USSR

UDC 621.175.845.001.5

SHKLOVER, G. G., and GRIGOR'YEV, V. G.

"On the Effect of the Air-Evacuating Device on the Intensity of Steam Condensation in a Steam Turbine's Condenser"

Kaluga, Materialy nauch.-tekhn. konf. Kaluzh. Fil. MVTU -- sb. (Materials of the Scientific and Technological Conference at the Kaluga Branch of the Moscow Higher Technical School imeni N. E. Bauman -- Collection of Works), 1972, pp 63-64 (from Referativnyy Zhurnal -- Teploenergetika, No 3, 1973, Abstract No 3S39)

Translation: In order to investigate the effect of an admixture of air on the intensity of the heat exchange process, the authors conducted experimental research, using a number of condensers with the very small initial concentrations of air in the steam (0.003-0.1 percent) that are typical of steam turbine condensers. In connection with the condensation of a moving air-steam mixture, it turned out to be possible to express the effect of the added air in the steam on the intensity of the heat exchange process unequivocally, for all the condensers that were investigated, in terms of the initial concentration of air in the steam (ε_0 kg/kg) and the specific steam load on the heat exchange surface (G_n(kg/m^2·hr)): $\alpha_{mix}/\alpha_n = 0.7(\varepsilon_0 G_n)^{1/2} - 0.05$,

USSR

SHKLOVER, G. G. and GRIGOR'YEV, V. G., Materialy nauch.-tekhn. konf. Kaluzh. Fil. MVTU -- sb., 1972, pp 63-64

where α_{mix} and α_n = average coefficient of heat emission from the air-steam mixture and pure steam respectively. This function allows for the direct effect of adding air to the steam on the intensity of heat exchange in the condenser when the air-evacuating device (or ejector) does not limit the condenser's operational possibilities. Special experiments that were carried out to investigate the combined operation of condensers with ejectors showed that when the characteristics of the condenser and the steam-jet ejector do not coincide, the hollow beam's deaerating capability drops sharply, along with there being a reduction in the efficiency of the heat transfer process.

2/2

USSR

UDC 536.248.2.001.5

GRIGOR'YEV, V. G., ROSINSKIY, A.Z., and SHKLOVER, G. G.

"Study of Heat Transfer in a Steam Turbine Condenser"

Dokl. nauchno-tekhn. konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg.Sekts. Promteploenergetiki. Podsekts. Sushil'n i teploobmen. ustroistv (Reports of the Scientific-Technical Conference on Summaries of Scientific Research Work for 1968-1969. Industrial Thermal Engineering Section, Subsection on Desiccating and Heat Transfer Devices), Moscow Power Engineering Institute, 1970, pp 119-124 (from RZh-Teploenergetika, No 5, May 70, Abstract No 5G94)

Translation: It is experimentally shown that distribution of local heat loading, when using the method of water cooling in a two-channel system, is practically uniform for the case of pure vapor; with air added, the distribution becomes non-uniform, and increases this tendency with increased air added to the vapor. Two figures, three references.

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USSR

UDC: 678.01:677.52+539.4

ZHIGACH, A. F., TSIRLIN, A. M., SHCHETILINA, YE. A., SVETIOV, I. L., GRIGOR'YEV, V. I., SHAFRANOVICH, E. G., BULYGINA, T. I., and YARTSEV, V. A., State Scientific-Research Institute of Chemistry and the Technology of Elementoorganic Compounds, Moscow

"Mechanical Properties of Boron Fibers"

Riga, Mekhanika Polimerov, No 4, Jul-Aug 73, pp 641-647

Abstract: The authors study the strength distribution of boron fibers. The study is based on a large amount of experimental material. The results show that the strength of boron fibers can be sufficiently accurately described by the Weibull or by normal rules of distribution. The parameters of these distributions are determined. The typical defects in boron fiber macrostructure are isolated and described. Mean strength as a function of tested fiber length is studied experimentally.

USSR UDC 62-494:519.28

GRIGOR'YEV, V. I., and TSIRLIN, A. M.

"Statistical Checking of the Quality of Brittle Fibers and Threads"

Moscow, Zavodskaya Laboratoriya, no 5, 1973, pp 571-575

Abstract: Methods are suggested for checking the strength and diameter of high-strength brittle fibers and threads used for reinforcement in composite materials. The one-time unidirectional control by quantitative indication and the subsequent control by qualitative indication are analyzed by reference to formulas and diagrams. The application of the methods in acceptance inspections of the qualities of continuous boron threads is discussed. The methods are recommened for estimates of strength, modulus of elasticity, geometric dimensions of reinforcing fillers of various types, and of composite materials based on them. Five figures, twenty formulas, eight bibliographic references.

1/1

USSR

(18)

BALOSHIN, O. N., BLAGORODOV, A. M., BOLONKIN, B. V., VLADIMIRSKIY, V. V., GORIN, YU. P., GRIGOR'YEV, V. K., GRISHIN, A. P., YEROFEYEV, I. A., KOROL'KOV, I. YA., LUZIN, V. N., MILLER, V. V., NIKOLAYEVSKIY, YE. S., PETRUKHIN, V. N., PLIGIN, YU. S., PONOMAREV, L. A., SIROTKIN, S. M., SOKOLOVSKIY, V. V., TARASOV, YE. K., TIKHOMIROV, G. D., TROSTINA, K. A., TURCHANOVICH, L. K., and SHKURENKO, YU. P., Institute of Theoretical and Experimental Physics GKI AE (State Committee for the Use of Atomic Energy)

"The $K^-p \rightarrow \bar{K}^0n$ Charge Exchange Reaction at a Pulse of 39 Gev/sec"

Moscow, Yadernaya Fizika, Vol 18, No 3, Sep 73, pp 542-544

Abstract: The authors present the measurement results from studying the charge exchange reaction of K^--mesons on protons ($K^-p \rightarrow \bar{K}^0n$) at a pulse of 39 Gev/sec. The study was carried out using the ITEF 6-m magnetic track spectrometer. The working volume of the magnetic field of the spectrometer was 1.0 x 1.5 x 6 m . Twelve optical spark chambers were located inside the magnet, with each chamber having eight spark gaps (10 mm each). The chamber electrodes consisted of two layers of aluminum foil 14 microns thick. The photographs were taken through a special slit in the magnet yoke. A mirror system made it possible to obtain three stereoprojections of all of the chambers

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USSR

(18)

BALOSHIN, O. N., et al., Yadernaya Fizika, Vol 18, No 3, Sep 73, pp 542-544

with one camera. The reaction was studied on the negative particle beam of the IFVE accelerator. The K^--mesons were distinguished by a differential Cerenkov counter. The beam was focused on a liquid hydrogen target 40 cm long which was set approximately three meters from the first chamber of the spectrometer. Approximately $5 \cdot 10^7$ K^--mesons were passed through the equipment and 1020 photographs taken. Pairs of uniformly charged tracks were measured on the photographs. The measurement results were then processed on the Razdan-3 computer. Only 270 intersecting tracks were found. A graph is given for the differential cross section of the reaction. The results show that the cross section value of 7.4 ± 1.2 microbarns obtained by the authors in comparison to data obtained for lower energies elsewhere shows the logarithmic dependence of the charge exchange cross section on the pulse, equal to -1.58 ± 0.05. The authors thank K. G. Boreskov, A. M. Lapidus, S. T. Sukhorukov, and K. A. Ter-Martirosyan for their presentation of the computational results as the dependence of the differential cross section onpulse transfer (do/dt). This dependence is compared with predictions of the Regge pole model.

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1/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--INJECTION CONDUCTIVITY IN COMPENSATED SEMICONDUCTORS WITH IMPURITY SCATTERING -U-

AUTHOR-(05)-GRIGORYEV, V.K., KAZANTSEV, O.I., MURYGIN, V.I., RUBIN, V.S., STAFEYEV, V.I.

COUNTRY OF INFO--USSR

SOURCE--FIZIKA I TEKHN. POLUPROV., JAN. 1970, 4, (1), 116-119

DATE PUBLISHED----JAN70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GERMANIUM SEMICONDUCTOR, GALLIUM ARSENIDE SEMICONDUCTOR, ELECTRIC PROPERTY, SEMICONDUCTOR IMPURITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0992 STEP NO--UR/0449/70/004/001/0116/0119

CIRC ACCESSION NO--AP0124651

UNCLASSIFIED

2/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70
CIRC ACCESSION NO--AP0124651
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF CARRIER INJECTION OF THE V-A CHARACTERISTICS AND GENERAL ELECTRICAL PROPERTIES OF COMPENSATED SEMICONDUCTORS SUCH AS GE AND GAAS INCORPORATING IMPURITY SCATTERING IS DISCUSSED THEORETICALLY. A MECHANISM IS PROPOSED IN ORDER TO EXPLAIN THE CREATION OF A NEGATIVE DIFFERENTIAL RESISTANCE IN THE FORWARD BRANCH OF THE V-A CHARACTERISTIC DUE TO THE CHANGE IN SCREENING RADIUS ARISING FROM THE INJECTION. EXPERIMENTAL RESULTS QUALITATIVELY SUPPORT THE THEORY.

UNCLASSIFIED

USSR

UDC 8.74

GRIGOR'YEV, V. L., ZLOBIN, V. I., KURGANOV, V. D.,

"Filtration of Images in Pattern Recognition"

V sb. Avtomat. upr. i vychisl. tekhn. (Automatic Control and Computer Technology -- Collection of Works), No. 10, Moscow, "Mashinostroyeniye", 1972, pp 116-140 (from RZh-Matematika, No 9, Sep 72, Abstract No 9V671)

Translation: Possible forms of noise in the input of iso-object information into a computer are analyzed. A critical review of several known methods of filtration is given. Single anisotropic filtration of discrete images is investigated. A new form of a recurrent filter having many advantages over known anisotropic filters was developed, and investigated. A procedure for measuring the intensity of noise and the automatic change depending on the value obtained for the filter aperture is proposed and investigated. A high-speed device was developed for measuring the intensity of noise in images of three-dimensional objects. A systematic study of the double filtration of images was conducted. The structures of filters of the first and second stages were determined. Recommendations are made concerning the parameters of a single smoothing device. 15 ref. Authors abstract.

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USSR

GRIGOR'YEV, V. L. and KARLIN, A. K.

"Algorithm for Separation of an External Contour Line into Images"

Tr. Ryazan. Radiotekhn. In-ta [Works of Ryazan Institute of Electric Engineering], 1972, No 30, pp 163-166 (Translated from Referativnyy Zhurnal Kibernetika, No 9, 1973, Abstract No 9V785).

Translation: An algorithm is studied for separation of an external contour, based on the maximum information concerning the image produced in the process of input. All coded information is presented in the form of a two-dimensional mass, although it forms a one-dimensional file in memory. The essence of the method suggested by the author for formation of the full contour is as follows. The subfile of coordinates corresponding to the ith row is studied. For each element of the ith row falling within certain fixed ranges, it is determined in what state the elements of the preceding i - 1th row and the subsequent i + 1th row are located. If the quantity tested is in the fixed range both in row i - 1 and in row i + 1, it is not considered a contour line. Otherwise, the element selected is located on the contour line and is included in the full contour file. The program realization of this algorithm depends on the peculiarities of the specific computer used.

A. Model'

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USSR

UDC 8.74

GRIGOR'YEV, V. L., ZLOBIN, V. K., KURGANOV, V. D.

"Filtration of Images in Pattern Recognition"

V sb. Avtomat. upr. i vychisl. tekhn. (Automatic Control and Computer Engineering — collection of works), Vyp. 10, Moscow, Mashinostroyeniye Press, 1972, pp 116-140 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V671)

Translation: Possible forms of noise during input of iso-objective information to a digital computer are analyzed.

A critical analysis of some of the known filtration procedures is presented. A study was made of single anisotropic filtration of digitalized patterns.

A new type of recurrent filter has been developed which has a number of advantages by comparison with the known anisotropic ones, and it is investigated.

A procedure is proposed and investigated for measuring the intensity of noise and automatic variation as a function of the magnitude of the filter aperture obtained.

A high-speed device was developed for measuring the noise intensity in the patterns of three-dimensional objects. A systematic study of double filtration of the patterns is presented. The structures of the filters of the first and second stages are defined.

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USSR

GRIGOR'YEV, V. L., et al., Avtomat. upr. i vychisl. tekhn., Vyp. 10, Moscow, Mashinostroyeniye Press, 1972, pp 116-140

Recommendations are made with respect to selecting the parameters of a single smoothing device. The bibliography has 15 entries.

2/2

USSR UDC [illegible]

GRIGOR'YEV, V. K., and VANTSYAN, S. A.

"Stepwise Combustion of the Propane-Air Mixture in a Tube"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 46, No 3, Mar 72, pp [illegible]

Abstract: During the combustion of a propane-air mixture in a vertical [illegible] ically sealed tube, 60 mm in diameter and 4000 mm long, intermittent [illegible] increase in pressure was observed until a maximum was reached. Then the pressure dropped, to be followed by a sharp jump. On the basis of the "phasal" character of flame expansion in a closed volume, it may be assumed that the mechanism of combustion is a complex thermal chain mechanism, in which concurrently with heat evolution a phase of an elementary act of autocatalysis takes place.

[illegible]

USSR

UDC: 550.838

LEBEDEV, N. N., GRIGOR'YEV, V. M., KLOCHEK, N. V., KOBANOV, N. I., Siberian Institute of Terrestrial Magnetism, the Ionosphere and Propagation of Radio Waves, Siberian Department of the Academy of Sciences of the USSR

"A Method of Measuring Magnetic Field Strength"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 13, May 72, Author's Certificate No 335652, Division G, filed 17 Aug 70, published 11 Apr 72, p 196

Translation: This Author's Certificate introduces a method of measuring magnetic field strength in accordance with Zeeman splitting of a spectral line. As a distinguishing feature of the patent, precision is improved by converting the left-hand and right-hand circularly polarized components of Zeeman splitting to linearly polarized components, spatially modulating the relative position of the components in the direction of dispersion, and measuring the oscillations of the light flux which are proportional to magnetic field strength.

1/1

USSR UDC: 621.385:530.145.6:528

GRIGOR'YEV, V. M.

"Effect Which the Time of Delay of an Emitted Pulse has on the Working Accuracy of a Light-Ranging Instrument for Measuring the Altitude of the Boundary of Clouds"

Tr. NII gidrometeorol. priborostr. (Works of the Scientific Research Institute of Hydrometeorological Instrument Building), 1971, vyp. 24, pp 45-47 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6D467)

Translation: The author considers the effect which the time delay of emission from a semiconductor injection maser has on the working accuracy of a light-ranging device for measuring the altitude of the lower edge of clouds, using a semiconductor injection maser as the signal source. It is shown that the effect of time delay is insignificant with appropriate pumping pulse shape. The proper shape of the pumping pulse is presented. One illustration. Resumé.

1/1

USSR UDC: 621.385:530.145.6:528

GRIGOR'YEV, V. M., GRISHCHENKO, L. V.

"Some Problems in the Use of Semiconductor Lasers for Measuring the Altitude of the Lower Boundary of Clouds"

Tr. NII gidrometeorol. priborostr. (Works of the Scientific Research Institute of Hydrometeorological Instrument Building), 1971, vyp. 24, pp 35-44 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6D466)

Translation: The authors discuss the possibility of making light-ranging instruments for measuring the altitude of the clouds on the basis of a gallium arsenide injection laser. Formulas and graphs are presented which can be used to calculate the necessary laser power as a function of the state of the atmosphere and the altitude of clouds, as well as receiver sensitivity. Basic expressions are derived and analyzed for the signal-to-noise ratio in the system. Sensitivity is calculated for two types of photomultipliers used as photoreceivers. Calculations are presented which show the possibility of using the instrument for measuring cloud altitudes up to 500-1000 m. Two illustrations, one table, bibliography of six titles. Resumé.

1/1

USSR UDC 532.132

GRIGORIYEV, V. N., GULIN, B. A., YESEL'SON, B. N., KOREPANOV, V. D., MIKHEYEV, V. A.

"Device for Investigating Diffusion and Magnetic Characteristics of ^3He and ^3He-^4He Solutions by the Spin Echo Method"

Trudy, Fiziko-tekhnicheskiy institut nizkikh temperatur (Physico-technical Institute for Low Temperatures--collection of works) Academy of Sciences, Ukrainian SSR, No. 10, 1970, pp 166-177 (from RZh-Fizika, No. 9, 1971, Abstract No. 9E36)

Translation: The description is given of a spin echo device, designed for investigating the characteristics of ^3He and ^3He-^4He solutions in the liquid and solid states. The device permits measurements of the coefficient of diffusion, the magnetic susceptibility, and the magnetic relaxation time, as they vary in a broad range. The results of controlled measurements of the diffusion coefficient in liquid ^3He at various pressures are given. These results correspond well with the results obtained by other authors. Author's abstract.

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USSR

UDC: 621.438:669.5:546.821

KOSTYRKO, O. S., BRAUN, M. P., MARTYNENKO, A. P., ZELENAYA, L. A., and GRIGOR'YEV, V. P.

"Particularities Associated With Using Some Grades of Steel and Alloys at Low Temperatures"

V sb. Lityye iznosostoyk. materialy (Cast Wear-Resistant Materials -- collection of works), Kiev, 1972, pp 156-164 (from RZh-Turbostroyeniye, No 5, 1973, Abstract No 5.49.152)

Translation: The authors study changes in the casting expansion factor and the characteristics of strength, plasticity, and ductility within a broad temperature interval of up to -70° C for the 12 Kh 2NChA, 18KhNVA, 30 Kh KhGSA, 38 KhMYuA, 40 Kh NMA, 2 Kh13, Kh17 N2, EI698-M grades of steel and for the VTZ-1 alloy. Fatigue strength using smooth and cut specimens was also studied in the case of the Kh17N2 and EI961 grades of steel and the VTZ-1 alloy. Original article: 5 tables, 3 bibl. entries.

1/1

1/2 031 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--APPLICATIONS OF THE PRINCIPLE OF LINEARLY VARYING FREE ENERGIES TO THE RUPTURE OF A CATHODICALLY POLARIZED WIRE IN INHIBITED MEDIA -U-

AUTHOR--GRIGORYEV, V.P.

COUNTRY OF INFO--USSR

SOURCE--FIZ. KHIM. MEKHAN. MAT., 1970, 6, (2), 54-58

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CARBON STEEL, WIRE, CATHODE POLARIZATION, SULFURIC ACID, RUPTURE STRENGTH, FREE ENERGY, BENZALDEHYDE, ANILINE, GLYCINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1816 STEP NO--UR/0369/70/006/002/0054/0058

CIRC ACCESSION NO--AP0129184

UNCLASSIFIED

2/2 031 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0129184

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF DERIVATIVES OF ANILINE, BENZALDEHYDE, AND GLYCINE ON THE TIME TO FAILURE OF A CATHODICALLY POLARIZED C STEEL WIRE IN SOLUTIONS OF N H SUB2 SO SUB4 WAS STUDIED, AND THE RESULTS WERE ANALYZED FROM THE POINT OF VIEW OF THE PRINCIPLE OF LINEAR VARIATION OF FREE ENERGIES. THIS PRINCIPLE WAS FURTHER APPLIED TO DISCUSS THE RELATION BETWEEN THE THERMODYNAMIC AND CHEMICAL CHARACTERISTTICS OF THE ORGANIC ADDITIVES AND THE TIME TO FAILURE OF WIRES SUBJECT TO THEIR ACTION. AN EMPIRICAL EQUATION IS DERIVED TO REPRESENT THE RESULTS IN CONCISE FORM.

UNCLASSIFIED

USSR UDC 536.242:532.517.4.001.5

KRASNOSHCHEKOV, YE. A., PROTOPOPOV, V. S., IGAMBERDYYEV, A. T., GRIGOR'YEV, V. S.

"Experimental Study of Local Heat Transfer Coefficients in the Turbulent Flow of Carbon Dioxide of Supercritical Parameters in a Rectangular Channel Heated on One Side"

[Nauchn. tr.] Tashkent. politekhn. in-t ([Scientific Works of] Tashkent Polytechnical Institute), 1970, No 65, pp 115-126 (from RZh-Teploenergetika, No 12, Dec 70, Abstract No 12G89)

Translation: An experimental section with a through cross section of 16 × 3.9 mm and a heated length of 256 mm, and also a heated device in the form of a semicylinder of diameter 120 and length 256 mm were made from a single copper block. The thickness of the side walls was the same and equal to 1.9 mm and the thickness of the roof of the channel was 4 mm. Before entering into the channel there was an unheated segment for hydrodynamic stabilization. The section was connected into a closed circulation circuit. The experimental results were compared with

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USSR

KRASNOSHCHEKOV, YE. A., et al, [Nauchn. tr.] Tashkent. politekhn. in-t, 1970, No 65, pp 115-126

heat transfer coefficients calculated from a relationship that holds for turbulent flow of a fluid of supercritical parameters in a circular tube:

$$Nu_f = \frac{\frac{\xi}{8} Re_f Pr_f}{12{,}7\sqrt{\frac{\xi}{8}}\left(Pr_f^{2/3}-1\right)+1{,}07}\left(\frac{\bar{c}_p}{c_{p_f}}\right)^n\left(\frac{\rho_c}{\rho_f}\right)^{1{,}3};$$

$$\xi=(1{,}82\lg Re_f-1{,}64)^{-2};$$

$$n=f(T_c/T_f,\ T_f/T_w).$$

Until the development of more exact methods of determining local heat transfer coefficients, it is recommended that they be calculated from the above formula with the introduction of the equivalent diameter of the channel as the characteristic dimension. 4 ill., 1 table, 6 references. Yu. D. Barulin.

2/2

USSR UDC 621.314.26

DOLMATOV, R. G., GRIGOR'YEV, V. S., BESSARABOV, G. V., ZUYEV, V. N., Taganrog Radio Engineering Institute

"A Converter of the Mean Frequency of a Random Pulse Train"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 3, Jan 71, Author's Certificate No 291220, Division G, filed 4 Aug 69, published 6 Jan 71, p 124

Translation: This Author's Certificate introduces a converter of the mean frequency of a random pulse train. The device contains a flip-flop, switches, a shaper, two voltage sources of different polarity, and an integrating amplifier. As a distinguishing feature of the patent, the reliability of the converter is improved by including a threshold device whose output is connected to the inputs of the shaper and flip-flop and to the controlling input of one of the switches, through which the input of the entire device is connected to the second input of the flip-flop. The sources of voltage of opposite polarity are connected through the corresponding switches to the inputs of the integrating amplifier. The output of the amplifier is connected to the input of the threshold device.
1/1

USSR

UDC: 621.319.4(088.8)

GRIGOR'YEV, V. S.

"A Fixed Vacuum Capacitor"

USSR Author's Certificate No 280677, filed 3 Feb 69, published 4 Dec 70 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V386 P)

Translation: This Author's Certificate introduces a fixed vacuum capacitor which contains coaxially arranged packets of cylindrical electrodes enclosed in a double hermetic shell. The gap between the sections of the shell is filled with a liquid dielectric. Leads are placed along the axis of the capacitor. As a distinguishing feature of the capacitor, the resistance to mechanical loads is improved by making the leads on the segments between the inner and outer sections of the shell in the form of a cup with holes in the outer walls connected in series with an elastic element such as a bellows which is symmetric with respect to the axis of the capacitor.

1/1

USSR

UDC 621.352.1.035.151(088.8)

PEVZNER, M. G., GRIGOR'YEV, V. V., LEONOV, O. V., KOCHERGINSKIY, M. D., CHUVPILO, A. V.

"[Small Battery]. Galvanic Battery"

USSR Author's Certificate No 276191, filed 16 Dec 66, published 29 Sep 70 (from RZh-Elektrotekhnika i Energetika, No 5, May 1971, Abstract No 5A251P)

Translation: In order to simplify the assembly and improve the voltage of a small battery one end of the case, for example, the bottom is made concave and is supported on the open surface of the electrode with the current tap of the outside element. There is 1 illustration.

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USSR

UDC 533.607.11

GRIGORYEV, V. V., ISAKOV, S. N., KUKLIN, B. A.

"Shock Tube with a Diffuser Near a Diaphragm"

Trudy Leningradskogo Politekhnicheskogo Instituta, Aerotermodinamika (Works of the Leningrad Polytechnical Institute, Aerothermodynamics), No 313, 1970, pp 131-136

Translation: This article contains an investigation of various models of gas flow in a shock tube with a diffusor and in the region of small Mach numbers of the shock wave. Relations are derived which relate the intensity of the shock wave to the initial conditions in the high and low pressure chambers.

The characteristic features of the structure of a device of this type are investigated briefly. The preliminary experimental data obtained are compared with theoretical estimates. There are 5 illustrations and a 3-entry bibliography.

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1/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--SOME OBSERVATIONS ON THE EFFECTIVENESS OF MONOMYCIN IN THERAPY OF GONORRHEA IN MEN -U-

AUTHOR-(05)-GRIGORYEV, V.YE., POTAPNEV, F.V., SKURATOVICH, A.A., GRACHEV, YU.I., VOSKRESENSKAYA, G.A.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK DERMATOLOGII I VENEROLOGII, 1970, NR 4, PP 59-62

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTIBIOTIC, VENEREAL DISEASE, MONOMYCIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0936 STEP NO--UR/0206/70/000/004/0059/0062

CIRC ACCESSION NO--AP0109093

UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109093

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTIVENESS OF MONOMYCIN IN THERAPY OF GONORRHEAL INFECTION IN 145 MEN WAS STUDIED. THE DRUG WAS INJECTED INTRAMUSCULARLY IN A DOSE OF 500,000 UNITS EVERY 10-12 HOURS. PATIENTS WITH ACUTE AND SUBACUTE GONORRHEAL URETHRITIS RECEIVED A COURSE DOSE OF MONOMYCIN OF 2,000,000 UNITS. FOR PATIENTS WITH COMPLICATED AND CHRONIC FORMS OF GONORRHEAL INFECTION COURSE DOSES WERE INCREASED TO 3,500,000-4,000,000 UNITS. GONOCOCCI DISAPPEARED FROM THE SECRETE IN THE MAJORITY OF PATIENTS WITHIN 6-7 HOURS. ETIOLOGICAL CURE AFTER MONOMYCIN THERAPY WAS ACHIEVED IN 96.6PERCENT OF PATIENTS. FACILITY: OTDEL GONOREI TSENTRAL'NOGO N I KOZHNO VENEROLOGICHESKOGO INSTITUTA MINISTERSTVA ZDRAVOOKHRANENIYA SSSR, MOSCOW.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--GAMMA RADIATION OF PALLADIUM-99 -U-

AUTHOR-(05)-ANTONYEVA, N.M., GRIGORYEV, YE.P., KATYKHIN, G.S., NIKITIN, M.K., PROTASOVA, L.F.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSR, SER. FIZ. 1970, 34(1), 54-8

DATE PUBLISHED--------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--GAMMA SPECTRUM, PALLADIUM ISOTOPE, HALF LIFE, ISOTOPE SEPARATION, RADIATION INTENSITY, RADIOACTIVE DECAY SCHEME, BETA PARTICLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0228 STEP NO--UR/0048/70/034/001/0054/0058

CIRC ACCESSION NO--AP0105304

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002201020007-7"

UNCLASSIFIED PROCESSING DATE--16OCT70

2/2 025

CIRC ACCESSION NO--AP0105304

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE GAMMA SPECTRUM OF THE PD FRACTION FROM CD IRRADIATED WITH 660-MEV RHO WAS STUDIED WITH GE(LI) DETECTORS. BESIDES PRIME99 PD, THE FRACTION ALSO CONTAINED OTHER PD NUCLIDES, AND PRIME98 RH, PRIME99 RH, AND PRIME104 AG. THE PRIME99 PD GAMMA LINES WERE IDENTIFIED FROM THEIR HALF LIVES AND FROM THE CONSISTENCY IN RELATIVE INTENSITIES DURING VARIOUS STAGES AFTER IRRADN. THE PROBABLY DECAY SCHEME OF PRIME99 PD IS PRESENTED. THE BETA TRANSITIONS TO PIRME99 RH LEVELS SHOWED A HIGH DEGREE OF PROBABILITY: LOG FT EQUALS 4.9 FOR THE 1ST EXCITED LEVEL. SOME SIMILARITIES IN THE DECAY SCHEMES OF PRIME99 PD AND PRIME101 PD ARE POINTED OUT. FACILITY: NAUCH.-ISSLED. FIZ. INST., LENINGRAD. GOS. UNIV., LENINGRAD, USSR.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--YTTERBIUM 169 LEVELS ARISING DURING THE DECAY OF LUTETIUM 169 -U-

AUTHOR-(04)-BONCHOSMOLOVSKAYA, N.A., GRIGORYEV, YE.P., LIPTAK, J.,
URBANEC, J.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(1), 12-28

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SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY

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RADIOACTIVE DECAY SCHEME, TRANSITION RADIATION, GAMMA TRANSITION,
NEUTRON BOMBARDMENT, DEUTERON INTERACTION

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PROXY REEL/FRAME--1988/0278 STEP NO--UR/0048/70/034/001/0012/0028

CIRC ACCESSION NO--AP0105352
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UNCLASSIFIED PROCESSING DATE--16OCT70

2/2 016

CIRC ACCESSION NO--AP0105352

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE LU FRACTION SEPD. BY CHROMATOG. FROM TA TARGET IRRADIATED WITH 660-MEV P WAS STUDIED WITH 6 AND 12 CM PRIME3 GE(LI) DETECTORS WITH RESOLN. OF 4.5 AND 5.5 KEV, RESP. LINES (127) IN THE ENERGY RANGE 24.2-2300 KEV WERE TABULATED TOGETHER WITH THEIR INTENSITIES REFERRED TO THE 1184.5 KEV LINE AS THE STD. A DETAILED DECAY SCHEME IS PRESENTED. THE PRIME169 YB GAMMA BANDS WITH GROUND LEVELS SEVEN HALVES PLUS (633), ONE HALF MINUS (521), FIVE HALVES MINUS (512), FIVE HALVES MINUS (523), THREE HALVES MINUS ((521) PLUS (521) SUBVIBR PLUS ...), (512) SUBGAMMA,VIBR PLUS ONE HALF MINUS (510), FIVE HALVES PLUS (642), THREE HALVES PLUS ((651) PLUS (633) SUBVIBR) ARE DISCUSSED IN DETAIL IN TERMS OF THEIR OCCURENCE DURING (N, GAMMA), (D,P), (D,T) REACTIONS, AND BETA TRANSITIONS, THEIR MULTIPOLARITY, AND RELATIVE PROBABILITY. ALSO DISCUSSED ARE THE 960.4-KEV, SEVEN HALVES PLUS, SEVEN HALVES MINUS (514), 1449.7 MINUS, AND 1462.8-KEV LEVELS AND LEVELS WITH ENERGY LARGER THAN 1500 KEV. THE 1070.6-KEV TRANSITION (EO PLUS E2) WAS ASCRIBED TO DEESCITATION OF A BETA VIBRATIONAL LEVEL. ACCORDING TO LOG FT VALUES 3 TYPES OF BETA DISINTEGRATION OF PRIME169 LU WERE FOUND. FACILITY: OB'EDIN. INST. YAD. ISSLED., DUBNA, USSR.

UNCLASSIFIED

USSR UDC 616.281-073-18

FILATOV, V. I., Professor, and GRIGOR'YEV, YE. S., Engineer, Ear Nose and Throat Clinic of the Arkhangel'sk Medical Institute

"A New Design of an Electromechanical Guided Chair with Device Recording Nystagmus"

Kiev, Zhurnal Ushnykh Nosovykh i Gorlovykh Bolezney, No 6, 1971, pp 103-104

Abstract: An outline and a description of a rotary chair designed and built by the authors at the Ear Nose and Throat Clinic are presented. The mechanisms are mounted in the encased base and pedestal of the chair. The angular velocity can be increased from 1 to 180° per sec, yielding smooth acceleration and an identical deceleration after a desited period of uniform velocity. The velocity is indicated by a dial pointer which deflects in proportion to the number of RPM's. EEG electrodes project from a flexible tube at the level of the patient's head. The leads run into the pedestal, where the currents are picked up by another pair of wires connected to a recording instrument. The chair was tested and proved sturdy and reliable.

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UDC 620.178.53

USSR

GRIGOR'YEV, YE. T., and GRONSKIY, V. I.

"The Reaction of a Mechanical System to a Random Effect"

Kiev, Priklandnaya Mechanika, Vol 9, No 1, Jan 73, pp 105-109

Abstract: There is shown the incorrect nature of the problem of calculation of the spectral density of a reaction on the basis of the spectral density of the effect and the frequency characteristic of the mechanical system with account taken of the errors that are unavoidable in engineering practice, or the finiteness of the value of the resolving power of spectral analysis. The problem of determination of the spectral density (or dispersion) of the reaction of a mechanical system on the basis of spectral density (or dispersion) of the input effect is incorrect in the sense that a considerable change of the spectral density and of the total dispersion of the reaction of the system can correspond to a small change of the spectral density of the input effect, which is within the limits of the errors of its evaluation.

In any random process, including "white noise," there are sharp changes of phase of the narrow-band components. Care should be taken in realization of the methods for utilizing the reactions of a system to "white noise" or

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GRIGOR'YEV, YE. T., and GRONSKIY, V. I. , Prikladnaya Mekhanika, Vol 9, No 1, Jan 73, pp 105-109

some other random effect to obtain dynamic characteristics, and for determining the frequencies, shapes, and decrements of the oscillations of mechanical designs. 3 figures, 4 references.

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USSR

UDC 577.391

SHIKHODYROV, V. V., ARLASHCHENKO, N. I., and GRIGOR'YEV, YU. G., Institute of Biophysics, Ministry of Health USSR, Moscow

"Morphological Changes and Disturbances in the Physiological Functions Induced in the Rabbit's Organ of Equilibrium by the Action of Ionizing Radiation"

Moscow, Radiobiologiya, Vol 11, No 4, Jul/Aug 71, pp 560-565

Abstract: Rabbits were irradiated with gamma-rays in a dose of 800 r at a dose rate of 500 r min. The most pronounced disturbances of funtions of the vestibular analysor developed within the first hours after irradiation. During this time compression of the membranous labyrinth took place as a result of disturbed lymph circulation. Because of this compression, crypts connecting the membranous with the osseous labyrinth were torn apart together with the blood vessels passing through them. Subsequently dystrophic changes took place in the inner ear, leading finally to necrosis of the sensory and secretory epithelium. Within the first hours after the action of radiation, there were pronounced changes in the labyrinth function, which were indicated by a lowering of the intensity of the nystagmus reaction in response to stop stimuli and a reduced sensitivity to position changes. In later stages of the
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radiation injury, the degree to which the functions of the vestibular analysor were impaired did not correspond to the morphological changes in the inner ear, because compensatory mechanisms of the central nervous system came into play.

RADIOBIOLOGICAL EFFECTS AFTER 3-YEAR GAMMA IRRADIATION OF DOGS

[Article by Yu. G. Grigor'yev, B. A. Markelov, V. I. Popov, A. A. Akhmov, A. V. Ilyukhin, I. P. Ivanitskaya, A. V. Sedov, and V. A. Kazakov; Moscow, Kosmicheskaya Biologiya i Meditsina, Russian, Vol 6, No 1, pp 3-7, 1972, submitted for publication 25 March 1971]

Abstract: This paper summarizes the results of a three-year radiobiological experiment on dogs. In several experimental series chronic irradiation with varied dose rates (21 to 150 rad per year) and chronic irradiation combined with acute exposures (total doses of 190 rad per year) were applied. Clinical hematological, physiological and cytological examinations demonstrated that the animals maintained a satisfactory clinical condition and exhibited no serious organic radiation damage. However, a decrease in their reactivity were noted.

A lack of adequate information in the literature on the biological effects induced by constant exposure to ionizing radiation in the doses possible during prolonged space flights served as a basis for conducting a special experiment on a large number of dogs. The scientific program for the experiment, the irradiation conditions and the results obtained over two years after beginning this experiment have been published earlier (Yu. G. Grigor'yev, et al., 1968, 1970).

This paper gives materials obtained after three years of irradiation of the experimental animals. Data on the number of animals, doses and irradiation conditions are given in Table 1.

After three years of the experiment the condition of the animals, evaluated from the results of systematic examinations (inspections, temperature measurement, measurements of body weight, pulse and respiration rates), remains satisfactory. The incidence of disease in the irradiated groups (conjunctivitis, dyspepsia, etc.) was low and did not exceed the corresponding incidence in the group of control animals.

GRIGOR'YEV, Yu. G.

USSR

GRIGOR'YEV, Yu. G., FARBER, Yu. V., and VOLOKHOVA, N. A.

Vestibulyarnyye reaktsii (Metody issledovaniya i vliyaniya razlichnykh faktorov vneshney sredy) (Vestibular Reactions [(Methods of Investigation and the Effect of Various Factors in the External Environment)

Moscow, "Meditsina", 1970, 196 pp

Translation: Annotation: This monograph reports data on the quantitative characteristics of the sensitivity and reactivity of the vestibular analysor. It describes the nature of the functional connection between the intensity of vestibular reactions and the magnitudes of various parameters of adequate stimuli (strength, duration) of the nonaural part of the labyrinth. A special section contains data on the nature of the organism's reactions, on the characteristics of adaptation, of shifts in the sensitivity and reactivity of the vestibular analysor during the prolonged (up to 15 days) periodic effect of Coriolis accelerations. An analysis is made of the motion-sickness syndrome which occurs when a person remains in a rotation chamber. The urgency of the present investigation is conditioned, apart from its general physiological significance, by the prospects of creating artificial gravity on space vehicles.

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GRIGOR'YEV, Yu. G., et al, "Meditsina", 1970, 196 pp

Material is examined regarding the effect on the vestibular analysor of a number of other environmental factors, principally the effect of ionizing radiation. The dynamics of the development of radiation injury of the vestibular analysor has been traced and the degree of resistance of the compensatory processes has been evaluated. Experiments set up during acute and chronic irradiation in small and large doses make it possible to draw conclusions about the sensitivity of the vestibular analysor to ionizing radiation and also about the possible reactions of the organism in the event of their occurrence. Observations were made using modern methods of investigating vestibular function (cupulometry and electrographic recording of reactions). From the Authors. Questions relating to the study of vestibular analysor function have been worked out for many decades. A great quantity of published works has recently appeared in the Soviet Union and abroad regarding one or another aspect of vestibular analysor function. The perfection of vestibular measuring methods, based on the application of an adequate stimulation of the sense organs of the vestibular analysor, has helped make possible the considerable success attained in that area of physiology. It must be emphasized once again that the successes now being achieved by Soviet labyrinthologists in the study of vestibular analysor function represent the harmonious continuation of the

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GRIGOR'YEV, Yu. G., et al, "Meditsina", 1970, 196 pp

work of such researchers as S. F. Shteyn, V. I. Voyachek, K. L. Khilov, V. F. Undrits, and A. Kh. Min'kovskiy. The study of the function of the nonaural part of the labyrinth, especially the cupular apparatus, has great scientific and practical significance. Data on the nature of vestibular reactions of the organism in response to the effect of angular accelerations are equally of interest to space medicine specialists and otologists and neuropathologists. The authors of the present monograph, which is being brought to the attention of readers, have for a number of years made a study of vestibular reactions in clinical and experimental studies of the effect on the organism of various environmental factors. As a result a great deal of factual material has been accumulated which may be useful to a great many specialists. We consider it our pleasant duty to express sincere thanks to N. I. Arlashchenko, B. B. Bokhov, V. A. Galichego and V. S. Sveshinkov, who participated in individual phases of the work.

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GRIGOR'YEV, Yu. G., et al, "Meditsina", 1970, 196 pp

PREFACE. As so often happens, heightened interest in understanding some phenomenon or other is inevitably accompanied by the growth of technical capabilities making experimentation possible. Suitable examples have been cited in abundance, but it is enough to recall the evolution of the working concepts of visual and auditory analysors. As a result, researchers have long been equipped with reliable quantitative criteria for evaluating the functional state of those systems. At the present time, an analagous process is also underway in the study of vestibular analysor function. It can be said with complete conviction that this field of analysor physiology is now studied least of all. One of the reasons for such a situation is the specific lag, until recently, in the development of vestibulometry. Due to the efforts of Soviet and foreign investigators, labyrinthologists are today equipped with methods of procedure which permit the objective study of the vestibular analysor on a rigidly quantitatibe basis. As a result, researchers in the physiology of this analysor system are now rapidly accumulating facts characterizing its basic activity. It is obvious that, lacking the concepts of the basic functional characteristics of the vestibular analysor, it is difficult to study its function under the influence of various environmental factors. Notwithstanding the great amount of work expended on this question, many of

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GRIGOR'YEV, Yu. G., et al, "Meditsina", 1970, 196 pp

its aspects require more exact definition and further investigation. In physiology textbooks and manuals, the sections dealing with vestibular analysor function are treated very inadequately. It is therefore fitting to welcome the appearance of works which summarize the experimental data on the physiology of analysor systems. As a result of the experiments conducted by the authors, additional facts were obtained which described the sensitivity and reactivity of the vestibular analysor of experimental animals and of man. Special sections deal with the significance of the time factor in the action of adequate stimuli in arousing vestibular reactions, and also deal with questions of interrelationships between various components. (see chapters I-III). The rapid development of space medicine and biology made necessary a detailed and still wider study of some areas of physiology. Among the various questions in modern space physiology, the study of vestibular analysor function occupies a central place. Available information permits the assumption that a prolonged state of weightlessness can exert a definite influence on the vital activity and behavior of cosmonauts. In this connection it is practicable to create a spaceship with artificial gravity by rotating it around its own axis. In this case, man is confronted with Coriolis accelerations, an adequate stimulus

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GRIGOR'YEV, Yu. G., et al, "Meditsina", 1970, 196 pp

of the vestibular analysor. Research in this direction is fairly recent and the information available on this question is still insufficient. A special section of the monograph contains data about the organism's reactions, adaptation characteristics, and shifts in the sensitivity and reactivity of the vestibular analysor during the prolonged effect (up to 15 days) of periodic Coriolis accelerations. An analysis is made of the motion-sickness syndrome, which occurs when a person stays in a slowly rotating chamber. The urgency of the present investigation is determined, apart from its general physiological significance, by the prospects of creating artificial gravity in space vehicles. Numerous observations indicate that the effect on an organism of stimuli which are not adequate for the vestibular analysor can substantially alter the functional state of the vestibular analysor. Data on the effect of ionizing radiation on the vestibular analysor are also presented (see Chapter V). Data is analyzed regarding the effect on the vestibular analysor of a number of other environmental factors and above all of ionizing radiation. The dynamics of radiation injury of the vestibular analysor is traced and the degree of resistance of the compensatory processes is evaluated. Experiments conducted with acute or chronic irradiation in small and large doses make it possible to draw conclusions about the sensitivity of the vestibular analysor

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GRIGOR'YEV, Yu. G., et al, "Meditsina", 1970, 196 pp

to ionizing radiation, and also about the possible reactions of the organism. Some of the data deals with the reaction of a person to small doses of radiation when a number of physical environmental factors are acting simultaneously. Particular attention should be paid to the authors' suggestion that the vestibular analysor is a critical organ, on the basis of permissible levels of radiation during spaceflight. All of the observations were made on people and experimental animals using modern methods of investigating vestibular function (cupulometry and electrographic recording of reactions).

Academician V. V. Parin

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GRIGOR'YEV, Yu. G., et al, "Meditsina", 1970, 196 pp

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GRIGOR'YEV, Yu. G., et al, "Meditsina", 1970, 196 pp

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USSR UDC 536.46:533.6

GRIGOR'YEV, Yu. M.

"Evaporation and Combustion of n-Heptane in an Oxidizing Medium"

V sb. Goreniye i vzryv (Combustion and Explosion -- Collection of Works), Moscow, "Nauka", 1972, pp 221-226 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B937)

Translation: A thermogravimetric method was used to make an experimental study of the evaporation and combustion of a drop of n-heptane in an atmosphere of air, oxygen, and nitrogen over a wide temperature range. It is shown that the gas-phase reactions of the oxidizer have a considerable effect on the evaporation processes. The combustion characteristics are determined as a function of the parameters of the process. The macrokinetic characteristics of reactions occurring in the combustion of the drop are calculated using data on the combustion limits. 8 ref. Author's abstract.

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USSR

UDC 536.46:533.6

MERZHANOV, A. G., GAL'CHENKO, Yu. A., GRIGOR'YEV, Yu. M., MASHKINOV, L. B.

"Ignition of an Aluminum Wire"

V sb. Goreniye i vzryv (Combustion and Explosion -- Collection of Works), Moscow, "Nauka", 1972, pp 245-249 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B941)

Translation: The ignition of an aluminum wire in a pure hydrogen flow at atmospheric pressure was studied by an electrothermographic method. The ignition temperatures and the critical electrical powers were determined as a function of the rate of flow of the gas and the diameters of the wires. The ignition parameters were determined as a function of the initial thickness of the oxide film on the wire for different methods of application. 7 ref. Authors' abstract.

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USSR

UDC: 532.61

GRIGOR'YEV, YU.M., KHAYKIN, B.I., TROYAN, N.M., MERZHANOV, A.G., Affiliate of the Institute of Chemical Physics, Chernogolovka, Academy of Sciences USSR

"The Theory of Equilibrium of Drop Vaporization"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 44, No 3, Mar 70, pp 647-652

Abstract: General transfer equations in a two-component system are used as the basis in deriving a system of equations which describes the equilibrium of vaporization of a drop when the process takes place at high intensity. The characteristics of vaporization are calculated with regard to Stefan flux, the temperature dependence of the transfer coefficients, the overall pressure differential of the medium due to vaporization, and the difference between the molecular weight of the components of the medium. Expressions are derived for the rate of vaporization, the drop surface temperature, and dimensionless transfer numbers. Generalizing criteria are found which characterize the part played by Stefan flux. Corrections for the rate of vaporization are found which account for the temperature dependence of the transfer coefficients. The pressure differential in the gas is calculated. Vaporization of the drop in an atmosphere of the same vapor is considered. Calculations for water and ethyl alcohol by the proposed formulas show satisfactory agreement with the experimental data of various authors.

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GRIGOR'YEV, Yu. M.

Barzykin, V. V., V. A. Verteynikov, Yu. M. Grigor'yev, and A. S. Rozenberg.
Results of Third All-Union Symposium on combustion and explosions. FGiV, no. 4, 1971, 616-618.

The Symposium, which took place July 5-10, 1971 in Leningrad, was attended by 730 representatives from 210 organizations. There were three sections: on combustion, detonation, and kinetics. Three plenary reports and 154 section reports were presented. The plenary sessions reports were presented by Ya. B. Zel'dovich, (The contribution of D. A. Frank-Kamenetskiy to the theory of combustion), V. V. Pomerantsev (Atomization, evaporation, and combustion of liquid fuel), and A. D. Margolin (The present status and some problems of the combustion theory of condensed systems).

At the section on combustion, 79 reports were presented in 9 subject areas: ignition in condensed systems, steady combustion of condensed systems, combustion stability and non-steady combustion of condensed systems, combustion in dispersion systems, flame propagation limits in gases, laminar combustion of gases, combustion of organic fuels, turbulent combustion of gases, and combustion in supersonic flow. The problem of supersonic combustion was included for the first time in the program of the All-Union Symposiums.

At the section on detonation, 36 reports were presented in 4 subject areas: detonation of condensed explosives, detonation in gaseous and heterogeneous systems, sensitivity of explosives to mechanical interactions, and physico-chemical transformations of materials from shock wave effects. In addition to reports on the continuation of theoretical and experimental research on shock wave propagation in condensed media, other reports in this section dealt with

USSR UDC: 533.6.011.8

GRIGOR'YEV, Yu. N., IVANOV, M. S., Institute of Theoretical and Applied Mechanics, Siberian Department of the Academy of Sciences of the USSR, Novosibirsk

"Investigation of the Applicability of Certain Statistical Models in the Problem of Shock Wave Structure"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Tekhnicheskikh Nauk, No 13(208), Issue 3, Oct 72, pp 33-38

Abstract: Various model kinetic equations of the form

$$\vec{\xi}\vec{\nabla}_r f = \nu(M_\nu)\{f_+(\vec{\xi}, M_+) - f\},$$

are used to study flows of rarefied gas, where ξ is molecular velocity, $\vec{r}$ is a coordinate in physical space, $f(\vec{r},\vec{\xi})$ is the distribution function, ν, f_+ are functions of some aggregates of moments of the distribution function M_ν and M_+ respectively. A model of this type is found which is suited to describing flows of rarefied gas with large gradients of the macroparameters. The choice of model is based on comparing theoretical

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GRIGOR'YEV, Yu. N., IVANOV, M. S., Izv. SO AN SSSR, Ser. Tekhn. Nauk, No 13(208), Issue 3, Oct 72, pp 33-38

curves for the distribution of density in the shock wave as found for a number of models with the results of experiments conducted on direct shock waves in argon.

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UDC 541.67:547.26'118

USSR

MASTRYUKOVA, T. A., SPIVAK, L. L., GRIGOR'YEVA, A. A., URZHUNTSEVA, Ye. K., and KABACHNIK, M. I., Institute of Organoelemental Compounds, Academy of Sciences USSR, Khar'kov State University

"Ionization Constants of Dithiophosphoric Acids in Absolute Ethanol"

Leningrad, Zhurnal Obshchey Khimii, Sep 71, Vol 41, No 9, pp 1938-1941

Abstract: Measurements were made of the ionization constants of organic dithiophosphoric acids in absolute ethanol. There exists a linear relationship between the ionization constant values of acids and $\Sigma\sigma_\phi$ of the substituents at the phosphorus atom. It is shown that the conditions for the solvation of molecules and anions of dithiophosphoric acids in 100% ethanol markedly differ from those in 7 and 80% aqueous ethanol. In switching from 7 to 80% ethanol, ΔpK_a remains constant for all acids under study. In 80 to 100% ethanol, ΔpK_a changes and increases from dialkyldithiophosphoric to dithiophosphonic and dithiophosphinic acids. In the former case, ΔpK_a depends largely on changes in the solvation energy of molecules while in the latter case, it depends on that of ions. The difference in the change of the solvation energy of ions and molecules results from the differentiating action of the solvent on the strength of

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USSR

MASTRYUKOVA, T. A., et al., Zhurnal Obshchey Khimii, Sep 71, Vol 41, No 9, pp 1938-1941

the acids. In the present case alcohols appear to have the highest differentiating action on the strength of dithiophosphoric acid. The difference between the strength of dithiophosphoric acids in alcohol and that in aqueous alcohol is close to 2.5 orders of magnitude.

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UDC: 681.3:519.2

USSR

TIKHOMIROV, D. L., PAVLOV, I. S., GRIGOR'YEVA, G. A.

"A Device for Analyzing Pseudorandom Test Sequences"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 6, Feb 72, Author's Certificate No 328469, Division G, filed 9 Jun 70, published 2 Feb 72, p 159

Translation: This Author's Certificate introduces a device for analyzing pseudorandom test sequences. The device contains a recurrent code ring register, half-adders, frequency dividers, a control flip-flop, AND and OR circuits, and inverters. As a distinguishing feature of the patent, the effectiveness of analyzing pseudorandom test sequences is improved by connecting one of the inputs of the first OR circuit to an input of the first AND circuit and also through an inverter to the output of the first half-adder. The second input of the OR circuit is connected to an input terminal of the device and also through a second inverter to another input of the first AND circuit. The output of the first OR circuit is connected through a third inverter to the input of the second OR circuit. A third input of the first AND circuit and a second input of the second AND circuit

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TIKHOMIROV, D. L. et al., USSR Author's Certificate No 328469

are connected through the second OR circuit to the input of the first frequency divider. This frequency divider is connected through decoders to the inputs of the control flip-flop, whose outputs are connected to the first inputs of the third and fourth AND circuits. The second input of the third AND circuit is connected to the output of the second half-adder. This half-adder is connected to one of the inputs of the first half-adder, whose second input is connected to the second input of the fourth AND circuit and to the other input terminal of the device. The reset line of the first frequency divider is connected to the output of the second frequency divider. The second frequency divider is connected to a cadence pulse source.

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1/2 006 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--INFLUENCE OF SEED AGE ON THE CHARACTER OF THE CYTOGEAETIC ACTION OF MUTAGENS HAVING A DELAYED EFFECT -U-

AUTHOR-(03)-PROTOPOPOVA, YE.M., SHEVCHENKO, V.V., GRIGORYEVA, G.A.

COUNTRY OF INFO--USSR

SOURCE--GENETIKA 1970, 6(1), 29-35

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SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PLANT MUTATION, MUTAGEN, ETHYLENE, IMINE

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2/2 006 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125093

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF THE PHYSIOL. STATE OF CREPIS CAPILLARIS SEEDS ON THE CYTOGENIC ACTION OF SOME MUTAGENS WITH DELAYED EFFECTS (ETHYLENIMINE, ET METHANESULFONATE, AND MALEIC HYDRAZIDE) WAS STUDIED. IN SEEDS STORED 2 MONTHS, THE MUTAGENS INDUCED ONLY CHROMATID ABERRATIONS. SEEDS STORED A LONGER TIME (TO 6.5 YRS) OR KEPT 12 DAYS AT 50DEGREES SHOWED CHROMATID AND CHROMOSOME ABBERRATIONS WHEN SUBJECTED TO ETHYLENIMINE. FACILITY: INST. DEVELOP. BIOL., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 662.997

GRIGOR'YEVA, G. M., KREYNIN, L. B., LANDSMAN, A. P.

"Effect of Cosmic Radiation on Solar Elements"

Tashkent, Geliotekhnika, No 5, 1971, pp 3-17

Abstract: A survey of studies of the mechanism of radiation damage to solar elements, shielding of them and increased resistance to irradiation is presented. The discussion includes 1) the radiation environment in space, 2) the effect of hard radiation on silicon photoconverters -- the life of minority carriers in the material, the spectral distribution of the photosensitivity, the photoenergy characteristics -- 3) protection of solar cells from cosmic radiation and 4) improving the radiation resistance of solar cells. Graphs are presented showing the equal intensity lines in the plane of the magnetic meridian for two energies of electrons and protons in space, the inverse lifetime in the base region of n-p-photoconverters bombarded by electrons as a function of dosage, the energy dependence of the effectiveness of electron damage to n and p-silicon, the energy dependence of the effectiveness of proton damage to p-silicon with a specific resistance of one ohm-cm, the spectral distribution of silicon photoconverters bombarded with protons with an energy of E = 19.6 megaelectron volts and the spectral characteristics of

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002201020007-7"

USSR

GRIGOR'YEVA, G. M., et al., Geliotekhnika, No 5, 1971, pp 3-17

silicon photoconverters bombarded by protons with an energy of E = 0.2 mega-electron volts, the cross section of a photoconverter with sharply nonuniform concentration distribution of defects with respect to depth, the spectral distribution of the collection factor of a photoconverter bombarded by protons with an energy of 400 kiloelectron volts at an angle of 45°, the load characteristics of a silicon photoconverter bombarded by protons with an energy of 6.3 and 0.2 megaelectron volts, and the power taken from a silicon photoconverter as a function of the load voltage in the case of bombardment by various integral proton fluxes with an energy of 6.3 megaelectron volts and 0.2 mega-electron volts. The characteristicsof these plotted data are discussed. An equation is presented for calculating the damage to silicon photoconverters by protons and high-energy α-particles and, with some approximation, electrons. The equation is subjected to transformation making it applicable when experimental data are available on the effectiveness of damage to photoconverters with protection of a given thickness or preliminary calculations are performed which establish the equivalence between the omnidirectional unit fluxes of particles of various types and energies and the standard radiation flux -- in the given case, electrons with an energy of 1 megaelectron volt. The most prospective methods of improving radiation resistance are considered to be

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GRIGOR'YEVA, G. M., et al., Geliotekhnika, No 5, 1971, pp 3-17

high-temperature annealing of the converters and the manufacture of p-n-type photoconverters with an admixture of lithium. Replacement of silicon by GaAs for the manufacture of photoconverters may be useful from the point of view of sensitivity to hard radiation. A lengthy bibliography is presented as a basis for the indicated discussion and conclusions.

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Photoelectric Effect UDC: 621.472:621.383

USSR

GORODETSKIY, S. M., GRIGOR'YEVA, G. M., KREYNIN, L. B., LANDSMAN, A. P., LAZOVSKIY, V. V., and SOMINSKIY, M. S.

"Difference in Radiation Stability of n-Type and p-Type Silicon Photoelements"

Tashkent, Geliotekhnika, No. 1, 1971, pp 3-8

Abstract: The damaging effects of cosmic radiation on earth satellite solar batteries and the study of the behavior of silicon photocells in such fields are the subjects of this article. Such studies have shown that p-type silicon is more radiation-proof than n-type, the difference in the damage sustained by the two being a function of the kind and energy of the particles bombarding them. Research conducted by the authors on the temperature dependence of minority carrier lifetimes in irradiated p-type silicon with a resistivity of 1 ohm·cm showed that the recombination center subject to electron bombardment with an energy level of 1 Mev and 8 Mev retains the same position in the forbidden zone, with a ratio of the electron capture cross section to the hole capture cross section equal to 70. Similar effects are observed in n-type silicon subjected to electron irradiation. This is essentially a review article, with a bibliography of 19 titles.

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USSR

GORODETSKIY, S. M., et al, Geliotekhnika, No. 1, 1971, pp 3-8

The authors are associated with the All-Union Order of the Labor Red Banner Scientific Research Institute of Current Sources.

UDC 535.215.6

USSR

GORODETSKIY, S.M., GRIGOR'YEVA, G.M., KREYNIN, L.B., LAZOVSKIY, V.V., LANDSMAN, A.P., SOMINSKIY, M.S.

"Effect Of Electron Irradiation On The Recombination Parameters Of p-Silicon And The Photoelectric Characteristics Of Silicon n-p Junctions"

V sb. Radiatsion. fiz. nemet. kristallov (Radiation Physics Of Nonmetal Crystals--Collection Of Works), Minsk, Nauka i tekhn., 1970, pp 159-266 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1B269)

Translation: The results are discussed of an investigation of the bombardment of silicon photoconverters by electrons in the 0.5--18 Mev range of energies. As follows from the photoelectric characteristics presented, impairment of the photoconverters by electrons is characteristics for the case of the action of penetrating hard radiation. The energy dependence was experimentally found of the damage factor of the p-silicon base with a resistivity of 1 ohm.cm. An analysis of the changes of the dependences of the lifetime on the injection level and the temperature made it possible to draw the preliminary conclusion that the center determining the decrease of the lifetime of the p-Silicon irradiated by electrons is found at 0.2 ev above the top of the valence band and has a ratio of the electron and hole capture cross sections of ~ 100. 6 ill. 17 ref.

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UDC 621.383.567

USSR

GRIGOR'YEVA, G.M., KREYNIN, L.B., LANDSMAN, A.P.

"Investigation Of The Possibilities For An increase Of The Stability Of The Photoelectric Characteristics Of Irradiated Silicon n-p Junctions"

V sb. Radiatsion. fiz.nemet. kristallov (Radiation Physics Of Nonmetal Crystals--Collection Of Works), Minsk, "Nauka i tekhn.," 1970, pp 167-175 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1B270)

Translation: Methods are considered for increasing the stability of photoconverters operating in the conditions of hard radiation action. One of the methods in question is thermal annealing of the irradiated devices. A change is considered in the process of annealing of the spectral distribution of photosensitivity and the diffusion length of the minority carriers in the base of irradiated n-p type photoconverters. Another possibility for assuring radiation resistance is doping them with lithium. The results are presented of irradiation and low-temperature annealing of p-n type photoconverters with an impurity of lithium and various concentrations of oxygen. In the case when the content of oxygen in silicon is small ($< 10^{17}$ cm^{-3}) devices with an impurity of lithium reveal an extremely high resistance to irradiation. The ability of lithium to neutralize recombination centers in silicon having a nonradiation origin is also shown. 5 ill. 5 ref. G.B.

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USSR

UDC [illegible]

GRIGOR'YEVA, G. M., POPOV, E. V., and NOSYREVA, Ye. S., Institute of Petroleum and Coal Chemical Synthesis, Angarsk

"Specifics of Formation and Development of Cracks During Rupture of Hydrogenated Iron"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 30, No 3, Sep 70, pp [illegible]

Abstract: Technical iron was studied in the annealed state. Specimens [illegible] mm in diameter were hydrogenated electrolytically to a content of 3 ml/100 g, then tested at -196 to +20° C at a rate of extension of $6 \cdot 10^{-4}$ sec^{-1}. After rupture, the structure of the metal near the rupture surfaces was studied. The specifics of the structure and location of cracks in the hydrogenated iron indicated that under the temperature-rate conditions of formation of reversible hydrogen embrittlement, the formation of the principal crack occurs by formation of a large number of seed cracks, their development, and subsequent combination upon viscous rupture of the bridges between them. This is confirmed by fractographic analysis.

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USSR

UDC 547.26'118

TOROPOVA, V. F., CHERKASOV, R. A., SAVEL'YEVA, N. I., GRIGOR'YEVA, L. A., SHERGINA, I. V., OVCHINNIKOV, V. V., and PUDOVIK, A. N., Kazan' State University imeni V. I. Ul'yannov-Lenin

"Study of Stability of Complexes of Silver, Nickel and Cobalt Ions With Phosphorus Dithioacid Derivatives"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 8, Aug 71, pp 1673-1676

Abstract: A study was made of the composition and stability of complex compounds of silver ions with a series of phosphorus dithioacid derivatives, as well as complexes of nickel and cobalt ions with diethyldithiophosphoric acid by the potentiometric method in a 90-percent ethanol-aqueous solution at an ionic strength of 0.3 and a temperature of 25°. Stability constants ($\log \beta_2$) are determined and correlated with constants for substituents at the phosphorus atom in the molecule of the ligand, particularly for the 2,3-butylene glycol substituent.

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Acc. Nr: AP0049791 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: UR 0138

101586n **Molecular-weight distribution of cis-1,4-polybutadiene in relation to its preparation conditions.** Shatalov, V. P.; Grigor'eva, L. A.; Kistereva, A. E.; Grigor'ev, V. P.; Pozina, E. N. Voronezh. Filial Vses. Nauch.-Issled. Inst. Sin. Kauch. im. Lebedeva, Voronezh, USSR. *Kauch. Rezina* 1970, (5), 1-3 (Russ). The mol. wt. distribution of the title polymer (I) dissolved in C_6H_6 + C_7H_8 was studied by ultracentrifugation. Increased degree of conversion of butadiene (II) led to a displacement of the mol. wt. distribution curve max. towards the higher mol. wts., but increased polymn. temp. of II caused a shift in the mol. wt. distribution curve max. toward lower mol. wts. The mol. wt. distribution of I depended on the way in which the organoaluminum compd. and Ti halide catalysts were added. Thus, fractional addn. of the 2 catalysts to polymg. II brought about a significant widening in the mol. wt. distribution of I and increased content of low mol. wt. and high mol. wt. fractions. Fractional addn. of II had a favorable effect on polydispersity and improved polymer extrudability. CKJR

REEL/FRAME
19801713

Acc. Nr.: AP0029329 Ref. Code: UR 0240

PRIMARY SOURCE: Gigiyena i Sanitariya, 1970, Nr 1, pp 32-36

REMOVAL OF CERTAIN ENTERIC VIRUSES AND BACTERIA FROM SEWAGE IN A CIRCULATION OXIDIZING CHANNEL

Goncharuk, Ye.I.; Grigor'yeva, L.B.; Bey, T.V.; Shulyak, E.V. Shulyak, E.V.; Korchak, G.I.

Investigations have shown the treatment of sewage in a circulation oxidizing channel for two days to be a highly efficient means of decontamination judging by chemical indices. The sewage proved to be free of Coxsackie B5 and ECHO 19 viruses in 24 and 48 hours consecutively and that of Esch. coli bacteriophage in 12 hours in the initial concentration amounting 50 PFU/ml and in 16 hours, when it amounted to 6000—7000 PFU/ml. The pathogenic serotypes of B. coli in a mixture of sewage and active slime were recoved for a period of 3—7 days in the initial contamination equaling 1 million a litre and for 15—18 days if it amounted to 100 million a litre. The Coxsackie B5 virus was recovered from active slime up to the third day and ECHO 19 virus — up to the 5th day. The Esch. coli bacteriophage was present for 15 to 25 days depending on the initial concentration. Disinfection of treated sewages is considered to be an obligatory measure.

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REEL/FRAME

1/3 038 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--SCIENTIFIC TECHNICAL SEMINAR ON THERMAL TREATMENT OF POLYMER CONSTRUCTION MATERIALS -U-

AUTHOR--GRIGORYEVA, L.F.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, PLASTICHESKIYE MASSY, NO 2, 1970, PP 75-76

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, MATERIALS, BEHAVIORAL AND SOCIAL SCIENCES, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--CHEMICAL CONFERENCE, THERMAL EFFECT, CONSTRUCTION MATERIAL, SILOXANE, PLASTIC MECHANICAL PROPERTY, FLUOROCARBON RESIN, PHENOL FORMALDEHYDE RESIN, FIBERGLASS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605022/007 STEP NO--UR/0191/70/000/002/0075/0076

CIRC ACCESSION NO--AT0141195

UNCLASSIFIED

2/3 038 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0141195

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SEMINAR WAS HELD IN MOSCOW FROM THE SECOND TO SIXTH SEPTEMBER, 1969. M. V. SOBOLEVSKIY GAVE A PAPER ON SILICONORGANIC HEAT CARRIERS, NOTHING THAT THERMAL TREATMENT OF PLASTIC DEPENDS ON HEAT CARRIERS, POLYMETHYLSILOXANES AND POLYMETHYLPHENYLSILOXANES. K. A. MOSKATOV REPORTED ON THEORY OF CHEMOSORPTION AND CHEMICAL SURFACE REACTIONS OF POLYMERS. A. N. MACHYULIS DISCUSSED THE INCREASE IN LIFE EXPACTANCY OF POLYMERIC UNITS BY MEANS OF DIFFUSIVE STABILIZATION. THE EFFECT OF THERMAL TREATMENT ON STRUCTURE AND MECHANICAL PROPERTIES WAS DISCUSSED BY A. P. MAKUSHKINA. L. A. KOGAN READ A PAPER ON PROSPECTIVES FOR MATHEMATICAL MODELS USED IN DETERMINATION OF OPTICAL CONDITIONS FOR THERMAL TREATMENT OF PLASTIC DETAIL IN PUMP SYSTEMS. YE. I. KAPKOVA REPORTED ON THERMAL TREATMENT OF POLYMERS AS A LONG LASTING FACTOR. THERMOSTABILIZATION AND PROPERTY OF FLUORORESINS WAS DISCUSSED BY L. I. PROKHOROV. V. V. NALETOV GAVE A PAPER ON STUDIES ON LOWERING THE TOXICITY OF SYNTHETIC MATERIALS FROM PHENYLFORMALDEHYDE RESINS BY MEANS OF THERMAL TREATMENT. I. I. SAPRAGONAS READ A PAPER ON CHANGE OF THE PHYSICO CHEMICAL PROPERTIES AND STRUCTURE OF POLYAMIDES ON THERMAL TREATMENT AND THERMAL AGING. SELECTION OF CONDITIONS FOR THERMAL TREATMENT DURING DEPOSITION OF POLYCAPROAMIDE PLATING IN SEMICALCINED LAYER WAS DISCUSSED BY A. P. MAKUSHIN. K. A. MOSKATOV TALKED ABOUT CLASSIFICATION OF THERMAL TREATMENT OF POLYMER MATERIALS. OTHER PAPERS GIVEN WERE: P. S. DUNAYEVSKIY, EQUIPMENT FOR THERMAL TREATMENT OF LOW CLEARANCE DETAILS. N. N. DASHKO, EFFECT OF THERMAL TREATMENT OF AMORPHOUS POLYMERS ON THEIR STRENGTH.

UNCLASSIFIED

3/3 038 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AT0141195
ABSTRACT/EXTRACT--N. I. DOLGOV, THERMAL TREATMENT OF CAPRONE AND CAPROGRAPHITE DETAILS. V. P. D'YACHKOVA, THERMAL TREATMENT OF THICK WALL LARGE CLEARANCE UNITS FROM FLUOROPLAST-4. B. P. KISHKIN, EFFECT OF THERMAL TREATMENT ON PHYSICO MECHANICAL PROPERTIES OF FIBERGLASS PLASTICS. L. I. KRAVCHENKO, CONDITIONS FOR THERMAL TREATMENT OF FIBERGLASS. A. D. MUSTAFAYEV, EFFECT OF THERMAL TREATMENT ON THE HARDNESS OF COMPONENTS FROM THERMOREACTIVE PLASTICS. A. A. MEYYER, QUALITY IMPOROVEMENTS OF FIBERGLASS DETAILS. K. A. MOSKATOV, TERMINOLOGY OF THERMAL TREATMENT OF POLYMER MATERIALS.

UNCLASSIFIED

USSR

GRIGOR'YEVA, L. F.

"Scientific-Technical Seminar on Thermal Treatment of Polymer Construction Materials"

Moscow, Plasticheskiye Massy, No 2, 1970, pp 75-76

Abstract: The seminar was held in Moscow from the second to sixth September, 1969. M. V. SOBOLEVSKIY gave a paper on "Siliconorganic Heat Carriers", noting that thermal treatment of plastics depends on heat carriers -- polymethylsiloxanes and polymethylphenylsiloxanes. K. A. MOSKATOV reported on "Theory of Chemosorption and Chemical Surface Reactions of Polymers". A. N. MACHYULIS discussed the increase in life expectancy of polymeric units by means of diffusive stabilization. The effect of thermal treatment on structure and mechanical properties was discussed by A. P. MAKUSHKINA. L. A. KOGAN read a paper on "Prospectives for Mathematical Models Used in Determination of Optimal Conditions for Thermal Treatment of Plastic Detail in Pump Systems". YE. I. KAPKOVA reported on "Thermal Treatment of Polymers as a Long-Lasting Factor". Thermostabilization and property of fluororesins was

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GRIGOR'YEVA, L. F., Plasticheskiye Massy, No 2, 1970, pp 75-76

discussed by L. I. PROKHOROV. V. V. NALETOV gave a paper on "Studies on Lowering the Toxicity of Synthetic Materials from Phenylformaldehyde Resins by Means of Thermal Treatment". I. I. SAPRAGONAS read a paper on "Change of the Physico-Chemical Properties and Structure of Polyamides on Thermal Treatment and Thermal Aging. "Selection of Conditions for Thermal Treatment during Deposition of Polycaproamide Plating in Semicalcined Layer" was discussed by A. P. MAKUSHKIN. K. A. MOSKATOV talked about "Classification of Thermal Treatment of Polymer Materials." Other papers given were: P. S. DUNAYEVSKIY, "Equipment for Thermal Treatment of Low-Clearance Details"; N. M. DASHKO, "Effect of Thermal Treatment of Amorphous Polymers on Their Strength"; N. I. DOLGOV, "Thermal Treatment of Caprone and Caprographite Details"; V. P. D'YACHKOVA, "Thermal Treatment of Thick Wall Large-Clearance Units from Fluoroplast-4"; B. P. KISHKIN, "Effect of Thermal Treatment on Physico--Mechanical Properties of Fiberglass Plastics"; L. I. KRAVCHENKO, "Conditions for Thermal Treatment of Fiberglass"; A. D. MUSTAFAYEV, "Effect of Thermal Treatment on the Hardness of Components from Thermoreactive Plastics"; A. A. MEYYER, "Quality Improvements of Fiberglass Details"; and K. A. MOSKATOV, "Terminology of Thermal Treatment of Polymer Materials."

2/2

Acc. Nr: AP0038026 G Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1970, Vol 58, Nr 1, pp 45-50

INVESTIGATION OF PLASMA INSTABILITY IN A STRONG ALTERNATING ELECTRIC FIELD

~~Grigor'yeva, L. I.~~; Smerdov, B. I.; Stepanov, K. N.; Chechkin, V. V.

The frequency spectrum is obtained for the previously discovered high frequency small-scale instability excited in a plasma by a high amplitude fast magnetosonic wave. The dependence of noise amplitude on field strength of the wave is investigated and it is shown that the dependence is of the threshold type.

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REEL/FRAME
19731067

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1/2 030 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--INVESTIGATION OF RESONANCE EXCITATION OF HIGH AMPLITUDE WAVES IN A PLASMA -U-
AUTHOR-(03)-GRIGORYEVA, L.I., SMERDOV, B.I., CHECHKIN, V.V.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 4, PP 1234-1242
DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PLASMA WAVE, MAGENTIC RESONANCE, ACOUSTIC WAVE, PLASMA OSCILLATION, HIGH FREQUENCY CURRENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1720 STEP NO--UR/0056/70/058/004/1234/1242

CIRC ACCESSION NO--AP0106453
UNCLASSIFIED

2/2 030 UNCLASSIFIED PROCESSING DATE--23OCT70
CIRC ACCESSION NO--AP0106453
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXCITATION OF HIGH AMPLITUDE WAVES IN A PLASMA CYLINDER IS INVESTIGATED EXPERIMENTALLY FOR FREQUENCIES OMEGA SUBHI SMALLER THAN OMEGA SMALLER THAN (OMEGA SUBHI OMEGA SUBHE) PRIMEONE HALF. THE WAVE IS EXCITED BY A HIGH FREQUENCY AZIMUTHAL, AXIALLY PERIODIC CURRENT FLOWING IN A COIL ENCIRCLING THE PLASMA. THE SPECTRUM OF MAGENTIC FIELD OSCILLATIONS, WHICH APPEAR IN THE PLASMA WHEN THE EXCITING CURRENT IS SWITCHED ON, IS OBTAINED. IT IS DEMONSTRATED EXPERIMENTALLY THAT IN THE REGION OF RESONANCE EXCITATION OF A FAST MAGNETO ACOUSTIC WAVE (WHISTLE) IN THE PLASMA, BESIDES THE PURELY FORCED OSCILLATIONS, TWO PROPER OSCILLATIONS (WHISTLE) ARE ALSO EXCITED, THE WAVELENGTH OF ONE OSCILLATION AND THE FREQUENCY OF THE OTHER DIFFERING RESPECTIVELY FROM THE AXIAL PERIOD AND THE FREQUENCY OF THE EXCITING CURRENT. EXCITATION OF PROPER OSCILLATIONS IS DUE TO THE FINITE WIDTH OF THE EXCITING CURRENT SPECTRA IN WAVE NUMBER SPACE AND FREQUENCY SPACE. IT IS ALSO FOUND THAT A WHISTLE WITH A FREQUENCY DIFFERING FROM THAT OF THE EXCITING CURRENT DECAYS INTO A WHISTLE AND A FAST SOUND (CYCLOTRON SOUND) WAVE. THE CONDITIONS FOR SUCH DECAY IN A BOUNDED PLASMA ARE DISCUSSED. FACILITY: FIZIKO-TEKHNICHESKIY INST., AN UKR. SSR.

UNCLASSIFIED

GRIGOR'YEVA, L.P.

physiology / optics

INVESTIGATION OF THE CRITICAL DISCRETENESS INTERVAL OF THE VISUAL SYSTEM

L. P. Grigor'yeva and Ye. N. Sokolov

Investigation of the critical discreteness interval, i.e., the minimum time interval in which it is still possible to discrimi- [illegible] successive visual stimuli. Studies involved the dependence of the interval on the location of the stimulus in the field of view, flash brightness, and conditions of adaptation. Significant chang[illegible] [illegible] of the interval is demonstrated with increasing density of the receptor nerve elements of the retina, with increasing inten- [illegible] of the afferent signal, and with rhythmic stimulation of the visual system.

Visual [illegible] of surrounding objects is formed on the basis of [illegible] types of discrimination: spatial and temporal. The temporal aspect of visual discrimi- nation is a problem to which increasing attention is being paid at the present time. This is because of technical developments and the appearance of new types of work during which a subject must perceive a large amount of visual stim- [illegible] within a limited period of time. The object of the present investigation was to isolate and study the temporal aspect of visual discrimination.

To investigate temporal discrimination, Makarov [1, 2] has suggested and developed a method of discretometry. The writers have investigated the critical discreteness interval (CID) for individual areas of the field of vision. Local m[illegible] surement has many advantages over measurement of the CID for the whole field of vision. If this method is used, the investigation can be conducted against the background of a more stable functional state of the visual system, temporal characteristics of different parts of the field of vision can be studied, and, as Makarov [2] has pointed out, the factor of lability of the visual system can be excluded.

The dependence of CID on the location of the stimulus in the field of vision, brightness of the flashes, and conditions of adaptation was studied. In addition, the effect of repetitive photic stimulation on the minimum time interval during which discrimination is possible was investigated under normal conditions and in subjects with diseases of the eye.

NASA [illegible]

USSR

UDC 613.168-078:576.3.082.35

GRIGORYEVA, L. V., Laboratory of Sanitary Bacteriology and Virology, Kiev Scientific Research Institute of General and Communal Hygiene imeni A. N. Marzeyev

"Application of Cell Cultures for Evaluation of Electromagnetic Field Effects"

Moscow, Laboratornoye Delo, No 12, 1971, p 748-

Abstract: The effect of electromagnetic fields in the ultrashort frequency range on cell tissues (Hep-2, rat fibroblasts, monkey kidney, human embryonic fibroblasts) is described. A field intensity of 50-400 V/m produced a well defined degeneration of cells during the first 2-5 days of cultivation. Lower field intensities (5-6 V/m) caused only a slight degeneration of cells during 4-6 days of incubation. No visible changes in cellular structures were observed with the application of 0.1-1 V/m field. However, if any changes occurred, they were of a questionable nature and very weak. The primary cell cultures showed early the changes produced by the field. The obtained data make it possible the application of tissue cultures in preliminary hygienic evaluation of the effect of electromagnetic fields within the radiofrequency range.

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1/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF ADRENAL GLANDS FUNCTIONAL STATE ON OXIDATIVE METABOLISM OF VITAMIN A AND ITS CONTENT IN ADRENAL GLANDS, LIVER AND BLOOD PLASMA

AUTHOR-(04)-GRIGORYEVA, L.V., NATANSON, A.O., SMIRNOV, M.I., SHIPITSYNA, L.P.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY MEDITSINSKOY KHIMII, 1970, VOL 16, NR 3, PP 300-306

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ADRENAL GLAND, OXIDATION, METABOLISM, VITAMIN, LIVER, BLOOD PLASMA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0144 STEP NO--UR/0301/70/016/003/0300/0306

CIRC ACCESSION NO--AP0120844

UNCLASSIFIED

2/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120844

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONTENT OF VARIOUS VITAMIN A FORMS (ALCOHOL, PALMITATE; ALDEHYDE) IN ADRENAL GLANDS OF RATS AT THEIR ACTIVATION BY MEANS OF UNILATERAL ADRENALECTOMIA OR ACTH ADMINISTRATION AFTER INHIBITION OF THEIR FUNCTION BY PROLONGED HYDROCORTISOL INJECTION AND AFTER CANCELLATION OF HYDROCORTISOL WAS STUDIED. SIMULTANEOUSLY ALL THREE FROMS OF VITAMIN A CONTENT IN LIVER AND BLOOD PLASMA WAS DETERMINED. ACTIVATION OF ADRENAL GLANDS FUNCTION LEADS TO DECREASE IN THEIR VITAMIN A CONTENT. INHIBITION OF THEIR FUNCTION DID NOT CHANGE SIGNIFICANTLY VITAMIN A CONCENTRATION. THE DECREASE IN VITAMIN A CONTENT IN LIVER OF RATS INJECTED WITH HYDROCORTISOL WAS NORMALIZED AFTER THE CANCELLATION OF THE DRUG. THE CONSTANCY IN VITAMIN A ALDEHYDE CONTENT IN ADRENAL GLANDS, LIVER AND BLOOD SHOWS THAT ACTIVATION AS WELL AS INHIBITION OF ADRENAL CORTEX FUNCTION DOES NOT LEAD TO THE INCREASE IN OXIDATIVE VITAMIN A TRANSFORMATION IN ADRENAL GLANDS AND LIVER OF EXPERIMENTAL ANIMALS. FACILITY: ALL UNION RESEARCH VITAMINOLOGY INSTITUTE USSR MINISTRY OF HEALTH, MOSCOW.

UNCLASSIFIED

UDC 621.396.628:523.164

PARAMETERS OF THE RT-22 KRAO RADIOTELESCOPE ANTENNA AT WAVELENGTHS OF 3 AND 1.35 CENTIMETERS

[Article by L.D. Bakhrakh, M.I. Grigor'yeva, V.A. Efanov, L.R. Kogan, V.I. Kostenko, L.I. Matveyenko, I.G. Moiseyev and Yu. G. Monin of the Institute of Space Research of the USSR Academy of Sciences; Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Radiofizika, Russian, Vol 16, No 5, 1973, submitted 1 July 1972, pp 675-679]

A two-reflector antenna system in the 3-centimeter wave band was developed in 1968 in order to improve the KrAO [Crimean Astrophysical Observatory] RT-22 radiotelescope[1] and, to provide maximum sensitivity, it was tuned and its basic electrical parameters at 3.34 centimeters were determined. In developing the illuminating system of the KrAO's RT-22, the operating experience of the FIAN[2] [Physics Institute imeni P. N. Lebedev of the USSR Academy of Sciences] RT-22 was considered and certain changes in its system parameters were introduced: the diameter of the secondary reflector D_2 = 1,400 millimeters, and the system's secondary focus was chosen as 200 millimeters from the vertex of the paraboloid with a view to insuring minimal losses in the millimeter waveband. These circumstances limited the longitudinal dimension of the irradiator in the 3-centimeter wave band. The two-reflector irradiator has a comparatively small longitudinal dimension, which is why it was chosen. Its scheme was tried out on an analogical antenna, the FIAN RT-22[2], and gave satisfactory results.

The radiation patterns of the two-reflector irradiator in the E and H planes and the cross-polarization characteristic at the 3.34 centimeter wavelength are shown in figure 1. The irradiator's dispersion coefficient, computed per the radiation pattern, does not exceed β = 0.2.

Preliminary tuning of the antenna was done on the sun, final tuning on radio sources of small angular size. A radiometer with a parametric amplifier was used in tuning at the

1/2 037 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--HYGIENIC ASSESSMENT OF COMPOSITE WOOD PLASTICS MADE ON THE BASIS OF PHENOLFORMALDEHYDE RESINE -U-

AUTHOR--GRIGORYEVA, M.N.

COUNTRY OF INFO--USSR

SOURCE--GIGIYENA I SANITARIYA, 1970, NR 4, PP 47-50

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--WOOD CHEMICAL PRODUCT, PLASTIC COATING, TOXICOLOGY, FORMALDEHYDE, AIR POLLUTION, INSULATING MATERIAL, MICROORGANISM, BACTERICIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1985/1683 STEP NO--UR/0240/70/000/004/0047/0050

CIRC ACCESSION NO--AP0101738
UNCLASSIFIED

2/2 037 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0101738

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WOOD COMPOSITE PLASTICS UNDERWENT SANITARY CHEMICAL ANALYSIS UNDER LABORATORY AND FIELD CONDITIONS AT VARIOUS TEMPERATURE LEVELS. BESIDES, THE AUTHOR STUDIED THE THERMO INSULATING PROPERTIES OF A FLOOR MADE OF THIS MATERIAL AND THE SURVIVAL OF MICROORGANISMS ON ITS SURFACE. THE FINDING WAS THAT THIS PLASTICS CANNOT BE USED FOR THE COATING OF FLOORS IN DWELLING PREMISES AS IT WAS FOUND TO BE EMITTING A CONSIDERABLE AMOUNT OF FORMALDEHYDE INTO THE AIR. MICROBES WERE KILLED ON THIS PLASTICS 3 TO 4 TIMES QUICKER THAN ON THE CONTROL AND OTHER TYPES OF MATERIALS USED FOR THE COATING OF FLOORS.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--23OCT7C

TITLE--ASCORBIC ACID TITRATION IN FOODSTUFFS -U-

AUTHOR-(02)-GRIGORYEVA, M.P., STEPANOVA, YE.N.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY PITANIYA, 1970, NR 3, PP 32-37

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FOOD ANALYSIS, ASCORBIC ACID, ELECTROMETRY, TITRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/2053 STEP NO--UR/0244/70/000/003/0032/0037

CIRC ACCESSION NO--AP0120696

UNCLASSIFIED

2/2 010 UNCLASSIFIED PROCESSING DATE--23OCT7
CIRC ACCESSION NO--AP0120696
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THREE METHODS OF DETERMINING ASCORBIC ACID IN FOODSTUFFS, BASED ON ITS ACIDIFICATION WITH 2,6,DICHLOROPHENOLINDOPHENOL, WERE COMPARED. THEY INCLUDED VISUAL TITRATION, EXTRACTION OF THE DYE EXCESS WITH XYLENE AND ELECTROMETRIC TITRATION. THE RESULTANT DATA INDICATE ALL THREE METHODS EQUALLY SUITABLE FOR USE IN THE ANALYSIS OF FOOD PRODUCTS CONTAINING NO PIGMENT HINDERING ITS RELIZATION. XYLENE EXTRACTION OF INDOPHENOL AND ELECTROMETRIC TITRATION MAY BE RECOMMENDED FOR DETERMINING THE ASCORBIC ACID IN COLOURED OBJECTS. ELECTROMETRIC TITRATION IS MOST SUITABLE, SINCE IT IS SIMPLE, EXACT AND HAS NO LIMITATIONS IN MEASURING THE ASCORBIC ACID CONTENT IN FOODSTUFFS. FACILITY: LABORATORIYA PO RAZRABOTKE METODOV VITAMINOLOGICHESKOGO ANALIZA VSES. N-I INSTITUTA VITAMINOLOGII MINISTERSTVA ZDRAVOOKHRANENIYA SSSR, MOSCOW.

UNCLASSIFIED

Acc. Nr.: AP0031628 Ref. Code: UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i Meditsiny, 1970, Vol 69, Nr 1, pp 80-83

A STUDY INTO REACTIVITY OF LYMPHOID CELLS CULTURE OF THE HUMAN FETUS IN VITRO

Govallo, V.I.; Grigor'yeva, M.P.; Kopelyan, I.I.

Central Scientific-Research Institute of Traumatology and Orthopedics

The ability of the thymic and splenic cells of 16—28 week old human fetuses to undergo morphological transformation in a mixed culture and under the effect of non-specific stimulators of blastogenesis was studied. As evidenced, the intensity of the blast-transformation reaction in a mixed lymphocyte culture of adults was directly related to the degree of antigenic distinctions of the cells cultivated. In a mixed culture and in the presence of stimulators the embryonal splenic cells underwent differentiation identical to that in lymphoid cells (lymphocytes, thymocytes) of adults. Thymic cells in fetuses of the same age were unable to undergo morphological transformation in similar experimental conditions.

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REEL/FRAME

19691755

1/2 017 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--A STUDY OF THE ACTIVITY OF ANTILYMPHOID SERA IN THE CULTURE OF LYMPHOCYTES IN THE PERIPHERAL BLOOD OF MAN -U-

AUTHOR-(04)-GOVALLO, V.I., GRIGORYEVA, M.P., KOPELYAN, I.I., KOSMIADI, G.A.

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69, NR 4, PP 82-85

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BLOOD SERUM, LYMPHOCYTE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1579 STEP NO--UR/0219/70/069/004/0082/0085

CIRC ACCESSION NO--AP0106325

UNCLASSIFIED

2/2 017 UNCLASSIFIED PROCESSING DATE--02OCT70
CIRC ACCESSION NO--AP0106325
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ACTIVITY OF DIFFERENT HETEROLOGOUS ANTILYMPHOID SERA WAS STUDIED IN THE CULTURE OF HUMAN LYMPHOCYTES IN VITRO. IT IS SHOWN THAT DIFFERENT IMMUNE ANTISERA HAVE THEIR CHARACTERISTIC SPECTRUM OF ACTION IN THE MONOCULTURE OF LYMPHOCYTES, MANIFESTING IN A VARYING DEGREE THE LEUKOAGGLUTINATING, CYTOTOXIC AND BLAST TRANSFORMING EFFECT. IN A MIXED CULTURE OF LYMPHOCYTES ANTILYMPHOID SERA CAUSED BOTH STIMULATION AND INHIBITION OF THE REACTION OF BLAST TRANSFORMATION IN COMPARISON WITH THE REACTION OF NATIVE LYMPHOCYTES.

UNCLASSIFIED

AA 0040646

UR 0482

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Soviet Inventions Illustrated, Section I Chemical, Derwent,

242089 YEAST STRAIN Candida tropicalis SKF-2 was isolated from yeast obtained commercially by continuous cultivation. The novel strain does not require preliminary adaptation to hydrocarbons and was found suitable for the biosynthesis of vitamin-containing proteinaceous fodder from the naptha hydrocarbons. The strain assimilates glucose, maltose, saccharose and galactose, and does not liquify gelatine. The nitrate nitrogen is not utilised. 29.1.68. as 1213829/28-13, SHUBINA, L.N. and GRIGOR'EVA, N.A. Protein Biosynthesis Res. Inst. (5.9.69.) Bul. 15/25.4.69. Class 6a, Int. Cl. C 12k.

Lo 2

AA0040646

AUTHORS: Shubina, L. N.; and Grigor'yeva, N. A.

Severo - Kavkazskiy Filial Vsesoyuznogo Nauchno - Issledovatel'skogo Instituta Biosinteza Belkovykh Veshchestv

19750225

USSR

GRIGOR'YEVA, N. F.

"The Application of Immunofluorescent Method in the Study of Thyreoglobulin in Embryonic Thyroid Glands"

Ontogenez (Ontogenesis), 1973, Vol 4, No 4, pp 427-431 (from RZh - Biologicheskaya Khimiya, No 22, Nov 73, Abstract No 1648)

Translation: The application of an immunofluorescent method has been described for the investigation of thyreoglobulin (I) of the embryonic thyroid gland. The method of the preparation of I has been described for the immunization of rabbits as well as the schematic of immunization, the method of freezing the thyroid gland and the preparation and staining of the preparations by the indirect method of Kuns. High sensitivity of this method makes it possible to study I or its precursor in the early stages of the differentiation of embryonic thyroid gland.

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UDC: 771.351.3

VOLOSOV, D. S., SHPYAKIN, M. G., TARABUKIN, V. V., GRIGOR'YEVA, E. M.

"A Fast Photo Lens"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 6, Feb 72, Author's Certificate No 328408, Division G, filed 4 May 70, published 2 Feb 72, p 142

Translation: This Author's Certificate introduces: 1. A fast photo lens which contains four components, the first made up of two separate negative menisci with concavity facing the diaphragm, and the second made up of a double-cemented element and a separate element. As a distinguishing feature of the patent, correction of aberrations is improved with simultaneous reduction of the overall longitudinal size by equipping the first component with an additional negative meniscus with concavity facing the diaphragm, and by making the separate element of the second component in the form of a negative meniscus with concavity turned toward the diaphragm, and making the third component from cemented positive and negative menisci and a biconvex lens with a power that is 1.5 and 1.6 times that of the positive and negative menisci respectively. The fourth component is assembled up from a positive and a negative meniscus with powers of the same order and a difference in the coefficients of refraction of at least 0.15 and

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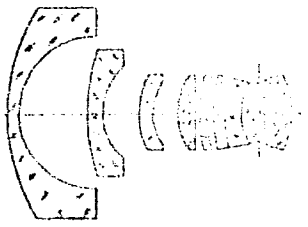
VOLOSOV, D. S. et al., USSR Author's Certificate No 328408

a dispersion coefficient ratio of at least 2.2. 2. A modification of this lens distinguished by the fact that a field of view of at least 30° is achieved in a liquid by making the separate and double-cemented elements of the second component as a single unit.



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1/2 030 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--ANIONS OF DINITROMETHYL COMPOUNDS. V. CRYSTAL STRUCTURE OF THE POTASSIUM SALT OF PHENYLDINITROMETHANE -U-
AUTHOR-(04)-GRIGORYEVA, N.V., MARGOLIS, N.V., TSELINSKIY, I.V., SHOKHOR, I.N.
COUNTRY OF INFO--USSR

G

SOURCE--ZH. STRUKT. KHIM. 1970, 11(1), 165-8

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CRYSTAL STRUCTURE, BENZENE DERIVATIVE, X RAY STUDY, NITROMETHANE, ORGANOPOTASSIUM COMPOUND, CRYSTAL LATTICE, CONJUGATE BOND SYSTEM, ANION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/0444 STEP NO--UR/0192/70/011/001/0165/0168

CIRC ACCESSION NO--AP0104057
UNCLASSIFIED

2/2 030 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0104057

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE OF PHENYLDINITROMETHANE (I) WAS DETD. BY SINGLE CRYSTAL X RAY METHODS. THE MONOCLINIC LATTICE PARAMETERS ARE A 11.58, B 7.95, C 10.12 ANGSTROMS, AND BETA 99DEGREES; ZETA EQUALS 4; THE SPACE GROUP IS P2 SUB1-C. IN THE ANION, THE DIHEDRAL ANGLE BETWEEN THE PH RING AND THE N(1) MINUS C(0) MINUS N(2) PLANE IS 62DEGREES, AND THE C(1) MINUS C(4) LINE MAKES AN ANGLE OF SIMILAR TO 8DEGREES WITH THE N(1) MINUS C(0) MINUS N(2) PLANE. BOTH NO SUB2 GROUPS ARE ROTATED BY SIMILAR TO 10DEGREES ABOUT THE C AND N BONDS RELATIVE TO THE N(1) MINUS C(0) MINUS N(2) PLANE. CONJUGATION BETWEEN THE PH RING AND THE REMAINDER OF THE ANION CANNOT EXCEED 20PERCENT OF THE VALUE POSSIBLE IF THE ANION WERE PLANAR. MARY FRANCES RICHARDSON.

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USSR

UDC 620.193.5

NIKITIN, V. I., and GRIGOR'YEVA, T. N., TsNIPKI [expansion unknown] imeni I. I. Polzunov, Leningrad

"Effect of Calorizing a Nickel Alloy on Its Long-Time Strength in Certain Media"

Kiev, Fiziko—Khimicheskaya Mekhaniak Materialov, Vol 10, No 1, 1974, pp 7-12

Abstract: A study was made to determine the effectiveness of calorizing alloy EI826 in order to protect it from high-temperature oxidation and from the action of ash deposits during testing for long-time strength as well to determine the relationship of long-time strength of the calorized alloy to the scale factor. Chemical composition of the alloy was (in wt %): 0.037 C, 14.03 Cr, 1.47 Ti, 2.24 Al, 4.06 Mo, 5.89 W, 0.16 Mn, 0.27 Si, 0.015 P, and 0.004 S, balance-Ni. It was shown that the long-time strength of the alloy exceeds 4000 hours when tested at 850° C in an ash without NaCl, but when an ash with 10% NaCl is deposited on samples, their long-time strength is 500 hours or less. The basic conclusion made is that calorizing does protect EI826 samples from the effects of ash content in that samples without a calorized layer have a much less long--time strength than those which are calorized. Also, the thicker the calorized layer, the better the long-time strength. Six figures, six bibliographic references. 1/1

UDC 620.193.5

USSR

NIKITIN, V. I., GRIGOR'YEVA, T. N., Academy of Civil Aviation, Leningrad

"Influence of Ash Deposits on Long-Term Strength of Gas Turbine Blade Materials"

Kiev, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 8, No 5, 1972, pp 19-26.

Abstract: This work studies the influence of a synthetic ash containing sodium sulfate and sodium chloride on the long-term strength of type EI826 nickel alloy (0.037 wt.% C, 14.03% Cr , 1.47% Ti, 2.24% Al, 4.06% Mo, 5.89% W, 0.16% Mn, 0.27% Si, 0.015% P, 0.005 wt.% S) used for the manufacture of turbine blades. Two compositions of synthetic ash were used. The first composition imitated the ash of high-sulfur fuels, while the second mixture was designed to contain sodium chloride. The study of the effects of the influence of ash deposits on long-term strength of nickel alloy indicated the necessity of developing measures (protective coatings, treatment of fuels, etc.) to eliminate or significantly reduce the influence of the medium on the strengths of gas turbine blade materials.

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