Sitotroga, which was transmitted for further reproduction. Parallel with producing Sitotroga, the lab proceeded with reproduction of Trichogramma. In 1969, the biolaboratories gathered 17.1 kilograms of eggs of the grain moth Sitotroga, of which 1.8 kilograms was used for further contamination of grain, and 13.2 kilograms for reproduction of Trichogramma. The remaining biomaterial was sold to other laboratories. During the entire technological process the laboratories raised 525.4 million units of Trichogramma, of which 368 million were used for treating planted fields and 137.5 million for contaminating Sitotroga.

Fields were treated on 95 farms in nine rayons. Trichogramma entomophages were released on bare fallow land for use against the turnip moths and also against stalk corn borers, cabbage cutworms and moths, at an average rate of 17,000 (from 10,000 to 25,000) individuals per hectare. The number depended on the crop which was being seeded and the degree of contamination of the field.

In the course of the summer, 19,400 hectares of fields designated for winter crop seeding (including 18,200 hectares of bare fallow and 1,200 hectares

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VOLODIN, N., et al, Zemledeliye, No 6, 1970, pp 52-53

of stubble, 1,600 hectares of corn, 400 hectares of sugar beets, and about 200 hectares of vegetable crops and fruit plantings were treated. Of this, 19,800 hectares were treated against the turnip moths, 1,600 hectares against stalk corn borers, and 100 hectares against the cabbage cutworm and moth.

In working with Trichogramma, the conditions recommended in the directions of the Ukrainian Scientific Research Institute for Plant Protection were followed.

Preliminary data allow us to draw the conclusion that a considerable number of pests have perished due to Trichogramma. For example, 42% of the pests perished at the Rodyan'ska Ukraina Kolkhoz, Veselinovskiy Rayon, in stubble treated with Trichogramma, 38.5% on fallow land at the Drushba Kolkhoz, and 58.3% at the Pobeda Kolkhoz. At the Zavet Il'icha Kolkhoz, Kamankovskiy Rayon, on bare fallow land treated with Trichogramma, 69.2% of turnip moths perished, while none of the pests perished on fallow land not treated with Trichogramma. The corresponding figures were 65.4% and 3.6% for the Kolkhoz imeni Petrovskiy, and 71.2% and 1.9% at the Kolkhoz imeni Lenin.

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VOLODIN, N., et al, Zemledeliye, No 6, 1970, pp 52-53

The effectiveness of Trichogramma in kolkhozes of Vradiyevskiy, Domanevskiy, Voznesenskiy, and Pervomayskiy rayons was also calculated, where approximately the same results were achieved.

From three to 13 men were occupied in releasing Trichogramma at the farms. The average output norm was 30 hectares per day. Trichogramma was sold to kolkhozes at 50 kopecks per 10,000 units. Treating one hectare of bare fallow land cost an average of 57 kopecks, while for corn it was one ruble 32 kopeks (releasing 25,000 units per hectare). This is considerably cheaper than chemical treatment. Corn was treated in June and August, and bare fallow land from the second week in August. All work in applying Trichogramma was completed by August 25.

The operating experience of the biolabs in 1969 demonstrated that, even with insufficient equipment and apparatus, they are still able to raise and apply Trichogramma and Telenomus.

We are now taking measures to increase the productive capacities of the biolabs. On order from the rayons, the Nikolayevskaya Oblast Kolkhoz Designing Institute developed plans for construction of biolaboratories. Four of them,

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VOLODIN, N., et al, Zemledeliye, No 6, 1970, pp 52-53

Vradiyevskaya, Novoodesskaya, Voznesenskaya, and Pervomayskaya, will be built during the current year.

Next season, the laboratories will be able to treat about 100,000 hectares of plantings against chewing cutworms, cornborers, and coddling moths, and a considerable area of plantings of grain crops against chinch bugs.

The expenses now being incurred by biolaboratories for obtaining equipment and staff are high for the time being. However, they will be paid back rapidly. Calculations show that in just three years each biolaboratory will be able to have an annual income that covers expenses for raising and applying entomophages, and part of their capital can be allotted to replenishing fixed assets and expanding production capacities. Every year the cost of treatment will go down.

However, despite the broad scope which the biological method of plant protection is beginning to receive in production, there is still not sufficient attention to it on the part of specialized institutes. During one year of operation, our biolaboratories did not receive a single request, advice, or recommendation from any Ukrainian institute.

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USSR

VOLODIN, N., et al, Zemledeliye, No 6, 1970, pp 52-53

At the present time we have an approximate method for breeding Trichogramma, and an imperfect, complicated method for breeding Telenomus. This is, of course, very little.

It is stated in the press that biolaboratories in our country are working on the cultivation and application of other entomophagaes. The All Union Scientific Research Institute of Phytopathology worked out recommendations for breeding and application of the predatory Phytoseyulius mite for the struggle with spider mites in the protected soil for cucumbers, and the Samarkand State University has a way of using Phytomyza in the campaign against Egyptian broom rape. But these methods have been poorly publicized.

It seems to us that it has become necessary to organize active seminars or courses for training biolab workers, and also to publish an information bulletin where laboratories could share operating know-how and receive advice on breeding and applying entomophages.

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1/2 012 UNCLASSIFIED

TITLE--COMPOSITION FOR REMOVING LAC DYE COATINGS -U- PROCESSING DATE--04DEC70

AUTHOR-(05)-VOLODIN, N.L., GARIFZYANOV, G.G., RAKHIMOV, R.R., POTAPOV, A.M., SHAROV, V.G.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,341

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--09MAR70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--LACQUER, DYE, ORGANIC SOLVENT, CHEMICAL PATENT, POLYETHYLENE, POLYAMINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1766 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0137006

UNCLASSIFIED

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UNCLASSIFIED

CIRC ACCESSION NO--AA0137006 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COMPN. CONSISTS OF 7:3-5:5 VOL. POLYETHYLENEPOLYAMINES AND ETOH.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 620.193.5:546.623-31:546.45-31

BUDNIKOV, P. P., BELYAYEV, R. A., VOLODIN, P. L., RAKHALIN, N. A., FURAYEV, V. A., and TUMBAKOVA, M. I.

"The Corrosion of Aluminum and Beryllium Oxides in Gaseous Ammonia at 200-800°C"

Leningrad, Zhurnal Prikladnoy Khimii, Vol XLIV, No 1, Jan 71, pp 54-59

Abstract: Data on the corrosion resistance of fused samples of beryllium and aluminum oxides in gaseous ammonia are virtually absent in the literature.

This study deals with liquid synthetic ammonia, Grade 1, GOST 6221-52, 99.94% pure, and 99.5% pure beryllium oxide with a specific surface of 4.5 m^2/g. After processing, samples were placed in streams of ammonia gas at various temperatures and flow rates, for various periods (200-800°C; 7.5-12.8 m/sec; 3-10 hr). After each test the ammonia gas was checked for decomposition, which might occur at high temperatures.

Gravimetric, metallographic and electron-microscope studies of the surface, revealed no corrosion of either oxide in the 200-800°C range. An ammonia

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BUDNIKOV, P. P., et al., Zhurnal Prikladnoy Khimii, Vol XLIV, No 1, Jan 71, pp 54-59

gas flow of 10 m/sec had neither a corrosive nor an erosive effect in the 250-350°C range.

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USSR

UDC: 519.2

VOLODIN, S. V., KOLIN, K. K.

"On Approximating the Distribution of Customer Waiting Time in Single-Channel Queuing Systems"

Moscow, Sist. raspredeleniya inform.--sbornik (Information Distribution Systems--collection of works), "Nauka", 1972, pp 36-41 (from RZh-Kibernetika, No 10, Oct 72, abstract No 10V85 [authors' abstract])

Translation: A simple method of approximating the distribution of the waiting time of customers in a line is proposed for single-channel queuing systems with unlimited waiting. The essence of the method is that the actual distribution is replaced by an indicative distribution having equal mathematical expectation. It is shown that the given method of approximation can be used for a number of queue disciplines, including queuing with relative priorities. To evaluate the accuracy of the approximation, the results of calculation by the approximate formulas are compared with mathematical modeling data.

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USSR

VOLODIN, T.

"Light Welds Metals"

Moscow, Moskovskaya Pravda, 7 Jun 73, p 2

Translation: There is an intense light beam like that escaping from the objective of a photographic enlarger, and instantly a grayish little smoke rises over the steel plates. Professor G. D. Nikiforov handed me a protective face shield. Through the dark glasses I perceived how a luminous point moved along the plates, joining them. The light had welded steel. Light-beam welding has long been of interest to scientists. They have been specific advantages in the beam of concentrated light as against other welding methods. The light beam heats any materials, regardless of their magnetic or electric properties. Experimenters do not use solar rays, using instead the light of arc lamps whose spectral composition of emission differs little from solar rays. Working with solar rays must always depend on whims of the weather. The arc energy of the lamp can be concentrated by optical means, i.e., either magnifying or minimizing the light spot, or changing the supply voltage. Furthermore, the light beam can work at a distance, and its energy is capable of perfectly warming up the material even through transparent quartz glasses.

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USSR UDC 577.391+575.1+633.15+575.1

TURBIN, N. V., [redacted], and GORDEY, I. A.

"The Reasons for Increased Radioresistance of Heterosis Forms of Plants"

Minsk, Voprosy Genetiki i Selektsii (Aspects of Genetics and Selection), "Nauka i Tekhnika," Minsk, 1970, p 302

Abstract: Experimental data analyzing the dependence of the radioresistance level of plants on the degree of their heterozygosity are presented. On the basis of an analysis of radiation induced depression of 12 quantitative criteria of 35 inbred strains of maize plants with different duration of self-pollination and of different origin, it is indicated that the degree of heterozygosity plans an essential part in the radioresistance of plants, although no direct correlation between these criteria has been discovered.

The problem as to whether the balancing of the heterozygosity of the heterosis forms, developing as a result of crossing of pairs with high combining ability and the creation of conditions for the intensification of metabolic and reducing processes is one of the reasons for the increase in plant radioresistance, is discussed.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 029 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--THE RELATION BETWEEN VASCULAR FRAGILITY AND THE STATE OF SKIN MUCOPOLYSACCHARIDES -U-

AUTHOR-(04)-OYVIN, I.A., OYVIN, V.I., TOKAREV, O.YU., VOLODIN, V.M.

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69, NR 4, PP 55-57

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RABBIT, GUINEA PIG, RAT, SACCHARIDE, BLOOD VESSEL, HEMORRHAGE, RADIATION BIOLOGIC EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1588 STEP NO--UR/0219/70/069/004/0055/0057

CIRC ACCESSION NO--AP0106334

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 029 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0106334

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN INVESTIGATIONS ON HUMAN BEINGS, RABBITS, GUINEA PIGS AND RATS THE AUTHORS SHOW THAT INTRADERMAL ADMINISTRATION OF HYALURONIDASE DOES NOT REDUCE THE VASCULAR RESISTANCE OF THE SKIN NOTWITHSTANDING THE OBVIOUS RAREFACTION AND REDUCTION OF THE VISCOSITY OF MUCOPOLYSACCHARIDES. THESE DATA POINT TO THE NECESSITY OF CRITICAL APPROACH TO THE CONCEPTS ON THE ROLE OF MUCOPOLYSACCHARIDES IN MAINTENANCE OF THE MECHANICAL RESISTANCE OF VESSELS AND DEPOLYMERIZATION OF SKIN MUCOPOLYSACCHARIDES, AS ONE OF THE CAUSES OF THE ORIGIN OF HEMORRHAGES, IN PARTICULAR OF RADIATION ORIGIN.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR UDC 621.373.421.1(068.8)

KITAYGORODSKIY, Yu. I., BELOUSOV, N. A., SHLENSKIY, Ye. M., VOLODIN, V. P.

"A Magnetostriction Converter With Acoustic Feedback"

USSR Author's Certificate No 148609, Filed 28 Jul 61, Published 16 Mar 70 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10D376 P)

Translation: This Author's Certificate introduces a magnetostriction converter with acoustic feedback for automatically tuning the frequency of a self-oscillator to the mechanical resonance frequency of the converter. In order to obtain feedback voltage sufficient for direct excitation of oscillator tubes with a power of 5-15 kW without additional signal amplification, and to increase operational stability, the converter packet is made in the form of three electrically and magnetically independent elements which have the same natural resonance frequency. Two of these elements form the active link of the converter while the third, which is placed between them, produces the acoustic feedback voltage. Also introduced is a converter which differs from the one described above in that the phase relationships between the excitation and feedback voltages are maintained throughout the working frequency range of the converter by connecting the active elements and acoustic feedback element to the transmitting system of the converter in the same plane perpendicular to the direction of propagation of longitudinal oscillations of the system. The proposed magnetostriction converter may be used in self-oscillator circuits with automatic frequency control, for instance in ultrasonic oscillators which operate with welders. V. P.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 681.828.083.84

VASILEVSKIY, YU. A. and VOLODINA, A. P.; State Scientific-Research Institute of Chemical-Photographic Design

"New Magnetic Recording Carriers"

Moscow, Tekhnika Kino i Televideniya, No 6, 72, pp 14-21

Abstract: Film with gamma-iron oxide carrier has been undergoing significant improvement for some 35 years, but the inherent physical and technological difficulties associated with this oxide render any further advance in this line improbable. For this reason, new carriers are being sought, and among these chromium dioxide appears the most promising.

The authors obtained pure CrO_2 by decomposing CrO_3 under high pressure in oxygen, and from this prepared modified CrO_2 by adding tellurium and tin, with the formula $Cr_{0.989}Te_{0.01}Sn_{0.001}O_2$. Tape was prepared from both substances. Physical properties of the two carriers and of the corresponding tapes were determined, and compared with those of conventional iron-oxide tape.

The modified CrO_2 tape was found to be superior to conventional tape in several important respects, for example thickness and frictional properties; but its practical use is limited to operating temperatures not higher than 60-70°C. The new tape offers distinct advantages in some situations, but will not generally replace iron-oxide tape, with its stable and relatively inexpensive carrier.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 612.882"52"

VOLODINA, A. V., and KURILOVA, L. M., Laboratory for the Physiology and Pathology of the Sense Organs, Institute of Normal and Pathological Physiology, Academy of Medical Sciences USSR

"Circadian Rhythm of Human Cold Receptors"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 7, 1971, pp 7-8

Abstract: The number of cold-sensitive spots on the upper arms of human subjects increased from 0900 hours, peaking at 1700 hours and declining from 2100 hours until 0100, when the smallest number was recorded. Stimulation of the cold receptors elicited reactions related to the same time of day. The number of active cold receptors increased in response to heating and decreased in response to cooling.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 007 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--COLORIMETRY OF DRY WEIGHT OF BACTERIAL CULTURES, APPLICABILITY OF COLORIMETRIC METHOD OF DETERMINATION OF DRY RESIDUE FOR ANLYSIS OF

AUTHOR-(03)-CHALENKO, V.G., RUMYANTSEV, S.N., VOLODINA, I.K.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970 NR 3, PP 45-50

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TYPHOID FEVER CULTURE METHOD, COLORIMETRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/1466 STEP NO--UR/0016/70/000/003/0045/0050

CIRC ACCESSION NO--AP0109526

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 007 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0109526

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON THE EXAMPLE OF TYPHOID CULTURES THE AUTHORS DEMONSTRATED THE POSSIBILITY OF USING COLORIMETRIC METHOD OF DETERMINATION OF DRY WEIGHT FOR ANALYSIS OF BACTERIAL POPULATIONS. IN THE SUGGESTED MODIFICATION THE METHOD IS CHARACTERIZED BY HIGH SENSITIVITY AND PRECISION, ADEQUATE REPRODUCIBILITY; IT IS ALSO WELL COMPARABLE WITH THE DRY HEAT METHOD. WIDE APPLICATION OF THE METHOD IN EXPERIMENTAL AND TECHNICAL MICROBIOLOGY IS RECOMMENDED.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

Acc. Nr: AP0036821

Ref. Code: UR 0016

PRIMARY SOURCE: Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, 1970, Nr 1, pp 75-81

COLORIMETRY OF DRY WEIGHT OF BACTERIAL CULTURES. REPORT I. DETAILS OF THE METHOD

V. G. Chalenko, I. K. Volodina, S. N. Rumyantsev

The authors present the experimental results to ascertain the applicability of colorimetric method of determination of dry residue of tissue homogenates (Bailey a. Meymandi-Nejad, 1961) for corresponding analysis of S. typhi cells. Assessment of details of the method demonstrated the principal possibility of applying colorimetric procedures for analysis of bacterial biomass.

D.K.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 552.321.6(234.851)

BAKHTEYEV, M. K., ABRAMKIN, A. S., VOLODINA, I. V., LARIONOV, A. M., and PROSKURIN, G. F., Moscow Geological Exploration Institute imeni S. Ordzhonikidze, Vorkuta Complex Geological Exploration Expedition

"The Geological Nature of Local Aeromagnetic Anomalies of the Western Slope of the Northern Urals (the Verkhnyaya /Upper/ Pechora River Basin)"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy--Geologiya i Razvedka, No 10, Oct 73, pp 41-48

Abstract: A report is given on a detailed investigation of the aeromagnetic anomalies on the left bank of the Verkhnyaya Pechora river, on the water divides of its left tributaries -- the Vyder'ya, the Temp'ya, and the Man'skaya Volosnitsa. The area of development of stratified metamorphic rock possesses on the whole a negative magnetic field, which is of a strongly varied nature. Numerous local positive anomalies are to be observed against the generally negative background. Two types of anomalies are to be distinguished among the most intensive ones: isometric and linearly elongated. The isometric and linear magnetic anomalies are described. Worthy of note among the geological objects which bring about the local positive magnetic anomalies are the Temp'inskiye hyperbasites. 4 figures. 3 tables. 12 references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 543.848

VOLODINA, M. A., IVIN, S. Z., and PAL'YANOVA, M. V., Chair of Organic Chemistry

"Reduction Method for Chlorine and Bromine Determination in Organophosphorus Compounds

Moscow, Vestnik Moskovskogo Universiteta, Seriya II -- Khimiya, Vol 11, No 5, Sep-Oct 70, pp 634-638

Abstract: A method is suggested for chlorine and bromine determination in organophosphorus compounds based on pyrohydrogenolysis of the substance in the stream of a nitrogen-hydrogen mixture obtained in the thermal decomposition of ammonia. The pyrohydrogenolysis apparatus is as follows: Ammonia goes through a drying bottle with alkali into two quartz tubes (10-12 mm) heated by two electric furnaces. The tubes contain catalysts for decomposing the ammonia. The electric furnaces are heated to 600-700° C. The mixture of nitrogen and hydrogen obtained in the decomposition of the ammonia goes through a washing bot-

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

VOLODINA, M. A., et al., Vestnik Moskovskogo Universiteta, Seriya II -- Khimiya, Vol 11, No 5, Sep-Oct 70, pp 632-634

tle with a concentrated aqueous ammonia solution to a quartz tube heated by two electric furnaces, one large and immobile, the other small and mobile. The tube is equipped with a small cooler. The pyrohydrogenolysis is carried out with the small mobile furnace (400-500°). The article includes a sketch of the device.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 011 UNCLASSIFIED

TITLE--QUANTITATIVE DETERMINATION OF PRIMARY AND SECONDARY ALCOHOLS BY ISOPROPENYL ACETATE ACETYLATION -U-

PROCESSING DATE--13NOV70

AUTHOR-(02)-VOLODINA, N.A., KONKOVA, I.V.

COUNTRY OF INFO--USSR

SOURCE--VESTN. MOSK. UNIV., KHIM. 1970, 11(1), 119-21

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ACETATE, TOLUENE, SULFONIC ACID, ESTER, GAS CHROMATOGRAPHY, QUANTITATIVE ANALYSIS, ALCOHOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1758

STEP NO--UR/0189/70/011/001/0119/0121

CIRC ACCESSION NO--AP0123559

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 011 UNCLASSIFIED

CIRC ACCESSION NO--AP0123559 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ISOPROPENYL ACETATE (I) REACTED QUNAT. WITH PRIMARY ALCS. IN 1.5 HR, SECONDARY ALCS. IN LARGER THAN OR EQUAL TO 3 HR, IN THE PRESENCE OF P,TOLUNE SULFONIC ACID (II) AT 80DEGREES. THE RESULTING ESTERS WERE DETD. BY GAS CHROMATOGRAPHY. HEAT A MIXT. OF 50-100 MG OF THE ALC., 100-200 MG OF I, AND 1-2 MG OF II ON A WATER BATH AT 80DEGREES. INSERT 5 MU L. OF THE REACTION MIXT. ON A COLUMN (2 M LONG, 0.6 CM DIAM.) FILLED WITH 1:9 POLYETHYLENE GLYCOL 3000 ON CHEMOSORB (60-80 MESH) AT 80-150DEGREES WITH HE CARRIER GAS AT 60-70 ML-MIN. WHEN APPLIED TO 16 ALCS., THE ERROR WAS 0 TO PLUS OR MINUS 1PERCENT.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 008 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--SYNTHESIS AND PROPERTIES OF PYRROLIDINES AND PYRROLES -U-

AUTHOR-(03)-TEREMTYEV, A.P., VOLODINA, M.A., MISHINA, V.G.

COUNTRY OF INFO--USSR

SOURCE--VESTN. MOSK. UNIV., KHIM. 1970, 11(1), 93-5

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, PYRROLES, PYRROLIDINE, BENZENE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1099 STEP NO--UR/0189/70/011/001/0093/0095

CIRC ACCESSION NO--AP0104497

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 008 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0104497

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO 0.04 MOLE HCONME SUB2 WAS ADDED FOR 10 MIN 0.042 MOLE POCL SUB3, WITH COOLING AND STIRRING, THE MIXT. STIRRED 45 MIN, AND WITH COOLING WAS ADDED FOR 30 MIN 0.01 MOLE 1,ALKYL,2,METHYL(OR PHENYL)CYCLOPENTA OR CYCLOHEXA(B)PYRROLE IN 2.7 ML HCONME SUB2. THE MIXT. WAS HEATED AT 35-40DEGREES TO GIVE THESE I (R, R PRIME1, N, PERCENT YIELD, B SUB4, M.P., AND N PRIME20 SUBD GIVEN): ME, BU, 1, 50, 160-2DEGREES, -, 0.15430; PH, ET, 1, 75, -, 110-11DEGREES, -; ME, BU, 2, 60, 168-9DEGREES, -, 0.15510; PH, ET, 3, 89, -, 132-3DEGREES, -. ADDING TO 0.004 MOLE I (R EQUALS PH, R PRIME1 EQUALS ET, N EQUALS 1 OR 2) IN 25 ML H SUB2 O, 0.04 MOLE KMNO 3 HR, FOLLOWED BY 1.5 HR STIRRING GAVE 96PERCENT BZOH.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC: 547.75

TERENT'YEV, A.P., ~~VOLODINA, M.A.~~, MISHINA, V.G., Department of Organic Chemistry Moscow State University imeni M.V. Lomonosov, Moscow, Ministry of Higher and Secondary Specialized Education RSFSR

"Synthesis and Properties of Pyrrolidines and Pyrroles"

Moscow, Vestnik Moskovskogo Universiteta, Seriya II, Khimiya, Vol 11, No 1, Jan/Feb 70, pp 93-95

Abstract: The authors investigated the reaction of formylation of 1-alkyl-2-(methyl- or phenyl)-cyclopentano-4, 5-pyrroles, and also 1-alkyl-2-(methyl- or phenyl)-cyclohexano-4,5-pyrroles. The position of the formyl group was determined on the basis of the products of formylation of 1-ethyl-2-phenylcyclopentano- and cyclohexano-4, 5-pyrroles. Interaction of 1-21kyl-2-(methyl- or phenyl)-cyclopentano- and cyclohexano-4, 5-pyrroles with dimethylformamide and phosphorus oxychloride formed previously unknown 1-alkyl-2-(methyl- or phenyl)-3-formylcyclopentano- and cyclohexano-4, 5-pyrroles with a yield of 50-89%. The synthesized 1-butyl-2-methyl-3-formylcyclopentano- and cyclohexano-4,5-pyrroles are oils which darken rapidly in air. The 1-ethyl-2-phenyl-3-formylcyclopentano- and cyclohexano-4, 5-pyrroles are crystals. It is established that the formyl group occupies the third position in the pyrrole cycle rather than the benzene ring.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 539.4

GORDEYEVA, T. A., ZHEGINA, I. P., VOLODINA, T. A., Moscow

"Application of Fractography to Study the Rupture Kinetics of Light Alloys"

Kiev, Problemy Prochnosti, No 3, March 1971, pp 25-29

Abstract: In this paper the fractographic method was used to study retarded rupture of alloys based on Ti and Al and to establish the relation of the structure of these alloys to the rupture kinetics in the case of single and repeated loading. The results indicate the complex, as a rule, nonmontonic variation of the rupture rate and nature in the process of crack development even when the nature of the external load is kept practically constant. It is demonstrated that in the fatigue fracture zone corresponding to transition from the stage of slow crack development to sharply accelerated crack development, along with the relief characteristic of rupture from the effect of repeated loads, microsections appear regularly for which the mechanism of single rupture is characteristic.

The role of individual structural components in the various stages of rupture turns out to be quite different. For example, in aluminum alloys the primary phase particles essentially have no effect on the rupture process

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

GORDEYEVA, T. A., et al., Problemy Prochnosti, No 3, March 1971, pp 25-29

during the period of slow development of fatigue cracks. The widths of the microfatigue strips are studied and compared for VAD-23 and AK4-1 alloys. This index is taken as the characteristic of the microstructure of fatigue fracture. The expediency of using optical and electron photography to study the behavior of materials during crack development and the relation of rupture characteristics to load conditions is demonstrated.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 017 UNCLASSIFIED

TITLE--POLYMERIZATION OF ALLYL COMPOUNDS -U- PROCESSING DATE--30OCT70

AUTHOR-(03)-VOLODINA, V.I., TARASOV, A.I., SPASSKIY, S.S.

COUNTRY OF INFO--USSR

SOURCE--USP. KHIM. 1970, 39(2), 276-303

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYMERIZATION, ALLYL HALIDE, AMINE, ALCOHOL, CYCLIC GROUP

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2035 STEP NO--UR/0074/70/039/002/0276/0303

CIRC ACCESSION NO--AP0125623

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 017 UNCLASSIFIED

CIRC ACCESSION NO--AP0125623 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLYMN. OF ALLYL ETHERS, ESTERS, AMINES, ALCS., AND HALIDES, ALLYLAROMATIC COMPDS., AND OTHER ALLYL COMPDS.; THE MECHANISMS OF ALLYL POLYMN. BY RADICAL, RADICAL COMPLEX, RADIATION, AND IONIC MEANS, AND CYCLOPOLYMN. OF GEM DIALLYL COMPDS. ARE REVIEWED WITH 386 REFS. FACILITY: INST. KHIM. SVERDLOVSK, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--REACTION OF A GRIGNARD REAGENT WITH 4,HYDROXY,3,5,DITERT,BUTYLPHENYLETHYLENE BROMOHYDRIN -U-

AUTHOR-(03)-YERSHOV, V.V., VOLODKIN, A.A., VOLODKINA, V.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 724-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--GRIGNARD REAGENT, HYDROXYL RADICAL, BENZENE DERIVATIVE, ETHYLENE, BROMINATED ORGANIC COMPOUND, OXIDATION, COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0047 STEP NO--UR/0062/70/000/003/0724/0725

CIRC ACCESSION NO--AP0125882

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 011 UNCLASSIFIED

CIRC ACCESSION NO--AP0125882 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTION OF RMGX WITH 4,3,5,HO(ME SUB3 C) SUB2 C SUB6 H SUB2 CH, (OH)CH SUB2 BR PROCEEDS WITH MIGRATION OF THE HO GROUP TO THE OTHER C ATOM OF THE CHAIN. MEMGBR GAVE 64PERCENT 4,3,5,HO(ME SUB3 C) SUB2 C SUB6, H SUB2 CH SUB2 CHMEOH, M. 56-8DEGREES, ALSO PREPD. FROM HYDROLYTIC TREATMENT OF 1,METHYL,2,6,DI,TERT,BUTYLSPIRO(2.5),3,6,OCTADIEN,5,ONE IN THE PRESENCE OF MINERAL ACIDS IN 90-5PERCENT YIELDS. OXIDN. OF THE ISOMERIZED ALC. WITH PBO SUB2 RESULTED IN A FREE RADICAL, DETECTED BY ITS EPR SPECTRUM, PROVING THE PRESENCE OF 2 H ATOMS AT THE 1ST C ATOM OF THE SIDE CHAIN. REACTION OF THE BROMIDE WITH RMGX PROCEEDS PROBABLY VIA AN INTERMEDIATE SPIROCYCLIC COMPLEX, WHOSE 3,MEMBERED RING IS OPENED BY ADDN. OF THE GRIGNARD REAGENT BETWEEN THE HO BEARING C ATOM AND THE C ATOM OF THE 6,MEMBERED RING. FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 022 UNCLASSIFIED

TITLE--STERICALLY HINDERED QUINAMINE -U-

PROCESSING DATE--20NOV70

AUTHOR-(03)-YERSHOV, V.V., RASULEVA, D.KH., VOLODKIN, A.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (4), 956-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--STEREOCHEMISTRY, IR SPECTRUM, UV SPECTRUM, CYCLOHEXANE, ALKYNE, BROMINATED ORGANIC COMPOUND, AMINE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1302

STEP NO--UR/0062/70/000/004/0956/0957

CIRC ACCESSION NO--AP0134976

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0134976

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTION OF MORPHOLINE WITH 4,BROMO,R,METHYL,2,6,DI,TERT, BUTYL,2,5,CYCLOHEXADIEN,1,ONE GAVE THE 4,MORPHOLINO ANALOG, M. 103-4DEGREES, WHICH WAS CHARACTERIZED BY ITS UV AND IR SPECTRA. A REACTION SCHEME WAS GIVEN. FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--REACTION OF A GRIGNARD REAGENT WITH 4,HYDROXY,3,5,DITERT,BUTYLPHENYLETHYLENE BROMOHYDRIN -U-

AUTHOR-(03)-YERSHOV, V.V., VOLODKIN, A.A., VOLODKINA, V.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 724-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--GRIGNARD REAGENT, HYDROXYL RADICAL, BENZENE DERIVATIVE, ETHYLENE, BROMINATED ORGANIC COMPOUND, OXIDATION, COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0047 STEP NO--UR/0062/70/000/003/0724/0725

CIRC ACCESSION NO--AP0125882

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125882

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTION OF RMGX WITH 4,3,5,HO(ME SUB3 C) SUB2 C SUB6 H SUB2 CH, (OH)CH SUB2 BR PROCEEDS WITH MIGRATION OF THE HO GROUP TO THE OTHER C ATOM OF THE CHAIN. MEMGBR GAVE 64PERCENT 4,3,5,HO(ME SUB3 C) SUB2 C SUB6, H SUB2 CH SUB2 CHMEOH, M. 56-8DEGREES, ALSO PREPD. FROM HYDROLYTIC TREATMENT OF 1,METHYL,2,6,DI,TERT,BUTYLSPIRO(2.5),3,6,OCTADIEN,5,ONE IN THE PRESENCE OF MINERAL ACIDS IN 90-5PERCENT YIELDS. OXIDN. OF THE ISOMERIZED ALC. WITH PBO SUB2 RESULTED IN A FREE RADICAL, DETECTED BY ITS EPR SPECTRUM, PROVING THE PRESENCE OF 2 H ATOMS AT THE 1ST C ATOM OF THE SIDE CHAIN. REACTION OF THE BROMIDE WITH RMGX PROCEEDS PROBABLY VIA AN INTERMEDIATE SPIROCYCLIC CCMPLEX, WHOSE 3,MEMBERED RING IS OPENED BY ADDN. OF THE GRIGNARD REAGENT BETWEEN THE HO BEARING C ATOM AND THE C ATOM OF THE 6,MEMBERED RING. FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

BUDAGOV, YU. A., VINOGRADOV, V. B., VOLOD'KO, A. G., DZHELEPOV, V. P., KLADNITSKIY, V. S., KUTSIDI, N. K., Tbilisi State University, LOMAKIN, YU. F., MAKSIMENKO, V. A., MARTINSKA, G., FLYAGIN, V. B., KHARZHEYEV, YU. N., and SHANDOR, L.

"Possible Existence of $\pi^- \gamma$-Resonance With a Mass of 270 MeV"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 13, No 12, 20 Jun 71, pp 665-668

Abstract: The preliminary results of this experiment were presented in 1970 at the Fifteenth International Conference on High-Energy Physics in Kiev. The authors find experimental signs of the possible existence of a new meson resonance. They observe a narrow peak when M = 270 MeV in the spectrum of effective masses of the system $\pi^- \gamma$, which forms in the reaction $\pi^- p \rightarrow \pi^- p + (2,3)\gamma$ at 5 GeV/c. The authors study events of the type $\pi^- p \quad \pi^- p + (2,3)\gamma$ which satisfy the following conditions: (1) the protons are identified by ionization and stopping in the camera, and the impulses of the protons do not exceed 900 MeV/c; (2) the length of the tracks of secondary charged particles from the star is no less then 2 cm, and the impulses of these particles are measured with an

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

BUDAGOV, YU. A., et al., Pis'ma v Zhurnal Eksperimental'ncy i Teoreticheskoy Fiziki, Vol 13, No 12, 20 Jun 71, pp 665-668

accuracy no worse than 30%; (3) the γ-quanta have impulses greater than 30 MeV/c, measured with an accuracy no worse than 25%; (4) the scattering angles between the two γ-quanta do not exceed 2°. As a result of the experiment, the authors find that the effect which they observed is caused by the existence of a new meson resonance. The figures depict the distribution by effective mass of quanta. The article contains 2 figures and a bibliography of 7 entries.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 013 UNCLASSIFIED

TITLE--PRODUCTION OF XI HYPERSONS IN TAU P INTERACTIONS AT 5.1 GEV-C -U- PROCESSING DATE--13NOV70

AUTHOR-(05)-BUDAGOV, YU.A., VINOGRADOV, V.B., VOLODKO, A.G., DZHELEPOV, V.P., DUSHENKO, V.F.

COUNTRY OF INFO--USSR

SOURCE--JETP LETTERS (USA), VOL. 11, P. 28-31 (JAN. 1970)

DATE PUBLISHED----JAN70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--HYPERON, CASCADE, PROPANE BUBBLE CHAMBER, PARTICLE PRODUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1795 STEP NO--US/0000/70/011/001/0028/0031

CIRC ACCESSION NO--AP0133700

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 013 UNCLASSIFIED

CIRC ACCESSION NO--AP0133700 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) SP-0- ABSTRACT. REPORTS THE OBSERVATION OF THE DECAYS OF THE CASCADE HYPERON XI YIELDS ALPHA PLUS PI PRIME NEGATIVE AND A DETERMINATION OF ITS PRODUCTION CROSS SECTION IN PI P INTERACTIONS AT 5.1 GEV-C IN A METER PROPANE BUBLE CHAMBER.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--STUDY OF THE MASS SPECTRUM OF THE LAMBDA K SYSTEM IN PI PRIME NEGATIVE P INTERACTIONS AT 4 AND 5.1 GEV-C -U-

AUTHOR-(05)-BUDAGOV, YU.A., VINOGRADOV, V.B., VOLODKO, A.G., DZHELEPOV, V.P., KIRILLOVUGRYUMOV, V.G.

COUNTRY OF INFO--USSR

SOURCE--JETP LETTERS (USA), VOL. 11, NO. 1, P.31-5 (JAN. 1970)

DATE PUBLISHED----JAN70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PROPANE BUBBLE CHAMBER, SYNCHROTRON, PROTON, MASS SPECTRUM, PION PION INTERACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1778 STEP NO--US/0000/70/011/001/0031/0035

CIRC ACCESSION NO--AP0133683

UNCLASSIFIED

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2/2 014 UNCLASSIFIED

CIRC ACCESSION NO--AP0133683 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REPORTS THE RESULTS OF THE STUDY OF THE EFFECTIVE MASS SPECTRUM OF THE LAMBDA K SYSTEM, OBTAINED IN AN INVESTIGATION OF PI PRIME NEGATIVE PI INTERACTIONS IN THE 24 LITER AND THE METER PROPANE BUBBLE CHAMBERS IRRADIATED BY 4 AND 5.1 GEV-C PION BEAMS, RESPECTIVELY, FROM THE JINR PROTON SYNCHROTRON. (10 REFS.).

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 013 UNCLASSIFIED

TITLE--PRODUCTION OF XI PRIME NEGATIVE HYPERONS IN PI PRIME NEGATIVE P INTERACTIONS AT 5.1 GEV-C -U-

PROCESSING DATE--16OCT70

AUTHOR-(05)-BUDAGOV, YU.A., VINOGRADOV, V.B., VOLODKO, A.G., DZHELEPOV, V.P., DUSHENKO, V.F.

COUNTRY OF INFO--USSR

SOURCE--PIS'MA ZH. EKSP. TEOR. FIZ. 1970, 11(1), 28-31

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--HYPERON, PION PROTON INTERACTION, RADIOACTIVE DECAY, PARTICLE PRODUCTION, PARTICLE CROSS SECTION, BUBBLE CHAMBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0678

STEP NO--UR/0386/70/011/001/0028/0031

CIRC ACCESSION NO--AP0105654

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 013 UNCLASSIFIED

CIRC ACCESSION NO--AP0105654 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANAL. OF 230,000 PHOTOGRAPHS TAKEN IN A C SUB3 H SUB8 BUBBLE CHAMBER OF PI PRIME NEGATIVE P INTERACTIONS AT 5.1 GEV-C SHOWED 28 NUCLEAR EVENTS WHOSE SECONDARY NEG. TRACKS COMING OUT THE INTERACTION STARS HAD THE CHARACTER OF THE XI PRIME NEGATIVE YIELDS 0 PLUS PI PRIME NEGATIVE DECAY. ONLY 6 OF THEM SATISFIED THE CRITERION FOR A XI HYPERON DECAY, I. E., IONIATION OF EACH TRACK NOT CONTRADICTING THE XI DECAY HYPOTHESIS AND EFFECTIVE MASS (0 PLUS PI PRIME NEGATIVE) NOT DIFFERING FROM M EQUALS 1321 MEV-C PRIME2 MORE THAN 50 MEV-C PRIME2. ALL 6 EVENTS IN THE NUCLEAR STAR WERE UNEQUIVOCALLY IDENTIFIED AS THE FOLLOWING: (SHOWN ON MICROFICHE). THE TOTAL CROSS SECTION FOR XI PRIME NEGATIVE HYPERON PRODUCTION IN THE PI PRIME NEGATIVE-P INTERACTION WAS (2.9 NEGATIVE SUB1.0 POSITIVE PRIME1.8)MU B. THE CROSS SECTION INCREASED ON INCREASING THE INTERACTION ENERGY. FACILITY: OB'EDIN, INST. YAD. ISSLED., DUBNA, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 015 UNCLASSIFIED

TITLE--MEASUREMENT OF TOTAL AND PARTIAL CROSS SECTIONS OF THE 5.1 GEV-C PI PRIME NEGATIVE MESON INTERACTION IN A PROPANE BUBBLE CHAMBER -U-

PROCESSING DATE--16OCT70

AUTHOR-(05)-BUDAGOV, YU.A., VINOGRADOV, V.B., VOLODKO, A.G., OZHELEPOV, B.P., MARTINSKA, G.

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(2), 395-8

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--MESON INTERACTION, PION, PROTON, NEUTRON, CARBON, BUBBLE CHAMBER, PROPANE, INTEGRAL CROSS SECTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1033

STEP NO--UR/0367/70/011/002/0395/0398

CIRC ACCESSION NO--AP0110723

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 015 UNCLASSIFIED

CIRC ACCESSION NO--AP0110723 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TOTAL CROSS SECTION OF THE 5.1 GEV-C PI PRIME NEGATIVE MESON INTERACTION WAS MEASURED IN A C SUB3 H SUB8 BUBBLE CHAMBER. YIELDS OF REACTIONS WITH DIFFERENT MULTIPLICITIES OF CHARGED PARTICLES WERE DETD. FOR THE INTERACTION OF PI PRIME NEGATIVE MESONS WITH P, N, AND C ATOMS, AND THE CROSS SECTIONS FOR GENERATIONS OF 0-10 PRONG EVENTS IN COLLISIONS WITH P WERE OBTAINED. FACILITY: OB'EDIN, INST. YAD. ISSLED., DUBNA, USSR.

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USSR

BUDAGOV, YU. A., VINOGRADOV, V. B., VOLOD'KO, A. G., DZHELEPOV, V. P., KIRILLOV-UGRYUMOV, V. G., KLADNITSKIY, V. S., KUZNETSOV, A. A., LOMAKIN, YU. F., MEL'NIKOVA, N. N., PONOSOV, A. K., PLYAGIN, V. B., SHLYAPNIKOV, P. V., MARTINSKA, G. (1), BOLDEA, V. (2), MIKHUL, A. (2), MUNUYANU, D. (2), PONTA, T. (2), FELEA, S. (2), and CHADRAA, B. (3), Joint Institute of Nuclear Research; (1) University imeni P. I. Shafarik, Koshitse, Czechoslovak SSR; (2) Institute of Atomic Physics, Bucharest, Romania; (3) Physics Institute of the Academy of Sciences Mongolian People's Republic, Ulan-Bator

"Study of the Mass Spectrum of a ΛK-System in $\pi^- p$-Interactions at 4 and 5.1 Gev/c"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol. 11, No. 1, 5 Jan 70, pp 31-35

Abstract: The results of a study of the spectrum of the effective masses of a ΛK-system are reported. The spectrum was obtained in investigating $\pi^- p$-interactions in a 24-liter and a 1-meter propane bubble chamber irradiated in π-meson beams of the proton synchrotron of the Joint Institute of Nuclear Research with pulses of 4 and 5.1 Gev/c, respectively. An investigation of the structure of the effective mass spectrum of a ΛK-system was of interest from the viewpoint of observing new

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USSR

BUDAGOV, YU. A., et al, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol. 11, No. 1, 5 Jan 70, pp 31-35

resonances with zero strangeness and the decays of different isobars via the channel $N^* \to \Lambda + K$, to determine the relative probabilities of these decays. Approximately 230,000 photographs were analyzed for each bubble chamber. The effective mass spectra of ΛK^0 combinations for events in which the decays of a Λ-hyperon and a K^0-meson were simultaneously recorded in the chamber are graphed. The graphs show a considerable excess in the number of events above the background in the mass region 1.61-1.96 Gev/c^2. It is shown that this anomaly is not associated with the reflection of known resonances Y^* (1385) and K^* (890) in the ΛK^0-spectrum. The total excess in the number of events over the background in the mass interval 1.61-1.96 Gev/c^2 was 114 ± 13. The experimental data verify the existence of two resonances with masses about 1685 and 1935 Mev/c^2 and widths of the order of 150 Mev/c^2. It is concluded that the anomaly observed in the effective mass spectrum of ΛK can be explained only by the decay of the isobar S_{11} (1710), P_{11} (1750) via the channel $N^* \to \Lambda + K$ or by the existence of a new resonance with mass about 1685 Mev/c^2, as the data of R. Erbe et al indicate.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC: 535.37

VOLOD'KO, L. V., DEMCHUK, M. I., SEVCHENKO, A. N., ZAZHOGIN, A. P., and CHERNYAVSKIY, A. F.

"Investigating the Statistical Method for Recording the Laws of Luminescence Scintillation"

Minsk, Zhurnal Prikladnoy Spektroskopii, vol 16, No 6, 1972, pp 1001-1007

Abstract: The purpose of this paper is to further the development of physical investigation of the processes accompanying luminescence by looking into a better method for statistically recording the laws of luminescence scintillation in the time range of 10^{-9} to 10^{-5} sec, in which there are no principal defects as in the stroboscopic method or in the method of synchronous photon counting. The basic idea of this superior method was first considered in an earlier paper published in this same journal by some of the authors listed above (A. F. Chernyavskiy, et al, 13, 1970, p 840). The present paper gives the results of a thorough investigation into the method and describes an experimental device for investigating luminescence. A block diagram of the device is given and its operation explained. It is found that this method is useful in a practically unlimited range of luminescence intensity and has high resolving power and low error.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 024 UNCLASSIFIED

TITLE--AZIMUTHAL FUNCTIONS OF THE EXTENT OF POLARIZATION OF SEPARATE LINES IN THE LUMINESCENCE SPECTRA OF URANYL COMPOUND CRYSTALS -U-

PROCESSING DATE--30OCT70

AUTHOR-(03)-VOLODKO, L.V., KOMYAK, A.I., POSLEDOVICH, M.R.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(3), 567-71

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

SUBJECT AREAS--PHYSICS

TOPIC TAGS--URANIUM COMPOUND, POLARIZATION, SINGLE CRYSTAL, LUMINESCENCE SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1534

STEP NO--UR/0048/70/034/003/0567/0571

CIRC ACCESSION NO--AP0125162

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 024 UNCLASSIFIED

CIRC ACCESSION NO--AP0125162 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLARIZATION OF THE MORE INTENSE LINES IN THE SPECTRA OF CSUO SUB2(NO SUB3) SUB3, RB SUB2UO SUB2(NO SUB3) SUB4, AND (NH SUB4) SUB2UO SUB2(NO SUB3) SUB4 SINGLE CRYSTALS WERE STUDIED IN ALL DIRECTIONS AROUND THE CRYSTAL AXIS BY A PREVIOUS METHOD (A. I. KOMYAK, ET AL., 1970). THE RESULTS ARE DISCUSSED FROM THE POINT OF VIEW OF A 3 DIMENSIONAL OSCILLATOR MODEL.

FACILITY: BELORUSS. GOS. UNIV. IM. LENINA, MINSK, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 621.382.3

PAVLOV, P. V., VASIL'YEV, V. K., VOLOD'KO, V. G., ZORIN, Ye. I., TETEL'-BAUM, D. I., TULOVCHIKOV, V. S., CHIGIRINSKAYA, T. Yu.

"Peculiarities of Concentration Profiles in Ion Implantation and Their Use for Creating Varicaps and Bipolar Transistors"

Kiev, IVUZ, Radioelektronika, Vol 14, No 11, Nov 71, pp 1353-1364

Abstract: The authors consider the principal technically important singularities of concentration profiles in the case of ion-beam alloying both without distillation and after diffusion distillation of dopants. Problems of calculating the principal sections and depths of PN junctions on silicon as a function of conditions of irradiation and annealing are discussed. A description is given of the use of the ion-beam method for making a varicap with an inverse impurity gradient in the base, and also for making a binary PNP transistor. The basic parameters of the varicap are calculated. Nine figures, one table, bibliography of nine titles.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 038 UNCLASSIFIED

TITLE--USE OF THE ION BOMBARDMENT METHOD TO DOPE GERMANIUM -U-

PROCESSING DATE--30OCT70

AUTHOR-(04)-VOLODKO, V.G., ZORIN, YE.I., PAVLOV, P.V., TELEBAUM, D.I.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(4), 812-13

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--ION BOMBARDMENT, GERMANIUM, DOPED ALLOY, BORON, ION, VOLT AMPERE CHARACTERISTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0930

STEP NO--UR/0449/70/004/004/0812/0813

CIRC ACCESSION NO--AP0121532

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 038

UNCLASSIFIED

CIRC ACCESSION NO--AP0121532 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SURFACE RESISTIVITY OF THE INVERSION LAYER IN P TYPE GE BOMBARDED AT 50 KEV WITH P IONS AND ANNEALED 30 MIN AT 200-800DEGREES WAS STUDIED. THE ION BEAM WAS ORIENTED NORMAL TO THE (111) PLANE, AND THE ION DOSE WAS 0.1-1000 MICROCOULOMBS-CM PRIME2. THE SURFACE RESISTIVITY DEPENDS MONOTONICALLY ON ANNEALING TEMP. THE INVERSION N TYPE LAYER IS FORMED AFTER ANNEALING AT GREATER THAN 450 AND 350DEGREES FOR ION DOSES OF 10-100 AND 1000 MICROCOULOMBS-CM PRIME2, RESP. NO INVERSION LAYER WAS OBSD. FOR DOSES SMALLER THAN 1 MICROCOULOMB-CM PRIME2. CURRENT VOLTAGE CHARACTERISTICS OF P,N JUNCTIONS FORMED IN N TYPE GE BY BOMBARDMENT AT 50 KEV WITH B IONS AND ANNEALING AT 400DEGREES EXHIBIT A RECTIFICATION COEFF. OF SIMILAR TO 10 PRIME4 AT 1 V. FACILITY: GOR'K. ISSLED. FIZ.-TEKH. INST., GORKI, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 621.315.592

VOLOD'KO, V. G., ZORIN, YE. I., PAVLOV, P. V., and TETEL'BAUM, D. I.

"Germanium Doping by the Method of Ion Bombardment"

O legirovanii germaniya metodom ionnoy bombardirovki (cf. English above), Moscow, 1969, 8 pp, ill., bibliogr. 8 naz. (from RZh-Metallurgiya, No 6, Jun 70, Abstract No 6 G416 DEP)

Translation: An experimental study was made of the change of surface resistance of the inversion layer and the utilization factor of the introduced alloy during the bombardment of p-type Ge by P ions with an energy of 50 kev. Also presented are characteristics of the p-n-transition obtained on n-type Ge by combardment with B ions. Ge with a specific resistance of 1 ohm·cm was used in bombardments with P ions. The beam of ions was directed normally toward face (111). The dose of ions varied from 0.1 to 1000 μ coul/cm^2. The irradiated specimens were annealed at 200-800° over a period of 30 min. The absence of the inversion type of conductivity of the irradiated layer for doses 1 μ coul/cm^2 and less over the entire interval of cited annealing temperatures was established. At doses of 10 and 100 μ coul/cm^2 the n-type layer began to form at the annealing temperature of 400°, and for the 1000 μ coul/cm^2 dose it began at 350°. The dependence of surface resistance on annealing temperature is monotonic. The surface resistance

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

VOLOD'KO, V. G., et al., O legirovanii germaniya metodom ionnoy bombardirovki, 1969, (from RZh-Metallurgiya, No 6, Jun 70, Abstract No 6 G416 DEP)

approaches a constant value when the annealing temperature does not exceed 550°. A maximum utilization factor is observed in a dose of 100 μ coul/cm^2. The absence of inversion during doping by small doses of P is explained by the acceptor character of the radiation defects, and the reduction of the utilization factor at large doses is related to the formation of an amorphous layer. The volt-ampere characteristics of p-n-transitions which have formed on n-Ge due to bombardment with B ions with an energy E = 50 kev and dose 100 μ coul/cm^2 were studied. Annealing after bombardment was conducted at 400° over 30 min. The p-n-transition boundary was protected by the SiO_2 film which was vaporized on in the high-frequency plasma of the gas discharge. The rectification factor at U = 1 v was $\sim 10^4$.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 024 UNCLASSIFIED

TITLE--ANATOMO TOPOGRAPHICAL BASES OF SURGICAL RESTORATION OF LYMPH LIVER OUT PATHWAYS OR THE DOG AFTER ORTHOPADIC TRANSPLANTATION -U-

PROCESSING DATE--09OCT70

AUTHOR-(02)-KIRPATOVSKIY, I.D., VOLODKO, V.P.

COUNTRY OF INFO--USSR

SOURCE--EKSPERIMENTAL'NAYA KHIRURGIYA I ANESTEZIOLOGIYA, 1970, NR 2, 36-41

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LIVER FUNCTION, LYMPHATIC SYSTEM, AUTOPSY, DOG, BIOLOGIC STAIN, BLOOD CIRCULATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0643

STEP NO--UR/0481/70/000/002/0036/0041

CIRC ACCESSION NO--AP0108854

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 024 UNCLASSIFIED

CIRC ACCESSION NO--AP0108854 PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTS ON 42 CADAVERS OF DOGS WEIGHING FROM 10 TO 35 KG IN WHICH LYMPHATIC VESSELS AND REGIONAL LYMPH LIVER NODES WERE ISOLATED AND PRELIMINARILY FILLER WITH THE GEROTHE'S BLUE MASS OR LATEX, STAINED DIFFERENTLY. EXPERIMENTS ON DOGS SHOWED THAT THE BEST PATHWAYS FOR RESTORING THE LIVER LYMPH OUTFLOW AFTER TRANPSLANTS IS A LIVER NODE, WHICH RECEIVES LYMPHATIC VESSELS OF ALL THE LIVER LOBES IMMEDIATELY OR THROUGH ANASTOMOSES BETWEEN VESSELS. THE MAIN LIVER NODE, CONSTANT, LAGE IS BEHIND THE PORTAL VEIN, BETWEEN THIS VEIN AND THE RENAL ARTERY. EXPERIMENTALLY ORTHOPEDIC TRANSPLANTS OF THE LIVER WITH ANASTOMOSES OF THE MAIN HEPATIC LYMPH NODES OF THE DONOR AND OF THE RECIPIENT HAVE BEEN PERFORMED. FACILITY: KAFEDRA OPERATIVNOY KHIRURGII UNIVERSITETA DRUZHBY NARODOV IM. P. LUMUMBY, LABORATORIYA PO PERESADKE ORGANOV I TKANEY AMN SSSR AND KAFEDRA TOPOGRAFICHESKOY ANATOMII MOSKOVSKOGO MEDITSINSKOGO STOMATOLOGICHESKOGO INSTITUTA.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--EXTRACTION AND COMPLEXOMETRIC DETERMINATION OF A CALCIUM TRACE IMPURITY IN TUNGSTEN AND ITS COMPOUNDS -U-

AUTHOR-(03)-GORBENKO, F.P., VOLODKO, YE.U., NEMIROVSKAYA, YE.M.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB. 1970, 36(3), 277

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--TUNGSTEN COMPOUND, TUNGSTEN ALLOY, TRACE ANALYSIS, CALCIUM, METAL CHEMICAL ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0430 STEP NO--UR/0032/70/036/003/0277/0277

CIRC ACCESSION NO--AP0126183

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/2 018

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CIRC ACCESSION NO--AP0126183 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISSOLVE 1-2 G OF SAMPLE IN 12 ML OF 20PERCENT NAOH WITH HEATING. ADD DROPWISE 3 ML 50PERCENT SOLN. OF TARTARIC ACID (TO DISSOLVE CAWO SUB4) AND BOIL TILL THE SOLN. BECOMES CLEAR. COOL AND ADD H SUB2 O TO MAKE 35 ML. EXT. CA WITH 35 AND 15 ML OF AT (AZO,AZOXY BN IN CCL SUB4 PLUS 20PERCENT BU SUB3 PO SUB4). COMBINE THE EXTS. AND REEXT. CA WITH 50 ML 0.1N HCL. ADD NH SUB4 OH AND TITRATE WITH 0.01N EDTA UNTIL THE BLUE COLOR OF METHYLTHYMOL BLUE CHANGES TO LIGHT GREY. PREP. A BLANK IN THE SAME WAY. FOR THE DETN. OF LARGER THAN OR EQUAL TO 0.01PERCENT CA THE RELATIVE ERROR IS 3.5PERCENT.

FACILITY: VNII REAKTIVOV KHIM. CHIST. MATER. ELEKTRON. TEKH., DONETSK, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 632.95

VOLODKOVICH, S. D., ANDREYEVA, YE. I., GOLYSHIN, N. M., MONOVA, V. I., KAPLAN, G. I., PRONCHENKO, T. S., USMANOV, M. G., ABELENTSEV, 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 RZh-Khimiya, No 13, 10 Jul 72, Abstract No 13N501 by T. A. Belyayeva)

Translation: The preparation bromtan ($BrCCl_2CHBrCH_2CH_2CH_2Cl$) (I) is being tested as a soil fungicide and antiseptic for nonmetallic materials. I is as effective as carbathion in the control of melon fusarial 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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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 632.95

GOLYSHIN, N. M., ABELENTSEV, V. I., DVUKHSHERSTOV, M. G., MEL'NIKOV, N. N., VOLODKOVICH, S. D., TRUNOV, P. P., DYMSHAKOVA, G. M., NOVIKOVA, V. A.

"Fungicide Mix"

USSR Author's Certificate No 250600, filed 28 Mar 68, published 16 Jul 71 (from RZh-Khimiya, No 6 (11), Jun 72, Abstract No 6N624)

Translation: Ethylenethiuramdisulfide (13-40%) is added to a fungicide mix containing ethylenebisdithiocarbamates of Zn (36-55%) and Mn (20-35%) for simultaneous control of several plant diseases. The preparation can be used for preplant treatment of the seed of bean and vegetable crops with consumption norms of 6-10 grams/kg of feed.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 632.934.1

VOLODKOVICH, S. D., and KAPLAN, G. I., All-Union Scientific Research Institute of Chemical Means for Plant Protection, Moscow, State Committee for Chemistry USSR

"Synthesis of Bromtan, A New Fungicide"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 43, May 70, No 5, pp 1140-1143

Abstract: Bromtan, 1,1,5-trichloro-1,2-dibromopentane, is synthesized in a two-step process: 1) dehydrochlorination of 1,1,1,5-tetrachloropentane to trichloropentene in the presence of aluminum chloride; 2) bromination of trichloropentene. Bromination temperature should be kept below 30°C, which requires a system of heat removal since this is an exothermal reaction. The resultant product is chemically pure and may be used without vacuum distillation. Bromtan is an effective soil fungicide and is recommended for combatting diseases of fruits, vegetables and flowers from indoors and outdoors. The chemical is also recommended for fighting cotton wilt and for eradicating various hibernating vectors of diseases such as apple scab. Bromtan may also be used as an antiseptic for nonmetallic materials.

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VOLODKOVICH, S. D., and KAPLAN, G. I., All-Union Scientific Research Institute of Chemical Meand for Plant Protection, Moscow, State Committee for Chemistry USSR

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Abstract: Bromtan, 1,1,5-trichloro-1,2-dibrompentane, is synthesized in a two-step process: 1) dehydrochlorination of 1,1,1,5-tetrachloropentane to trichloropentene in the presence of aluminum chloride; 2) bromination of trichloropentene. Bromination temperature should be kept below 30°C, which requires a system of heat removal since this is an exothermal reaction. The resultant product is chemically pure and may be used without vacuum distillation. Bromtan is an effective soil fungicide and is recommended for combatting diseases of fruits, vegetables and flowers from indoors and outdoors. The chemical is also recommended for fighting cotton wilt and for eradicating various hibernating vectors of diseases such as apple scab. Bromtan may also be used as an antiseptic for nonmetallic materials.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 632.95

HEL'NIKOV, N. N., SOKOLOVA, YE. M., TRUNOV, P. P., VOLODKOVICH, S. D., DYMSHAKOVA, G. M., GOLYSHIN, N. M., ABELENTSEV, V. I., UKRAINETS, N. S., FEDOSEYENKO, L. G., ZAIKIN, B. A., DVUKHSHERSTOV, M. G., VISHEVETSKAYA, A. M., ORLOV, S. I., ZAVIZION, A. P., and TALASH, A. I.

"Polycarbazin"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Protectants -- collection of works), vyp 1, Moscow, 1970, pp 95-104 (from RZh-Khimiya, No 13, 10 Jul 72, Abstract No 13N503 by T. A. Belyayeva)

Translation: The effectiveness of polycarbazin (I) on apple scab and grape-vine mildew equals that of zineb (II) and polyram-combi, while on cherry-fruit gray rot it equals Bordeaux liquid (III) (1 percent), but is ahead of II. I equals II and III for Clasterosporium infection of the cherry plum and tomato macrosporiosis. The decisive factor which determine the length of action of I is precipitation, which washes thepreparation off plants.

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Metrology, Surveying, Mapping, Graphics

USSR

UDC 621.317.795.2.087.7

VOLOGDIN, E. I.

"Quantization Error in Reiterated Measuring of Time Intervals Duration"

Moscow, Izmeritel'naya Tekhnika, No 9, Sep 71, pp 33-35

Abstract: A method is outline for determining this quantization error in averaging the results of dependent (phase) transformation, assuming that the time interval is given with the aid of start and stop pulses, while the analog to digital conversion is achieved with the aid of quantization pulses, filling the time interval as shown in the diagram. Formulas are derived which make it possible to determine the dispersion of an average, correspinding to a specific value of the measured time interval, at which the probability of the result of $N + 1$ pulses is equal to p. The averaged dispersion at optimal averaging is given by the formula: $D = \int \omega(p) \left[p/n - p^2 \right] dp$ where $\omega(p)$ is the probability distribution density of the time interval values. It is shown that it is possible to reduce the dispersion of the average in averaging the results of dependent transformations.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 621.791.011:620.192.4:669.295.017

VOLOGDINA, G. P., Candidate of Technical Sciences, and PETROV, G. L., Doctor of Technical Sciences

"Causes of Crack Formation During Welding of Cast Alpha-Titanium Alloys"

Moscow, Svarochnoye Proizvodstvo, No 9, 1973, pp 23-25

Abstract: A study was made to determine the mechanism and cause of crack formation in the heat-affected zone of welded cast alpha-titanium alloys (Ti-Al system). It was found that hot cracks are formed and the reasons for this are the presence of chemical heterogeneity in the initial cast metal, produced by the steady-state method of pouring into a magnesite mold, which leads to the formation of easily melting eutectics of the Ti+TiFe and $Ti+Ti_5Si_3$ type. The degree of tendency to crack formation depends on the size of segregation concentrations and can be decreased by means of using a pouring technology which provides a fast rate of cooling, high density of the cast metal, small grain size, and a fine intergranular structure. Development of cracks above 1000°C occurs at a stress equal to 0.3 of the yield point. Presence of chemical heterogeneity in the initial cast metal causes a heterogeneity in the plastic deformation of heat-affected zone microvolumes during welding which leads to the formation of cracks at a temperature below 900°C. 4 figures, 1 table, 8 bibliographic references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 539.12.01

TAMM, I. Ye., and VOLOGODSKIY, V. B.

"The Use of a Curved Momentum Space to Construct a Nonlocal Quantum Field Theory"

Moscow, Teoriya Vzaimodeystviya Elementarnykh Chastits pri Vysokikh Energiyakh —Sbornik, Trudy Ordena Lenina Fizicheskogo Instituta im. P. N. Lebedeva, Vol 57, 1972, pp 5-28

Abstract: The article gives a generalization of the usual perturbation theory for a curved momentum space, postulating a method of summing the momenta which enter into the argument of the delta functions corresponding to Feynman diagram vertices. It is shown that direct generalization of the theory for a curved momentum space does not culminate in success because of the presence of infinities (angular divergences) in the matrix elements and violation of the condition of unitarity. Another method is given for constructing the S matrix in a curved momentum space in which the S matrix is written as an antichronologically charge-ordered exponent. The S matrix automatically proves to be unitary and apparently free of infinities. However,

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USSR

Tamm, I. Ye., and VOLOGODSKIY, V. B., Teoriya Vzaimodeystviya Elementarnykh Chastits pri Vysokikh Energiyakh -- Sbornik, Trudy Ordena Lenina Fizicheskogo Instituta im. P. N. Lebedeva, Vol 57, 1972, pp 5-28

since in its construction the identity $\theta(x)[\mathcal{L}(x),\mathcal{L}(0)]_- = \theta(x)\theta[(x+\tau^2][\mathcal{L}(x),\mathcal{L}(0)]_-$ (where $\mathcal{L}(x)$ is the Lagrangian, τ an arbitrary vector lying in the upper light cone) was used to preserve relativistic invariance, a difficulty arises due to violation of the correspondence principle in the sense of a limiting transition to local theory. This difficulty is discussed in an appendix. Other appendices give basic formulas for the volume element and the sum of the momenta in the curved momentum space, as well as some limitations on the form of the metric tensor.

The authors thank many staff members of their division, particularly D. A. KIRZHNITS and V. YA. FAYNBERG for their criticism and advice.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 026 UNCLASSIFIED

TITLE--ON THE DEPENDENCE OF THE PHOTOSENSITIVITY OF SOME PROTEINS TO ULTRAVIOLET LIGHT ON THE MOLECULE CONFORMATION -U-

PROCESSING DATE--23OCT70

AUTHOR-(03)-KONEV, S.V., VOLOGOVSKIY, I.D., VOSKRESENSKAYA, L.G.

COUNTRY OF INFO--USSR

SOURCE--MOLEKULYARNAYA BIOLOGIYA, 1970, VOL 4, NR 3, PP 395-400

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PROTEIN, ENZYME, PHOTOCHEMISTRY, FLUORESCENCE, LIGHT POLARIZATION, MOLECULAR STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0149

STEP NO--UR/0463/70/004/003/0395/0400

CIRC ACCESSION NO--AP0120849

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

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UNCLASSIFIED

CIRC ACCESSION NO--AP0120849 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONSIDERABLE CHANGES ARE OBSERVED OF THE QUANTUM YIELDS OF ARGINASE AND UREASE PHOTOINACTIVATION (Q) DUE TO TEMPERATURE CHANGES IN THE REGION 5-35DEGREES WHICH ARE NOT ACCOMPANIED BY ANY CHANGES OF THE RATE OF THE TRYPTOPHANYL PHOTOLYSIS OR BY CHANGES IN THE NATURE OF PHOTOPRODUCTS. A GOOD CORRELATION BETWEEN THE EXPERIMENTAL CURVES Q EQUAL F(T) AND CURVES OD DEPENDENCE OF THE DEGREE OF FLUORESCENCE POLATIZATION OF TYPTOPHANYLS ON THE TEMPERATURE P SUBFL EQUALS F(T) TESTIFIES THAT THE EARLIER FOUND COOPERATIVE CONFORMATIONAL TRANSITION BETWEEN A AND B FORMS OF THE NATIVE PROTEINS IS RESPONSIBLE FOR THE CHANGES IN PHOTOSENSITIVITY OF ENZYMES. IT IS SUGGESTED THAT CHANGES IN PHOTOSENSITIVITY OF THE PROTEINS ARE CONNECTED WITH INFLUENCES OF MACROMOLECULAR CONFORMATION ON EVENTS WHICH PRECEED THE FORMATION OF THE FINAL STABLE PHOTOPRODUCTS. FACILITY: LABORATORY OF BIOPHYSICS AND ISOTOPES, ACADEMY OF SCIENCES, BESSR, MINSK.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC: 621.373.431.2

MAKSIMOV, G. T., VOLOKH, N. F.

"A Sawtooth Voltage Generator"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 5, 1970, p 39, patent No 261457, filed 6 May 68

Abstract: This Author's Certificate introduces a sawtooth voltage generator based on a symmetric multivibrator which uses semiconductor elements. The generator contains a T-shaped diode-resistor load network. As a distinguishing feature of the patent, the return time is reduced and the operational reliability of the device is improved by connecting a series diode-resistor network shunted by an additional diode to the collector of each of the transistors. The other end of this diode resistor network is connected to the emitter of the same transistor through a storage capacitor, and the emitters of both transistors are connected to the positive pole of the power supply through a blocking diode.

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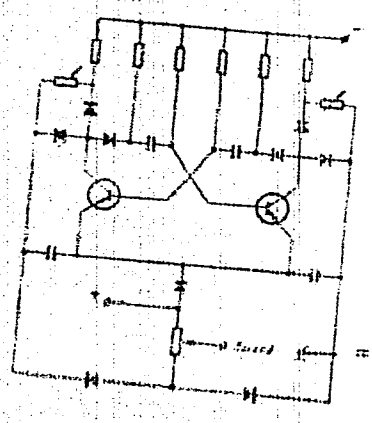
USSR

MAKSIMOV, G. T., VOLOKH, N. F., Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 5, 1970, p 39, patent No 261457, filed 6 May 68



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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--PREPARATION AND PROPERTIES OF CHLORONITROBIS,PHENANTHROLINE,COBALT,III, SALTS -U-

AUTHOR-(02)-PALADE, D.M., VOLOKH, T.N.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 885-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--COBALT COMPLEX, ORGANIC NITRO COMPOUND, PHENANTHROLINE, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/1329 STEP NO--UR/0078/70/015/003/0885/0886

CIRC ACCESSION NO--AP0138339

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

272 014

UNCLASSIFIED

CIRC ACCESSION NO--AP0138339 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. (CO(PHEN) SUB2 (NO SUB2)CL)CL.5H SUB2 O (I) (PHEN EQUALS PHENANTHROLINE) WAS OBTAINED WHEN CRYST. CIS,(CO,(NO SUB2) SUB2 (PHEN))NO SUB3 WAS SUSPENDED IN BOILING HCL. IN THE PRESENCE OF KX (X EQUALS I OR BR), (CO(PHEN) SUB2 NO SUB2 X)X.H SUB2 O PPTD. (CO(PHEN) SUB2 CO SUB3) PRIME POSITIVE FORMED WHEN I REACTED WITH NA SUB2 CO SUB3.

FACILITY: DONETS. POLITEKH. INST., DONETSK, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 029 UNCLASSIFIED

TITLE—PREPARATION AND PROPERTIES OF FIBERS FROM THE LACTAM OF 4 AMINOCYCLOHEXANECARBOXYLIC ACID -U-

PROCESSING DATE--30OCT70

AUTHOR-(05)-VOLOKHINA, A.V., MURASHKINA, S.I., KHARITONOVA, A.S., TUZHIKOVA, S.S., ROLEV, M.YA.

COUNTRY OF INFO—USSR

SOURCE—KHIM. VOLOKNA 1970, (2), 67-8

DATE PUBLISHED———70

SUBJECT AREAS—CHEMISTRY, MATERIALS

TOPIC TAGS—COPOLYMERIZATION, LACTAM, CAPROLACTAM, SULFURIC ACID, SYNTHETIC FIBER, ELONGATION, NYLON, AMINE, CYCLOHEXANE, CARBOXYLIC ACID

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED

PROXY REEL/FRAME—2000/0831

STEP NO—UR/0183/70/000/002/0067/0068

CIRC ACCESSION NO--AP0124498

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

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2/2 029 UNCLASSIFIED

CIRC ACCESSION NO--AP0124498 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COPOLYMN. OF THE TITLE LACTAM (I) (PREPD. BY HEATING CIS 4 AMINOCYCLOHEXANECARBOXYLIC ACID AT 300DEGREES IN AN AUTOCLAVE) WITH EPSILON CAPROLACTAM (II) WAS DONE AT 185-240DEGREES DEPENDING ON THE I-II RATION IN THE PRESENCE OF K METAL AND II N ACETYL DERIV. THE POLYMER MELTS CANNOT BE SPUN INTO FIBERS, BUT 10-12PERCENT SOLNS. IN H SUB2 SO SUB4 WERE SPUN INTO WATER, GIVING EXCELLENT FILAMENTS. THE OPTIMUM MONOMER RATIO WAS 1:1, THE TEMP. 185DEGREES. THE FIBERS PREPD. UNDER THE OPTIMUM CONDITIONS HAD 589 KG-MM PRIME2 MODULUS AT 3PERCENT ELONGATION AND RESISTED 41,080 FLEX CYCLES UNDER 5 KG-MM PRIME2 LOADING IN BOTH CASES, EXCEEDING THESE PROPERTIES OF NYLON 6.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/2 026

UNCLASSIFIED

TITLE--COPOLYMERIZATION OF LACTAMS OF HEXAHYDRO,P,AND M,AMINOBENZOIC ACIDS -U-

PROCESSING DATE--30OCT70

AUTHOR-(04)-VOLOKHINA, A.V., KHARITONOVA, A.S., RYZHENKO, L.M., KUDRYAVTSEV, G.I.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN. SER. B 1970, 12(3), 225-7

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

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--COPOLYMERIZATION, AMINE, BENZOIC ACID, CAPROLACTAM, INTRINSIC VISCOSITY, SYNTHETIC FIBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1676

STEP NO--UR/0460/70/012/003/0225/0227

CIRC ACCESSION NO--AP0125297

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

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UNCLASSIFIED

CIRC ACCESSION NO--AP0125297 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE LACTAMS WERE POLYMD. AND COPOLYMD. IN VARIOUS PROPORTIONS IN THE PRESENCE OF 1 MOLE PERCENT METALLIC K AND 0.25 MOLE PERCENT N-ACETYL-EPSILON-CAPROLACTAM AT 200DEGREES TO GIVE THE STABLE TITLE POLYMERS (I) (SMALLER THAN OR EQUAL TO 400DEGREES). THE DEGREE OF CONVERSION AND THE INTRINSIC VISCOSITY WERE INVERSELY PROPORTIONAL TO THE REACTION TEMP., BUT WERE ESSENTIALLY INDEPENDENT OF MONOMER RATIOS. TENSILE FIBERS WERE OBTAINED FROM I DISSOLVED IN CONCD. H SUB2 SO SUB4. THE EFFECTS OF CHEM. STRUCTURE OF I ON THEIR SOFTENING POINTS ARE DISCUSSED. FACILITY: VSES. NAUCH.-ISSLED. IN T. ISKUSSTV. VOLOKNA, MYTISHCHI, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 612.821.6+612.84

VOLOKHOV, A. A., and SHILYAGINA, N. N., Laboratory of the Growth Physiology of the Central Nervous System, Institute of the Brain, Academy of Medical Sciences USSR, Moscow

"Formation of a Defensive Conditioned Reflex to Light Stimulus After Early Visual Deprivation"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol 22, No 4, Jul/Aug 72, pp 735-742

Abstract: Newborn, healthy rabbits were kept in complete darkness for 1 month intact or with eyelids sewn together. A conditioned withdrawal reflex was then developed in them (also in a dark room) by presenting a light stimulus which was followed by an electric shock delivered to one paw. This conditioned defensive reflex developed in the experimental animals on a later data and after a greater number of drills than in control animals. Differences were also observed in light-evoked potentials in the visual and motor cortex: the latent period was prolonged, EP amplitudes in the cortical zones and in lateral geniculate bodies were diminished, while EP amplitudes in the reticular formation were considerably increased. After the animals were brought to normal conditions, the observed changes gradually disappeared. It is concluded that visual

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

VOLOKHOV, A. A. and SHILYAGINA, N. N., Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol 22, No 4, Jul/Aug 72, pp 735-742

deprivation causes functional disturbances in specific and nonspecific brain structures, thus affecting the central nervous system's plastic properties which normally play an important role in the organization of behavior.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

1/3 023 UNCLASSIFIED

TITLE--RESECTION AND PLASTIC REPAIR OF TRACHEAL BIFURCATION IN BRONCHOPULMONARY CANCER -U- PROCESSING DATE--04DEC70

AUTHOR-(02)-KHARCHENKO, V.P., VOLOKHOV, B.E.

COUNTRY OF INFO--USSR

SOURCE--KHIRURGIYA, 1970, NR 5, PP 26-30

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SURGERY, LUNG, RESPIRATORY SYSTEM, CANCER, PNEUMONIA, CARDIOVASCULAR SYSTEM, RADIOTHERAPY, CHEMOTHERAPY, ANTINEOPLASTIC DRUG, METASTASIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1902 STEP NO--UR/0631/70/000/005/0026/0030

CIRC ACCESSION NO--AP0137099

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

2/3 023 UNCLASSIFIED

CIRC ACCESSION NO--AP0137099 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT THE MOSCOW ONCOLOGICAL HOSPITAL NO. 62 120 RECONSTRUCTIVE PLASTIC OPERATIONS WERE PERFORMED. RESECTION AND PLASTIC REPAIR OF TRACHEAL BIFURCATION WERE DONE IN 26 CASES. CANCER OF THE UPPER LOBE BRONCHUS OF THE RIGHT LUNG WITH INVOLVEMENT OF THE MAIN BRONCHUS, TRACHEOBRONCHIAL ANGLE AND CARINA OF TRACHEAL BIFURCATION SURVED AS AN INDICATION TO RESECTION. RIGHT SIDED PULMONECTOMY WITH CIRCULAR AND WEDGE LIKE RESECTION OF TRACHEAL BIFURCATION WERE PERFORMED IN 7 PATIENTS, CIRCULAR RESECTION OF TRACHEAL BIFURCATION WITH UPPER LOBECTOMY ON THE RIGHT SIDE WAS DONE IN ONE CASE. IN THIS GROUP OF PATIENTS AN END TO END ANASTOMOSIS WAS FORMED BETWEEN THE LEFT MAIN BRONCHUS AND TRACHEA. ONE PATIENT UNDERWENT A CIRCULAR RESECTION OF THE THORACIC TRACHEA FOR MALIGNANT TUMOR WITH AN END TO END ANASTOMOSIS. THE REMAINING PATIENTS WERE SUBJECTED TO UPPER AND LOWER LOB BILOBECTOMY WITH RESECTION OF THE CARINA OF TRACHEAL BIFURCATION, TRACHEOBRONCHIAL ANGLE AND LATERAL WALL OF THE TRACHEA. AN ANASTOMOSIS WAS ESTABLISHED BETWEEN THE BRONCHUS OF THE REMAINING PART OF THE LUNG, MEDIAN WALL OF THE LEFT MAIN BRONCHUS AND PRELIMINARILY PARTIALLY SUTURED LATERAL TRACHEAL WALL. THREE PATIENTS DIED IN THE POSTOPERATIVE PERIOD. IN TWO CASES DEATH WAS DUE TO PNEUMONIA, IN ONE, ACUTE CARDIOVASCULAR INSUFFICIENCY. IN 16 PATIENTS THE OPERATION WAS COMBINED WITH POSTOPERATIVE AND IN 4, WITH PREOPERATIVE GAMMA THERAPY. THE TOTAL FOCAL DOSE AMOUNTED TO 4500-5000 RAD. IN 6 PATIENTS THE OPERATION WAS COMBINED WITH CHEMOTHERAPY; CYCLOPHOSPHAN WAS INJECTED INTRAVENOUSLY IN A TOTAL DOSE OF 5-6 R.

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3/3 023

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CIRC ACCESSION NO--AP0137099 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--FOLLOW UP RANGING UP TO REVEALED UNFAVORABLE RESULTS IN FIVE PATIENTS. THREE OF THEM DEVELOPED METASTASES INTO THE MEDIASTINAL LYMPH NODES AND TWO INTO OTHER ORGANS. FACILITY: MOSKOVSKAYA KLINICHESKAYA ONKOLOGICHESKAYA BOL'NITSA NO. 62.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

UDC 681.327.12

VOLOKHOV, V. S., LEMISHEVSKIY, G. A., REUTSKIY, V. YE., Institute of Cybernetics, Academy of Sciences of the Ukrainian SSR

"An Image Conversion Device"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 12, 1970, Author's Certificate No 267213, filed 11 Apr 68, p 125

Abstract: This Author's Certificate introduces a device for image conversion which contains a rotating Dove prism, a TV transmitting camera, and a band-pass frequency filter module. As a distinguishing feature of the patent, the converter is designed to eliminate error in the initial reading of the image spectrum redistribution functions and increase the speed by locating the Dove prism in the hollow rotor of a step-by step motor and connecting the vertical sweep unit of the TV camera through a control circuit to the phases of the step-by-step motor.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203530001-5

USSR

VOLOKHOVA, M. N.

UDC 624.131.43+539.21.084-492.3

"On the Coefficient of Damping of Oscillations in Calculating Dams of Local Materials for Seismic Effects"

Tr. VNII vodosnabzh., kanaliz., gidrotekhn. sooruzh. i inzh. gidrogeol. (Works of the All-Union Scientific Research Institute of Water Supply, Sewer Systems, Hydraulic Structures and Engineering Hydrogeology), 1971, No. 30, pp 52-53 (from RZh-Mekhanika, No 3, Mar 72, Abstract No 3V877)

Translation: The necessity of conducting experimental studies of the values of the coefficients of damping of seismic vibrations in soils used in the construction of dams from local materials is pointed out.

Abstracters Note: At the beginning of the article the equations for vibrations of a system with one degree of freedom under the action of a dynamic force is given erroneously:

$$\ddot{u} + 2\lambda\omega_n\dot{u} + \omega_n^2 u = \frac{p(t)}{m}$$

where u is the displacement of a layer of the dam, ω_n is the circular frequency, $p(t)$ is the displacement of the base, and λ is a coefficient, instead of the equations for the oscillations under the displacement of the base, which the author has in mind. Actually, in the right side instead of $p(t)/m$ there should be $(-1)\ddot{p}$. V. M. Shamin.

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UDC 627.82:624.042.7.69(083.75)

VOLOKHOVA, M. N., NATARIUS, YA. I., Engineers

"On Designing Dams of Local Materials and Massive Concrete for Seismic Disturbances"

Moscow, Gidrotekhnicheskoye stroitel'stvo, No. 1, Jan 72, pp 38-42

Abstract: The specifications as given in design SNiP II-A.12-69 which take into account dynamic characteristics of structures and dynamic or spectral theory are discussed. It is shown that these specifications are up to date and correct but that to achieve them requires more complete information on the reaction of a structure to an earthquake. The data presented in the article show that there presently exist the necessary premises for achieving the requirements of the SNiP design in practice, the technique for determining seismic inertial accelerations, and the corresponding computer techniques. It is recommended that studies to determine the dynamic values of elastic moduli of materials and permissible stresses be carried out in order to better realize the possibilities of the dynamic method of calculation on the basis of analog accelerograms. Detailed studies of the dynamic characteristics of the

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VOLOKHOVA, M. N., NATARIUS, YA. I., Gidrotekhnicheskoye stroitel'stvo, No. 1, Jan 72, pp 38-42

material of the body of the dams and the structures themselves are necessary. Particular attention should be paid to the relationship between the logarithmic decrement in the oscillations and the stressed state of the structure and to establishing maximum values for the decrement and its changes on the basis of oscillation tones. Further development is recommended in techniques for calculations based on analog accelerograms considering the elastic-plastic working of the material, crack formation and the actual block structure of the structure. The existing technique for calculating hydroengineering structures for seismic disturbances is recommended for achieving the appropriate requirements of SNiP even in the statistical interpretation of the computational results.

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Immunology

USSR

UDC 576.858.25.097.2.077.3

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

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

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

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

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

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

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