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LOCHKOV, V. P., et al., Poluprovodnikovaya tekhnika i mikroelektronika, No 6, 1971, pp 24-30

mosaic structure. The data on the angles of disorientation of the films and substrates obtained from the corresponding rocking curves confirm the conclusions obtained from topographic studies: the film growing on the surface of the crystal is not only distorted itself, but it distorts the substrate.

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USSR

BUNTAR', A. G., TKHORIVSKIY, A. M., Kiev Polytechnical Institute

"Crystallization Kinetics of Antimony Thin Films"

Leningrad, Fizika Tverdogo Tela, No. 12, Dec 71, pp 3481-3488

Abstract: The crystallization kinetics of a thin film of antimony during deposition in an electronograph chamber was investigated and the process of crystallization of a thin amorphous film of antimony condensed on a glass substrate was studied. It is noted that the condensation of antimony on a substrate through sublimation in a vacuum is practically unstudied. The electronographic study of the condensation process was carried out with the EG-100M electronograph equipped with a specially designed evaporator for carrying out deposition on a collodion substrate directly in the electronograph chamber. The evaporation temperature was selected so that the evaporation time for 4-5 mg of antimony did not exceed 5 min, corresponding to the time for the motion of the photographic plate on which the kinematic electronograph was recorded. It was shown that the rate of crystallization and the nature of the texture of the deposit formed are functions of the evaporation rate. Preliminary data

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USSR

BUNTAR', A. G., TKHORIVSKIY, A. M., Fizika Tverdogo Tela, No. 12, Dec 71, pp 3481-3488

indicate that small changes in the evaporation rate have a considerable effect on the kinetics of antimony codensation. This is explained by the fact that both the initial thickness at which crystallization of the amorphous layer begins and the rate of growth of the crystalline phase are functions of the evaporation rate. Films were produced on a glass substrate of dimensions 130 × 35 mm by sublimation in a vacuum from a tantalum evaporator to study the process of crystallization of amorphous antimony films. There was satisfactory agreement between measurements of the thickness of the film and calculations of the thickness using the Vekshinskiy method. Analysis of a series of photographs of an antimony film during the crystallization process shows that the number of nuclei in various sections of the film varied from approximately 40 cm^{-2} for a film thickness of 350 Å to 100 cm^{-2} for a film thickness of 400 Å.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

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UDC 577.1:615.7/9

CHAPLYGINA, Z. A., TEODOROVICH, V. P., SEDOVA, L. A., TKHORZHEVSKAYA, Z. S., MIKHAYLOVA, L. G.

"Investigation of the Properties of Certain Synthetic Polymers and Copolymers to Determine Their Physiological Activity"

Riga, V sb. Fiziol. i opticheski aktivn. polimern. veshchestva (Physiologically and Optically Active Polymer Substances--collection of works), "Zinatne," 1971, pp 82-88 (from RZh-Biologicheskaya Khimiya, No 21, Nov 71, Abstract No 21F2189)

Abstract: The authors investigated certain biological properties of polyvinyl alcohol (I), polyvinyl-pyrrolidone (II), and also copolymers of vinylpyrrolidone with crotonaldehyde (III) with various degrees of substitution. It is shown that solutions of low-molecular I and II (molecular weight 10,000 and 12,000) and also III with a 5 percent degree of substitution are not toxic for mice. The toxicity of III increases when the degree of substitution is raised to 25 percent. Data are given on the concentration of I and II with different molecular weights in the blood. The main path of elimination is through the kidneys; an insignificant

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USSR

CHAPLYGINA, Z. A., et al, V sb. Fiziol. i opticheski aktivn. polimern. veshchestva, "Zinatne," 1971, pp 82-88

amount penetrates into the tissues. Compound (I) actuates the reticulo-endothelial system on the tenth day after injection, and III throughout the entire period of the observations (3 hours to 20 days). It is shown that the polymers have a detoxifying effect which is associated in the opinion of the authors with the presence of aldehyde groups.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC: 621.317.76.089.68

MAKASHEV, M. Kh., TKHORZHEVSKIY, O. A.

"On a New Method of Improving the Frequency Stability of Piezoquartz Oscillators"

Tr. Metrol. in-tov SSSR (Works of Metrological Institutes of the USSR), 1969, vyp. 106 (166), pp 116-120 (from RZh-Radiotekhnika, No 6, Jun 70, Abstract No 6A447)

Translation: The authors give the circuit of a previously described high-stability quartz-stabilized vacuum-tube oscillator based on a Colpitts circuit. This circuit is compared with the classical Hartley system; it is shown in particular that self-excitation of the new circuit takes place at considerably lower voltages. The results of measurement of circuit stability are given. One illustration, one table, bibliography of four titles. N. S.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

UNCLASSIFIED

TESTING MACHINES, INSTRUMENTS, AND EQUIPMENT FOR SUITABILITY FOR TROPICAL CONDITIONS -U-

PROCESSING DATE--02OCT70

AUTHOR--TKHORZHEVSKIY, V.P.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, IZMERITEL'NAYA TEKHNIKA, NO 2, 1970, P 78

DATE PUBLISHED--------70

SUBJECT AREAS--METHODS AND EQUIPMENT

TOPIC TAGS--TROPICAL ATMOSPHERE, TEST METHOD, EQUIPMENT TROPICALIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/1749

STEP NO--UR/0115/70/000/002/0078/0078

CIRC ACCESSION NO--AP0114248

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

CIRC ACCESSION NO--AP0114248 UNCLASSIFIED PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE CONTAINS A DISCUSSION OF THE PROCEDURES USED FOR TESTING MACHINES, INSTRUMENTS, AND EQUIPMENT WITH REGARD TO THEIR FITNESS FOR TROPICAL CONDITIONS. SHORTCOMINGS OF THE PRESENTLY EMPLOYED PROCEDURES ARE NOTED, AND PROPOSALS FOR IMPROVEMENT ARE MADE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

UNCLASSIFIED

CYTOPHOTOMETRIC AND RADIOAUTOGRAPHIC STUDY OF RNA SYNTHESIS IN CULTURES OF LEUKEMIA CELLS SENSITIVE AND RESISTANT TO COXSACKIE B3 VIRUS

PROCESSING DATE--30OCT70

AUTHOR-(05)-KHESIN, YA.E., TKHORZHEVSKIY, V.V., YERMAN, B.A., AMCHENKOVA, A.M., VORONINA, F.V.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(5), 1218-21

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LEUKEMIA, COXSACKIE B VIRUS, RNA, BIOSYNTHESIS, TRITIUM, CHEMICAL LABELLING, AUTORADIOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0705

CIRC ACCESSION NO--AT0121364

STEP NO--UR/0020/70/190/005/1218/1221

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

272 035

CIRC ACCESSION NO--AT0121364 UNCLASSIFIED PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KINETIC CURVES WERE SHOWN FOR CHANGES IN RNA CONTENT OF NORMAL AND SPECIFICALLY RESISTANT LEUKEMIA L69 CELLS AFTER INFECTION WITH HOMOLOGOUS VIRUS. THE RESISTANT CELLS DISPLAY A PECULIAR METABOLISM IN THAT THE INTRACELLULAR DEVELOPMENT OF THE VIRUS IS INTERRUPTED AT AN EARLY STAGE WITHOUT REACHING FULL DEPROTEINIZATION WHILE THE SECONDARY GROWTH OF RNA CONTENT IS NOT ACCOMPANIED BY A RISE OF VIRUS RNA SYNTHETIC ACTIVITY IN THE CYTOPLASM OR CYTOPATHIC CHANGES OF THE CELLS. TREATMENT OF THE INFECTED CELLS BY ACTINOMYCIN FOR 1 HR COMPLETELY INHBIITED NUCLEIC ACID SYNTHESIS SO THAT IN SUBSEQUENT TREATMENT WITH URIDINE PRIME3 H SUBSTANTIALLY NO TAG IS INTRODUCED INTO THE NUCLEI OF THE CELLS. THUS THE PRODUCTION OF MESSENGER RNA FOR THE VIRUS INHIBITOR OF SYNTHESIS OF CELLULAR RNA IS CODED NOT BY THE VIRUS GENOME BUT BY THE CELLULAR GENOME.

FACILITY: INST. EPIDEMIOL. MIKROBIOL. IM. GAMALEI, MOSCOW, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

medical sciences

LENIN'S NATIONAL POLICY AND DEVELOPMENT OF PUBLIC HEALTH IN NORTH OSETIN ASSR

UDC: 614.2(470.65)(091)

[Article by B.K. Tkhostov, Candidate of Medical Sciences, Chair of Epidemiology (Headed by Professor K.G. Vasil'vev), Odessa Medical Institute imeni N.I. Pirogov; Moscow, Sovetskoye Zdravookhraneniye, Russian, No 12, 1972, submitted 14 July 1972, PP 37-41]

The Communist Party, headed by V.I. Lenin, always devoted serious attention to resolving the national problems as a component of Marxist-Leninist theory of socialist revolution. The proper solution to the national problem for a multinational State was not only of theoretical but also of tremendous practical importance.

The fifty years that have elapsed since the USSR was formed were particularly important to the national republics. In North Osetin, the measures initiated by the Communist Party for development of public health were an important element in implementing Lenin's national policy and strengthening friendship between peoples. Class, national, and caste restrictions which extended under tsarism to public health care were completely abolished by the October Revolution.

Up to the 20th Century the chief means of production and consumer goods of North Osetin were manufactured in semi-indigenous facilities. In the life style and mores of the Osetin people there remained traces and features of patriarchy. The bitter lot of the Osetin people can be seen from an article published in the newspaper "Voice of the Caucasus" in 1906: "The village of Tamisk (at the present time there is a balneological sanitorium there of All-Union significance -- DT) creates a strange impression at first glance. There are wooden houses on stilts barely covered with straw, without windows and without stoves. Not a cow or calf can be seen. But it is even sadder as to inner content: small children dressed in rags lie around under antihygienic conditions, as well as sick men, women, and the aged. Chronic starvation, disease, and poverty plague the unfortunate residents. Children do not own a pair of shoes until they are ten years old. Adults are not dressed much better" [1].

JPRS 58117
31 Jan 73

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

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UDC 59:616.981.455(574.52)

AYKIMBAYEV, M. A., KORNEYEV, G. A., KUNITSA, G. M., TLEUGABYLOV, M. K., TRYKIN, V. S., SKVORTSKOVA, S. S., KUZIN, I. P., and SURMIN, V. M., Central-Asian Scientific Research Antiplague Institute, Alma-Ata

"A Tugai Focus of Tularemia in Dzhambulskaya Oblast in the Lower Chu Flow"

Moscow, Zoologicheskiy Zhurnal, Vol 50, No 10, 1971, pp 1595-1598

Abstract: Rhipicephalus pumilio, the tick which carries and transmits tularemia bacteria, can circulate the bacteria over a long time-span due to its ability to parasitige hares and other rodents at all stages of its development. The flooded fields in this region, on which cattle graze, create ideal conditions for the spread of the ixodid tick. Dermacentor daghestanicus is the dominant species because of its high percentage of infection by tularemia bacteria and because it preserves the bacteria in its body for a long period. Bacteriological studies were made of 117 mammals and 19,000 ticks of various species. In infected hares pathological-anatomic changes were manifested by enlargement of the spleen, in some cases by a change in the color and texture of the liver, and by the characteristic mound arrangement of cocci-bacteria in the spleen, liver, lungs, lymph nodes, and blood. 30 strains of Pasteureela tularensis were found in ixodid ticks and 7 strains, in the hare (Lepus tolai). These strains decompose glycerine and circulate in the tugai focus.

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USSR

UDC 612.59.082

TLEULIN, S. ZH., Institute of Physiology, Kazakh SSR Academy of Sciences

"Electrophysiological Methods of Studying the Effect of Peripheral Thermostimulation on the Central Nervous System"

Alma-Ata, Izvestiya Akademii Nauk Kazakhskoy SSR, No 2, Mar/Apr 71, pp 57-63

Abstract: Since the hypothalamus is known to be the basic center controlling the reponses to afferent thermoreceptor signals. It was decided to study the reaction of electrical activity of the cerebral cortical brain stem centers to contrasting temperature stimuli. The electric activaty of the hypothalamus, reticular formation and cerebral cortex was recorded and changes of the monosynaptic reflex and the potential of the dorsal surface were recorded in the spinal cord. The experimental subjects were cats under nembutal narcosis. Monopolar glass electrodes were used. It was found that from the moment heat was applied to the skin, the amplitude of the monsynaptic reflex was reduced until the skin temperature reached 35°C. When thermostimulation ceases, the amplitude of the monosynaptic reflex returns to its original value. In response to thermal stimulation, the potential of the dorsal surface of the spinal cord is reduced; it reaches approximately its original value when the stimulus is removed. In response to coldness, both indexes (the amplitude of the mono-

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

TLEULIN, S. ZH., Izvestiya Akademii Nauk Kazakhskoy SSR, No 2, Mar/Apr 71, pp 57-63

synaptic reflex and the potential of the dorsal surface of the spinal cord) increased. Thermal stimulation results in an increase in the electrical activity of the reticular formations, whereas that of the hypothalamus is reduced. In almost all tests the responses to the effect of heat and coldness were found to be opposing one another. The response mechanisms involved were found to be extremely complex. The increase in activity of the sympathic nervous system in response to a heat effect and its reduced response to coldness may be due to the fact that the authors recorded tha activity of axons connected to the vessels of the skin. Different responses to the effect of heat and coldness were observed also in the responses of the brain stem structures; the electrical activity of these structures dropped as a result of the effect of heat and underwent synchronization; the opposite effect, that of desynchronization, was observed in response to coldness. The response mechanisms to coldness appear to be based on activating structures and those to heat appear to be based on inhibiting structures.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC 612.822.3+612.817.3

TLEULIN, S. Zh. and BERDYKHODZHIN, M. T., Institute of Physiology, Kazakh Academy of Sciences, and Institute of Regional Pathology, Kazakh Ministry of Health

"Relationship Between Some Indices of Higher Nervous Activity, Muscle Tone, and the Nature of Cortical Electrical Activity"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti, No 3, 1970, pp 644-646

Abstract: The article reports the results of an attempt to correlate cortical electrical activity with characteristics of higher nervous activity, judged by performance in a proofreading test (number of letters crossed out in a minute and amount of errors), and muscle tone in 103 male and female students 21 years of age. The subjects were divided into three groups according to the nature of the EEG. Muscle tone was found to be highest in the group in which the beta rhythm predominated, next highest in the group with a pronounced alpha rhythm, and lowest in the group in which slow waves were present. The results of the proofreading test correlated well with the nature of the individual EEG's. The group with the beta rhythm predominating performed the test the fastest and made the fewest mistakes, while the group showing slow waves was the slowest and made the most errors. The group with the alpha rhythm predominating occupied an intermediate position.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC: 621.326.6-181.5

FROLIN, M. I., TLOSTANOV, Yu. K., BURLAKOV, V. D.

"Indirect Method of Measuring the Parameters of Thin-Film Microcircuits"

Tr. Ryazansk. radiotekhn. in-ta (Works of the Ryazan Radio Engineering Institute), 1970, vyp. 23, pp 76-85 (from Rzh-Radiotekhnika, No 7, Jul 70, Abstract No 7V260)

Translation: The paper considers the possibilities of using the theory of linear two-terminal pair networks for measuring the parameters of thin-film micromodules. The method is substantiated and the necessary relationships are given as well as the results of an experimental check. It is pointed out that this checking method may be used to determine the parameters of thin-film micromodules with inaccessible points. Resumé.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC: 621.326.6-181.5

FROLIN, M. I., TLOSTANOV, Yu. K., BURLAKOV, V. D.

"Errors in Measuring the Parameters of Thin-Film Microcircuits"

Tr. Ryazansk. radiotekhn. in-ta (Works of the Ryazan Radio Engineering Institute), 1970, vyp. 23, pp 85-89 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7V260)

Translation: The paper contains an analysis of errors in indirect determination of the parameters of thin-film microcircuits. Relationships are derived which can be used to determine the optimum conditions for measurements and minimize measurement error. Resumé.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

UNCLASSIFIED

A RISING FLOW OF HEAT CARRIER -U-

PROCESSING DATE--11SEP70

AUTHOR--ABDULLAYEV, F.M., ZAFERMAN, D.M., KORSH, B.S., MAZIN, M.B., TMENOV, D.N.

COUNTRY OF INFO--USSR

SOURCE--KHIM. TEKHNOL. TOPL. MASEL. 1970, 15(3), 40-2

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, PROPULSION AND FUELS

TOPIC TAGS--CHEMICAL REACTOR, MATHEMATIC MODEL, PYROLYSIS, DIESEL FUEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/2038

CIRC ACCESSION NO--AP0109970

STEP NO--UR/0065/70/015/003/0040/0042

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ACCESSION NO--AP0109970 UNCLASSIFIED

PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PYROLYSIS OF A DIESEL FUEL FRACTION, B. 253-354DEGREES, FREE OF AROMATIC HYDROCARBONS, WITH QUARTZ SAND AS HEAT CARRIER, WAS STUDIED IN A PILOT PLANT. A CORRELATION MATRIX WAS USED AS CRITERION FOR THE DEGREE OF ORTHOGONALITY OF THE DESIGN MATRIX. THE OPTIMAL OPERAT6NG CONDITIONS WERE DETD. BY MEANS OF 2ND ORDER EQUATIONS.

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USSR

TOBIAS, T.

"Optimal Stopping of Diffusion Processes and Parabolic Variation Inequalities"

Differents. uravneniya [Differential Equations], 1973, 9, No 4, pp 702-708 (Translated from Referativnyy Zhurnal - Kibernetika, No 8, 1973, Abstract No 10 V76 by the author)

Translation: A method is given for solution of the problem of optimal stopping of a diffusion process in a finite sector of time. Without a priori assumptions of smoothness, it is proven that the value of the optimal stopping is a unique solution to a parabolic variation inequality and that it can be constructed as the limit of the solutions of nonlinear parabolic equations.

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USSR

TOBIAS, V. I., Institute of Zoology, Academy of Sciences USSR

"Contribution of Taxonomists of the Institute of Zoology to Practical Biological Control"

Moscow, Zashchita Rasteniy, No 3, 1973, pp 9-11

Abstract: Taxonomists contribute to the development of biological and integrated methods of controlling crop pests chiefly through their accurate identification of entomophagous insects. The nature of their work is such that they cannot, as a rule, participate in the direct formulation of recommendations for agriculture. Occasionally, however, they make suggestions at seminars or conferences on, for example, the need to introduce into the Soviet Union several species of foreign entomophages to control fruit tree pests. Their greatest contribution to plant protection is the preparation of handbooks (identification tables or keys with or without descriptions of the species). Mention is made of some of the recent and planned publications of the Institute of Zoology in this field. The fauna of entomophages in the USSR has not been thoroughly investigated. The study of many regions, landscapes, and many groups of insects has just begun. Progress is slow due to the shortage of competent personnel. The quality of the work of Institute of Zoology entomologists is enhanced by their access to the world's best collections of insects.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

TOBIAS, V. I., Doctor of Biological Sciences, Scientific Secretary, All-Union Entomological Society

"At the Entomological Society"

Moscow, Zashchita Rasteniy, No 4, 1970, pp 63-64

Abstract: The All-Union Entomological Society (AUES) prepared for the VI Convention, held 17-23 Aug 70 in Voronezh. The preparations were widely discussed at the session of the Presidium of AUES in Leningrad on 30 Oct. This session was held concurrently with the 1000 scientific meeting of AUES in Leningrad, at which G. Ya. Beyenko gave a history of the Society and G. A. Viktorov talked on interspecies competition and the coexistence of ecological homologues in parasitic hymenoptera. Next day the 1001 session of the AUES was held, at which I. D. Shapiro and N. A. Vilkova reported on some aspects of nutritional specialization of insect-phytophages. Ye. B. Vinogradova discussed the diapause of Aedes mosquitoes and its ecological regulation. The session held on 13 Nov was devoted

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USSR

TOBIAS, V. I., Zashchita Rasteniy, No 4, 1970, pp 63-64

to the 75th anniversary of N. N. Bogdanov-Kat'kov. Besides the biographical reports by Bey-Biyenko and N. G. Berim, a talk was given by I. D. Shapiro on current tendencies in selection of agricultural cultures and prognosis of the importance of some weeds, and G. Ye. Osmolovskiy discussed the phenological basis for prognosis of the appearance of fruit pests and their control.

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Acc. Nr. AP0040014 Abstracting Service: CHEMICAL ABST. 4-70

Ref. Code UR 0096

70540m Water system of branch stations [of electric power plants]. Kostrikin, Yu. M.; Dzysyuk, A. A.; Tokoleva, A. D. (Vseé. Teplotekh. Inst., Moscow, USSR). Teploenergetika 1970, 17(1), 74-5 (Russ). The chem. and spectral anal. of the deposits formed in the flow regions of the turbines was carried out. The main components of the deposits are compds. of Si, Al, Fe, and to a lesser extent Na and Cu. The content of Fe, Si, and Al oxides is usually tens of percents while Cu occasionally reaches also >10%. The Cu and Zn enter the water system by the corrosion of the low pressure preheater tubes. The Na is probably derived from the aging of the anion-exchanger units. The Fe content is directly assocd. with the no. of on-off switching events. The SiO_2 and Al_2O_3 are transported by the soln. in the high-pressure steam. Preventive means are outlined to minimize the amt. of deposits. M. Shelef

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC 621.039.5/6

LEYUNSKIY, A. I., YUROVA, L. N., BOBROV, S. B., MURCGOV, V. M., TOCHENYY, L. V., TROYANOV, M. F., and SHMELEV, A. N.

"Improving the Physical Characteristics of Fast Plutonium Reactors by Using U^{233} and Thorium"

Moscow, Atomnaya Energiya, Vol 30, No 6, Jun 71, pp 491-498

Abstract: Investigations carried out on the physics of fast reactors, both in the USSR and abroad, have shown the requirements for a high breeding time and safety guarantee may be contradictory. This article seeks to find ways for resolving these contradictions.

The authors first discuss the basic physical characteristics of fast reactors using a mixed fuel by equalizing the field of heat release. Computations showed that in a fast reactor using a mixed fuel composed of U^{233} and plutonium the radial coefficient of inbalance can be reduced, the breeding ratio increases significantly, and the doubling time is improved. Table 1 compares the characteristic of different types of high-power fast reactors.

The authors then discuss changing the profile of the heat release

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

LEYPUNSKIY, A. I., et al., Atomnaya Energiya, Vol 30, No 6, Jun 71, pp 491-498

field during the operating period of a high-power fast reactor using a mixed fuel and give Figure 1 as illustration. They then discuss change in the reactance during the same period for such a reactor, using Figures 2, 3, and 4 for graphic visualization. Finally, they discuss the Doppler and sodium coefficients of reactance in such a reactor and use Figure 5 and Table 2 to clarify the discussions. Based on their research the authors claim that the possibility does exist for increasing the power strength and breeding time of the fuel with the simultaneous assurance of safety for a fast reactor using a sodium heat carrier; this is possible by using U^{233} and thorium in conjunction with U^{238} and plutonium in high-power fast reactors.

The article contains 5 figures, 2 tables, and a bibliography of 15 titles.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

BOBROV, S. B., MUROGOV, V. M., TOCHENYY, L. V., and SHMELEV, A. N. UDC 621.039

"Possibility of the Stabilization of the Heat Release Field in Fast Power Reactors Operating in a Mixed Fuel Cycle"

V sb. Fiz. yadern. reaktorov (Physics of Nuclear Reactors -- Collection of Works), No 2, Moscow, Atomizdat, 1970, pp 121-128 (from RZh-Fizika, No 4, Apr 71, Abstract No 4V536)

Translation: The physical characteristics are calculated for a fast reactor that is optimal with respect to breeding, with a heat capacity of 2500 Mw on mixed fuel (U^{233}, Pu^{239}, U^{238}, Th) and profiling of the heat release field by developing zones of different enrichment with the preservation of a fixed amount of fuel by volume in the core. Calculations of the heat release field were made for reactors of the BN-1000 type in zones of different enrichment, taking into consideration changes in the isotope composition of the fuel and changes in the neutron spectrum and flux during the run (with the 18-RZ-4-B program). It was found that balancing of the heat release with a change in enrichment of the mixed fuel makes it possible to reduce the radial coefficient of nonuniformity (from 1.8 to 1.2), increase the breeding coefficient

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

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BOBROV, S. B., et al, Fiz. yadern. reaktorov (Physics of Nuclear Reactors -- Collection of Works), No 2, Moscow, Atomizdat, 1970, pp 121-128 (from RZh-Fizika, No 4, Apr 71, Abstract No 4V536)

(from 1.3 to 1.5), and also to reduce the doubling time (from 11-12 to ∿7 years). The change in the heat release profile in the course of a run of a fast reactor on mixed fuel is determined by the relationship of the zone breeding coefficients and the difference in the fission cross sections of the burned and accumulated isotopes. V. P. Demin.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

BOBROV, S. B., MUROGOV, V. M., TOCHENYY, L. V., and SHMELEV, A. N.

UDC 621.039

"High-Power Fast Reactor With a Stable Heat Release Field Throughout a Run"

V sb. Fiz. yadern. reaktorov (Physics of Nuclear Reactors -- Collection of Works), No. 2, Moscow, Atomizdat, 1970, pp 129-135 (from RZh-Fizika, No 4, Apr 71, Abstract No 4V535)

Translation: Computational studies of a fast power reactor with an electric power of 1000 Mw with Na coolant in which radial balancing of the heat release field is achieved by the use of different types of fuel in the core are presented: in the inner portion PuO_2-UO_2 with an average density of 8 g/cm^3 and in the outer portion the alloy Pu-U-Zr (12%) with a Pu-U density of 15.1 g/cm^3. The calculations were made with the 18-RZ-4-B program considering the change in the isotope composition with time. The results show that fuel productivity improves in this reactor as compared with a purely oxide version (the average conversion coefficient in the core is ~1) and the change in reactivity over the run also decreases (by a factor of 4) and does not exceed 0.3%. The coefficient of nonuniformity and the heat release profile throughout the run are almost constant and less in

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

BOBROV, S. B., et al, Fiz. yadern. reaktorov, No. 2, Moscow, Atomizdat, 1970, pp 129-135

absolute value than for the purely oxide version. It is also shown that maximum burn-up achievable simultaneously for both forms of fuel (∿10% for oxide and ∿5% for metallic fuel) corresponds to the permissible burning depths, so that a simple method of simultaneous recharging of the entire core can be applied for this reactor. V. P. Demin.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC: 621.396.6-181.5(088.8)

TOCHILKIN, V. I., All-Union Scientific Research Institute of Magnetic Recording, and Radio and Television Broadcasting

"A Device for Measuring Rate of Evaporation"

USSR Author's Certificate No 278162, filed 14 Feb 69, published 10 Nov 70 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V241 P)

Translation: A device is proposed for measuring rate of evaporation. The device contains a power supply, pickup and registration instrument. To make the device simpler and less expensive, the pickup is made in the form of a thermocouple with four paired identical electrodes of refractory metals with a junction located in the precipitation zone of the material being evaporated. One pair of thermoelectrodes is connected to the power supply, and the second pair is connected to the recording instrument.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

Acc. Nr: AP0052509

Abstracting Service: CHEMICAL ABST. 5-70

Ref. Code: UR0460

T

101316z **Radiothermoluminescence of polyethylene films under stress.** Nikol'skii, V. G.; Sapozhnikov, D. N.; Tochin, V. A. (Inst. Khim. Fiz., Moscow, USSR). *Vysokomol. Soedin., Ser. B* 1970, 12(1), 19-22 (Russ). High-pressure polyethylene (I) films were irradiated with γ-rays at 77°K and heated ≤235°K. The intensity (I) of radiothermoluminescence was detd. of unstretched I and of I elongated under loads ≤ the load at yield point. The plots of I vs. temp. had max. at 152, 181, and 232°K. Under stress, there is a very strong max. in the 200-235°K range, the position of which depends on the applied stress. The phenomenon is discussed in terms of the mol. mobility of I. CPJR

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REEL/FRAME
19821150

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

Antennas

TOCHINSKIY, YE.G.

UDC 620.179.16

"Analysis Of Practical Methods Of Electrical Control Of The Directional Diagram Of Ultrasonic Antenna Arrays"

Tr. Mosk. energ. in-ta (Works Of The Moscow Power Institute), 1972, Issue 108, pp 55-58 (from RZh:Elektronika i yeye primeneniye, No 7, July 1972, Abstract No 7A285)

Translation: In order to control the directional diagram of antenna arrays, phase-shifting devices are necessary which assure a specified change of the phase of the signal at elements of the array. The frequency method of changing the phase shift, regardless of its simplicity, leads to a distortion of the directional diagram in the scanning sector, which is undesirable. Consequently, in ultrasonic phase antennas, phase shifters based on a delay line with constant or variable elements are more frequently employed. At frequencies at higher MHz a change of capacitance in the line is assured by varactors and at lower frequencies by blocks of variable capacitors. In a transmitting antenna controlled succession of pulses can be used, which are produced, for example, by circuits of the phantastron type. 4 ref. N.B.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR UDC 621.317.77

TOCHINSKIY, YE.G., POPOV, I.S., AKSENOV, V.P.

"Some Techniques for Obtaining a Controllable Phase Shift Between Two or More Signals"

Dokl. Nauchno-tekhn konferentsii po itogam nauchno-issled, rabot za 1968-1969 gg., Mosk. energ. in-t, 1970, Sekts. elektron. tekhn. Podsekts. elektron. priborov (Reports of the Scientific-Engineering Conference on Advances in Scientific-Engineering Studies in 1968-1969, Moscow Energetics Institute, 1970, Electronic Technology Section. Electronic Instruments Subsection), Moscow, 1969, pp 149-156 (from RZh-Radiotekhnika, No 2, Feb 70, Abstract No 2A310)

Translation: The first technique is a development of the so-called frequency method, based on the signal phase change with passage through an artificial delay line. The required phase change is obtained by varying the frequency. However the technique is suitable only for quite high frequencies and in practice is applicable for frequencies of several hundred kHz. A modification of the method is proposed suitable for low frequencies, with double fre-

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

TOCHINSKIY, YE.G., et al, Dokl. Nauchno-tekhn konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg., Mosk. energ. in-t, 1970, Sekts. elektron. tekhn. Podsekts. elektron. priborov, 1969, pp 149-156 (from RZh-Radiotekhnika, No 2, Feb 70, Abstract No 2A310)

quency conversion and an additional variable frequency generator to provide the required phase change law. The second technique is based on the fact that in the summation of two harmonic signals of different frequencies the relative change of their amplitudes leads to a phase change of the over-all signal. Rational selection of the initial phase difference (0, 120 and 240°) of the three summed signals and corresponding variation of their amplitudes provides a summed signal with phase varying by 360° and nearly constant amplitude. L.K.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

Acc. Nr.: AR0113975

USSR

Ref. Code: UR0000

UDC: 621.762.001:664.71

SEVERIDENKO, V. P., TOCHITSKIY, E. I., GURSKIY, L. I.

"Change of the Structure of Sintered Aluminum Powder During Plastic Deformation"

Minsk, Plasticheskaya Deformatsiya i Obrabotka Metalla Davleniyem -- Sbornik (Plastic Deformation and Working of Metal by Pressure -- Collection of Works), 1969, pp 147-151 (from Referativnyy Zhurnal, Metallurgiya, No 1, 1970, Abstract No 1G326)

Translation: Consideration is given to the special features of formation of the structure of deformed powder material based on sintered aluminum powder. Electron-microscope research has shown that the change of the structure of sintered aluminum powder in the process of plastic deformation is connected with the destruction of the oxide skeleton, conversion and redistribution of the oxide lamellae as well as by granulation of the grains of the aluminum matrix.

Reel/Frame
19931292

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

Acc. Nr.: AR0113976

USSR

Ref. Code: UR0000

UDC: 621.762.001:669.71

SEVERDENKO, V. P., TOCHITSKIY, E. I., GURSKIY, L. I.

"Change of the Electrical Resistance of Sintered Aluminum Powder in Plastic Deformation"

Minsk, Plasticheskaya Deformatsiya i Obrabotka Metalla Davleniyem -- Sbornik (Plastic Deformation and Working of Metal by Pressure -- Collection of Works), 1969, pp 152-168 (from Referativnyy Zhurnal, Metallurgiya, No 1, 1970, Abstract No 1G327)

Translation: The results of a change of the specific electrical resistance and structure of synthetic aluminum powder in plastic deformation are discussed.

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Reel/Frame
19931293

18

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC: 621.396.6-181.5(088.8)

TOCHITSKIY, Ya. I., MAL'TO, V. I., KRYUK, I. P.

"A Device for Registering a Phototemplate With a Substrate"

USSR Author's Certificate No 263011, filed 19 Aug 68, published 8 Jun 70 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V207 P)

Translation: A device is proposed for registering a phototemplate with a substrate. The device contains a fixed base, a micromanipulator, and a recess with a spherical segment which carries the substrate. To improve the precision of registration, the recess is made in an armature connected to a spring-loaded frame by means of guides made in the form of double parallelograms equipped with elastic hinges. Inside the armature is a plunger with pneumatic stopper.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC: 621.396.6-181.5

TOCHITSKIY, Ya. I.

"Algorithms for the Process of Registering During Photolithographic Operations in the Manufacture of Microcircuits and Semiconductor Devices"

Elektron. tekhnika. Nauchno-tekhn. sb. Poluprovodn. pribory (Electronic Technology. Scientific and Technical Collection. Semiconductor Devices), 1970, vyp. 2 (52), pp 230-242 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1V205)

Translation: The author describes four algorithms for the process of registering the phototemplate and semiconductor plate during photolithographic operations in the manufacture of semiconductor devices and microcircuit modules. The described algorithms are analyzed and optimum algorithms are selected by criteria of accuracy and productivity. On the basis of the analysis, requirements are determined for the kinematics of the principal devices in installations for registration with visual control by an operator, and for an automated method of registration. Resumé.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

014

UNCLASSIFIED

TITLE--A STUDY OF LYSOZYME IN MACROPHAGES OF PERITONEAL EXUDATE OF GUINEA PIGS SENSITIZED WITH STREPTOCOCCUS -U-

PROCESSING DATE--16OCT70

AUTHOR--TODER, V.A.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 5, PP 115-118

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--MACROPHAGE, GUINEA PIG, STREPTOCOCCUS, IMMUNOLOGY, ANTIGEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/0159

STEP NO--UR/0016/70/000/005/0115/0118

CIRC ACCESSION NO--AP0114555

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

2/2 014

CIRC ACCESSION NO--AP0114555 UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERE WAS AN INCREASE IN THE AMOUNT OF LYSOZYME IN THE MACROPHAGES OF PERITONEAL EXUDATE OBTAINED FROM GUINEA PIGS IN HYPERSENSITIVITY TO STREPTOCOCCUS OF DELAYED TYPE AS A RESULT OF THE ACTION OF A SPECIFIC ANTIGEN UPON THESE CELLS. THE DATA OBTAINED COINCIDED WITH THE PRESENCE OF SPECIFIC AND SUBSEQUENT NONSPECIFIC PHASE OF CELLULAR IMMUNITY. ELEVATION OF THE AMOUNT OF LYZOCYME COULD BE CAUSED ONLY BY SPECIFIC ANTIGEN; HOWEVER, ACCUMULATION OF LYSOZYME IN THE CELL SHOULD PRODUCE A NONSPECIFIC EFFECT ON A NUMBER OF MICROORGANISMS.

FACILITY: INSTITUT EPIDEMIOLOGII I MIKROBIOLOGII IM. GAMALEI, MOSCOW.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

UNCLASSIFIED

TITLE--ACID PHOSPHATASE MEASUREMENT IN MACROPHAGES WITH THE DELAYED TYPE HYPERSENSITIVITY -U-

PROCESSING DATE--17JUL70

AUTHOR--LYAMPERT, I.M., TODER, V.A.

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69, NR 2, PP 60-62

DATE PUBLISHED--------70

14
5
19

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--STREPTOCOCCUS, PHOSPHATASE, ENZYME ACTIVITY, ANTIGEN, HISTOCHEMISTRY, MACROPHAGE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1982/0441

STEP NO--UR/0219/70/069/002/0060/0062

CIRC ACCESSION NO--AP0051954

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

Acc. Nr: AP0051954 Ref. Code: UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i Meditsiny, 1970, Vol 69, Nr 2, pp 60-62

ACID PHOSPHATASE MEASUREMENT IN MACROPHAGES WITH THE DELAYED TYPE HYPERSENSITIVITY

I. M. Lyampert, V. A. Toder

N. F. Gamalei Institute of Epidemiology and Microbiology of the Academy of Medical Sciences of the USSR

The activity of the acid phosphatase was studied by various methods in a culture of peritoneal macrophages on glass in the delayed type of hypersensitivity to the group A streptococcus. Incubation of the sensitized animal macrophages with a specific antigen for 24 hours with subsequent application of histochemical procedures without preliminary fixation of cells demonstrated an increased proportion of cells containing the acid phosphatase. This effect is not related to the action of O- or S-streptolysins and can be inhibited with dexamethasone. In the same conditions no substantial increase in the activity of the enzyme could be discovered. The above data bear proof to an elevated permeability of the macrophage lysosome membranes in sensitized animals following the action of a specific antigen on the cells. The increased permeability of the membranes should, apparently, facilitate the liberation of the enzymes from lysosomes. It is suggested that the macrophage lysosome enzymes appear as a factor causing destruction of the tissues in the delayed type hypersensitivity.

REEL/FRAME
19820441

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

TODES, O. M., IONUSHAS, K. K., GOL'TSIKER, A. D., and ABDURAGIMOV, I. M.

UDC: 536.468

"Investigating the Inhibition of Flame Propagation in Air-Dispersed Systems"

Novosibirsk, Fizika goreniya i vzryva, No 2, 1973, pp 204-210

Abstract: This paper is the follow-up of an earlier article (O. M. Todes, et al, Tretiy Vses. simpozium po goreniyu i vzryvu, Author's abstract, Chernogolovka, 1971) which developed a theory of the propagation of flames in air-dispersed media due to heat radiation transmission. The present paper considers the principal consequences of this theory, important in the study of the effectiveness of inhibiting the flames for the simplest case in which the radiative front is deep and its frontal limit can be considered a plane. Experiments are described to determine the speeds of the propagation and to compare them, in their order of magnitude, with those specified by the theory; a diagram of the equipment is given with the method of the experiment. The results of the latter confirm the assumption of heat radiation as the means of propagation and demonstrate the effectiveness of flame inhibition by halide hydrocarbons.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

GLUSHKOV, V. Ye., SELIVANOV, S. Ye., FEDOSEYEV, V. A., TODES, O. M.

UDC 536.46:533.6

"Thermal Combustion of Metal Particles"

V sb. Fiz. aerodispersn. sistem. Vyp. 5 (Physics of Aerodisperse Systems. No. 5 — Collection of Works), Kiev, Kiev University, 1971, pp 65-71 (from RZh-Mekhanika, No 6, Jun 72, Abstract No 6B893)

Translation: The period of induction is obtained in implicit form as a function of the temperature of the medium T, particle size d and the functional relationships $t_i(d)$, T = const, and $t_i(T)$, d = const are analyzed. The relationship $t_i(d)$ in explicit form shows that as $d \to d_0$, where d_0 is the minimum dimension of the particles for which the particles still ignite, $t_i \to \infty$ and for a sufficiently large d increases in proportion to d. That particle dimension d^* is found for which the period of induction reaches the minimum value. It was found that $d^* \approx 1.5\, d_0$. It follows from the relationships found for $t_i(T)$ that t_i increases monotonically with a decrease in T and tends toward infinity as $T \to T_0$ (combustion temperature). The dependence of "conventional" combustion temperatures for finite periods of induction on particle size was investigated. Authors abstract.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC: 541.183

DUBININ, M. M., TODES, O. M., and LEZIN, YU. S., Institute of Physical Chemistry, Moscow, Academy of Sciences USSR

"Equations Characterizing Adsorption Kinetics on Porous Adsorbent for the Entire Grain as a Whole"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, Vol 4, Apr 1970, pp 767-772

Abstract: On the basis of theoretical analysis the authors showed that the coefficients of internal and external mass exchange in a wide range of the fluctuation of bio criterion are additive. An empirical equation for the determination of the coefficient of internal mass exchange with linear adsorption isotherm was developed. Using experimental data on the kinetics of benzene adsorption on active carbon it was shown that in spite of the fact that the values of the coefficient of internal mass exchange -- β_1 -- and the coefficient of internal diffusion -- $\bar{D}$ -- change when one type of active carbon is changed for another, but the ratio of $\beta_1/\bar{D}$ remains practically the same. This agrees with theoretical equation by which β_1 is a linear function of $\bar{D}$.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC 612.014.3

DISHOVSKIY, Kh. D., KAGAN, Yu. S., KOVTUN, S. D., KOKSHAREVA, N. V., TODIONOV, G. O., and SASINOVICH, L. M., Division of Experimental Toxicology, All-Union Institute of the Hygiene and Toxicology of Pesticides, Polymers, and Plastics

"The Physiological Mechanism of the Action of Dipyroxime"

Kiev, Fiziologichniy Zhurnal, Vol 19, No 3, May/Jun 73, pp 310-314

Abstract: Therapeutic administration of dipyroxime to rats poisoned with the insecticides DDVP (0,0-dimethyl-2,2-dichlorovinyl phosphate) and chlorophos resulted in a partial reactivation of cholinesterase in the brain, spinal cord, and striated muscles, as shown by histochemical data. Cytophotometric studies showed that the reactivation of cholinesterase under the effect of dipyroxime in the brain of animals poisoned with DDVO was most pronounced in the caudate nucleus - putamen complex. Electromyographic investigation indicated a beneficial effect of dipyroxime on the transmission of impulses in nerve-muscle synapses. The results of the study of the physiological action of dipyroxime substantiated the conclusion arrived at in earlier work that this drug is effective in the treatment of poisonings with DDVP and chlorophos (cf. Kagan et al, Farmakol. i Toksikol., 3, 359, 1971).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

UNCLASSIFIED

...SIUM HYDROXIDE -U- ... IN THE SEDIMENTATION AND FILTRATION PROPERTIES OF

PROCESSING DATE--09OCT70

AUTHOR-(02)-STAVROV, S.N., TODIRASH, V.D.

COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. UKR. 1970, (1), 6-8

DATE PUBLISHED--------70

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

TOPIC TAGS--FILTRATION, SEA WATER, LIME, MAGNESIUM HYDROXIDE, SODIUM CHLORIDE, GEOGRAPHIC LOCATION, CALCIUM CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/1449

STEP NO--UR/0436/70/000/001/0006/0008

CIRC ACCESSION NO--AP0109509

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

ACCESSION NO--AP0109509 UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE PRODUCTION OF MG(OH)SUB2 FROM SEA WATER BY PPTN. WITH MILK OF LIME, FILTRATION AND RINSING ARE DIFFICULT. WHEN NACL IN THE LIME SUSPENSION INCREASES, THE FILTRATION RATE INCREASES CONSIDERABLY. FAVORABLE CONDITIONS EXIST IN THE SOUTH SIVASH, NORTH OF THE CRIMEAN PENINSULA, WHERE THE WATER CONTAINS 11-14PERCENT SALTS (2.5PERCENT CACL SUB2 AND 9PERCENT NACL). THE MG(OH) SUB2 IS PPTD. TOGETHER WITH CACO SUB3 AND THE MIXT. SERVES AS RAW MATERIAL FOR THE PRODUCTION OF MG SALTS.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

UNCLASSIFIED

FINISHING OF WOOD WITH POWDERED POLYMER MATERIALS BY FUSING -U-

PROCESSING DATE--30OCT70

AUTHOR-(03)-BELOKON, M.E., TODORCHIK, V.S., KOZYRINA, A.P.

COUNTRY OF INFO--USSR

SOURCE--DEREVOOBRAB. PROM. 1970, 19(3), 5-7

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--WOOD, POLYVINYL ACETAL RESIN, PLASTIC COATING, COMPRESSIVE STRENGTH, BENDING STRENGTH, PROTECTIVE COATING, THERMAL EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0978

CIRC ACCESSION NO--AP0124637

STEP NO--UR/0489/70/019/003/0005/0007

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

ACCESSION NO--AP0124637 UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POWDERED POLY(VINYL BUTYRAL) (I) WAS APPLIED AS A PROTECTIVE AND (OR) DECORATIVE COATING TO WOOD BY FUSION, AND THE EFFECTS OF THE TEMP. AND TIME OF EXPOSURE DURING THE APPLICATION OF THE COATING ON THE PHSY. AND MECH. PROPERTIES OF WOOD WERE STUDIED. EXPTS. WERE CONDUCTED ON SAMPLES OF BEECH, OAK, AND SPRUCEWOODS. THE SAMPLES WITH OR WITHOUT A COATING OF POWDERED I WERE HEATED AT LESS THAN OR EQUAL TO 210DEGREES FOR VARYING TIMES, AND THE RATE OF THE TEMP. INCREASE WITHIN THE WOOD, THE COMPRESSION AND BENDING STRENGTH, AND THE IMPACT RESISTANCE WERE DETD. ALL THE TESTED PROPERTIES WERE LOWERED BY EXPOSURE TO THE REQUIRED FUSION TEMP. 180-210DEGREES AND FUSION TIME 18-20 MIN. TO PREVENT THIS DETERIORATION, POLYMERS M. 170-180DEGREES SHOULD BE USED. WHEN A HIGHER TEMP. IS NEEDED, THE FUSION TIME SHOULD BE 8-10 MIN.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

UNCLASSIFIED

DETERMINATION OF THE OPERATING CHARACTERISTICS OF THE PILOT BEARINGS OF HYDROTURBINES -U-

PROCESSING DATE--23OCT70

AUTHOR-(05)-KVITNITSKIY, YE.I., POLTAVSKIY, YU.D., PRIKHODKO, O.B., TODOROV, A.D., OSTAPENKO, V.V.

COUNTRY OF INFO--USSR

SOURCE--LENINGRAD, ENERGOMASHINOSTROYENIYE, NO. 2, 1970, PP 10-11

DATE PUBLISHED--------70

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

TOPIC TAGS--HYDRAULIC EQUIPMENT, SLIDE BEARING, BIBLIOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1640

STEP NO--UR/0114/70/000/002/0010/0011

CIRC ACCESSION NO--AP0120394

UNCLASSIFIED

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ACCESSION NO--AP0120394 UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THEORETICAL FUNDAMENTALS FOR HYDRODYNAMIC MULTIPLE BUSHING SLIDE BEARINGS ARE INVESTIGATED FOR THE CASE OF THEIR STATIC LOAD. SIMILAR BEARINGS ARE USED AS GUIDE SUPPORTS OF HYDRAULIC UNITS. CONCRETE RESULTS ARE PRESENTED FOR THE DESIGN OF THE PILOT BEARING OF A HYDROTURBINE, WHICH IS INSTALLED AT THE MAIN HYDROELECTRIC POWER STATION OF THE VAKHSHSKIY CASCADE.

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UDC 577.391

VASYL'CHENKO, V. M., TODOROV, I. M., DYACHENKO, A. H., and VASYL'YEVA, Ye. S., Physico Technical Institute of Low Temperatures, Academy of Sciences Ukrainian SSR, Kharkov, and Sector of Molecular Biology and Genetics, Academy of Sciences Ukrainian SSR, Kiev

"Investigation of Spleen and Liver Polysomes of Nonimmunized and Immunized Rats With Acute Radiation Damage"

Kiev, Ukrainskyy Biokhimicheskiy Zhurnal, Vol 42, No 4, 1970, pp 499-507

Abstract: The state of the spleen and liver polysomal apparatus was studied in vivo and in vitro in albino rats subjected to lethal doses of ionizing radiation and immunization. It was established that 24 hours after irradiation of the non-immunized animals, the protein-synthesizing activity of the liver polysomes increased while the spleen polysomes were simultaneously destroyed, resulting in a decrease in their synthetic activity. Immunization resulted in a considerable activation of protein synthesis in the liver and spleen. When the animals were irradiated 24 hours after immunization, no decrease in the functional activity of the polysomal apparatus in the spleen was noted. Polysome protein synthesis in the liver, on the other hand, decreased considerably under analogous conditions. It is assumed that an acute radiation damage the liver temporarily participates in compensatory immunogenesis. Possible reasons for the radioprotective effect of preliminary immunization on the polysomal apparatus of irradiated animal spleens are discussed.

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UNCLASSIFIED

RNA SYNTHESIS IN RAT LIVER AND SPLEEN IN THE EARLY STAGES OF ACUTE RADIATION INJURY -U-

PROCESSING DATE--30OCT70

AUTHOR-(04)-PASKEVICH, I.F., VASILYEVA, YE.S., TODOROV, I.N., SHANTYR, V.I.

COUNTRY OF INFO--USSR

SOURCE--RADIOBIOLOGIYA 1970, 10(1), 19-24

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--X RAY RADIATION BIOLOGIC EFFECT, RADIATION DOSAGE, RAT, RNA, LIVER, SPLEEN, PHOSPHORUS ISOTOPE, CHEMICAL LABELLING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0452

STEP NO--UR/0205/70/010/001/0019/0024

CIRC ACCESSION NO--AP0121126

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

UNCLASSIFIED

...NO--AP0121126

PROCESSING DATE--30OCT70

...STRACT/EXTRACT--(U) GP-0- ABSTRACT. RNA SYNTHESIS IN RAT LIVER AND SPLEEN WAS DETD. 2, 12, AND 24 HR AFTER WHOLE BODY X IRRADN. WITH A DOSE OF 800 R (197 KV, 10 MA, FILTER 0.5 MM CU PLUS 1 MM AL, FOCUS DISTANCE 40 CM, DOSE RATE 26.5 R-MIN). NA SUB2 H PRIME32 PO SUB4 WAS INJECTED INTO RATS 1 HR BEFORE KILLING THE ANIMALS. RNA WAS EXTD. FROM HOMOGENIZED LIVER AND SPLEEN BY A THERMAL PHENOL METHOD IN TEMP. INTERVALS OF 0-10DEGREES, 45-55DEGREES, 45-65DEGREES, AND 55-65DEGREES. THE RADIOACTIVITY OF RNA PREPNS. WAS MEASURED BY LIQ. SCINTILLATION TECHNIQUES. AN ACITVATION OF RNA BIOSYNTHESIS IN THE LIVER AND AN INHIBITION IN THE SPLEEN WERE OBSD. IN THE EARLY STAGES OF ACUTE RADIATION INJURY, ESP. 2 HR AFTER IRRADN.; A TENDENCY TO NORMALIZATION OCCURRED IN THE LATER TIME INTERVALS. FACILITY: NAUCH.-ISSLED. INST. MED. RADIOL., MOSCOW, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

CIRC ACCESSION NO--AP0123256 UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THREE STAGES OF WORK ARE INVESTIGATED CHARACTERIZING THE DEVELOPMENT OF VIBRATION AND WAVINESS OF DISC AND WORK PIECE DURING INFEED PRECISION GRINDING. CHANGES IN THE CIRCULAR VELOCITY OF THE DISC DURING THE GRINDING PROCESS DECREASES THE VIBRATION AMPLITUDE OF THE WORK PIECE AND WAVE HEIGHT 2.5-3 TIMES AND SURFACE FINISH FROM CLASSES 8B TO 9A. A RULE FOR THE OPTIMUM VARIATION IN DISC VELOCITY IN THE CUTTING PROCESS IS ESTABLISHED.

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USSR

ANZON, Z. V., et al, Institute of Nuclear Physics, Academy of Sciences, Kazakh SSR, Alma-Ata; BOZOKI, G., et al, Central Research Institute of Physics, Budapest; DALKHAZHAV, N., et al, High-Energy Laboratory, Joint Institute of Nuclear Research, Dubna; BABETSKIY, Ya., et al, Laboratory of High-Energy Physics, Institute of Nuclear Research, Polish Academy of Sciences, Krakow; MASLENNIKOVA, N. V., TRET'YAKOVA, M. I., CHERNYAVSKIY, M. M., Physics Institute imeni P. N. Lebedev of the Academy of Sciences, USSR, Moscow; ALEKSEYEVA, K. I., Scientific Research Institute of Nuclear Physics, Moscow State University, Moscow; CHERNEV, Kh., TODOROV, P. T., Institute of Nuclear Physics, Academy of Sciences of the People's Republic of Bulgaria, Sofia; TUVDENDORZH, D., SHARKHI, D., CHADRAA, V., Institute of Physics and Mathematics of the Academy of Sciences, Mongol People's Republic, Ulan-Bator); AZIMOV, S. A., et al, Institute of Nuclear Physics Academy of Sciences, Uzbek SSR, Tashkent

"Coherent Generation of Particles by π^--Mesons With Momenta of 45 and 60 Giga-electron-Volts/Sec on the Basis of Photoemulsion Nuclei"

Moscow, Izvestiya Akademii Nauk SSR. Seriya Fizicheskaya, No 9, 1970, pp 1938-1943

Abstract: In the present report are presented data concerning the coherent generation of π-mesons by π^--mesons at 45 and 60 gigaelectron-volts/sec, obtained by means of nuclear photoemulsion by the laboratories of a number of institutes

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ANZON, Z. V., ET AL, Izvestiya Akademii Nauk SSR. Seriya Fizicheskaya, No 9, 1970, pp 1938-1943

of the Soviet Union and countries of the Soviet bloc. The joint study was organized by the Photoemulsion Committee of the Joint Institute of Nuclear Research. The preliminary results of this project were presented at the International Conference on Elementary Particles in Lund in June 1969 and at the International Conference on Cosmic Rays in Budapest in August 1969. The path value of the coherent generation of three and five charged particles is obtained from the distribution of charged particles and the angular characteristics of secondary particles on the basis of multiplicity. Comparison of the path value with the corresponding values at lower and higher energies shows a decrease of the run (and, consequently, an increase of the coherent particle-generation cross section) as the energy increases. 5 figures, 11 bibliographic entries.

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USSR

ANZON, Z. V., et al, Institute of Nuclear Physics, Academy of Sciences, Kazakh SSR, Alma-Ata; BOZOKI, G., et al, Central Research Institute of Physics, Budapest; DALKHAZHAV, N., et al, High-Energy Laboratory, Joint Institute of Nuclear Research, Dubna; BABETSKIY, Ya., et al, Laboratory of High-Energy Physics, Institute of Nuclear Research, Polish Academy of Sciences, Krakow; MASLENNIKOVA, N. V., TRET'YAKOVA, M. I., CHERNYAVSKIY, M. M., Physics Institute imeni P. N. Lebedev of the Academy of Sciences, USSR, Moscow; ALEKSEYEVA, K. I., Scientific Research Institute of Nuclear Physics, Moscow State University, Moscow; CHERNEV, Kn., TODOROV, P. T., Institute of Nuclear Physics, Academy of Sciences of the People's Republic of Bulgaria, Sofia; TUVDENDORZH, D., SHARKHI, D., CHADRAA, V., Institute of Physics and Mathematics of the Academy of Sciences, Mongol People's Republic, Ulan-Bator); AZIMOV, S. A., et al, Institute of Nuclear Physics Academy of Sciences, Uzbek SSR, Tashkent

"Coherent Generation of Particles by π^--Mesons With Momenta of 45 and 60 Giga-electron-Volts/Sec on the Basis of Photoemulsion Nuclei."

Moscow, Izvestiya Akademii Nauk SSR. Seriya Fizicheskaya, No 9, 1970, pp 1938-1943

Abstract: In the present report are presented data concerning the coherent generation of π-mesons by π^--mesons at 45 and 60 gigaelectron-volts/sec, obtained by means of nuclear photoemulsion by the laboratories of a number of institutes

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USSR

TODOROV, D. N., LYSYY, S. T., KAPATSYNA, G. G., KHANBEKOVA, N. S.

"Input Language for Graphic Information Processing System"

Prikl. Mat. i Programmir. [Applied Mathematics and Programming -- Collection of Works], No 8, Kishinev, Shtiintsa Press, 1972, pp 122-138 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V675).

Translation: The GRAFIK input language for computer and plotter software systems is described. The language includes geometric operators (cycle, turn, shift, symmetry, transform, calling of subroutine) and fragments (point, line, enscription, function, pen, linear and angular dimensions). The language also includes ALGOL-60 operators: attachment and transfer. An example of a program written in GRAFIK is presented.

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USSR UDC 547.822.7.341.26'118.07

DRUZIN, M. I., TODRES, I. M., and ZHURAVLEVA, M. A.

"A Method of Making 0,0-Dialkyl(alkarlyl) N-[2-(Alkylpyridyl-2')alkylene]alkylaminomethylene Phosphonates"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 33, Soviet Patent No 284990, class 12, filed 21 Jul 69, published 29 Oct 70, p 25

Translation: This Author's Certificate introduces: 1. A method of making 0,0-dialkyl(alkaryl) N-[2-(alkylpyridyl-2')alkylene]alkylaminomethylene phosphonates. As a distinguishing feature of the patent, dialkyl(alkaryl) phosphites are allowed to react with formaldehyde and N-[2-(alkylpyridyl-2') alkylene]alkylamine with subsequent isolation of the production by conventional methods. 2. A modification of this method is distinguished by the fact that the process is carried out at a temperature below 100°C.

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SINGLE-ELECTRON TRANSFER AND CHEMICAL TRANSFORMATIONS

(Conference in Rostov-on-Don)

[Article by Candidate of Chemical Sciences Z. V. Todres; Moscow, Vestnik Akademii Nauk SSSR, Russian, No 9, September 1973, pp 102-106]

A conference on the role of electron transfers in chemical reactions was held in Rostov-on-Don on 22-25 May. It was organized by the Northern Caucasus Scientific Center of the Higher School; about 40 reports were presented. Participating in the conference were the leading chemical institutes of the AS USSR and the republican academies, and also Rostov-on-Don, Moscow, Leningrad and Gor'kiy universities.

Chemical reactions are usually regarded as the rupture and formation of bonds, that is, the rearrangement of the skeleton of a molecule. It is now considered, however, that the displacement of atoms or atomic arrangements is preceded by the transfer of electrons from one of the reacting molecules to the other. The study of that stage, which has become possible through the use of new instrumental methods of investigation, especially of electron paramagnetic and nuclear magnetic resonance, expands concepts of the reaction mechanism as a sequence of elementary stages known to us.

As a result of electron transfer new particles appear, not known to organic chemistry of the past. The properties of these products were examined in a number of reports. Hemoglobin, cytochrome C and other enzymes with Fe(III) after electron transfer give nonequilibrium forms in which the iron has already gone over into the state Fe(II) but the protein part still retains its previous configuration (R. M. Davydov). The transformation of 4-41-dinitro-cis-stilbene into an anion-radical is accompanied by complete cis-trans-isomerization. Destruction of the symmetry of the molecule leads to establishment of equilibrium: 4-nitro-cis-stilbene in the presence of electron transfer gives a mixture

 JPRS 60661, 30 Nov 73

TODRES, Z. V.

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USSR

BABAYEVA, A. Kh.; SULTANOV, F. F.; SEREBRYAKOV, Ye. P.; TODRIS, I. I.; STEFANOVSKAYA, N. V.; YeLDASHEV, A. Ye.

Ashkhabad, Voprosy fiziologicheskikh mekhanizmov adaptatsii organizma k zharkomu klimatu, (Aspects of the Physiological Mechanisms of Adaptation of the Organism to a Warm Climate), "Ylym," 1970, 172 pp

Translation:

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Oxidative phosphorylation and the role of kidney mitochondria in the regulation of glycolysis	81
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USSR

BABAYEVA, A. Kh., et al, Voprosy fiziologicheskikh mekhanizmov adaptatsii organizma k zharkomu klimatu, "Ylym," 1970, 172 pp

The content of free amino acids in the blood plasma of humans and animals in the hot climate of the Turkmen SSR 136

Compensatory-adaptive reactions during the constriction of the aorta in a hot climate 145

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

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UDC 621.357.7.035.4:699.587(088.8)

TODT, KHANS GYUNTER, AND FOSS, GYUNTER, Sharing Co., West Berlin, Germany

"An Acid Electrolyte for Galvanizing"

Author's Certificate No 330640, filed 10 Apr 70, published 7 Apr 72 (from Referativnyy Zhurnal -- Khimiya, No 8(II), 1973, Abstract No 8L303P by V. N. Titova)

Translation: An electrolyte is patented for depositing a shiny galvanizing coat. It is improved in that to obtain the shine and pliability for large thicknesses of the zinc film, an aromatic ketone is added to the composition of the acid galvanizing electrolyte. The proposed electrolyte has the following composition, in g/liter: the zinc salt, 50-200; NH_4Cl, 50-300; polyethylene glycol, 0.1-20; the aromatic ketone, 0.01 - 5; a pH of 3-6 with an optimum range of 4.5 to 5.5; a temperature of 10-45°; and D_k 0.1-10 amps/decimeter^2. The solution is mixed either by air or by stirring with a cathode. The following series of compounds may be used for the aromatic ketone: acetophenone, ethylphenolketone, propiophenone, benzylacetone, 2-hydroxybenzalacetone, benzoylacetonitrile, 3-acetylpyridine, 2-benzoylpyridine, the ethyl ether of benzoylacetic acid, 3-acetylcoumarin, thienyldenacetone and others.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

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TODT, et al., Author's Certificate No 330640, filed 10 Apr 70, published 7 Apr 72

Other brighteners may be used in the electrolyte, for example, thio compounds, high molecular compounds, aromatic aldehydes, and also non-frothing surface active compounds in particular, short chain alkyl sulfates. For example, in g/liter: $ZnCl_2$,150; NH_4Cl,175; polyethylene glycol (average molecular weight of 4000), 2.0; 3-acetylcourmarin 0.2; salicylic acid (the potassium salt), 4.0; pH of 4.8; temperature 20°; D_k 5.0 amps/decimeter^2; and an injection of air.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR UDC: 621.372.01-503.25

TODUA, A. V., ZUYEV, L. N., YEREMEYEV, G. A., CHITAISHVILI, I. A.

"Frequency Parameters of the Input Circuits of Electronic Devices"

V sb. Radioelektronika optich. diapazona (Radio Electronics in the Optical Band--collection of works), Moscow, 1970(1971), pp 188-193 (from RZh-Radiotekhnika, No 3, Mar 72, Abstract No 3A118)

Translation: The paper deals with the frequency and wave properties of a series tank circuit with auxiliary active load in parallel with the tank capacitance. An expression is found for the modulus of the transmission factor of the circuit, and an extremum analysis of this expression is given which shows the cutoff frequencies of the tank passband and the maximum transmission factor. An examination of transient processes in periodic and aperiodic modes of conduction is made on the basis of a differential equation for the voltage across an equivalent capacitor. It is shown that the given circuit can have two types of transient characteristics: classical, where the resistance of the loop is less than the double wave impedance, and non-trivial, where the zone of periodicity is in the middle of the range of external loads relative to the capacitor. In this connection, between the

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TODUA, A. V. et al., Radiotekhnika optich. diapazona, Moscow, 1970(1971), pp 188-193

upper and lower limits of the oscillatory region is a load at which the oscillatory process has an extremum. Two illustrations, bibliography of two titles. Ye. R.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

TODUA, M. M.

JPRS 55818

27 April 1972

UDC: 62-50.23

A METHOD OF MATHEMATICAL MODELING OF COMPLEX ECOLOGICAL SYSTEMS

[Article by O. Z. Ivakhnenko, Yu. V. Koppa, M. M. Todua, and G. Petraka; Kiev, Avtomatika, Ukrainian, No 4, 1971, pp 20-34]

Problem Statement for Modeling of the Water Ecological System

Automatic control-computer centers will be created in the near future which will be coupled by means of telemetering systems with sensors operating as control elements of conditions in water reservoirs. Since water reservoirs will be objects of automatic control the mathematical modeling of the ecological system of water reservoirs becomes increasingly necessary.

An attempt is made below to apply to this purpose a new approach of an heuristic self-organization where instead of differential equations particular use is made of nonlinear equations of higher power in finite differences (a "polynomial description"). This approach is more adequate for simulation of problems of complicated processes and it is capable of producing not only qualitative but accurate estimates of variables.

Models which were constructed until present are applicable only to a qualitative investigation of processes as it is stated by the authors of these models. For example, in [2] where the best determined model has been described one can read: "Investigation results of the created model of the water ecosystem may be considered only from the qualitative standpoint, more work is necessary in order to obtain valid qualitative data." In contrast to this the authors of the present paper claim that their mathematical model produces in addition to qualitative also valid quantitative estimates.

Accuracy of Simulating Complicated Objects Requires Measured Complexity of Mathematical Description

There is a definite inconsistency between the complexity of mathematical simulation and the simplicity of the apparatus utilized for this purpose. Until present the simulation was performed either by determined methods (based on investigation of simple differential equation, for example, linear equations of convective diffusion), or statistical methods of ordinary regression

[I - USSR - N]

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC 632.954

TODUA, N. A., and KHUBUTIYA, R. A., Scientific Research Institute of Plant Protection, Tbilisi

"Effectiveness of Herbicides Against Nightshade"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 10, No 7 (105), 1972, pp 50-52

Abstract: The most effective herbicide against the nightshade spots is tordon 22-K applied at a dose of 2.5 kg/hectare. Additional application is needed at the appearance of new individual growths. Banwell-D used in 20-30 kg/hectare quantities destroys the entire overground portion of the nightshade plants, but after 1-2 years a repeated treatment is necessary. At the effective dosage, both herbicides are toxic to geranium, tea, citrus cultures, and sweet bay. Apple and pear trees are less sensitive towards them. The only resistant plant is vetiver. Tordon 22-K and banwell-D penetrate down to 60 cm depth of the soil and are preserved there for two vegetation periods. Tordon 22-K is deactivated at a slower rate.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

IVAKHNENKO, A. G.; TODUA, N. N.

"Problems of Statistical Prediction of Random Processes According to the Principles of Self-Organization of Prediction Equations"

Kiev, Avtomatika; May-June, 1972; pp 46-66

ABSTRACT: In previous studies the principle of self-organization was applied to solve problems of short-term (one-two years) prediction of random processes by data sampling. The article deals with finding, on the basis of the principle of self-organization, optimal algorithms and methods of their regularization for the problem of mean-term (Part I) and long-term (Part II) predictions. A random process is presented as the sum of a "trend" (time function) and a "remainder" (function of many independent variables). To determine the equation of trend regression a method of "purposeful regularization" is recommended; and to determine the remainder expression, another method ("combined regularization"). The recommendations are tested by means of two examples of prediction (the discharge of water into the Dnepr River and the industrial capacity of Great Britain).

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USSR

UDC [537.226+537.311.33]:[537.535]

GEORGOBIANI, A. N., LAVROV, A. V., TODUA, P. A., CHIKHACHEVA, V. A.

"Characteristics of the Electroluminescence of Homogeneous Zinc Sulfide Single Crystals Caused by Acoustoelectric Instability"

Kratkiye soobshch. po fiz. (Brief Communications in Physics), 1971, No. 6, pp 31-34 (from RZh Fizika, No 12, Dec 71, Abstract No 12Ye14 6)

Translation: A study of the electroluminescence in ZnS:I crystals which occurs upon the rise of acoustoelectric instability is described. The relaxation time of the electroluminescence ≤ 2 μsec, which is 2-3 orders less than the corresponding times for luminophors based on ZnS. The electroluminescence spectrum and the dependence of brightness on the applied field were measured. V. A. Chapnin.

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Pharmacology and Toxicology

USSR

UDC 612.82.015.3.014.46:577.153.9.025.3

DVORKIN, V. YA., ROZENGART, V. I., TOFILO, A. P. and CHETVERIKOV, D. A., Laboratory of the Regulation of Brain Metabolism, Institute of Physiology imeni I. P. Pavlov, Academy of Sciences USSR, and Chair of Biochemistry, First Medical Institute imeni I. P. Pavlov, Leningrad

"Mechanisms of Action of Organophosphorus Cholinesterase Inhibitors on Phospholipid Metabolism in the Brain"

Moscow, Voprosy Meditsinskoy Khimii, Vol 16, No 1, Jan/Feb 70, pp 63-69

Abstract: Poisoning of rats with the cholinesterase inhibitor O-ethyl-S-hexylmethylthiophosphonate (LG-63) in a sublethal dose did not affect the content or rate of metabolism of phosphate groups of phospholipids in the brain, whereas poisoning of mice with LG-63 in the same dose (5 mg/kg) significantly lowered the intensity of phospholipid metabolism in the brain. The difference was due to the fact that in mice, poisoning with LG-63 was accompanied by a pronounced drop in body temperature (by 9.2°C), while the drop in body temperature of rats (2.7%) was insignificant. Poisoning with LG-63 of rats subjected to acute hypoxia (created in a chamber with an air pressure

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DVORKIN, V. YA., et al., Moscow, Voprosy Meditsinskoy Khimii, Vol 16, No 1, Jan/Feb 70, pp 63-69

of 240 mm Hg) produced a greater decrease in the rate of phospholipid metabolism in the brain and a more pronounced hypothermia than in rats poisoned with LG-63, but not subjected to hypoxia. This indicated that an inhibiting action of LG-63 on the brain phospholipid metabolism was exerted only when administration of this poison was followed by a significant drop in body temperature. When the body temperature of mice was kept at a normal level after poisoning with LG-63, the rate of phospholipid metabolism in the brain increased. The lethality of the poisoned mice also increased evidently the development of hypothermia in mice was a protective reaction.

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Acc. Nr. AP0036568

Ref. Code: UR 0301

PRIMARY SOURCE: Voprosy Meditsinskoy Khimii, 1970, Vol 16, Nr 1, pp 63-69

ANALYSIS OF THE EFFECT OF PHOSPHOORGANIC CHOLINE ESTERASE INHIBITORS ON PHOSPHOLIPIDS METABOLISM IN BRAIN

Dvorkin, V. Ya.; Rozengart, V. I.; Tofilo, A. P.; Chetverikov, D. A.

Laboratory of Brain Metabolism Regulation, I. P. Pavlov Institute of Physiology and The Department of Biochemistry I. P. Pavlov I-st Medical Institute, Leningrad

The effect of intoxication by phosphoorganic choline esterase inhibitor (LG-63) on the content and rate of exchange of phosphate groups of phospholipids in rat and mice brain has been studied. In rat the intoxication with sublethal doses of LG-63 had no effect on the rate of phospholipids renewal in brain. On the oter hand the administration of LG-63 into mice at the same dose leads to decrease in the metabolism of phospholipids by 27% as compared to the control. The different picture obtained is explained by the significant body temperature fall in mice (an average by 9.2°). In rats the hypothermia was at a much low level. Intoxication of hypoxic rats with LG-63 leads to more pronounced decrease in phospholipids exchange in brain and to more pronounced hypothermia as compared to rats suffered with oxygen insufficiency only. So the inhibitory action of LG-63 on brain phospholipids metabolism was detected only when intoxication with LG-63 was followed by the significant decrease in body temperature.

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USSR

UDC 669.017.3:548.735.6

TOFPENETS, R. L., MALASHENKO, L. M., and SOKOLOV, YU. V., Physico-Technical Institute, Academy of Sciences BSSR

"Grain Formation During Rolling of the D16 Alloy"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 4, 1973, pp 22-24

Abstract: This article contains the results of a grain analysis of the D16 alloy deformed by rolling at room temperature (ε = 75%) in the quenched, aged (t_{age} = 150° C, τ = 10 hours) and annealed states. Pole figures {111} and {200} are constructed.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

TOFPENETS, R. L., Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 4, 1973, pp 22-24

Aging the alloy in conditions which ensure a zone stage of decay does not change the character of the deformation orientation. Comparison of the intensities of the major orientations (112) [1$\bar{1}$1], and (110) [1$\bar{1}$2] shows a slowdown in transverse glide in the aged alloy in comparison with pure aluminum and the annealed alloy. Slow-down in the transverse glide is manifested by change in the energy of packing defects in the alloy containing disperse zones G-P.

Pole figures {111} and {200} are illustrated for the D16 alloy deformed by 75% after quenching at 500° C, after quenching and aging at 150° C for 10 hours, and after slow cooling from the quenching temperature.

The article contains 1 illustration and 8 bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC 669.35:621.78

GOREV, K. V., TOFPENETS, R. L., and MALASHENKO, L. M., Physico Technical Institute ~~Academy of~~ Sciences Belorussian SSR

"Electron Microscope Study of Stress Relief of a 3.2% Titanium Alloy of Copper"

Minsk, Izvestoya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 4, 1971, pp 29-32

Abstract: Results are presented from a study of stress relief of deformed precipitation-hardening 3.2% titanium alloy of copper during various subsequent annealing temperatures. During repeated heating of deformed pre-aged alloy both processes connected with complete decomposition of the solid solution and the stress relief processes (recovery, pllygonization, and recrystalliza-tion) take place. The curve for the variation of the alloy characteristics is in this case the resultant, and it cannot be used to describe the stress relief kinetics. The best method of studying recovery is the electron microscope. Results are pre-sented from an electron microscope study of aging alloy Cu + 3.2%

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GOREV, K. V., et al., Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 4, 1971, pp 29-32

Tr permitting the variation of the dislocation structure of the alloy matrix to be traced during its deformation and complete recrystallization annealing. The structure of the deformed alloy is analogous to the structure of pure copper and is characterized by nonuniform dislocation distribution. For samll annealing times at 350°C no significant changes in structure were observed. The possibility of developing polygonization at this temperature and during recrystallization at 600°C is demonstrated.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR UDC 669.3'5':621.78

GOREV, K. V., TOFPENETS, R. L., and VASIL'YEVA, L. A., Physico Technical Institute, Academy of Sciences Belorussian SSR

"Study of Recrystallization Annealing of 3.2% Titanium Alloy of Copper"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 4, 1971, pp 33-37

Abstract: A study was made of transformations occurring in Cu + 3.2% Ti alloy during annealing at 350, 450, and 600°C. By varying the specific electrical resistance and the width of the interference lines, the nature of the processes occurring during annealing of aged and deformed alloy was determined (the aging times were 1 and 5 hours at 400°C with a degree of deformation of 0, 20, 30, and 50%, and the annealing, prior deformation of the aged alloy by 20 and 30% retards decomposition of the solid solution, and deformation by 50% intensifies it. It was proposed that the variation of the indicated characteristics takes place mainly as a result of completion of aging of the alloy and not

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USSR

GOREV, K. V., et al., Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 4, 1971, pp 33-37

as a result of the deformation recovery process. It was pointed out that simultaneously with the variation of the specific electrical resistance, the width of the interference lines of the alloy matrix characterizing both the level of microstresses in the matrix and the degree of inhomogeneity of it with respect to content of alloying element varies. The curves for variation of the line width as a function of annealing time are analogous to the curves for variation of the specific electrical resistance. The variation of the line with is greater the higher the annealing temperature of the alloy. The nature of the curves for an annealing temperature of 600°C indicates the beginning of the recrystallization process.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC 532.593

VOYNICH-SYANOZHENTSKIY, T. G., TOGONIDZE, N. V.

"Transformation of Surface Waves on a Stream of Variable Depth"

V Izv. Tbilissk. n.i. in-ta sooruzh. i gidroenerg. (Tbilisi Scientific Research Institute of Structures and Water Power Engineering -- collection of articles), 1969, 18(52), pp 51-65 (from RZh-Mekhanika, No 1, Jan 70, Abstract No 1B500)

Translation: The problem of wave transformation on a flow of variable depth is examined. The Kochin-Krylov method is used and within the framework of the linear theory of planar potential waves of an ideal fluid, relations are obtained which establish the connection between the amplitudes and lengths of the approaching and "passing" waves. Qualitative methods are used to study the effect of individual factors (depth, flow velocity) on the basic characteristics of the transforming waves.

The solution of the problem of determining the depth of waves breaking on shoals and in the zone of the opposing flow of a river stream is given. An estimate is made of the possible movements of river deposits at the shoreline under the influence of velocities of the discharge and wave flows. Twelve references.

1/1 Author's abstract

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

TOKACHIROV, V. A.

UDC 622.011.43

"Bearing Capacity of Rock Masses as Footings of Subsurface Structures Loaded with Uniform Pressure"

Izv. Tbilissk. n.-i. in-ta sooruzh. i gidroenerg. (News of the Tbilisi Scientific Research Institute of Installations and Hydroelectric Power), 1969, 19, pp 200-213 (from RZh-Mekhanika, No 3, March 1970, Abstract No 3V652)

Translation: A solution is presented for the stressed state of a rocky mass weakened by cylindrical excavation. The characteristic of the rock examined, which is multimodal, is allowed for. The modulus of elasticity depends on the sign of the stress component in the directions normal and tangential to the transverse contour of the excavation. Calculation of the bearing capacity of the rocky mass as an isotropic body is shown to include a definite safety margin. Resume

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC: 621.375.82

PETROV, V. V., KRYUCHIN, A. A., SALYUK, L. I., TOKAR', A. P.

"Focusing Laser Emission in Optical Memory Devices"

Kiev, Fokusirovka lazernogo izlucheniya v opticheskikh zapominayushchikh ustroystvakh. AN USSR. In-t elektrodinam. (cf. English above. UkrSSR Academy of Sciences. Institute of Electrodynamics), Preprint No 54, 1973, 17 pp, ill., 7 k., mimeo. (from RZh-Fizika, No 11, Nov 73, abstract No 11D1441 [résumé])

Translation: Concentration of laser emission into a spot of fairly small dimensions is considered. Different types of focusing systems are analyzed. Graphs are presented showing the emission density and size of the focused spot as functions of the parameters of the optical system. It is shown that in an optical memory device with discrete data recording it is advisable to use a focusing system with telescope.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC: 534.282;539.67

MATVEYEV, V. V., TOKAR', I. G., Kiev

"Influence of Field of Centrifugal Forces on Damping of Transverse Oscillations of Rods"

Kiev, Problemy Prochnosti, No 10, Oct 73, pp 12-16

Abstract: The peculiarities of the influence of a field of centrifugal forces on damping of bending oscillations of cantilever prismatic rods are studied. It is shown that the change in damping characteristics of the oscillations of the rods results from a change in potential tensile energy, resulting from bending of the rod, and dissipation of energy in the material. When a field of centrifugal forces is applied, the oscillation decrement of the specimens, both those of ferromagnetic materials and those of paramagnetic materials, decreases. The level of dissipation of energy in a material with clearly expressed magnetomechanical hysteresis (such EI961 steel tempered at t=730° C) decreases, while it increases in a nonmagnetic material (such as MTSI magnesium alloy).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC 621.311.25:621.039.56

GREBEN'KOV, ZH. A., SAUNIN, YE. V., TOKAR', M. S.

"System for All-around Automation of a High-Power Atomic Electric Power Plant based on a Control Computer"

Dissotsiiruyushch. gazy kak teplonositeli i rab. tela energ. ustanovok -- V sb. (Dissociating Gases as Heat Transfer Agents and the Working Medium of Power Plants -- Collection of Works), Minsk, Nauka i Tekhn. Press, 1970, pp 131-137 (from RZh-Elektrotekhnika i Energetika, No 5, May 1971, Abstract No 5U128)

Translation: A basis is provided for the necessity of constructing an all-around automation system for high-power atomic electric power plants based on the control computer, and the basic principles of constructing this system on the basis of one of the models of the aggregate system of computer devices are presented. The bibliography has 13 entries.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC 690:624.131.23

KRUTOV, V. I., TOKAR', R. A.

"Experience in the Construction and Utilization of Buildings and Structures of the South-Tube Metallurgical Plant in Nikopol on Slumping Soils"

Moscow, Osnovaniya, fundamenty i mekhanika gruntov, No. 5, 1971, pp 27-29

Abstract: Thirty years of experience at the site of the Nikopol South-Tube Metallurgical Plant which was built on highly slumping ground are discussed. The plant is located on the right bank of the Dnepr at a distance of 2-5 km from the river. Actual data on the rise in the level of ground water and on the settling of the buildings are given. The level of ground water before the beginning of the construction of the plant was at a depth of 32-40 m and usually coincided with the sand cover. In subsequent years it rose to a depth of 22-28 m due to construction of a reservoir and the outflow of water from the plant. The slumping properties of the loess soils in the vicinity of the factory varied in shape and especially in depth. The effect of the rise in the ground water level on the settling of the built-up area from buildings and structures placed on it using different types of bases and foundations is analyzed. It was found that

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USSR

KRUTOV, V. I., TOKAR', R. A., Osnovaniya, fundamenty i mekhanika gruntov, No. 5, 1971, pp 27-29

since settling of the area from the natural weight of the ground occurs relatively uniformly, even very large settling of individual foundations of up to 600-989 mm does not lead to serious disruption of the normal utilization of the buildings. Local settling of the ground under accidental wetting by industrial waters had a considerably greater effect on the utilization of the structures. In the absence of local wetting the settling of foundations located close together was practically the same and independent of the type of foundation and preparation of the base.

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USSR

UDC 616.988.75(A2)-06:616.981.25]-092.4:57.085.23

TOKAR', R. G., ZAKSTEL'SKAYA, L. Ya., and SHENDEROVICH, S. F., Vladivostok Scientific Research Institute of Epidemiology and Microbiology; Institute of Virology imeni Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Results of a Combined Infection of Tissue Culture With Influenza Virus A2 and Staphylococcus"

Moscow, Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, Vol 48, No 6, Jun 71, pp 100-103

Abstract: Reports indicating the possible role of Staphylococci in the development of postinfluenzal pneumonia in children prompted experimental investigations to determine the combined effect of influenza virus A2 and Staphylococcus in infection of cell cultures. A tissue culture of a trypsinized fetal human kidney in culture medium No 199 with bovine serum and maintenance medium with aminopeptide was infected with influenza virus A2 Hong Kong 1/68. Within 24, 48, 72, and 96 hours, pathegenic strain No 239 and nonpathogenic strain No 112 of Staphylococcus were added to the culture. Within 24, 48, 72, 96, and 120 hours of the addition of Staphylococci, virological and bacteriological examinations were conducted. It was found that influenza virus A2 caused no

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USSR

TOKAR', R. G., et al, Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, Vol 48, No 6, Jun 71, pp 100-103

cytopathic changes in the tissue culture. The addition of Staphylococci, however, induced pronounced cytopathic changes, resulting in degeneration of a large number of cells. Changes induced by the nonpathogenic strain No 112 were not quite as pronounced as those caused by strain No 239. It was established that the addition of the pathogenic strain of Staphylococcus stimulated virus reproduction and intensified viral infectious activity. In the presence of the influenza virus, Staphylococci completely retained viability, and no changes in pigment formation, lecithinase or hyaluronidase activities were noted. The pathogenic properties of Staphylococcus strain No 239 were somewhat enhanced.

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1/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--BLAST FURNACE GRANULATED SLAGS RAISE THE QUALITY OF SLAG PORTLAND CEMENT -U-

AUTHOR-(05)-KRYZHANOVSKAYA, I.A., DOROSHENKO, N.M., POPUDRENKO, M.K., TOKAR, V.A., SHEVCHENKO, I.I.

COUNTRY OF INFO--USSR

SOURCE--TSEMENT 1970, (3), 20-1

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--BLAST FURNACE SLAG, CEMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605018/C08 STEP NO--UR/0101/70/000/003/0020/0021

CIRC ACCESSION NO--AP0140817

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

2/2 009

UNCLASSIFIED

CIRC ACCESSION NO--AP0140817 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. LAB. AND PRODUCTION TESTS SHOW THAT PORTLAND CEMENT BASED ON SLAGS OF BLAST FURNACE GRANULATION RAISE CONSIDERABLY THE CEMENT QUALITY AND INCREASE OUTPUT.

KRIVOROZH. TSEM. ZAVOD., KRIVOI ROG, USSR. FACILITY:

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC 613.644

[redacted], Zaporozh'ye Medical Institute

"Nervous Mechanism of the Acoustic Stress Reaction"

Kiev, Fiziolohichnyy Zhurnal, Vol 18, No 4, Jul/Aug 72, pp 529-534

Abstract: The effect of strong and long sound signals (74, 94, 95-98 decibels at 500 Hz, and 94 decibels at 50 Hz) on the central nervous system and on physiological processes caused by them was studied in dogs and cats. For this purpose a detailed analysis was done of shifts occurring in motor defense conditioned reflexes, unconditioned reactions, respiration and heart functions, and the electrical activity of the cerebral cortex. Three definite phases were established: stress, temporary stress, and chronic overstress. Each phase is analyzed and described in detail. It was also possible to localize structural changes in the brain tissues. The obtained results make it easier to understand the effect of noise on the human organism and to correlate the occupational deafness and partial hearing loss that are observed among workers subjected to intense industrial noise.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

TOKARENKO, A. V., KRAVCHENKO, V. F.

UDC 536.21

"A Numerical Method for Calculating Nonstationary Temperature Fields in Bodies of Complex Shape"

Energ. mashinostroyeniye. Resp. mezhved. temat. nauch.-tekhn. sb. (Power Machine Building. Republic Interdepartmental Thematic Scientific-Technical Collection), 1972, No. 14, pp 122-128 (from Ref. 34. Aviatsionnyye i raketnyye dvigateli, No 9, Sep 72, Abstract No 9.34.11)

Translation: A new method is proposed for constructing the functionals for variational problems equivalent to boundary value problems of nonstationary heat conductivity for regions of complex shape. The numerical method of solving the boundary value problem, based on a variational principle, reduces to the construction of a system of coordinate functions exactly satisfying given boundary conditions and to the solution of a system of ordinary linear differential equations. The application of the method is illustrated for the solution of a specific problem of nonstationary heat conductivity. 1 ill., 7 ref. Resume.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

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UNCLASSIFIED

TITLE--CHARACTERISTICS OF BLOOD SYSTEM IN THE WORKERS OF SOME NOISY PROFESSIONS -U-

PROCESSING DATE--16OCT70

AUTHOR-(02)-TOKARENKO, I.I., GRIGOREVA, Z.E.

COUNTRY OF INFO--USSR

SOURCE--FIZIOLOGICHNIY ZHURNAL, 1970, VOL 16, NR 3, PP 330-335

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BLOOD SERUM, INDUSTRIAL HYGIENE, HAZARDOUS SOUND, BLOOD COAGULATION, LYMPHOCYTE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1138

STEP NO--UR/0238/70/016/003/0330/0335

CIRC ACCESSION NO--AP0115157

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

2/2 031

UNCLASSIFIED

CIRC ACCESSION NO--AP0115157 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN PERSONS WORKING UNDER CONDITIONS OF INTENSIVE NOISE (95-144 DB, 800-1600 HZ) SOME CHANGES ARE FOUND IN THE BLOOD MORPHOLOGICAL COMPOSITIONS AND ITS COAGULATION PROPERTIES. THE ACCELERATION OF SEDIMENTATION TEST WAS NOTED IN MEN. THE TENDENCY TO ITS ACCELERATION WAS OBSERVED IN WOMEN. IN WORKERS OF BOTH SEXES THE ERYTHROPENIA AND TENDENCY TO LYMPHOCYTOSIS WERE FOUND. THERE APPEARED NEUTHROPENIA IN WOMEN WITH THE LENGTH OF SERVICE MORE THAN 10 YEARS. TOTAL QUANTITY OF LEUCOCYTES, CONTENT OF MONOCYTES AND EOSINOPHILS DID NOT CHANGE. INVESTIGATION OF COAGULOGRAM SHOWED AN INCREASE IN ACTIVITY OF COAGULATING AND ANTICOAGULATING SYSTEMS. THESE SHIFTS IN THE FUNCTIONAL STATE OF BLOOD DEVELOP WITH AND INCREASE IN THE LENGTH OF SERVICE UNDER CONDITIONS OF NOISE, WHICH TESTIFIES TO THEIR PATHOGENOUS CONNECTION WITH THE GIVEN FACTOR. FACILITY: DEPARTMENT OF NORMAL PHYSIOLOGY AND DEPARTMENT OF PROPAEUTICS OF INNER DESEASES, MEDICAL INSTITUTE, ZAPOROZHYE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203320002-7

USSR

UDC 621.355.8.035.25

TOKAREV, A. F., and GASRYUSHOV, A. N.

"Wear On a Roller Perforation Instrument"

Sb. rabot no khim. istochnika, toka. Vses. n.-n akkumulyator. in-t (Collection of work on the Chemical Source of Current. All-Union Scientific Study Institute for Storage Batteries) Vyp 7, 1972, pp 167-170 (from Referativnyy Zhurnal -- Khimiya, No 8(II), 1973, Abstract No 8L237 by V. S. Levinson)

Translation: The process of wear of roller perforation instruments used for the perforation of laminar bands for the preparation of alkali batteries is described. It was established that the major effect on the degree of perforation of the bands was the wear of the teeth of the barbed roller.

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