

REEL # 16
KRASILNI KONA, N.Ya.

2/2 027

UNCLASSIFIED

PROCESSING DATE--100070

CIRC ACCESSION NO--AP0117484

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS CONVENED A CLINICO LABORATORIAL ANALYSIS OF 44 CASE HISTORIES OF PATIENTS WITH PROGRESSIVE LEUKOENCEPHALITIS AND NEUROECTODERMAL BRAIN TUMORS. SPECIAL ATTENTION IS BEING GIVEN TO PSEUDOTUMOROUS SYMPTOMS IN DIFFERENT FORMS OF PROGRESSIVE LEUKOENCEPHALITIS (SCHILDERS, SCHOLZ, VAN BOGARTS DISEASE). FOR DIFFERENTIAL PURPOSES THE AUTHORS UTILIZED OTONEUROLOGICAL AND X RAY CONTRAST METHODS, AS WELL AS EEG DATA. THE EEG OF PATIENTS WITH PROGRESSIVE LEUKOENCEPHALITIS DISPLAYED AN OPEN INTRAHYDROCEPHALIA WITHOUT A DISPLACEMENT OF THE VENTRICULAR SYSTEM. THE EEG CHANGES WERE IN THE FORM OF A DIFFUSE DISORGANIZATION OF THE RHYTHMS WITH A LOW AMPLITUDE ACTIVITY OR HIGH VOLTAGE PAROXYSMS OF ACUTE AND SLOW WAVES. THE OTONEUROLOGICAL CLINICAL PICTURE IN PROGRESSIVE LEUKOENCEPHALITIS IN COMPARISON TO TUMORS WAS CHARACTERIZED BY MULTIPLE FOCI, SUB AND SUPRATENTORIAL SYMPTOMATOLOGY. THIS INDICATES NOT ONLY TO A LESION OF THE HEMISPHERES, BUT OF THE STEM STRUCTURES AS WELL. FACILITY: KAFEDRA NERVNYKH BOLEZNEY BELORUSSKOGO INSTITUTA SOVESHENSTVOVANIYA VRACHEY AND N-I INSTITUTE NERVOLOGII, NEYROKHIRURGII I FIZIOTERAPII, MINSK.

UNCLASSIFIED

USSR

UDC 629.78.013:532.526

ARTYUKH, L. Yu., KRASIL'NIKOVA, T. K., and TROFIMENKO, A. T.

"Study of a Turbulent Jet on a Penetrable Plate"

Minsk, Teplo- i Massoperenos (Heat and Mass Transfer), Vol 2, 1972, pp 212-218; (Referativnyy Zhurnal, Series 41, No 6, 1972, Abstract No 6.41.169)

Abstract: Transverse input or discharge of matter in a boundary layer is one of the effective methods of influencing the structure of flow and the condition of heat exchange in the boundary layer; it may be used to diminish surface friction, prevent breakaway of flow, secure thermal shielding of surface, etc. The given paper is devoted to an experimental study of the motion of an isothermal jet along a penetrable plate in the presence of homogeneous injection or suction of air across a plate. Given are the design of an experimental apparatus and the results of the experiment. Biblio. 5, illus. 5.

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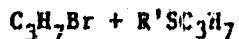
UDC 547.241

KRASIL'NIKOVA, Ye. A., ZYKOVA, T. V., RAZUMOV, A. M., STARSHOV, I. M.,
ORLOVA, G. V., and SALAKHUTDINOV, R. A., Kazan' Chemical-Technological
Institute Imeni S. M. Kirov

"Investigation of the Series of Phosphinic and Phosphinous Acid Derivatives.
XC. Effect of the Structure of Alkyl Halide on the Reaction With Esters of
Ethyl(Phenyl)dithiophosphonous Acid"

Leningrad, Zhurnal Obschey Khimii, Vol 43 (105), No 8, Aug 73, pp 1701-1705

Abstract: The study included reactions of normal and branched alkyl halides
with dipropyl esters of ethyl- and phenyldithiophosphonous acids. The normal
alkyl halides react much faster in this reaction than the branched alkyl
reagents. The reaction can be described by the equation $RP(SC_3H_7)_2 +$
 $R'Br \rightarrow RR'P(S)(SC_3H_7) + RR_2'P(S) + RP(S)(SC_3H_7)_2 +$



as supported by NMR ^{31}P data. It was shown that changing from normal alkyl
halides to the branched isomers increases the tendency of this reaction to
occur via the sulfur atom rather than through the phosphorus atom.

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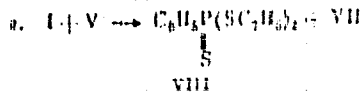
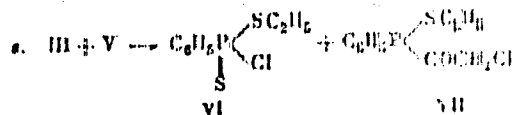
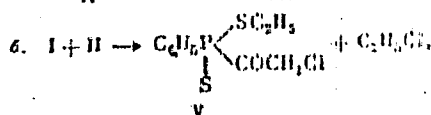
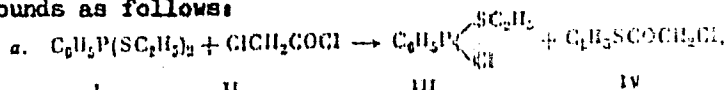
UDC 547.26'118

KRASIL'NIKOVA, YE. A., ORLOVA, G. V., MOSKVA, N. A., and RASUMOV, A. I.,
 Kazan Chemical Technological Institute imeni S. M. Kirova

"The Reaction of the Diethyl Esters of Phenylidithiophosphorous Acid with
 Chloroacetic Acid Chloride"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 11, 1972 pp 2578-1579

Abstract: The title reaction results in a complex mixture of products. Products of the initial reaction may react further resulting in the formation of a number of compounds as follows:



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KRASIL'NIKOVA, YE. A., et al., Zhurnal Obshchey Khimii, Vol 42(104), Vyp 11,
1972, pp 1578-1579

Products were separated on a chromatographic column and analysed by IR,
NMR, and PMR spectra.

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UDC 547.241

USSR

KRASII'NIKOVA, Ye. A., MOSKVA, N. A., and RAZUMOV, A. I., Kazan' Chemical-
Technological Institute imeni S. M. Kirov

"Reaction of Ethyl Diethylthiophosphinite With Chloroacetic Ester"

Leningrad, Zhurnal Obshchey Khimii, Vol XL, No 12, Dec 70, p 2765

Abstract: The above reaction yields, in addition to the basic product of
the Arbuzov reaction [diethylcarbethoxymethylphosphine sulfide (III)], also
diethylbis(carbethoxymethyl)phosphonium chloride (IV) and ethyl diethyldi-
thiophosphinate (V).

The structure of (III) was confirmed with infrared analysis.

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UDC 547.241+547.27

KRASIL'NIKOVA, Ye. A., RAZUMOV, A. I., BAYANDINA, Ye. V., and ZARINOVA, V. G.

"The Reaction of the Ethyl Ester of Diphenylthiophosphinic Acid with α -Halide Substituted Simple Esters"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 5, May 1971, pp 1173-1174

Abstract: The ethyl ester of diphenylthiophosphinic acid reacts with α -halide substituted simple esters. The following products were separated from the reaction mixture: diphenylalkoxyalkylphosphine sulfides, the ethyl ester of diphenyldithiophosphinic acid, and diphenyldi(alkoxyalkyl)-phosphonium chlorides.

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UDC 547.241

KRASILNIKOVA, YE. A., MOSKVA, N. A., BAZUMOV, A. I., Kazan'
Chemical-Technological Institute imeni S. M. Kirov, Kazan, Ministry
of Higher and Secondary Specialized Education RSFSR

"Study of the Phosphinous and Phosphinic Acid Derivatives. LXXI.
Reaction of the Esters of Diethylthiophosphinous and Diethylphos-
phinous Acids With Acetaldehyde"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70,
pp 2001-2004

Abstract: The reaction of ethyl esters of diethylthiophosphinous acid (I) and diethylphosphinous acid (II) with acetaldehyde is reported. Both esters react by the same mechanism with acetaldehyde. The reaction is complicated in case of (I) by decomposition of the starting material with the formation of triethylphosphine and the ethyl ester of diethyldithiophosphinic acid. It is proposed that the reaction of ethyl esters of (I) and (II) with acetaldehyde is a nucleophilic replacement reaction probably going through the formation of an intermediate cyclic complex. The proton is split

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KRASIL'NIKOVA, YE. A., et al, Zhurnal Obshchey Khimii, Vol 40,
No 9, Sep 70, pp 2001-2004

off by oxygen or sulfur atoms while the phosphorus atom is attacked
by the nucleophilic carbonyl oxygen. As a result, the ester group
is removed as an alcohol or a mercaptan. Product identification
was made by IR and TLC analysis.

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USSR

UTC: 8.74

KRASILOV, A. A., KSENOFONOV, Yu. I., LBYTES, V. I.

"Realization of an ALGOL-60 Type Language on the M-220 Computer"

Zh. vychisl. mat. i mat. fiz. (Journal of Computer Mathematics and Mathematical Physics), 1971, 11, No 4, pp 1075-1078 (from RZh-Kibernetika, no 1, Jan 72, Abstract No 1V1012)

Translation: The paper is a report on a high-speed translating system (up to 1200 commands/min) for the M-220 computer to convert ALGOL programs to machine codes. In addition to constructions in ALGOL-60, the input language includes operations on data blocks, with complex numbers and logic sequences of bits the length of a machine word. The characteristics of the translator give the system excellent operational and service properties. Authors' abstract.

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USSR

UDC 547.341

ISMAILOV, V. M., NOVRUZOV, S. A., KRASILOV, A. M., and AKHEDOV, SH. T.
Azerbaijani State University Imeni S. M. Kirov

"Reaction of Phosphorus Pentachloride With Isoprene Hydrochlorides"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 5, May 73, p 1197

Abstract: Studying the effect of two electron donating and one electron accepting substituents at the olefinic bond on the phosphorylation the reaction of phosphorus pentachloride with primary and tertiary isoprene hydrochlorides was studied. It has been shown that in both cases the reaction leads to the products of chlorination and phosphorylation. In the process 1-chloromethyl-2-chloro-2-methylpropylphosphonic acid dichloride was synthesized which could undergo dehydrochlorination after prolonged heating to yield 1-chloromethyl-2-methyl-propenyl-1-phosphonic acid dichloride.

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1/2 023 UNCLASSIFIED PROCESSING DATE--14NOV70
 TITLE--CORRELATION OF THE LUMINESCENT AND GYROTROPIC PROPERTIES OF URANYL
 COMPOUNDS WITH THEIR STRUCTURES -U-
 AUTHOR--(05)-BURKOV, V.I., KIZEL, V.A., KRASILEV, YU.I., NADY, V.A.,
 AKIKHANDVA, Z.M.
 COUNTRY OF INFO--USSR
 SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(3), 572-5
 DATE PUBLISHED-----70
 SUBJECT AREAS--CHEMISTRY, PHYSICS
 TOPIC TAGS--LUMINESCENCE, URANIUM COMPOUND, MOLECULAR STRUCTURE
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--2000/2013 STEP NO--08700487/07/010/005/00/000875
 CIRC ACCESSION NO--AP0125601
 UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--19NOV70

CIRC ACCESSION NO--AP0125001

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ROTATION STRENGTH (RE), THE TRANSITION, THE DICHROISM (D), AND THE DEGREE OF CIRCULAR POLARIZATION (C) WERE STUDIED IN THE SERIES MEUD SUB2, (C SUB3 H SUB5 (C SUB6) SUB3 (ME EQUALS K, IN SUB4, K0, CS, AND NA). LINEAR RELATIONS WERE FOUND BETWEEN RI AND THE CATION DIMENSION AND BETWEEN RE AND C AND D. THE DEPOSITION OF ENERGY LEVELS IN UD SUB2 IS DISCUSSED. FACILITY: MOSK. FIZ. TEKH. INST., MOSCOW, USSR.

UNCLASSIFIED

172 012 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--SPECTROGRAPHIC DETERMINATION OF IMPURITIES IN TITANIUM IV CHLORIDE
USING A HELLOW CATHODE DISCHARGE -U-
AUTHOR--(CB)--PEVTSOV, G.A., KRASILSHCHIK, V.Z., YAKOVLEV, A.F.
COUNTRY OF INFO--USSR
SOURCE--Zh. ANAL. KHIM. 1970, 25(3), 580-1
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--SPECTROGRAPHIC ANALYSIS, TITANIUM CHLORIDE, CATHODE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0471 STEP NO--UR/CD75/TQ/025/003/0580/0581
CIRC ACCESSION NO--AP012-223

272 012 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--A0126223
ABSTRACT/EXTRACT--(U) GR-0- ABSTRACT. A SPECTROGRAPHIC METHOD IS
SUGGESTED FOR THE DETN. OF IMPURITIES IN TICL SUB4. THE IMPURITIES ARE
COND. ON A C COLLECTOR BY DISTG. OFF TICL SUB4 AND THE COND. IS
ANALYZED, AFTER ADDING ADEL, IN A HOLLOW CATHODE IN WHICH THE EVAPN.
ZONE IS SEPD. FROM THE EXCITATION ZONE. SI IS DETD. WITHOUT CONDN.
ANAL. LINES USED ARE CA 4226.7, MG 2802.7, MN 4030.7, NA 3302.3, PB
2833.1, FE 3719.9, NI 3414.8, CO 3453.5, CR 3405.3, K 4044.1, AL 3944.0,
CU 3274.0, SI 2516.1 ANGSTROM. THE SENSITIVITY OF THE DETNS. RANGES
FROM 1 TIMES 10 PRIME NEGATIVE7 MINUS 2 TIMES 10 PRIME NEGATIVE3PERCENT
WITH THE EXCEPTION OF SI, WHERE THE DETERMINABLE CONCEN. IS 1 TIMES 10
PRIME NEGATIVE3PERCENT. THE REPRODUCIBILITY IS 20-5PERCENT.
FACILITY: ALL-UNION SCI.-RES. INST. CHEM. REAGENTS SPEC. PURE CHEM.,
MOSCOW, USSR.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--GEOCHEMISTRY OF DISPERSED ORGANIC SUBSTANCES IN PRECAMBRIAN
FORMATIONS OF SPITSBERGEN -U-
AUTHOR--(04)--DANYUSHEVSKAYA, A.I., VOYTSEKHOVSKAYA, M.G., KOLOTOVA, L.F.,
KRASILSHCHIKOV, A.A.
COUNTRY OF INFO--USSR
SOURCE--GEOL. NEFTI GAZA 1970, 14(3), 47-53
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GEOCHEMISTRY, ARTIC GEOLOGY, GREEN ALGAL, MOLECULAR STRUCTURE,
CARBONYL COMPOUND, GEOLOGIC FORMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/0146

STEP NO--UR/0009710/014/003/0047/0053

CIRC ACCESSION NO--AP0135643

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0135643

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MOL. STRUCTURE OF DISPERSED ORG. SUBSTANCES (DOS) IN CARBONATE AND TERRIGENOUS CARBONATE REEFS OF THE UPPER PRECAMBRAIN LOWER PALEOZOIC SECTION OF SPITSBERGEN WAS CHARACTERIZED BY IR SPECTROSCOPY, CHROMATOG., X RAY ANAL., PETROGRAPHY, AND BITUMEN EXAMN. THE ORG. SUBSTANCE IS A PRODUCT OF BLUE GREEN ALGAE TRANSFORMATION. THE INSOL. ORG. SUBSTANCE PROBABLY IS COMPOSED OF POLYCYCLIC AROMATIC MOLS., WHICH CONTAIN CARBONYL CO GROUPS (POSSIBLE QUINONE TYPE) AND SMALL QUANTITIES OF CH SUB2 AND ME SIDE GROUPS. THE STRUCTURE IS SIMILAR TO THOSE OF THE DOS INPRECAMBRIAN FORMATIONS OF NORTH AMERICA AND GREENLAND.

UNCLASSIFIED

USSR

UDC: 533.6.07

GUR'YASHKIN, L. P., KRASIL'SHCHIKOV, A. P., PODOBIN, V. P.

"A Ballistic Wind Tunnel for Measuring the Drag of Models in Free Flight at Hypersonic Velocities"

Uch. zap. Tsentr. aerogidrodinam. in-ta (Scientific Notes of the Central Aerohydrodynamic Institute), 1970, 1, No 2, pp 111-114 (from RZh-Mekhanika, No 9, Sep 70, Abstract No 9B497)

Translation: The authors describe a ballistic wind tunnel and some of the experimental data obtained in this tunnel. The installation comprises three main elements: the wind tunnel ($M=2.5-3.5$, total braking pressure up to 200 atmospheres), a pointer stand (caliber 14.5 mm, flight speed of the models up to 500-2,000 m/s) and electron-optical instrumentation. The operation of the installation is based on shooting the model into the teeth of the supersonic flow in the tunnel. The unit permits achievement of Mach numbers of 1.5-15, Reynolds numbers of 10^6-10^7 , and a stagnation temperature of up to 2,800°K. Data are given on the head drag coefficient of a conical model with generatrix discontinuity, and elliptical cones, as well as a relationship for development of the width of the turbulent kernel in the wake of a sphere (in the caliber range of $\delta = 30-3,500$, development of the relative width of the turbulent wake δ is approximated by the expression $\delta = 0.20(14\delta^{0.5})$. B. I. Bakun.

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USSR

KRASIL'SHCHIKOV, D., Candidate of Medical Sciences, Senior Scientific Associate
at the Scientific Research Institute of Epidemiology, Microbiology, and Hygiene.

"Nature Is Our Friend"

Vil'nyus, Sovetskaya Litva, 3 Apr 73, p 2

Translation: The protection of nature is a nationwide task in our country. In the December 1972 decree of the CPSU Central Committee and the USSR Council of Ministers entitled "On Strengthening the Protection of Nature and Improving the Use of Natural Resources," comprehensive steps are envisioned to insure the protection of open bodies of water, soil, and atmospheric air against the potential danger of pollution. However, the effectiveness with which measures to protect nature are carried out depends to a large extent on the participation by broad layers of the population in this great and important cause and on involving sanitation activists in the struggle for a clean environment, for decontaminating the environment in which man lives.

As we know, chemical and bacterial contamination of objects in the external environment results primarily from human labor activity. For example, the enormous successes of chemical science and the introduction of a large number of new synthetic compounds into everyday life and various areas of the

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KRASIL'SHCHIKOV, D., Sovetskaya Litva, 3 Apr 73, p 2

national economy involve a danger of contaminating the external environment with various chemical agents, many of which are capable, under certain conditions, of negatively affecting the human organism and the plant and animal world.

The consumption of toxic agricultural chemicals in our republic each year is comparatively small. Of the total number of pesticides used in the agriculture of the Lithuanian SSR, of herbicides for combatting weeds comprised a significant share, and they decompose in the external environment relatively quickly. At the same time, ignoring existing sanitary rules for storing, transporting, and using toxic chemicals may cause intensive contamination of the soil and the agricultural crops raised on it. Atmospheric precipitation washes the pollutants into open bodies of water where certain toxic chemicals are capable of accumulating in significant quantities in both water plants and in fish.

The spring months are the period of intensive field work involving the use of toxic chemicals. That is why sanitation activists in the countryside and all people engaged in work with toxic chemicals should intensify checks to see that measures are followed to bar the possible contamination by toxic agricultural chemicals of the soil, air, open bodies of water, and other objects of the external environment.

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KRASIL'SHCHIKOV, D., Sovetskaya Litva, 3 Apr 73, p 2

Winter is past and the snow has melted, exposing accumulations of garbage at certain places in cities and populated points. Eliminating them is one of our paramount tasks. And this must be done quickly, before they become a reproduction area for flies. "Natural" dumps and accumulations of garbage along the banks of open bodies of water present a special danger because, with spring precipitation, the chemical and bacterial pollutants will rapidly penetrate the open bodies of water.

According to a tradition established for many years in the Lithuanian SSR, April is the month of a broad public movement for cleanliness and health.

This year too, a great deal is to be done in the struggle to protect nature, further increase the sanitary level and cleanliness of the cities and communities of the republic, and clean up pollution of the external environment. Winter accumulations of garbage are to be cleared from the city; steps will be taken to plant streets and squares with greenery, and the banks of rivers and lakes will be cleaned up.

Petroleum products are among the pollutants which significantly retard natural self-decontamination processes. Even one case of contamination of water with gasoline, kerosene, mazut oil, or other petroleum products has a negative effect on the oxygen system in bodies of water and hinders the beneficial processes taking place in them by which organic pollutants are

USSR

KRASIL'SHCHIKOV, D., Sovetskaya Litva, 3 Apr 73, p 2

mineralized. Therefore, concern for preventing the contamination of open bodies of water with petroleum products should be at the center of attention for sanitation activists in the republic. Washing motor vehicles and tractors in lakes, ponds, and rivers should be banned in all places; special areas should be outfitted for this purpose and other rules which prohibit contaminating the soil and open bodies of water with petroleum products should be followed strictly.

In the system of measures to clean up populated points, a special place belongs to repairing individual and public use wells, garbage collection points, and so on and putting them in proper sanitary-technical condition. Timely decontamination of wells and insulating them against rain and surface waters will help preserve satisfactory quality in drinking water. Sealing off places where garbage and waste products are collected will prevent the accumulation of flies.

The struggle for cleanliness and order in populated points is an inalienable part of the struggle for health and sanitation. No one should be indifferent in this great and important work. We will make our cities and towns flourishing gardens of cleanliness and health.

4/3

Pharmacology and Toxicology

USSR

UDC 615.917

KRASIL'SHCHIKOV, D. G.

"Problem of the Combined Effect of DDT and Alkylbenzenesulfonate on the Organism of White Rats"

V sb. Vopr. epidemiol. i gigiyeny v LitSSR (Problems of Epidemiology and Hygiene in the Lithuanian SSR -- collection of works), Vil'nius, 1971, pp 173-174 (from RZh-Farmakologiya. Khimioterapevticheskiye sredstva. Toksikologiya, No 2, Feb 72, Abstract No 2.54.785)

Translation: Rats ♂ were injected intraperitoneally once or repeatedly with various doses of DDT, NP-1 sulfonol (alkylbenzenesulfonate) and a binary mixture of them (binary mixture; ratio of 1:1 in doses causing an equivalent toxic effect). On multiple injection of the binary mixture at the toxic dose level and single access of it to the organism on the fatal dose level, predominance of the DDT toxic effect was noted. This is connected with the emulsifying effect of the alkylbenzenesulfonate as a result of which the conditions of absorption of the DDT out of the ZhKT are improved. The cumulative factor was 2, 0.4 and 0.33 respectively for alkylbenzenesulfonate, DDT and a binary mixture of them.

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Acc. Nr: **AP0044135**

Ref. Code: UR 0239

PRIMARY SOURCE: *Fiziologicheskiy Zhurnal*, 1970, Vol 56,
Nr 1, pp 102-107

INVESTIGATION INTO SECONDARY PERISTALSIS IN VARIOUS PARTS
OF ESOPHAGUS IN DOG

Bogach, P. G.; Krasil'shchikov, K. B.; Grossman, S. D.

From the Institute of Physiology, T. G. Shevchenko State University, Kiev

In spite of the different character of the motor reactions in various parts of the esophagus to mechanical stimulation the frequency of the secondary peristalsis in all parts of the dog esophagus was shown to be the same, viz. 8-14 contractions a minute.

The frequency of the peristalsis in esophagus appears to be unchanged with the increase of the stimulating balloon volume by 4 times (10-40 ml.). Only the strong mechanical stimulation of esophagus which evoked pain depressed the secondary esophageal peristalsis. The excitability of esophagus to mechanical stimulation had a tendency to increase in distal direction.

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1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--RELATION OF CHEMICAL COMPOSITIONS AND PHYSICAL PROPERTIES OF
ARTESIAN WATERS WITH DEEP TECTONICS, ILLUSTRATED THE KARAGAKH STEPPE -U-
AUTHOR-(03)-KRASILSHCHIKOV, L.A., GUSLITSEK, M.I., MELNIKOVA, I.N.

COUNTRY OF INFO--USSR

SOURCE--AZERB. NEFT. KHJZ. 1970, (3), 13-15

DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--ARTESIAN WATER, SODIUM, CHLORINE, MINERAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0302

STEP NO--08/04877/01/000/0053/0013/0015

CIRC ACCESSION NO--AP0134106

UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP015+106

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MINERALIZATION OF THE ARTESIAN WATER INCREASED DUE TO HOT AND MINERALIZED WATER WHICH PENETRATED INTO THE CONTINENTAL STRATA, PRODUCING AN ANOMALY OF TEMP. AND CONTENT OF CL AND NA. THE HYDROGEOLOG. SURVEY SHOWED THE APPEARANCE OF BURIED DUMES.

UNCLASSIFIED

KRASILSHCHIKOV I. I.

COM PRESSORS

PLUNIC QUART COMPRESSORS FOR PISTON COMPRESSORS
I. I. KRASILSHCHIKOV, IN. A. ANDRONOV, A. V. ASTASOV;
REGULATORY PRINCIPLES (see: I. I. KRASILSHCHIKOV,
"KOMPRESSOR", Moscow, Russian, 52, pp. 1-10)

The analysis of the operation of various control systems for the output capacity of piston compressors has demonstrated that in spite of the significant achievements in the field of improving the method of regulation permitted quite efficient utilization of the methods of the compressor systems of industrial enterprises. They are characterized by certain deficiencies. For example, the effort to have the system maintain a constant pressure in the compressor station receiver independently of load at the same time as it would be more efficient to raise the pressure maintained by the regulator with an increase in load in order to compensate for the increasing pressure losses in the lines. The operation of the system depends only on the sign of the deviation of the controlled pressure from the established value and the rate of variation of the output capacity does not depend on the pressure variation rate. The most advanced systems are insufficiently effective when servicing technological processes with variable loads.

The effort to improve the quality of the transient process has led to different types of systems with respect to improving the existing regulation procedures; however, these measures do not solve all of the problems connected with improving the quality of the transient processes. They significantly complicate the regulator units and, as a consequence, they do not find practical application in industry.

The method of excitation regulation of the piston compressors developed by the All-Union Scientific Research and Planning and Design Process Institute of Chemical Machine Building jointly with the Control Problems Institute [1] and its

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KOMPRESSOR

USSR

UDC 629.76/.78.015:533.6

LEBEDEV, A. A., BARANOV, V. N., KRASIL'SHCHIKOV, M. N., MALYSHEV, V. V.

"Optimal Control Upon Entry Into the Atmosphere"

V sb. Upravleniye v kosmose. T. 1 (Control in Space. Vol 1 -- Collection of Works), Moscow, "Nauka", 1972, pp 256-266 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B346)

Translation: The problem of the synthesis of an autonomous control system for a space device entering the earth's atmosphere with a velocity close to the first cosmic velocity is discussed. 10 ref. Authors' abstract.

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1/2 018 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--OPTIMAL CONTROL AT ENTERING THE ATMOSPHERE -U-
AUTHOR--(04)--LEBEDEV, A.A., BARANOV, V.N., KRASILSHIKOV, M.N., MALYSHEV,
V.V.
COUNTRY OF INFO--USSR, FRANCE
SOURCE--INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL, SYMPOSIUM ON
AUTOMATIC CONTROL, 3RD, TOULOUSE, FRANCE, MAR. 2-6, 1970, PAPER. 18P.
DATE PUBLISHED-----70
SUBJECT AREAS--SPACE TECHNOLOGY, NAVIGATION
TOPIC TAGS--SPACECRAFT REENTRY CONTROL, SPACECRAFT LANDING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0001 STEP NO--FR/0000/70/000/000/0001/0010
CIRC ACCESSION NO--AT0117301
UNCLASSIFIED

2/2 . 018

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AT0117301

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXAMINATION OF THE PROBLEM OF THE SYNTHESIS OF THE SELF CONTAINED CONTROL SYSTEM OF A SPACECRAFT ENTERING THE ATMOSPHERE WITH THE FIRST COSMIC SPEED. DIGITAL CALCULATIONS MADE BY MEANS OF AN ELECTRONIC COMPUTER SHOW THAT THIS SELF CONTAINED CONTROL SYSTEM MAKES IT POSSIBLE TO DECREASE THE DISPERSION COMPONENT OF LANDING SPOTS SIGNIFICANTLY. A HISTOGRAM OF THE LANDING SPOTS IN THE CASE OF CONTROLLABLE AND CONTROLLESS MOTION IS SHOWN. FACILITY:
MOSKOVSKII AVIATIONNYI INSTITUT, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 534.28

KRASIL'SHCHIKOVA, YE. A., Moscow

"Diffraction of an Acoustical Wave on a Fixed Plate"

Moscow, Mekhanika zhidkosti i gaza, No. 2, Mar/Apr 72, pp 123-130

Abstract: The problem of determining the velocity field excited by an acoustical wave incident on a fixed plate is considered as a boundary value problem with a moving boundary for a two-dimensional wave equation. This problem is solved by constructing and converting Volterra integral equations. The solution is obtained in closed form for an arbitrary angle of inclination of the front of the incident wave to the surface of the plate and is represented in the form of recurrent formulas taking into account the effect of any number of diffraction waves arising in sequence at the boundary of the plate. It is assumed that the weak shock wave propagates in an infinite volume of ideal gas and that the shock wave front is a plane moving with the speed of sound. The shock wave is incident on the fixed plane plate and the velocity vector forms an arbitrary angle with the plane of the plate. After determining the velocity potential the pressure field is determined and the pressure distribution on the surface of the plate is found.

1/1

Acc. Nr:

AT0048085

Abstracting Service:

INTERNAT. AEROSPACE ABSTRACTS

Ref. Code:

R40019

/ A70-24719 # A velocity field excited by wing vibrations propagating over a surface at a finite velocity (Pole skorosti, vzbuzhdennoe vibratsionnoy krylo, rasprostraniayushchimisya po poverkhnosti s konechnoy skorost'yu). E. A. Kravtchikova (Akademiya Nauk SSSR, Institut Problemy Mekhaniki, Moscow, USSR). ~~Académie Roumaine des Sciences, Institut National de Mécanique Appliquée, Bucharest, Roumanie, Conférence Nationale de Mécanique Appliquée, Bucharest, Roumanie, June 23-27, 1969~~ ~~Revue Roumaine des Sciences Techniques, Série de Mécanique Appliquée, vol. 15, no. 1, 1970, p. 131-140, 15 refs. In Russian.~~

Study of a gasdynamics problem regarding a velocity field excited by vibrations propagating over an elastic wing surface at a finite velocity. This gasdynamics problem is reduced to a boundary value problem with a moving boundary for a three-dimensional wave equation. A general method of solving three-dimensional boundary value problems is proposed for the case where the boundary conditions are given in one plane. The solution to the problem is obtained in closed form when the wing moves at a supersonic velocity according to an arbitrary law, the vibration propagation front is an arbitrary curve moving over the wing surface, and the edges of the wing are supersonic.

A.B.K.

REEL / FRAME
19791774

20
21

KRASIN, A.K.

DISOCIATING GASES AS COOLANTS AND WORKING
SUBSTANCES AT ATOMIC POWER PLANTS

1985 50428
16 November 1973

(16)

Translation of Russian-language materials presented at the
Third All-Union Conference on the
Development and Application of Parameters of Atomic Power
Plants With High-Power Fast Reactors Using Dissociating Gases
as Coolants
Energeticheskii Vestnik, 1973, Number, UDC: 621.311.022.751,
signed to press 12 April 1973

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Development and Application of Parameters of Atomic Power Plants With High-Power Fast Reactors Using Dissociating Gases as Coolants (M. V. Kosterov).....	4
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(I - USSR - L)

Nuclear Science and Technology

USSR

UDC 541.15+621.039.05

DZANTIYEV, B. G., KRASIN, A. K., NICHIPOR, G. V., KAZAZYAN, V. T., and SAVUSHKIN, I. A.

"Calculation of Efficiency and the Optimization of Parameters of Chemo-nuclear Plants"

Moscow, Atomnaya Energiya, Vol 33, No 4, Oct 72, pp 801-808

Abstract: The calculation of the efficiency and the optimization of channel parameters on a loop-like chemonuclear plant are carried out on the basis of a generalized model. The approximate solution of the function characterizing in general the efficiency of any chemoradiative apparatus is reduced to a numerical summation of the efficiencies of individual chemonuclear channels. This method, in combination with physico-neutron calculations makes possible the efficiency determination of various types of chemonuclear plants taking into account the dosage rate, temperature, reagent density, and other factors characterizing the actual conditions of experimental and industrial chemonuclear plants. The use of this method for the indicated calculations of the KhYaU-5 chemonuclear plant resulted in optimization of its parameters. The possibility of the organization of an industrial synthesis of hydrazine on the basis of a chemonuclear reactor is analyzed on the example of a

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USSR

DZANTIYEV, B. G., et al., Atomnaya Energiya, Vol. 33, No 4, Oct 72, pp 803-808

reactor using chemonuclear fuel in the form of a 4 μ thick ^{235}U layer built up on an aluminum base. The plotted caloric power dependence of the channel efficiency shows a linear character. The efficiency of other active zones of chemonuclear reactors can be calculated on the basis of this dependence. Four figures, two tables, nine formulas, twelve bibliographic references.

2/2

USSR

UDC 621.039.524.034.3:621.039.526

~~KRASIN, A. K., NESTERENKO, V. B., KOLYKHAN, L. I., BUBILOV, V. P., IL'IN, A. YA.,
SLIZOV, V. P., SHURFROV, YU. V.~~

"Experimental Power Plant with a Gas Cooled Fast-Neutron Reactor and a Dissociating Heat Transfer Agent (BRG-20)"

Dissotsiiruyushch. gazy kak tekonositeli 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 42-47
(from RZh-Elektrotehnika i Energetika, No 5, May 1971, Abstract No 5U107)

Translation: The possibility of creating an experimental industrial atomic power plant with a gas-cooled fast neutron reactor and a dissociating heat exchange agent is investigated. The parameters of the device and the required volume of experimental research are discussed. There are two illustrations and a four-entry bibliography.

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USSR

UDC 621.039.524.034.3

KEASIN, A. K.

"Prospects for the Application of Dissociating Gases in High Power Engineering"

Dissotsiiruyushch. gazy kak teploositolii 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 6-10
(from RZh-Elektrotekhnika i Energetika, No 5, May 1971, Abstract No 50184)

Translation: It is proposed that dissociating gases be used as the heat transfer agents and working mediums of power plants. The characteristic features and advantages of these gases over other heat exchange agents already mastered are studied. Some developments of power plants with different heat conversion schemes are presented.

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Nuclear Science and Technology

USSR

UDC 621.039.58

~~FRASIN, A. K., NESTERENKO, V. B., KOLYKHAN, L. I., BUDNOV, V. P., IL'IN,~~
~~X. YA., SILZOV, V. P., and SHUFROV, YU. V.~~

"Experimental Powder Installation With Gas-Cooled Fast-Neutron Reactor and
Dissociating Heat-Transfer Medium (ERC-20)"

Dissotsiiruyushch. Gazy kak Teplonositeli i Rab. Tela. Energi. Ustanovok'
(Dissociating Gases as Heat Transfer Media and Working Fluids of Power
Installations -- collection of works), Minsk, Nauka i Tekhn. Press, 1970.
pp 42-47 (from Referativnyy Zhurnal-Yadernyye Reaktory, No 4, 1971, Abstract
No 4.50.134)

Translation: The possibility is studied of creating an experimental pilot
scale atomic power plant with a gas-cooled fast-neutron reactor with dissoci-
ating coolant. The parameters of the installation and required volume of
experimental study are discussed. 2 figures, 4 biblio. refs.

1/1

USSR

UDC: 51

VOLYNSKIY, E. I., and KRASIN, L. A.

"Optimum Disposition of Managers on the Concluding Stages of Jobs"

Mekhaniz. i avtomatiz. upr. Nauch.-proizv. sb. (Mechanization and Automation of Control. Scientific Production Collection), 1973, No 2, pp 16-18 (from RZh-Matematika, No 9, Sep 73, abstract No 9V580 by Yu. Finkel'shteyn)

Translation: In the critical path method of planning scientific research, design, construction, erection, and repair work, in order to minimize the deadline for job completion it is frequently necessary on the final stage to use rational placement of workers with regard to their productivity differences on uncompleted sections of the project. Let there be n uncompleted sections which can be worked on simultaneously, and M managers for placement on these sections. The volumes of job completion by sections a_1, a_2, \dots, a_n are given, as well as a matrix of interchangeability τ_{ij} , $1 \leq i \leq n$, $1 \leq j \leq M$, where the elements τ_{ij} characterize the productivity of the j -th manager on the i -th section. If the subset of the numbers of managers, placed on the i -th section is designated by T_i , then the total productivity on section $a_i = \sum_{j \in T_i} \tau_{ij}$. The project can be finalized only when all jobs

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USSR

VOLYNSKIY, E. I., KRASIN, L. A., Mekhaniz. i avtomatiz. upr. Nauch.-
-proizv. sb., 1973, No 2, pp 16-18

$a_i (i=1, \dots, n)$ have been completed, the time for finishing a job on section i being $t_i = a_i/g_i$. It is required to so space the N managers (i. e. to break the set of numbers $R = \{1, 2, \dots, N\}$ down into nonintersecting subsets T_1, \dots, T_n) that $\max_{1 \leq i \leq n} (a_i/g_i)$ is minimized. An algorithm of branches and boundaries is constructed for the problem with regard to inherent idiosyncrasies.

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USSR

VOLYNSKIY, E. I. and KRASIN, L. A.

"Optimal Placement of Actuators During the Final Stage of Work"

Mekhaniz. i Avtomatiz. Upr. Nauch.-Proizv. Sb. [Mechanization and Automation of Control Scientific-Production Collection], 1973, No 2, pp 16-18 (Translated from Referativnyy Zhurnal Kibernetika, No 9, 1973, Abstract No 9V580).

Translation: With network planning of scientific research, planning, construction-installation or repair work, in order to minimize the time required to complete an object, it is frequently necessary in the final stage to arrange workers on the job intelligently considering their different productivities among the uncompleted sections of the project. Suppose there are n uncompleted sections, work on which can be conducted in parallel, for which N actuators must be placed. The volumes of completion of operations by sectors $\alpha_1, \alpha_2, \dots, \alpha_n$ are fixed, as well as the matrix of interchangeability $\|\tau_{ji}\|$, $1 \leq j \leq N$, $1 \leq i \leq n$, where elements τ_{ji} characterize the productivity of the j th worker in the i th section. If the subset of actuator numbers assigned to the i th section is represented by T_i , the total productivity in the section

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USSR

Volynskiy, E. I. and Krasin, L. A., Mekhaniz. i Avtomatiz. Upr. Nauch.-Proizv. Sb., 1973, No 2, pp 16-18.

$$g_i = \sum_{j \in T_i} a_j$$

The object can be completed only when all operations a_i ($i = 1, 2, \dots, n$) are completed, the time of completion of each operation in section i being $t_i = a_i/g_i$. The problem is to arrange the N workers (i.e., to divide the set of numbers $R = \{1, 2, \dots, N\}$ into nonintersecting subsets T_1, \dots, T_n) so as to minimize $\max_{1 \leq i \leq n} (a_i/g_i)$. Considering the specifics of the problem, an algorithm of branches and bounds is constructed for it.

Yu. Finkel'shteyn

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USSR

UDC: 539.4:624.012

KRASIN, N. A.

"Experimental and Theoretical Investigations of Prestressed Reinforced Concrete I-Beams With Cracks When the Beams Operate Under Bending With Twisting"

Tr. Tashkent. in-ta inzh. zh.-d. transp. (Works of the Tashkent Institute of Railway Transportation Engineers), 1970, vyp. 68, pp 154-168 (From RZh-Mekhanika, No 4, Apr 71, Abstract No 4V832)

Translation: The paper presents the results of a study of a prestressed reinforced concrete beam of I cross section subjected to simultaneous bending and twisting. It is shown that the nature of crack formation during bending with twisting is practically no different from the nature of crack formation during simple bending. In the zone of pure bending, the cracks open out vertically, and in the support sections the cracks are inclined at an angle of 20-30° to the horizontal. Z. L. Gil'gur.

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Welding

8

USSR

K

UDC 621.791.053.002.612:658.336

BOTINOV, S. N., KAZENNOV, YU. I., AGAPOVA, N. F., ~~PALEKHIN, A. M.~~ (Candidates of Technical Sciences), PROKHOROV, V. I., REVIZNIKOV, L. I., BOBYLEV, A. P., KRASINA, T. A., KRYLOV, YE. A., BALASHOV, V. D., ZINKOVSKEY, V. I., SYCHEV, R. S (Engineers)

"Effect of Irradiation on the Properties of Welds of High-Alloy Steels and Alloys"

Moscow, Svarochnoye Proizvodstvo, No 3, Mar 70, pp 4-6

Abstract: The effect of neutron irradiation on the short-term mechanical properties of basic metals and welds from 00Kh16Ni15M3B, 0Kh16Ni15M3B, and 0Kh20Ni40B austenitic steels and 1Kh13Z3F8 ferrite-martensite steel was investigated. The mechanical properties were determined on samples cut in the longitudinal direction from argon-arc welds using an infusible electrode. The samples were irradiated in the active zone of a reactor at about 100°C. The theoretical neutron flux density was 10¹⁵ neutron/cm². sec. Some samples received a dose of 2.8 x 10²¹ neutron/cm², while others received a dose of 4.3 x 10²¹ neutron/cm². The mechanical properties were determined on UMD-5 tensile testing machines at air temperatures of 20, 350, and 650°C.

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USSR

BOTINOV, S. N. et al, Svarochnoye Proizvodstvo, No 3, Mar 70, pp 4-6

Tests conducted at 20°C showed that strength properties of all samples increased after irradiation; plasticity decreased. The tensile and yield strengths of weld metals with an austenitic structure increased to a lesser degree than those of the base metals. The mechanical properties of all samples at 350° did not differ from those of the base metals. A decrease in tensile and yield strength with a simultaneous decrease in plasticity was observed in samples with an austenitic structure in tests conducted at 650°C. These decreases were especially noticeable in irradiated samples made from 40% Ni steel. The possible cause of the sharp decline in the intergrain strength and plasticity observed at 650°C in the irradiated metal with high nickel content is suggested. Orig. art. has: 2 figures, 4 tables, and 5 references.

2/2

Receivers and Transmitters

USSR

UDC: 621.372.061

ARTEMOV, Yu. I., KRASKEVICH, M. M.

"Signal-to-Noise Ratio in a Channel With Random Variable Parameters"

V sb. Sistemy i sredstva avtomat. uprav. (Systems and Facilities for Automatic Control--collection of works), Kiev, 1970, pp 140-143 (from Elektronika-Radiotekhnika, No 2, Feb 71, Abstract No 2A122)

Translation: The authors consider passage of a signal through a linear system which has randomly changing parameters and a frequency-independent transfer function. The function of mutual correlation of signal and noise is computed (both are considered Gaussian). The effect which a reduction in the signal band has on the signal-to-noise ratio is investigated for the case where special additive interference is present within the passband of the receiver. It is shown that proper selection of the signal band can improve the signal-to-noise ratio in the given system. Two illustrations, bibliography of one title. N. S.

1/1

USSR

UDC 911.3:616.34(575.1)

SHATROV, I. I., POKROVSKAYA, M. P., KRASKINA, N. A., BRAYNINA, R. A.,
ELKIN, I. I., SKVORTSOV, V. V., KILESSO, V. A., HUNIN, K. V., NIKIFOROV,
V. N., POKROVSKIY, V. I., and STARSHINOVA, V. S.

"Current Status of Typhoid"

V sb. Materialy XV Vses. syezda epidemiologov, mikrobiologov i infektsionistov, Tezisy Dokl. Ch. 1 (Proceedings of the 15th All Union Conference of Epidemiologists, Microbiologists, and Infectious Disease Specialists, Theses Reports, Part 1 -- collection of works), Moscow, 1970, pp 262-269 (from RZh-Meditsinskaya Geografiya, No 3, Mar 71, Abstract No 3.36.258)

Translation: During the last seven years, the incidence of typhoid has decreased each year by 6-7% on the average in this country. Maximum drops were observed in the Belorussian SSR, Kazakh SSR, Lithuanian SSR, Latvian SSR, Armenian SSR, and Estonian SSR; minimum drops were found in the Uzbek SSR and Kirghiz SSR. During the last two years, the incidence of typhoid was 10% higher among rural residents than among urban residents. In comparison with 1964, a drop in incidence of approximately 40% was observed; in rural locations, the drop was 23%. The leading significance of the water factor in transfer and distribution of the agent of typhoid is
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USSR

SHATROV, I. I., et al., Materialy XV Vses. svyada epidemiologiv, mikro-
biologov i infektsionistov, Tezisy Dokl, Ch. 1 (Proceedings of the 15th
All Union Conference of Epidemiologists, Microbiologists, and Infectious
Disease Specialists, Theses Reports, Part 1 -- collection of works), Moscow,
1970, pp 262-269 (from RZh-Meditsinskaya Geografiya, No 3, Mar 71, Abstract
No 3.36.258)

confirmed. Of decisive importance, particularly in recent years, is the
nutritional (milk) factor of typhoid transfer and distribution.

2/2

Organ and Tissue Transplantation.

USSR

UDC 575.8.097.2.095.18:615.365.018.53

KRASKINA, N. A., KHOLOCHEV, N. V., and LOPATINA, T. K., Moscow
~~Institute of Epidemiology and Microbiology, Moscow~~

"Characteristics of the Depressive Effect of Antilymphocyte Serum and Antilymphocyte Globulin on the Formation of Antibodies in Mice"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 48, No 2, Feb 71, pp 83-89

Abstract: Antilymphocyte serum was obtained by injecting mouse lymphocytes into rabbits. The serum had an immunodepressive effect on mice given injections of sheep erythrocytes: the formation of antibodies to the erythrocytes was sharply reduced. No immunodepressive effect of antilymphocyte serum was observed with respect to formation in mice of antibodies to the soluble polysaccharide Vi antigen of *S. typhi*, however. By saturating antilymphocyte serum 33-40% with $(NH_4)_2SO_4$, fractions were isolated from it whose immunodepressive effect considerably exceeded that of the initial serum. These fractions consisted
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USSR

KRASKINA, N. A., et al, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 48, No 2, Feb 71, pp 83-89

of gamma-globulin (64-78%) and beta-globulin (22-36%). The effect of antilymphocyte serum in depressing the formation of antibodies to sheep erythrocytes could be assessed conveniently by determining the ED₅₀ of the serum, i.e., its mean dose in mg protein that reduced by 50% the number of antibody-producing cells in the spleen vs. the number of these cells in controls. The specific activity of antilymphocyte preparations with respect to their immunodepressive effect can be determined on the basis of the immunological response of mice to sheep erythrocytes by using these procedures.

2/2

USSR

UDC: 666.1.036.23

K
KRAS'KO, A. S., Engineer, KAKHANOVICH, V. S., TYUSHKEVICH, N. I., Candidates of Technical Sciences, CHEPURKIN, A. A., Engineer, Belorussian Affiliate of Power Institute Imeni, G. M. KRZHIZHANOVSKIY

"Frequency Sensor for Continuous Testing of Glass Fiber Thickness During Production"

Moscow, Steklo I Keramika, No 9, Sep 1970, Pages 16-18

Abstract: Methods currently used for testing the thickness of glass fiber are "passive," that is, performed after production and have low reliability. This article presents certain results from the investigation of a frequency method of testing the thickness of glass fiber during production. The method is based on the relationship between natural oscillating frequency of a drawn string and linear mass and tightness. An experimental model of a frequency sensor has been developed. Production tests of the sensor have confirmed its useability. The error does not exceed 4%, with 95% confidence. In the device, a vibrator forming one end support of the length of fiber drawn causes the fiber to oscillate, and the frequency of natural oscillations is measured by a photosensor.

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USSR

UDC: 681.612/613

ZAGOREL'SKIY, G. A., KRAS'KO, V. A.

"The Gezotayp D1"

Kiev, Mekhanizatsiya i Avtomatizatsiya Upravleniya No 2, Mar-Apr 73, pp 66-67.

Abstract: Leningrad University has developed a device (the Gezotayp D1) for manual input of information. The method of keying the information with the D1 has certain advantages over ordinary typewriter keyboard input: shorter training time for touch operation; smaller area of keying field with identical alphabet length; larger number of keyed characters with identical number of finger movements; possibility of touch operation using one finger. The keyboard for the 32 characters of the Russian alphabet has 6 contact points, four in one row and one on each side of the central row. Each of the switch positions can be deflected in either of two directions. A schematic diagram of the device is presented. It is stated that trained operators can input information at 800-900 characters per minute using the Gezotayp D1.

1/1

172 014 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--SELECTIVE SEPARATION OF NICKEL AND COBALT FROM AMMONIA SOLUTIONS BY
FRACTIONAL PRECIPITATION -U-
AUTHOR--(U4)-KRASKOVSKIY, G.I., LESHCH, I.YU., FRUMINA, L.M., SHNEVERSON,
YA.M. K
COUNTRY OF INFO--USSR
SOURCE--TSVET. METAL. 1970, 43(3), 32-3
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHEMICAL SEPERATION, AMMONIA, AQUEOUS SOLUTION, COBALT,
NICKEL, CHEMICAL PRECIPITATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/1900 STEP NO--0R70136710704870047001170033
CIRC ACCESSION NO--AP0132162
UNCLASSIFIED

272 014 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0132162
ABSTRACT/EXTRACT--(U) OP-D- ABSTRACT. THE INCONSISTENCY IN THE DATA ON
THE PPTN. OF NI AND CO FROM MN SUB3 SOLNS. BY DISTN. IS ATTRIBUTED TO
THE SIMULTANEOUS PRESENCE OF SOME FORMS OF CO AMMINES: CO
PRIME2POSITIVE HEXAMMINE, PENTAMMINE, AND AMMINE. THE BEHAVIOR DURING
REMOVAL OF NI AND CO BY DISTN. OR EVACUATION AT 20, 40, 60, AND
80DEGREES IS SHOWN. THE MOST EASILY DECOMPD., DURING DISTN., ARE THE CO
PRIME2POSITIVE COMPLEXES, FOLLOWED BY NI COMPLEXES, CO PRIME3POSITIVE
PENTAMMINE, AND FINALLY CO PRIME3POSITIVE HEXAMMINE. THE LAST IS
SUFFICIENTLY STABLE, IN THAT BELOW 40DEGREES, NO NOTICEABLE PPTN. OF CO
DURING DISTN. WAS OBSD. THESE DIFFERENCES IN STABILITY OF THE AMMINES
IS THE BASIS FOR EXPTS. ON THE SEPN. OF CO AND NI.

UNCLASSIFIED

USSR

UDC 161-006-02

KRASKOVSKIY, G. V., PORUBOVA, G. M., and KACAN, L. F.

"Influence of the Immunodepressive Effect of Urethan on Carcinogenesis in Pulmonary Isotransplants in Mice"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Biologicheskikh Nauk, No 1, 1971, pp 112-113

Abstract Urethan in a dose of one milligram per gram of body weight (mg/g) was intraperitoneally administered to strain AF male mice 2-3 months old twice with an interval of 48 hours between injections. Seventy-two hours later, the animals were intraperitoneally immunized with doses of $100 \cdot 10^6$ of ram erythrocytes. The control mice were given only ram erythrocytes. Pulmonary tissue sections of intact mice and mice given urethan were used as transplants. Five months after the administration of urethan, the transplants were extracted from the animals, fixed in a 10% solution of formalin, stained with hematoxylin eosin, and examined. It was found that urethan has a pronounced immunodepressive effect, manifested by a 31% decrease in the
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USSR

KRASKOVSKIY, G. V. et al., Izvestiya Akademii Nauk BSSR,
Seriya Biologicheskikh Nauk, No 1, 1971, pp 112-113

number of hemolysin-producing cells in the spleen. It was established also that urethan administered to mouse recipients 72 hr before isotransplantation increases by 92.9% the frequency with which adenomas develop in the pulmonary transplants of the donors given the carcinogen, and by six times the frequency of development of adenomas in the pulmonary transplants of intact donors.

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1/2 022 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--EFFECT OF ISOGENIC LYMPHOID SPLEEN CELLS ON URETHANE CARCINOGENESIS
IN THE LUNGS OF AF, B, STRAIN MICE -U-
AUTHOR--(02)-KRASKOVSKIY, G.V., GORELIK, L.S.
COUNTRY OF INFO--USSR
SOURCE--VESTSI AKAD. NAVUK BELARUS. SSR, SER. BIYAL. NAVUK 1970, (2),
109-11.
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--MOUSE, LUNG, SPLEEN, CARCINOMA, CARCINOGEN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD707605015/E09 STEP NO--01/0440/70/000100270109/0111
CIRC ACCESSION NO--AP0140625
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--04DEC77

CIRC ACCESSION NO--AP0140625

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CARCINOGENESIS WAS PRODUCED IN
MOUSE LUNGS BY URETHANE. LYMPHOID (SPLEEN) CELLS WERE OBTAINED FROM
NORMAL ISOGENIC MICE AND FROM THOSE GIVEN THE URETHANE. INJECTION OF
SPLEEN CELLS FROM URETHANE TREATED MICE HAD NO EFFECT ON THE URETHANE
CARCINOGENESIS IN THE LUNGS. SPLEEN CELLS FROM ISOGENIC NORMAL MICE
SUPPRESSED INFLAMMATION IN THE LUNGS OF TREATED FEMALES BUT STIMULATED
ADENOMA FORMATION IN THE MALES. FACILITY: INST. GENET. TESTOL.,
MINSK, USSR.

UNCLASSIFIED

USSR

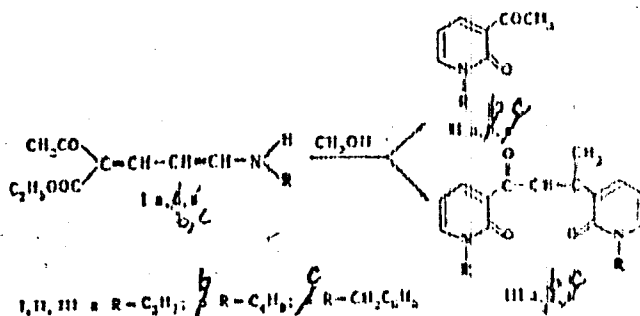
UDC 547.821.2:824.07:543.422.25

KRASNAYA, ZH. A. STYTSENKO, T. S., PROKOP'YEV, YE. P., and
 KUCHEROV, V. F., Institute of Organic Chemistry imeni N. D.
 Zelinskogo, Academy of Sciences USSR

"Synthesis of the Derivatives of N-substituted Pyridenes Based on
 Diene Monoalkylaminoketo Esters"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, 5, May 1973 pp 668-
 675

Abstract: Syntheses are described based on the following reaction:



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KRASNAYA, ZH. A., et al., Khimiya Geterotsiklicheskikh Soyedineniy, 5, May 1973, pp 668-675

The δ -monoalkylaminoketoesters (I) dissolved in methanol at room temperature react thru ring closure to give an 80% yield of an easily separated mixture of 1-alkyl-3-acetylpyrid-2-one (II) and the dimer 1,3-bis[3-(1-alkylpyrid-2-onyl)]-2-buten-1-one (III). Yields, experimental conditions, UV and extensive NMR data are given. Additional reactions are given, such as IIc + Ib \rightarrow IIIb + dimers where the two R groups are not the same; Ib + C₆H₅COCH₃ \rightarrow mixed -R dimers; and I+II \rightarrow dimers containing IR from each compound. The % water in the methanol changes the ratios of products II & III, II increasing with increasing H₂O.

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USSR

UDC: 519.24

KRASNENKER, A. S., RUSSMAN, I. B.

"On Two Models in the Leader Problem"

Tr. Mat. fak. Voronezh. un-t (Works of the Mathematics Department, Voronezh University), 1970, vyp. 2, pp 49-54 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V330)

Translation: The authors prove an elementary statement on the equivalence (under certain conditions) of two known methods of determining the significances of objects from the results of paired comparisons. G. Ivchenko.

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USSR

UDC 621.396.02

KRASNEKO, N.P., GLAZOV, G.N.

"Accuracy Of Amplitude Direction Finding By Focused Arrays"

Kiyev, Izv. VUZ:Radioelektronika, Vol XVI, No 2, Feb '75, pp 25-27

Abstract: Allowing for the space-time fluctuations of the signal field, the error is determined of amplitude monopulse direction finding in an approximation of "small" apertures and selection times. The results obtained in the particular case of an absence of signal fluctuations reduce to the results of a work by L. E. Brennan (Zarubezhnaya radioelektronika [Foreign Radio Electronics], 1971, 1, 17). Cases of large and small regularity parameters and error of direction finding with respect to a partially-coherent field are considered. The results of the work make it possible to calculate the component of the direction finding error due to signal fluctuations and noise for an effective functional scheme of treatment. 4 fig. 7 ref. Received by editors, 20 Nov 1973; after revision, 3 April 1972.

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USSR

KRASNER, N. Ya.

"Modification of a Model of Optimization of the Compositions of Mixtures for Production of Cotton Thread"

Vopr. Optimal'n. Programmir. v Proizv. Zadachakh [Problems of Optimal Programming in Production Tasks -- Collection of Works], Voronezh, 1972, pp 81-93 (Translated from Referativnyy Zhurnal Kibernetika, No 2, 1973, Abstract No 9V592).

Translation: An integer linear programming task is constructed and approximately solved using rounding of the optimal noninteger plan. The model is used to calculate the compositions of mixtures for the production of cotton thread at three factories of the Kherson Cotton Combine.

Yu. Finkel'shteyn

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USSR

UIC: 8.74

~~KRASNER, M. Ya.~~ and PINSKIY, M. M.

"Permutation Numbering"

Moscow, Tr. 4-y Zimn. shkoly po mat. programirov. i smesh. voprosam
(Transactions of the Fourth Winter School on Mathematical Program-
ming and Allied Problems) No 2, 1971, pp 71-78 (from RZh--
Matematika, No 7, 1972, Abstract No 7V638)

Translation: The authors consider the construction of an algo-
rithm for the numeration for permutations of n different elements
for the purpose of getting from an electronic computer the re-
quired permutation without repetition of all the others. A per-
mutation of the first n natural numbers, $1, 2, \dots, n$ is examined. It
is shown that all the other cases of permutation of n different
elements can easily be reduced to the case considered. V. Mikheyev

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USSR

WDC 632.952:633.63

KRASNOZHCHEKOV, I. M., Belotserkovskaya Experimental Breeding Station

"Effectiveness of New Compounds Against Sugar Beet Cercosporosis"

Moscow, Khimiya v sel'skom Khozyaystva, No 8, 1972, pp 36-37

Abstract: The development of cercosporosis and cercosporosis damage in sugar beets is described, and the results of testing new fungicides to control it are presented: brestane, triphenyltin acetate, benlate or benomyl [methyl-1-(butyl-carbamoyl)-2-benzimidazol carbamate], polycarbacin, polymarcin, maneb, and so on. Bordeaux mixture was used as the standard. When treating sugar beet plants against cercosporosis, benlate, brestane, polycarbacin, polymarcin and maneb can be used as substitutes for Bordeaux mixture. Double treatment of the sugar beets during the vegetation period by benlate and brestane in a concentration of 0.1% lowered the cercosporosis infestation of the plants by 3-4 times resulting in an increase in the yield by 34-37 cwt/hectare with an increase in sugar of 6.9-9.6 cwt/hectare.

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UDC S.74

KRASNER, N. YA., PINSKIY, M. M.

"Regenerating Numbering of Permutations"

Tr. 4-y Zimn. shkoly po mat. programir. i smoth. voprosam, 1971, Vyp. 2
(Works of the Fourth Winter School on Mathematical Programming and Adjacent Problems, 1971, Vyp. 2), Moscow, 1971, pp 71-78 (from MZh-Kibernetika, No 7, Jul 72, Abstract No 7V638)

Translation: A study was made of the structure of a numbering algorithm for permutations of indifferent elements for calling the required permutation from the computer without sorting all the rest. A study was made of permutations of the first n natural numbers $1, 2, \dots, n$. It was demonstrated that all the remaining cases of permutation of indifferent elements can easily be reduced to the investigated one.

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1/2 022 UNCLASSIFIED PROCESSING DATE--D4DEC77
TITLE--NUCLEOTIDE POOL AND SOME FEATURES OF THE METABOLISM OF ENDOGENOUS
NUCLEOTIDES IN HEART MUSCLE -U-
AUTHOR-(02)-GOLOVATSKIY, I.D., KRASNEVICH, A.YA.
COUNTRY OF INFO--USSR
SOURCE--BIOKHIMIYA 1970, 35(2), 296-302
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--NUCLEOTIDE, METABOLISM, HEART MUSCLE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3009/0195 STEP NO--UR/0208/70/035/001/0296/0302
CIRC ACCESSION NO--AP0139053
UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--0408070
CIRC ACCESSION NO--AP0139053
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ADAPTATION OF ION EXCHANGE
CHROMATOG. ON DOWEX 1 (CL PRIME NEGATIVE) AND DOWEX 50 (H PRIME
POSITIVE) FOR SUCCESSIVE SEPN. OF NUCLEOTIDES AND NUCLEOSIDES WAS
DEVELOPED. IN AN EXT. OF COW HEART MUSCLE, PREPD. AT VARIOUS PERIODS
AFTER THE DEATH OF THE ANIMAL, THE AMTS. OF ALL NUCLEOTIDES,
NUCLEOSIDES, AND BASES WERE DETD. DESTRUCTION OF A GREAT PART OF THE
ATP INTO HYPOXANTHINE AND XANTHINE AND SOME OTHER CHANGES WERE OBSD. AS
THE RESULT OF STORAGE OF THE TISSUE. FACILITY: DEP. ORG. INORG.
CHEM., L'VOV ZOOVET. INST., L'VOV, USSR.

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--14OCT70
TITLE--CONCERNING THE DIFFERENTIAL DIAGNOSIS OF PROGRESSIVE
LEUKOENCEPHALITIS AND GLIOMA OF THE BRAIN -U-
AUTHOR-(05)-LEUNOVICH, A.L.; SKLYUT, I.A.; KARDASH, I.I.; KASTRITSKAYA,
Z.M.; KRASILNIKOVA, N.YA. *K*
COUNTRY OF INFO--USSR

SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKOVA, 1970,
VOL 70, NR 5, PP 673-679
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TUMOR, BRAIN, LESION, DIAGNOSTIC MEDICINE,
ELECTROENCEPHALOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0232

STEP NO--UR/0246/70/010/005/0473/0070

CIRC ACCESSION NO--AP0117484

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Corrosion

UDC 621.762.001

USSR

KRASNICHENKO, L. V., ROSS, M. G., and BABANSKIY, V. V.

"Electrochemical Corrosion of Iron-Graphite P/M Alloy and Ways of Combating It"

V sb. Treniys, smazka i iznos mashin (Friction, Lubrication and Wear of Machinery -- Collection of Works), Rostov-on-Don, 1970, pp 3-8 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 30373 by S. Bobrova)

Translation: An investigation was made of iron-graphite alloy with 3% graphite having a density of $20 \pm 2\%$ after sintering on untreated specimens and on specimens protected by: 1) impregnation with urotropin inhibitor, 2) phosphate treatment, 3) impregnation with sodium benzoate, 4) nickel-phosphorus coating. A qualitative evaluation of the effectiveness of the protection employed was made by the method of comparing maximum corrosion currents in 0.5 n. NaCl solution. The maximum corrosion current ($8 \cdot 10^{-2}$ ma) is observed in the untreated specimens and declines successively from 1) to 4). The relative quantitative corrosion performance is determined by the gravimetric method in 0.5 n. NaCl solution at 22-24° over a test period of 60 days. The most effective protective technique in this case is phosphate treatment. The porosity of the phosphate coating conduces to swifter penetration of the base metal by the corrosive

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KRASNICHENKO, L. V., et al., V sb. Treniye, smazka i iznos mashin, Rostov-on-Don, 1970, pp 3-8

solution on application of an electric current, and this lessens the resistance of this coating. Two illustrations, bibliography with three titles.

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UDC 619:576.858.0:616.076.4

USSR

KRASNIKOV, G. A., Doctor of Veterinary Sciences, and NAUMETS, Z. P., Candidate of Veterinary Sciences, Ukrainian Scientific Research Institute of Experimental Veterinary Medicine

"Foot-and-Mouth Disease Virus in Ultrathin Sections"

Moscow, Veterinariya, No 1, Jan 71, pp 34-37

Abstract: Fetal pig kidney cells were inoculated with various dilutions of foot-and-mouth disease virus (A22 strain) and cultured for 20 hours at 25°C, a temperature low enough to prevent lysis of the cell membranes and nuclei. Electron-microscopic study of thin sections made it possible to identify the viral particles from their internal structure, and to differentiate them from polysomes, free ribosomes and ribosomes bound to cisterns of the rough endoplasmic reticulum. The viral particles were mostly irregularly oval or angular. The most characteristic feature was the presence of nucleoids with well-defined contours. The nucleoids were generally angular or amoebiform and frequently formed rather long evaginations. A layer of fine-grained material surrounded the nucleoids. The viral particles were generally larger than in the control preparations made from normal cells.

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USSR

UDC 621.383.8:621.383.4:535.376

KRASNIKOV, N.I."Resolution Of Solid-State Image Amplifier"

Poluprovodn. tekhn. i mikroelektronika. Resp. mezhd. sb. (Semiconductor Technology And Microelectronics. Republic Interdepartmental Collection), 1972, Issue 8, pp 81-90 (from RZh:Elektronika i yeye primeneniya, No 11, Nov 1972, Abstract No 118368)

Translation: For a solid-state image amplifier representing a 3-layer system of photoconductive, opaque, and electroluminescent films occurring between two exponential conducting transparent electrodes, a calculation is made by the method of calculating electrical circuits [tsep'] with distributed parameters of the degree of contrast and the distribution of brightness in the image at the amplifier output with projection into its input of an image of an absolutely contrasting miry [? universe] with a rectangular distribution of the illumination between the dashes. During the analysis electrical isotropy of the films, linearity of their current-voltage characteristics and weak absorption of the exciting emission in the photoconductive film was assumed. The effect is studied of the thickness, the dielectric constant, and the conductivity of all three films, and also the frequency of the supply voltage on the degree of contrast of the amplifier. 6 ill. 19 ref. Summary.

Semiconductors & Transistors

USSR

UDO 621.383.82

KRASNIKOV, N.I., SVECHNIKOV, S.V.

"Solid-State Amplifiers And Image Converters"

Poluprovodn. tekhn. i mikroelektronika. Resp. mezhvud. sb. (Semiconductor Technology And Microelectronics. Republic Interdepartmental Collection), 1972, Issue 7, pp 17-27 (from RZh:Elektronika i yeye primeneniya, No 9, September 1972, Abstract No 9B322)

Translation: A survey is made of the contemporary state of development of solid-state amplifiers and image converters, the operation of which is based on use of the phenomena of photoconductivity and electroluminescence of semiconductors. Existing designs are considered of image amplifiers based on powder layers, and their merits and shortcomings are analyzed. The prospects are shown for construction of solid-state image amplifiers based on thin-film elements. Thin-film solid-state image amplifiers are described which use electroluminescent films of ZnS:Mn deposited in a vacuum, and sintered [spechenny] photoconducting layers based on cadmium selenide. Such amplifiers have conversion ratios up to 100, a threshold of response of 10^{-3} lux and a limiting resolution of 25 line pairs [shtr.]/mm. 12 ill. 112 ref. Annotation.

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USSR

UDC 621.383.8:621.383.4

KRASNIKOV, N. I., and SVECHNIKOV, S. V.

"Image Converter (Short Communication)"

Elektron. tekhnika. Nauch.-tekhn. sb. Mikroelektronika (Electronics Technology. Scientific-Technical Collection. Microelectronics), 1971, Issue 2(28), pp 52-54 (from RZh-Elektronika i yeye primeneniye, No 8, August 1971, Abstract No 8B325)

Translation: The structure and principles of operation are described of a solid-state image converter which makes it possible to observe the output image from the same direction as that from which the input is projected. For this goal it is proposed to use a thin film converter with different spectral characteristics of the electroluminophor (ZnS--Mn) and the photoconductor (CdS) with a condition of high transparency of the thin electroluminescent films. 3 ill. N.B.

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USSR

UDC: 669.295:620.1

KRASNIKOV, N. Ye., SKRYABIN, N. P., KOCHETOV, I. M.

"Deformation Resistance of Titanium Alloys at High Temperatures"

Moscow, Tsvetnyye Metally, No 12, Dec 73, pp 51-53.

Abstract: A formula is recommended for practical calculations of the strength of titanium alloys in the 700-900° C interval, with degrees of deformation up to 40% and deformation rates up to 150 sec⁻¹. The formula recommended is:

$$\frac{\delta}{\delta_0} = \left(\frac{t}{t_0}\right)^\alpha \left(\frac{U}{U_0}\right)^\beta \left(\frac{\epsilon}{\epsilon_0}\right)^\gamma$$

where α , β and γ are empirical coefficients (unknown parameters).

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USSR

UDC 669.295:621.77

KRASNIKOV, N. Ye., SKEYABIN, N. P., and BONDYUGIN, V. M.

"Deformation Characteristics of Titanium Alloys in Rolling"

Moscow, Tsvetnyye Metally, No. 7, Jul 71, pp 71-73

Abstract: The deformation process of titanium alloys was investigated by rolling composite and solid specimens of the alloys Vt1-1, Vt5, Vt8, Vt15, etc. The experiments revealed that the lower the plasticity and the higher the resistance to deformation of surface layers relative to central layers, the greater the widening of the rolled strip. For the calculation of the widening, formulas for the widening of steel strips with a certain correction can be used. A modified formula of A.I. Grishkov is presented from which the widening of titanium alloys can be calculated with a maximum discrepancy of 10%. Three illustr., two formulas, one table, eight biblio. refs.

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USSR

UDC 656.61.052

KRASNIKOV, V. S., LUR'YE, I. YU., SHCHUKIN, V. B.

"Optimization of a Ship Course-Keeping System"

Leningrad, Sudostroyeniye, No 10, 1971, pp 40-42

Abstract: A mathematical simulation method is proposed for optimization of a ship course-keeping system. The control system and results of the simulation are depicted graphically. Use of a relay course-keeping system with one control input interval permits a decrease in the energy losses during maneuvering to be obtained by comparison with other relay systems. The proposed relay-course-keeping system has a great advantage as a result of simplification of the operating conditions of the steering system. Practical implementation of the developed system does not require significant changes in the existing course-keeping system especially since it can easily be made optimal with respect to speed. The investigated principle for constructing a course-keeping system for the maneuvering mode can also be used for the automatic course stabilization mode. Optimality of operation of the system is based on minimizing the following criterion:

$$J = \int_0^t |\Delta v| dt,$$

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KRASNIKOV, V. S., et al., Sudostroyeniye, No 10, 1971, pp 32-36

where Δv is the speed loss of the ship on changing course;

t is the time of making the optimality estimate.

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USSR

UDC 534.252.068.75-8(088.6)(47)

ZHASNIECV, YS.N., POLYAROV, V.YE., POTAPOV, A.I. (Leningr. inzh.-stroit. in-t. Leningrad Civil Engineering Institute)

"Piezoelectric Transducer"

USSR Author's Certificate No 501181, filed 8 Sept 69, published 29 July 71
(From RZh:Elektronika i yeye primeneniye, No 2, Feb 72, Abstract No 28478P)

Translation: A piezoelectric transducer is proposed which can be used in ultrasonic devices (defectoscopes, measurers of velocity and attenuation of elastic waves) which are used for nondestructive quality inspection and determination of the physicomachanical properties of polymeric materials and products. The transducer contains an oscillator, an electrical delay line, a unit [sic] for division of the signal, and a piezoelectric vibrator. With the object of obtaining pulses with a duration equal to half of the oscillation period of the piezoelement, the piezoelectric vibrator is formed of three elements with equal acoustic resistance, the outside of which are piezoelectric and connected with outputs of the unit for division of signals; one output of the unit directly and the other across the electrical delay line connected to the output of the oscillator, and the central element serves as the mechanical half-wave delay line. The circuit of the transducer is presented. 1 ill. L.K.

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UDC 539.3(534).1

USSR

KRASNIKOVA, R. D.

"Natural Vibrations of a Rod With Random Characteristics"

Sb. rabot aspirantov Dnepropetr. un-ta Mekh. i mat. (Collection of Works of Graduate Students of Dnepropetrovsk University, Mechanics and Mathematics), 1970, pp 119-124 (from RZh-Mekhanika, No 12, Dec 70, Abstract No 12V305, by I. Sh. Rakhmatullin)

Translation: The problem of the natural vibrations of an elastic, freely supported rod with random characteristics of stiffness EJ and mass is examined. These characteristics are assumed to be functions of a finite number of random parameters distributed according to the normal law with respect to some mean. It is assumed that the mean-square deviation of the random parameters is not large compared with the mean. The problem is solved by the perturbation theory method. Formulas are given for the first and second approximations of the correction to be applied to the natural frequencies and forms of vibrations of the rod. For the case when the perturbation is an increment of the per-unit-length mass of the rod $\delta \mu$ at the end, assumed to be in the form

$$\delta \mu(x) = m \delta(x - x_0)$$

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USSR

KRASNIKOVA, R. D., Sb. rabot aspirantov Dnepropetr. un-~~iv~~ers. Melch, 1 mat.,
1970, pp 119-124

(where μ = the random variable and $\delta(x)$ = delta-function), formulas are
given for the mathematical expectation and the dispersion of the n-th natural
frequency and form of the rod vibrations to the first approximation.

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USSR

UDC 669.187.5:669.017

KRASNIKOVA, S. I., and CHERNYAVSKAYA, S. G.

"Dependence of Mechanical Properties of BP56 (1Kh16N4B) Steel on the Quantity and Shape of Delta-Ferrite"

Dnepropetrovsk, Metallurgicheskaya i Gornorudnaya Promyshlennost', No 1(79), Jan/Feb 73, pp 39-40

Abstract: Rods (150 mm in diameter) made of steels produced by electric arc smelting (A), electroslag melting (B), and vacuum electric arc melting (C) were homogenized at 1150-1230°C for 15 hours. The quantity of delta-ferrite (areawise) in A, B, and C steels after homogenization was 0.1, 0.1, and 2.45-2.1, respectively, compared with 2.9-3.2, 2.45-3.0, and 8.7-10.2 before homogenization, respectively. A lower concentration of delta-ferrite in homogenized samples increased the impact toughness (two-fold) in a transverse direction with respect to the steel fibers. The ferrite particles also became rounded and shaped like spheroids. The plastic properties and strength of the samples did not change much with a decreasing quantity of delta-ferrite, but the relative elongation across the fibers increased. The mechanical properties of the two melts are tabulated.

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USSR

UDC 669.14.013.8:620.186.1

CHERNYAVSKAYA, S. G., KRASNIKOVA, S. I., and SULIMENKO, A. V., Dnepropetrovsk University

"Change of Delta-Ferrite in 1Kh16N4B Steel During Homogenization"

Moscow, Metallovedeniye, No 9, Sep 72, pp 66-67

Abstract: The effect of isothermal homogenization at 900-1300°C was studied to determine the amount and shape of the delta-ferrite formed in 1Kh16N4B cast steel (0.05% C, 0.28% Mn, 0.35% Si, 15.2% Cr, 3.6% Ni, 0.007% S, 0.025% P and 0.1% Nb). The investigation was conducted using blanks cut from a 780-kg commercial ingot produced at the Dneprospeetsstal' Plant by vacuum arc remelting. It was found that between 900 and 1150°C the amount of delta-ferrite formed decreases with time. For instance, at 900°C, 14% delta-ferrite in the steel to start with ends up with only 12.5% after 30 hours at that temperature. The same process, decrease in amount of delta-ferrite with time at temperature, holds true up to 1150°C where 14% delta-ferrite is reduced to 6% after 30 hours. At 1200°C the decrease in amount of the delta-ferrite begins the same as for the other temperatures except that after 10 hours the quantity of delta-ferrite begins to increase from a low of about 7% up to 13.5% after 16 hours. The decrease in delta-ferrite followed by an increase after a few hours at

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USSR

CHERNYAVSKAYA, S. G., et al., Metallovedeniye, No 9, Sep 72, pp 66-67

temperature is due to a polymorphous gamma-alpha transformation, as opposed to the alpha-gamma transformation at the lower temperatures. 4 figures, 2 bibliographic references.

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USSR

K
UDC 678.643.42.5-405.8.01:53

KRASNIKOVA, T. V., PETRILENKOVA, E. B., PARSNINA, N. K. (Deceased)

"Foam Materials Composed of Hollow Glass Microspheres and Poly-
meric Binders"

Moscow, Plasticheskiye Massy, No 3, 1970, pp 45-46

Abstract: Small hollow glass microspheres covered with EDS-6 or EDS-7 epoxy resin binder allowing thorough adhesion of all microspheres in one solid mass were developed as a water resistant foam material. The above resins are strong, water resisting cements, while other resins, such as EDS-5, contain hydroxyl groups and are hydrophilic. The resin covered microspheres are very hydrostatic, even under considerable pressure. They can be used as gas containers and sound proofing material, and they can satisfy many aquatic needs.

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1/2 047 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--CELLULAR MATERIALS BASED ON HOLLOW GLASS MICROSPHERES AND POLYMER
BINDERS -U-
AUTHOR--(C3)-KRASNIKOVA, T.V., PETRILENKOVA, YE.B., PARSHINA, N.K.
COUNTRY OF INFO--LSSR
SOURCE--PLAST. MASSY 1970, (3), 45-6
DATE PUBLISHED-----70

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

TOPIC TAGS--IMPACT STRENGTH, EPOXY RESIN, POLYMER BINDER, GLASS,
DIELECTRIC PROPERTY, PLASTIC MECHANICAL PROPERTY, INSULATING MATERIAL,
SHIPBUILDING ENGINEERING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1098

STEP NO--UR/0191/70/000/003/0045/0046

CIRC ACCESSION NO--AP0128525

UNCLASSIFIED

2/2 047

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0128525

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROPERTIES AND USES OF HIGH-IMPACT CELLULAR MATERIALS EDS (PREPD. FROM EPOXY RESIN BINDERS AND HOLLOW GLASS BEADS) ARE DESCRIBED. EDS EXHIBITED SUPERIOR PHYSICOMECH., THERMAL, AND DIELEC. PROPERTIES, AND A LOW H SUB2 O ABSORPTION UNDER ATM. OR HYDROSTATIC PRESSURES. EDS IS USEFUL AS SOUND AND HEAT INSULATOR, AND FOR THE CONSTRUCTION OF MARINE BOATS.

UNCLASSIFIED

Acc. Nr: **AP0044152**

Ref. Code: UR 0244

PRIMARY SOURCE: *Voprosy Pitaniya*, 1970, Vol. 29, Nr 1,
pp 61-66

**CORRELATION BETWEEN THE CONTENT OF POLYCYCLIC CARCINOGENS
IN ANIMAL FOOD PRODUCTS AND IN FODDER FOR FARM ANIMALS**

N. D. Gorelova, P. P. Dikun, A. P. Dmitrochenko, N. D. Krasnitskaya,
A. I. Cherepanova, I. A. Shandrikova (Leningrad)

Summary

Rabbits, pigs, cows, chicken and ducks received during different periods of time (up to one year) fodder containing 3,4-benzpyrene. Animals and poultry were sacrificed 24 hours on termination of the experiment and their tissues and organs analyzed for the benzpyrene content. Meat and separately fat and in some instances also liver, blood, etc were, as a rule, taken for analysis. Milk of experimental cows was used for feedings calves, whose meat, liver and blood were then also subjected to examination. Investigations also covered milk of experimental cows and chicken eggs. Control assays were a common practice as well. Meat and other objects under examination either contained no 3,4-benzpyrene at all, or demonstrated merely its traces. Hence, the presence in fodder of relatively large amounts of benzpyrene does not cause this carcinogen to appear in animal food products. Studies were also made as to the amount of intact benzpyrene passed from the organism of rabbits, cows, calves and chicken.

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REEL/FRA
19770633

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USSR

UDC: 519.214

KRASNITSKIY, S. M.

"On Some Limit Theorems for Random Fields With m -th Order Gaussian Differences"

Teoriya veroyatnostey i mat. stat. Mezhd. nauch. sb. (Probability Theory and Mathematical Statistics. Interdepartmental Scientific Collection), 1971, vyp. 5, pp 71-80 (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V153)

Translation: Let $\xi(t), t=(t_1, \dots, t_m) \in R^m$ be a random field with m -th order Gaussian differences which is given in m -dimensional Euclidean space, $\psi(n)$ be some whole-number function of $n, n=1, 2, \dots, \psi(n) \rightarrow \infty$ as $n \rightarrow \infty$; $\Delta_{k, n}^{(m)}$ be the m -th order

difference of function $\xi(t)$ over a cube with vertices $(\frac{k_1}{\psi(n)}, \dots, \frac{k_m}{\psi(n)})$

$(\frac{k_1-1}{\psi(n)}, \dots, \frac{k_m-1}{\psi(n)})$, $k_i, i=1, \dots, m$ be whole numbers such that $0 < k_i \leq \psi(n), i=1, \dots, m$.

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KRASNITSKIY, S. M., Teoriya veroyatnostey i mat. stat. Mefhved. nauch. sb.,
1971, vyp. 5, pp 71-80

It is proved that with certain limitations on the correlation function
of the field, with probability 1

$$\lim_{n \rightarrow \infty} f(n) \prod_{k_1, \dots, k_m=1}^{v(n)} [A_{k_1, \dots, k_m}^{(n)}] = A_m.$$

where $f(n)$ is some function of n . A_m is a constant which depends on m .
Author's abstract.

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- 21 -

1/2 007 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--GEOCHRONOLOGY OF PRECAMBRIAN FORMATIONS IN THE URALS -U-

AUTHOR--(04)-TUGARINOV, A.I., BIBIKOVA, YE.V., KRASNOBAYEV, A.A., MAKAROV,
V.A.

COUNTRY OF INFO--USSR

SOURCE--GEOKHIMIYA 1970, (4), 501-9

DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GEOCHRONOLOGY, PRECAMBRIAN TIME, ABSOLUTE AGE, MAGMA,
METAMORPHIC ROCK, ZIRCON, EARTH CRUST AGE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1997/0136

STEP NO--UR/0007/70/000/004/0501 509

CIRC ACCESSION NO--AP0119132

UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119132

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE ABS. AGES OF VARIOUS
PRECAMBRIAN MAGNETIC AND METAMORPHIC ROCKS WERE DETERM. FROM ZIRCONS BY
THE ISOTOPIC METHOD. THE AGE DETERMS. INDICATED THE PRESENCE OF 2 STAGES
OF EFFUSIVE ROCK FORMATION IN THE BASHKIR ANTICLINORIUM (SOUTHERN
URALS). THE ANCIENT TARATASHSK INTRUSIONS, WHICH TERMINATED THE LOWER
PROTEROZOIC CYCLE AND WERE ACCOMPANIED BY INTENSE REGIONAL METAMORPHISM,
HAVE ABS. AGE OF 2000-200 MILLION YR. THE BERDYANSHSK PLUTON (1430
MILLION YR OLD) AND GUBENSK AND RYABINOVSK INTRUSIONS (1350 MILLION YR)
BELONG TO SUCCESSIVE INTRUSIVE PHASE. THIS PHASE COINCIDED WITH LARGE
INTERRUPTION IN SEDIMENT ACCUMULATION AND WAS DENOTED BY DISCONFORMITY
BETWEEN THE BURZYANSK AND YURMATINSK SERIES INDICATING AN INTENSE
DEVELOPMENT IN URALS OF THE STRATA HAVING A VERY LIMITED DISTRIBUTION IN
THE EARTH. FACILITY: V. I. VERNADSKII INST. GEODCHEM. ANAL.
CHEM., MOSCOW, USSR.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--30OCT70
 TITLE--DETERMINING THE THERMAL RESISTANCE OF A DISC TYPE RECTIFIER USING
 ELECTROTHERMAL ANALOGY -U-
 AUTHOR--(04)-OLYAK, V.D., KRASNOBAYEV, A.M., ROMANOVSKIY, V.F., USTRENKO,
 V.S.
 COUNTRY OF INFO--USSR
 SOURCE--RUSCO, ELEKTREKHNKA, 1970, NR 2, PP 30-32
 DATE PUBLISHED-----70
 SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.
 TOPIC TAGS--THERMAL ANALYSIS, SEMICONDUCTOR RECTIFIER, PN JUNCTION,
 COOLING RATE, ELECTRONIC CIRCUIT MODELING/1U1VRL300 SEMICONDUCTOR
 RECTIFIER, 1U1JEGC1960 ELECTROINTEGRATOR
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--1999/1222 STEP NO--08/0292/70/000/002/0030/0032
 CIRC ACCESSION NO--AP0123186
 UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--300670

CIRC ACCESSION NO--AP0123185

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS STUDY THE APPLICATION OF THE ELECTROTHERMAL ANALOGY METHOD FOR DETERMINING THE HEATING TEMPERATURE OF THE P,N,JUNCTION AND THERMAL RESISTANCE OF THE VKL,300 SEMICONDUCTOR POWER RECTIFIER. THE ELECTRO MODEL IS MADE FROM CONDUCTING PAPER. THE EGDA-9-60 ELECTROINTEGRATOR WAS USED FOR MEASURING. THE WORK PRESENTS A DETERMINATION OF THE SCALES OF ANALOGOUS TRANSFORMATION, THEIR INTERPELATIONSHIP, CALCULATION OF THE ELEMENTS OF THE MODEL ALONG WITH A DETERMINATION OF THE P,N,JUNCTION HEATING TEMPERATURE AND THERMAL RESISTANCE OF THE RECTIFIER UNDER THREE COOLING REGIMES. A COMPARISON OF THE DATA OBTAINED FROM THE MODEL WITH THE RESULTS OF THE FULL SCALE EXPERIMENT SHOWS GOOD AGREEMENT.

UNCLASSIFIED

172 054 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--IONIZATION OF A GAS BY INSTANTANEOUS BURSTS OF RADIATION -U-
AUTHOR--KRASNOBAYEV, K.V. *K*
COUNTRY OF INFO--USSR
SOURCE--AKADEMIIA NAUK SSSR, IZVESTIIA, MEKHANIKA ZHIKOSTI I GAZA,
MAR.-APR. 1970, P. 14-19
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS
TOPIC TAGS--GAS IONIZATION, RADIATION EFFECT, HYDROGEN, PULSE EXCITATION,
COMPUTER CALCULATION, RADIATION SPECTRUM ION RECOMBINATION

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/1190 STEP NO--UR/0421/70/000/000/0014/0019
GIRC ACCESSION NO--AP0124844
UNCLASSIFIED

2/2 054

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124844

ABSTRACT/EXTRACT--(U) SP-0- ABSTRACT. DISCUSSION OF THE NONSTATIONARY PROBLEM OF THE IONIZATION OF A GAS CONTAINED IN GRAVITATIONAL EQUILIBRIUM AT CONSTANT TEMPERATURE IN THE UPPER HALF SPACE BY AN INSTANTANEOUS BURST OF RADIATION IN THE LOWER HALF SPACE. THE ANALYSIS IS PERFORMED FOR A GAS CONSISTING OF HYDROGEN ATOMS, UNDER THE ASSUMPTION THAT THE RADIATION PROPAGATING FROM THE LOWER HALF SPACE HAS A PLANCKIAN SPECTRUM AT A CERTAIN TEMPERATURE. THE HYDRODYNAMIC MOTION WHICH MAY ARISE DUE TO THERMAL EXPANSION IS NEGLECTED. A SOLUTION TO THE PROBLEM IS OBTAINED ON A DIGITAL COMPUTER. THE CHANGES IN THE DEGREE OF IONIZATION AND IN THE GAS TEMPERATURE ARE DETERMINED, TOGETHER WITH THE SPECTRAL COMPOSITION AND ANGULAR DISTRIBUTION OF THE RADIATION. THE GRAPHS OBTAINED INDICATE THAT THE IONIZATION PROCESS IS ESSENTIALLY NONEQUILIBRIUM AND THAT THE TIME REQUIRED FOR ESTABLISHING AN IONIZATION RECOMBINATION BALANCE DEPENDS ON THE GAS DENSITY, AND IS SHORTER FOR HIGH DENSITY LAYERS.

UNCLASSIFIED

Publications

USSR

UDC 619:616.983-07

SYJHIN, V. N., IVANOVA, G. A., KRASNOBAYEV, Ye. A., and ROMIN, Yu. V.

Laboratornaya diagnostika virusnykh bolezney zhivotnykh (Laboratory Diagnosis of Virus Diseases of Animals), Moscow, Kolos, 1972, 416 pp w/ill.

Annotation

Employing the latest advances by Soviet and foreign scientists the authors of the present book summarize the existing data on the diagnosis of virus diseases of animals.

In the description of a given disease a brief description of the agent is presented. Only those data that are essential for the identification of a virus and for the establishment of its etiological role in the onset of a disease are given.

The methods of taking, preparing and storing materials and the methods of growing viruses in large developing embryos, in primary and subinoculated cultures of cells from various animal tissues and organs, etc., are described in considerable detail.

Basic attention is devoted to the executing and reading of diagnostic reactions (complement fixation reaction, neutralization reaction, agglutination inhibition reaction, etc.) and to the description of a method for conducting biological tests of receptive laboratory animals.

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