

USSR

GUZ', I. S., DEMINA, G. S., KOROBV, Yu. M., VII Vses. Konf. po Polyarizats.-
optich. Metodu Issled. Napryazh., 1971, T. 3., Tallin, 1971, pp 171-172.

This agrees well with the results produced by selective etching. The dislo-
cation density is found to be significantly higher in the crystallite in
which the wave is reflected.

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1/2 017 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--DIFFRACTION OF ELASTIC WAVES IN AN INFINITE SERIES OF CIRCULAR
HOLES -U-
AUTHOR--(02)-GULOVCHAN, V.T., GUZ, O.M. **G**
COUNTRY OF INFO--USSR
SOURCE--AKADEMIIS ANUK UKRAINS'KOI RSR, DUPOVIDI, SERIIA A FIZIKO
TEKHNICHNI I MATEMATICHNI NAUKI, VOL. 32, FEB. 1970, P. 159-161
DATE PUBLISHED----FEB70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--WAVE PROPAGATION, ELASTIC WAVE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1992/2031 STEP NO--UR/0441/70/032/000/0159/0161
CIRC ACCESSION NO--AT0112986
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0112986

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THEORETICAL STUDY OF THE DIFFRACTION OF ELASTIC WAVES PROPAGATING IN AN ELASTIC PLANE MEDIUM CONTAINING AN INFINITE SEQUENCE OF CIRCULAR HOLES WHOSE CENTERS ARE POSITIONED ON A SINGLE STRAIGHT LINE. A PROCEDURE FOR SOLVING THE PERTINENT PLANE PERIODIC DIFFRACTION PROBLEMS IS DERIVED. THE SOLUTIONS OBTAINED ARE ANALYZED. FACILITY: AKADEMIIA NAUK UKRAINS'KOI RSR, INSTITUT MEKHANIKI, KIEV, UKRAINIAN SSR.

UNCLASSIFIED

USSR

6 UDC: 621.733

GUZDEV, S. V., KARPOV, R. G.

"Bridge Meters with Radio Impulse Feed"

Tr. Ryazansk. radiotekhn. in-ta (Works of the Ryazan Radio Engineering Institute),
1970, vyp. 23, pp 165-173 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No YA215)

Translation: It is theoretically shown that radio pulse voltage may be used for supply to bridge circuits. Relationships are given which define the time of the transition process and the required frequency spacing of the radio pulses. A number of advantages of radio impulse feed are pointed out. E. L.

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USSR

UDC 536.2.01.001.57

GUZENKO, A. I., KOLIK, V. N.

"The Solution of Equations of the Thermal-Conductivity Type on Electric Integrators With the Use of Quasi-Resistors"

Kiev, Kiberneticheskaya Tekhnika -- Sbornik (Cybernetic Engineering -- Collection of Works), No 1, 1970, pp 65-72 (from Referativnyi Zhurnal, Teploenergetika, No 1, 1971, abstract No 1690 by S. A. Priskman)

Translation: For solving equations of the type of $U/dt = a(U)d^2 U/dx^2$, a nonlinear electric integrator is proposed. In connection with the necessity of replotting the volt-ampere characteristic in accordance with the type of problem being solved, nonlinear quasi-resistors are used. A quasi-resistor constitutes a two-terminal network, consisting of an ohmic resistance and an adjustable voltage source. The model is balanced manually or automatically. In the case of automatic balancing, the voltages are formed by a functional converter. The distinguishing feature of the electric integrator is the fact that all the nonlinear elements have the same volt-ampere characteristics. The balancing process converges within 4-5 cycles. 4 figures. 4 bibliographic entries.

1/1

USSR

UDC 621.372.6

GINOVIER, A.S., GUZEV, A.A., KON'KOV, V.P., KURYSHEV, G.L., MISHIN, A.I.,
SINITSA, S.P., TSEKIN, B.G.

"Integrated Circuit With Programmed Structure Using MIS Memory Transistors"

Radiotekhnika i elektronika, Vol XVII, No 7, July 1972, pp 1991-1992

Abstract: The integrated circuit is described of an all-purpose element filled with conventional MIS [metal-insulator-semiconductor] transistors and MIS transistors with a memory (memory transistors). The integrated circuit realizes the following logical function:

$$z(t + \delta) = \bigvee_{i=1}^n a_i x_i \quad (i = 1, 2, 3, 4),$$

where x_i is the input logical variables; a_i is the state characteristic of the i -th memory transistor; z is the output variable; and δ is the delay. The circuit can be used for construction of a specialized array for fulfillment of logical, switching, and memory functions and also for construction of all-purpose structurally-uniform logical nets, which makes it possible for each problem to organize a specialized computing device by a programmed adjustment of its elements. 1 fig. 5 ref. Received by editors, 16 June 1971.

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USSR

UDC 576.851.55.093.2

AZOVA, L. G., GUZEV, M. V., and IVOYLOV, V. S., Chair of Microbiology, Soil Biology Faculty, Moscow State University imeni M. V. Lomonosov

"The Response of Some Clostridia to Molecular Oxygen"

Moscow, Mikrobiologiya, Vol 39, No 1, Jan/Feb 70, pp 55-59

Abstract: The response to molecular and Cl. butyricum oxygen of some strains of Clostridium Saccharobutricum which are usually treated as strict anaerobes, was studied. The dynamics of oxygen intake by the bacterial cells and the possibility of bacterial development under constant (and even forced) oxygen enrichment of the culture medium were investigated. Various strains of Clostridium saccharobutricum and Clostridium butyricum were used in the experiments. Oxygen threshold concentrations were determined and consumption of oxygen, dissolved in the culture fluid was studied during the lag phase. Tables are presented showing the oxygen threshold concentrations for development of Clostridium strains and the oxygen intake and lag phase length in relation to initial oxygen content
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AD . . . L. G., et al., Moscow, Mikrobiologiya, Vol 39, No 1, Jan/
Feb 70, pp 55-59

in the medium. The so-called obligate anaerobic property of this bacterial group was found to vary quantitatively and qualitatively in different strains. It is concluded that none of the strains investigated is actually an obligate anaerobe.

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UDC 621.791.16

ALEKHIN, V. P., MAZUR, A. I., and GUZEV, O. V., Moscow

"Investigation of Temperature Distribution in the Ultrasonic Welding of Semiconductors with Metals"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 4, Jul-Aug 71, pp 155-159

Abstract: A study was made of the temperature distribution directly on the surface and along the thickness of silicon single crystals in the ultrasonic welding of the crystals with aluminum wire (grade AV000) with a diameter of 100 microns. The temperature on the surface of the silicon crystals was determined by the method of the formation of natural thermocouples, while the temperature distribution along the crystal width was determined according to the relationships of the p-n transition parameters. The typical oscillograph curve for the ultrasonic welding process showed three characteristic sections: I -- no ultrasonic oscillations; II -- ultrasonic oscillations ($W = 2.8$ watts, $P(\text{load}) = 150$ grams, $t = 0.6$ sec); III -- ultrasonic oscillations switched off. For I there is a straight drop of voltage in relation to the geometry and condition or state of the touching components (crystal and welding wire). For II there is a reduced drop in the straight drop of volt-
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ALEKHIN, V. P., et al., Fizika i Khimiya Obrabotki Materialov, No 4, Jul-Aug 71, pp 155-159

age followed by stabilization to the end of the process. For III there is observed some increase in the welding voltage, i.e., a lowering of temperature for the p-n transitions to room temperature. Five figures, 9 bibliographic references.

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USSR

UDC 576.8.098

GUZEV, V. S., and ZVIYAGINTSEV, D. G., Chair of Soil Biology, Moscow State University

"Microelectrophoresis of the Cells of Microorganisms"

Moscow, Vestnik Moskovskogo Universiteta, Seriya 6, Biologiya, Pochvovedeniye, No 6, Nov/Dec 71, pp 90-96

Abstract: Despite the importance of electrophoresis to the study of the electrokinetic properties of cells, until now Soviet literature has not contained a description of a method of microelectrophoresis of cells in a closed chamber. The authors of the present article designed a device to accomplish this purpose, and thorough testing has shown it to be sufficiently accurate and reliable for a wide range of practical applications. It consists basically of a Perfil'yev capillary chamber with plane-parallel walls and two vessels containing electrodes and having outlets which lead back to the chamber. A system of stopcocks makes it possible to fill the vessels with a saturated solution of CuSO_4 and to drive the air out of the chamber and fill it with a suspension of cells. The authors list 10 steps for using their device to obtain electrophoretic data and then present and explain formulas for using this data to compute the cells' electrophoretic mobility, electrokinetic potential, and surface density of the charge. Finally, as an example, the values computed for the electrokinetic properties

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GUZEV, V. S., and ZVYAGINTSEV, D. G., Vestnik Moskovskogo Universiteta, Seriya 6, Biologiya, Pochvovedeniye, No 6, Nov/Dec 71, pp 90-96

of Bacillus subtilis and Bacillus cereus under varying media conditions are given.

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UDC 582.282.23.094.85.088.7

GUZEV, V. S., COLUBEV, V. I., and ZVYAGINTSEV, D. G., Chair of Soil Biology,
Faculty of Soil Biology, Moscow State University imeni M. V. Lomonosov, Moscow

"The Detection of Microcapsules in Microorganisms and the Control of Their
Complete Decapsulation by Microelectrophoresis"

Moscow, Mikrobiologiya, Vol 41, No 1, Jan/Feb 72, pp 115-120

Abstract: Strain No 943 of yeast *Cryptococcus albidus* var. *diffluens* was used in the study. An acapsular strain was obtained by multiple transfers and growths of the original strain on wort agar. Complete decapsulation was performed by autoclaving of the culture in an acetic acid solution at pH 4. Electrophoretic mobility was estimated using microelectrophoresis in a closed chamber. The effect of pH was studied using modified McIlvein's citrate-phosphate buffer of an ionic strength 0.02. The maximal electrophoretic mobility (2.7 micron/second/volt/centimeter) was obtained at pH 7.8. The mobility decreased at lower pH values. Both capsular and acapsular strains had identical mobility, which indicated the identity of their surfaces. The presence of a microcapsule (less than 0.4 micron) on the so-called acapsular strain was confirmed by electron microscopy. On the other hand, a strain completely decapsulated had a different electrophoretic mobility (+0.25
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GUZEV, V. S., et al., Mikrobiologiya, Vol 41, No 1, Jan/Feb 72, pp 115-120

micron/second/volt/centimeter) than the parent strain (-0.2 micron/second/volt/centimeter) at pH 1.7. The differences in electrophoretic mobility decreased with increased pH. Microelectrophoresis is a simple and convenient method for the detection of microcapsules undetectable by optical microscopy or by chemical methods. A control capsular strain is necessary for the test.

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USSR

UDC 622.253.35:699.1

GUZEVATAYA, L. I., KOLESNIK, B. P. (Deceased), (Dniepropetrovsk)

"Investigation of the Impact Viscosity of Some Steels for Highly Cold-Resistant Pipes"

Kiev, Problemy Prochnosti, No 10, 1970, pp 98-100

Abstract: It is proposed to use steels 20 and 35 in the state after hardening and high-temperature tempering for pipes of freezing columns functioning under complex operating conditions, when there are considerable static and dynamic loads at rather low operating temperatures (to -60°C). Tubes of these steel types have successfully passed stand and industrial tests in construction of the shafts of the Bereznikovskiy Potassium Combine. 4 figures, 1 table, 14 bibliographic entries.

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USSR

UDC 691.396.677:621.396.662.6(028.8)

GUZEVICH, Ya. N., SOKOLOV, M. M.

"Device for Adjustment of a Wide Band Discharger"

USSR Author's Certificate No 251015, Filed 29 Dec 63, Published 5 Feb 70 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8B96 P)

Translation: The proposed device for tuning a wide band discharger contains a resonance diaphragm with a regulatable gap soldered into a wave guide. In order to exclude slipping out of adjustment in the case of temperature deformations during the sealing process, the device is executed in the form of a copper bushing with a thin bottom and a cone at the end. The bushing is soldered into the wave guide together with the diaphragm. Here, the adjustment -- moving of the cone -- takes place by deformation of the bottom of the bushing with the help of a detaching mechanism. There is one illustration.

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Hydraulic and Pneumatic

USSR

UDC: 532.6+532.523

GUZEVSKIY, L. G., Novosibirsk

"A Numerical Analysis Method of Calculating Jet Flow of a Heavy Liquid Around Curved Barriers"

Moscow, Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki, No 6, Nov/Dec 72, pp 71-76

Abstract: The author suggests an approximate method of solving problems for plane stationary flows of an ideal incompressible fluid with a single free boundary. Examples in this category are the problem of flow of a heavy liquid from under a curvilinear sluice gate, and symmetric problems of cavitation flow around curvilinear arcs in a longitudinal field of gravitational force. The method is illustrated by an example of solution of the problem of cavitation flow around a given curvilinear arc placed on a horizontal bottom in the Ryabushinskiy scheme in a gravitational force field perpendicular to the direction of the oncoming flow. The fixed curvilinear boundary (arc P) is given by the equation $\psi = \psi(\lambda)$, where ψ is the angle of inclination between the tangent to the given arc and a straight horizontal line, and λ is the arc abscissa. The arc P is approximated by

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GUZEVSKIY, L. G., Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki, No 6, Nov/Dec 72, pp 71-76

some curve $\Psi_* = \Psi_*(\mathcal{L})$ which has a continuous derivative so that $\Psi_* = \Psi$ for a finite number of values of the arc abscissa \mathcal{L} . The problem is solved in explicit form with finite-dimensional approximation of boundary conditions. The author thanks V. N. Monakhov for constant interest in the work.

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USSR

UDC 532.529.5/.6

GUZEVSKIY, I. G.

"Nonuniqueness of the Solution of the Problem of the Cavitational Flow Over a Wedge in a Longitudinal Gravitational Field"

V sb. Dinamika splosh. sredy. Vyp. 8 (Dynamics of a Continuous Medium. No. 8 -- Collection of Works), Novosibirsk, 1971, pp 78-84 (from RZh-Mekhanika, No 8, Aug 72, Abstract No 8B643)

Translation: A symmetric wedge placed point downward is subjected to the flow of a heavy ideal incompressible fluid in the Zhukovskiy-Roshko manner. The velocity of the incident flow is directed upward. The left half of the flow region is reflected onto the interior of a unit semicircle of the parametric variable ζ , such that the free surface corresponds to a semicircle. An integral equation is compiled with the aid of boundary conditions on the free surface for determining the velocity $q(\zeta)$ at points of the semicircle. This equation is solved numerically using finite-difference approximation (Monakhov, V. N., Krayevyye zadachi fo svobodnymi granitsami dlya ellipticheskikh sistem uravneniy (Boundary Value Problems With Free Boundaries for Elliptical Systems of Equations), Parts 1, 2. Novosibirsk, Novosibirsk State University, 1969). Knowledge of $q(\zeta)$ makes it possible
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GUZEVSKIY, L. G., Dinamika splosh. sredy. Vyp. 8, Novosibirsk, 1971,
pp 78-84

to construct completely the solution of the hydrodynamic problem. It was established by a numerical experiment that two solutions of the problem exist for a given cavitation number and sufficiently high Froude numbers. In one solution there are no points of inflection on the free surface and parallel plates which are involved in the Zhukovskiy-Roshko method are located at a certain distance from one another. In the second solution these points come together, the cavern is closed and there are points of inflection on its free surface. 5 ref. M. I. Gurevich.

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GUZEY, L. S.

PHASE DIAGRAMS OF METALLIC SYSTEMS

(Conference in Moscow)

Article by Doctor of Technical Sciences M. Ye. Dril's and L. S. Guzey, Moscow, Vsesoiuznaya Akademiya Nauk SSSR, Russian, Vol. 47, No. 10, October 1971, pp. 105-109]

The creation of new and the improvement of already existing areas of engineering makes it necessary to develop and introduce into production new metallic materials with a definite complex of physical, mechanical, chemical, and technical properties. The solution of these problems will be helped by the construction of phase diagrams, which represent a summary and generalization of results of all observations for each system of alloys and serve as a scientific basis for the working up of metallic composition.

In spite of the fact that our country occupies one of the leading places in the world in the number of investigations of phase diagrams, the rates of development of our science and industry are such that experimental investigations on the study of phase diagrams still lag behind the requirements of the time. Because of that much attention is now given to the development of mathematical methods of analysis and calculation in the given areas; the forecasting of interaction of components with one another; analysis of the influence of crystal chemical factors on the structure of phase diagrams and the latest methods of studying them experimentally.

All these questions were discussed at the fifth all-union conference on the theme "General regularities in the structure of phase diagrams of metallic systems," held on 7-10 June in Moscow. The conference was organized by the Section of the Chemistry of Metals of the Scientific Council for Inorganic Chemistry, the Institute of Metallurgy named A. A. Baykov of the AS USSR, and the Chemistry Faculty of Moscow University; participating in it were 250 representatives of 59 scientific research and educational organizations from 22 cities of the Soviet Union; in all, 57 reports were heard, including 17 survey reports.

5 PRS 50616
10 JUL 1971

1/2 '023 UNCLASSIFIED PROCESSING DATE--19SEP70
TITLE--RESISTANCE OF ALUMINUM ALLOYS IN VARIOUS CORROSIVE MEDIA -U-

AUTHOR--(05)-BUDDV, G.M., ~~GUZEYEV, E.A.~~, YEFIMOV, I.A., SMETANINA, N.G.,
FLAKS, V.YA.

COUNTRY OF INFO--USSR

G

SOURCE--PRGM. STROIT. 1970, (1), 40-2

DATE PUBLISHED-----70

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

TOPIC TAGS--ALUMINUM ALLOY, ALUMINUM CORROSION, ALLOY DESIGNATION,
CHLORINE, HYDROGEN SULFIDE, CARBON DISULFIDE, INDUSTRIAL PLANT, SULFUR
OXIDE, OCEAN, ARCTIC TEST/(U)DIBT ALUMINUM ALLOY, (U)69511 ALUMINUM
ALLOY, (U)AK6T1 ALUMINUM ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/1298

STEP NO--UR/0227/70/000/001/0040/0042

CIRC ACCESSION NO--AP0055969

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--13SEP70

CIRC ACCESSION NO--AP0055969

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CORROSION OF D15-T, B95-T1, AND AK6-T1 AL ALLOYS (COMP. NOT GIVEN) WAS DETD. BY A 2 YR EXPOSURE ON THE SHORE OF THE ARCTIC OCEAN AND AT INDUSTRIAL PLANTS. THE RESULTS ARE GIVEN. THE LOSS STRENGTH WAS GREATER ON THE SHORE THAN AT THE PLANTS. AT THE INDUSTRIAL PLANTS, CL BEARING ATMS. CAUSED GREATER CORROSION THAN THOSE CONTG. SO SUB2, H SUB2 S, OR CS SUB2.

UNCLASSIFIED

USSR

UDC 632.951:634.0.414

GUZEYEV, G. F., Middleasiatic Scientific Research Institute of Forestry

"Effectiveness of Organophosphorus Insecticides Against the Fruit Tree Ermine Moth in the Mountain Fruit Forests of Uzbekistan"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 11, No 10 (120), 1973, pp 40-41

Abstract: Air and ground spraying was used to apply emulsions of benzophosphate, methylnitrophos, tsionox, lebaicide, valexan, Bi-58, and gardone suspension in an attempt to find substitute agents for DDT. The most effective agents, on the basis of field trials, were Bi-58, methylnitrophos and gardone in concentrations of 0.1 and 0.3%, valexan (0.1%) and benzophosphate at 0.3%. Dropping the concentrations of some of these agents to 0.05% gave poor results.

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USSR

UDC 535.37:621.375.8

BOL'SHOV, M. A., GUZEYEV, I. D., ZYBIN, A. V., KOLOSHNIKOV, V. G., MAYOROV, I. A., NEDLER, V. V., MANDEL'SHTAM, S. L., TIMOFEYEV, Ye. F., and FILIMINOV, L. N.

"Determining Small Na Concentrations by the Fluorescence Resonance Method Using Tunable, Pulsed Dye Lasers"

Minsk, Zhurnal Prikladnoy Spektroskopii, November 1973, pp 821-824

Abstract: The subject of this article involves the method of fluorescence resonance in the use of tunable radiation dye lasers for detecting small concentrations of elements. Experiments designed to demonstrate the possibilities of this method in the saturation mode of resonance transition with Na as the element to be detected are described. For the excitation of the Na vapor a rhodamine laser of the 6Zh type, pumped by the second harmonic radiation of a neodymium laser, was employed. The duration of the pulses was $2 \cdot 10^{-8}$ sec, their power was 10^5 W, the width of the fluorescence line was 1 Å, and the tunable range 5600-6200 Å, with an interval of 20-30 sec between scintillations. The ZMR-3 was used as receiver. A block diagram of the equipment is given, together with a curve for the amplitude of the $1/2$

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BOL'SHOV, M. A., et al., Zhurnal Prikladnoy Spektroskopii, November 1973,
pp 821-824

fluorescence signal varying with time. The authors find that using a laser
with high scintillation repetition rates and increasing the light power
increase the sensitivity of the element detection.

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VAVILOV, V. S., GUZEYEV, N. V., ZAYATs, V. A., KONONENKO, V. L., MANDEL'SHTAM, T. S.,
and MURZIN, V. N.

"The Spectra of Photo Excitation of Free Excitons by Submillimeter Radiation in
'Ultra Pure' Germanium"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 17,
No 9, 5 May 73, pp 480 - 483

Abstract: Recent experiments have been successful in the study of characteristics of excitons in the long-wave infrared band. Absorption in the region of 2 - 5 Mev was observed in 1971. Subsequent experiments with a backwards wave tube recorded absorption by free excitons in germanium of a triplet with a maximum at 3.42 Mev. In both cases the germanium had residual impurities of $10^{12} - 10^{13} \text{ cm}^{-3}$, which does not completely exclude possible impurity effects. The authors have made tests at impurity levels no greater than $5 \cdot 10^{10} \text{ cm}^{-3}$ with a backward wave tube at 340 - 455 and 510 - 730 micrometers, as well as with a diffraction spectrometer at the far infrared region of 60 - 700 micrometers. The experiments were at 1.5 - 4.2 degrees K.
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USSR

VAVILOV, V. S., et al., Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 17, No 9, 5 May 73, pp 480 - 483

Results indicate that the binding energy of the exciton in the ground state is 3.7 Mev and that the distance between the lowest two states is 0.7 Mev, a result which agrees fairly well with theoretical predictions and with measurements in the interzonal transition region. The narrowness of the absorption lines measured indicates that kinetic energy of the excitons does not substantially contribute to broadening these lines. The broadness is apparently related to interactions between the excitons and null oscillations of the crystal lattice.

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USSR

UDC 613.644:016.6

G
GUZEYEV, O. Ye., KALUGIN, G. P., and RYBALKO, N. S., All Union Scientific Research Institute of Scientific Instrument Building

"Complete Laboratories for the Study of Vibration and Noise"

Moscow, Gigiyena i Sanitariya, No 4, 1970, pp 100-101

Abstract: The authors designed three types of laboratories capable of (i) measuring noise and vibration in industrial and public buildings, stores, restaurants, and schools, and (ii) checking on the accuracy of apparatus used for this purpose by municipal and rayon sanitary epidemiological stations. The first and most fully equipped, Vibroshum I, is intended for Moscow, Leningrad, and republic sanitary epidemiological stations; the smaller Vibroshum II and Vibroshum III are intended for kray, oblast, and large-city, and for rayon and small-city sanitary epidemiological stations, respectively. The instruments and equipment are listed for the different types of laboratories. The modular structure of the laboratories makes it possible for an organization to acquire only those units that it needs, and to replace or add to them whenever desired.

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1/2 035 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--SOME ASPECTS OF TRANSFUSION THERAPY IN GRAVELY BURNT PATIENTS -U-
AUTHOR--GUZEYEV, V.A. G
COUNTRY OF INFO--USSR
SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 3, PP
71-75
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BURN, BLOOD TRANSFUSION, TRAUMATIC SHOCK, WHOLE BLOOD, BLOOD
PLASMA SUBSTITUTE, ALBUMIN, DIURETIC, SKIN GRAFT

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/0638 STEP NO--UR/0599/70/104/003/0071/0075
CIRC ACCESSION NO--AP0102624
UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102624

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR HAS STUDIED THE RESULTS OF TREATMENT IN 531 PATIENTS WITH DEEP BURNS (FROM 10 TO 20PERCENT OF THE BODY SURFACE). IN THE FIRST PERIOD OF THE BURN DISEASE 325 PATIENTS WERE ADMITTED TO THE HOSPITAL, SHOCK BEING OBSERVED IN 303 OF THEM. IN ALL PERIODS OF THE DISEASE SUCH PATIENTS WERE TRANSFUSED THE WHOLE BLOOD, GELATINOL, POLYVINOL, ALBUMIN AND ALSO DIURETICS: UREA, SODIUM THIOSULPHATE, MANNITOL. THE PROPER COMBINATION OF THESE AGENTS ENABLED PROMPTLY TO PREPARE PATIENTS FOR SURGICAL RESTORATION OF THE SKIN COVER. IN EARLY, AND ENERGETIC TRANSFUSION THERAPY, ASSOCIATED WITH AUTOPLASTY IN DUE COURSE, IT WAS FEASIBLE TO GAIN A RECOVERY IN GRAVELY BURNT PATIENTS, THE SURFACE OF A DEEP BURN IN WHICH DID NOT EXCEED 40PERCENT OF THE BODY SURFACE.

UNCLASSIFIED

1/2 038 UNCLASSIFIED PROCESSING DATE--23OCT/0
TITLE--RHEOLOGICAL PROPERTIES OF MELTS OF PLASTICIZED POLYVINYL CHLORIDE
FILLED WITH AEROSIL -U-
AUTHOR-(03)-GUZEYEV, V.V., RAFIKOV, M.N., MALINSKIY, YU.M.
COUNTRY OF INFO--USSR
SOURCE--PLAST. MASSY 1970, (3), 25-7
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--POLYMER RHEOLOGY, POLYVINYL CHLORIDE, FILLER, SHEAR STRESS,
VISCOUS FLOW
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0657 STEP NO--UR/0191/70/000/003/0025/0027
CIRC ACCESSION NO--AP0119565
UNCLASSIFIED

2/2 038

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119565

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE EFFECTIVE VISCOSITY (N) OF PLASTICIZED POLY(VINYL CHLORIDE) (I) MELTS SHARPLY INCREASED WITH INCREASED AEROSIL (II) CONTENT, DUE TO THE FORMATION OF AN ADSORBED I LAYER AROUND THE II PARTICLES. THE THICKNESS OF THE ADSORBED LAYER IS INVERSELY PROPORTIONAL TO THE SHEAR STRESS AND SHEAR RATE. A DECREASE IN THE THICKNESS OF THE ADSORBED I LAYER CAUSED AN INCREASE IN THE APPARENT ACTIVATION ENERGY OF VISCOUS FLOW.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--PLANNING AN EXPERIMENT USING COMPOSITION PROPERTY DIAGRAMS -U-
AUTHOR-(04)-SEREDA, E.A., KARTASHOVA, T.M., BELYAKOVA, L.K., GUZEYEV, V.V.
COUNTRY OF INFO--USSR
SOURCE--PLAST. MASSY 1970, (2), 55-7
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--PHYSICAL CHEMISTRY PROPERTY, POLYVINYL CHLORIDE, SYNTHETIC RUBBER, GRAPHIC TECHNIQUE, ORGANOLEAD COMPOUND, CHEMICAL STABILIZER, PHOSPHATE ESTER/(U)SKN26 RUBBER

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/1693 STEP NO--UR/0191/70/000/002/0055/0057
CIRC ACCESSION NO--AP0112687
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0112687

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE USE OF THE SIMPLEX METHOD FOR THE STUDY OF PHYS. PROPERTIES OF A TERNARY PLASTIC SYSTEM AS A FUNCTION OF COMPN. WAS DISCUSSED. THE EXPTS. WERE CONDUCTED WITH A SYSTEM COMPOSED OF S-70 POLY(VINYL CHLORIDE), SKN-26 RUBBER, TRICRESYL PHOSPHATE, AND A MIXT. OF STABILIZERS (2PBCO SUB3.PB(OH) SUB2 AND TRIS(NONYLPHENYL) PHOSPHITE). SEVERAL QUADRATIC EQUATIONS, WHICH EXPRESSED THE PHYS. PROPERTIES OF PLASTICS AS A FUNCTION OF COMPN., WERE DERIVED AND THE DATA WERE PLOTTED ON A TRIANGULAR DIAGRAM. THE ANAL. METHOD CUT THE NO. OF EXPTS. BY GREATER THAN TWO THIRD AND THE CALCD. CURVES MATCHED THE EXPTL. ONES FAIRLY WELL.

UNCLASSIFIED

USSR

UDC 624.01.46

MEDVED'KO, S. V., Engineer, MOSKVIN, V. M. Doctor of Technical Sciences,
BULGAKOVA, M. G., GUZEYEV, Ye. A., Candidates of Technical Sciences

"Particularities of the Work of Prestressed Elements Under a Prolonged Load
in an Aggressive Medium"

Moscow, Beton i Zhelazobeton, No 1, January 1972, pp 18-30

Abstract: At the Central Corrosion Laboratory of the Central Scientific Research Institute of Concrete and Reinforced Concrete, research is conducted on the influence of the simultaneous action of prolonged loading and an aggressive medium, with high moisture, upon the limit states of prestressed reinforced-concrete elements. Results of research on the bending deformation of prestressed reinforced-concrete elements during their prolonged loading in an aggressive medium are presented. It is shown that under the influence of high moisture, created by the dispersion of a 3% solution of sodium chloride, the moment of crack formation decreases somewhat, the deflections of beams increase with prolonged loading, and residual deformations increase after complete unloading. It is noted that the indicated changes are connected with adsorption strength decrease, and with an increase in the deformability of concrete in the elongated zone of the elements. It is pointed out

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USSR

MEDVED'KO, S. V., et al., Beton i Zhelezobeton, No 1, January 1972, pp 18-30

that account must be taken of the particularities of the work of structures in media with high moisture when designing these structures. 4 figures. 1 table. 5 references.

2/2

- 107 -

USSR

UDC 534.833.522.4;534.213.4

GEL'FGAT, V. I., ~~GUZHAS, D. R.~~, MIKHAYLOV, R. N., and
TARTAKOVSKIY, B. D., Acoustic Institute of the Academy of Sciences USSR, Moscow

"Sound Insulation of a Closed Cylindrical Shell by Inside Excitation"

Moscow, Akusticheskiy Zhurnal, Vol 17, No 4, 1971, pp 545-549

Abstract : The sound insulation of a cylindrical shell on low frequencies by axisymmetric inside excitation and propagation of normal waves excited within the shell is investigated. Formulas are derived characterizing the sound insulation of the cylindrical shell for diffusion sound and normal waves. The calculated dependence of the diffusion sound insulation on the frequency, for $h/R=0.03$ and $h/R=0.003$ (where: R = radius of the cylinder and h =wall thickness of the cylinder), is shown. An experimental proof of the formulas conducted on tubes, 6 m long and 219 mm in diam., wall thickness 2mm and 8 mm, revealed a good agreement with the calculation. It was found that the sound insulation of the shell on low frequencies exceeds considerably the sound insulation of a plate of the same thickness. With increasing frequency the sound insulation decreases and coincides with the sound insulation of a plate on high frequencies. Four illustr., 14 formulas, six biblio. refs.

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USSR

628.517.2

GUZHAS, D.R.

GUZHAX, D. R., Assistant, TARTAKOVSKIY, B. D., Candidate of Technical Sciences

"Experimental Investigation of the Vibroacoustic Characteristics of Damped Cylindrical Pipes"

Moscow, Izvestiya Vysshikh Uchevnykh Zavedeniy, Mashinostroyeniye, No 12, 1970, pp 36-42

Abstract: Vibrations of the walls of cylindrical pipe lines used for various purposes (for example at compressor stations or electric power plants) are sources of intensive noise, which attains 110-130 db. In a number of cases, intensive vibrations of the pipeline walls were the cause of fatigue destruction of the system of pipelines and fittings. The vibrations of pipeline walls originate as a result of aerodynamic and hydrodynamic processes within the pipeline. The external noise of the pipeline is due, in the first approximation, to noise penetrating through the pipe walls which is formed when the flow passes along the pipeline, and by noise due to the radiation of vibrations which appear in connection with turbulence of the flow in the pipeline and the action of mechanical exciters (the compressor, the reducer,
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USSR

GUZHAX, D. R. and TARTAKOVSKIY, B. D., *Izvestiya Vysshykh Uchevnykh Zavedeniy, Mashinostroyeniye*, No 12, 1970, pp 36-42

etc). In the article are presented the results of an experimental investigation of a homogeneous and reinforced vibration-absorbing coating applied to a cylindrical pipe. The sound-insulating and vibration-damping effect of the vibration-absorbing coating is investigated. The possibility of effective vibration damping of the oscillation of cylindrical pipes by a vibration absorbing viscoelastic homogeneous and reinforced coating is shown. 4 figures, 3 bibliographic entries.

2/2

- 134 -

1/2 031 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--EXPERIMENTAL STUDY OF SOUNDPROOFING OF CYLINDRICAL DUCTS -U-

AUTHOR--(02)-GUZHAS, D.R., TARTAKOVSKIY, B.D.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, IVUZ MASHINOSTROYENIYE, NO 2, FEB 70, PP 32-37

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ACOUSTIC INSULATION, CYLINDRIC SHELL STRUCTURE, FREQUENCY CHARACTERISTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1012

STEP NO--UR/0145/70/000/002/0032/0037

CIRC ACCESSION NO--AP0112167

UNCLASSIFIED

2/2 031

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112167

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE RESULTS OF THE EXPERIMENTAL STUDY OF SOUNDPROOFING OF SMALL DIAMETER CYLINDRICAL DUCTS ARE REPRESENTED. IT IS SHOWN THAT SOUNDPROOFING OF SUCH DUCTS DIFFERS SHARPLY FROM SOUNDPROOFING OF PLATES OF THE SAME THICKNESS. THE MEASURED AND CALCULATED. ACCORDING TO THE "LAW OF MASS", SOUNDPROOFING OF CYLINDRICAL DUCTS DIFFERS SHARPLY IN MAGNITUDE AND ACCORDING TO THE CHARACTER OF CHANGE IN FREQUENCY. AT LOW FREQUENCIES THE SOUNDPROOFING INCREASES BECAUSE OF THE EFFECT OF TENSILE RIGIDITY OF THE CYLINDRICAL SHELL. AT HIGH FREQUENCIES THE DUCT "SOFTENS", AND ITS SOUNDPROOFING IS ANALOGOUS TO THAT OF A UNIFORMLY THICK PLATE. THE CYLINDRICAL DUCTS AND SHELLS DURING SONICATION ON THE INSIDE ARE HIGHLY SOUNDPROOF AND SURPASS INSULATION OF THE UNIFORMLY THICK PLATE BY 40-60 DB. IT MAY BE ASSUMED THAT INSIDE THE DUCT THERE EXIST WAVES AT WHICH THE DEFORMATION OF THE DUCTS IS VERY SMALL IN THE RADIAL DIRECTION. AT HIGH FREQUENCIES THE SOUNDPROOFING AND THE DUCT, MEASURED BY THIS METHOD, APPROACHES THAT OF A PLATE. THE DUCT BECOMES "SOFTER" FROM THE EFFECT OF FLEXURAL STRAIN. THE CONDUCTED EXPERIMENTAL STUDIES OVERCOME THE PRACTICAL DIFFICULTIES IN CALCULATING SOUNDPROOFING OF CYLINDRICAL DUCTS AND SHELLS. THE ARTICLE WAS RECOMMENDED BY DOCTOR OF TECHNICAL SCIENCES, PROFESSOR OF THE MOSCOW HIGHER TECHNICAL SCHOOL IMENI N. E. BAUMAN, YE. YA. YUDIN.

UNCLASSIFIED

USSR

UDC 534.833

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GUZHAS, D. R. (Aspirant), and TARTAKOVSKIY, B. D. (Candidate of Technical Sciences)

"Experimental Apparatus for the Study of Soundproofing Cylindrical Tubes"

Moscow, IVUZ Mashinostroyeniye, No 1, Jan 70, pp 37-41

Abstract: A description of the design and principles of action of an apparatus for the study of soundproofing cylindrical pipes 10 m long and up to 1 m in diameter used in gas supply systems is presented. The apparatus makes possible study of pipe soundproofing during external and internal sonication of pipes. The apparatus consists of a mechanical part and electroacoustic channel which in turn is composed of a master and measuring-recording channels. From the outside, the pipe is sonicated by horn loudspeakers of the type 50GRD-8. The placement and number of loudspeakers can be changed in the process of testing in order to change the diffusivity of sound field around the tube. The loudspeaker 50GRD-8 serves as a source of sound inside the pipe and is fixed in a cylindrical chamber filled with fluffy glass wool. The master channel allows excitation of the sound sources by sinusoidal tones and thirdoctave bands of white noise. The measuring and recording apparatus consists of microphones,

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USSR

GUZHAS, D. R. (Aspirant), and TARTAKOVSKIY, B. D., IVUZ Mashinostroyeniye,
No 1, Jan 70, pp 37-41

third-octave spectrometer of the type 2112 and narrow band analyzer of
the type 2107 for noise suppression. In determining results of measure-
ments it is necessary to consider the effect of placement and acoustic
noises. The article was presented by YE. YA. Yudin, Doctor of Technical
Sciences, Professor of the Moscow Higher Technical School imeni N. E.
Bauman.

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ENGINEERING

Acoustical

UDC 534.834

USSR

GUZHAS, D. R., and TARTAKOVSKIY, B. D.

"Experimental Study of Soundproofing of Cylindrical Ducts"

Moscow, IVUZ Mashinostroyeniye, No 2, Feb 70, pp 32-37

Abstract: The results of the experimental study of soundproofing of small diameter cylindrical ducts are presented. It is shown that soundproofing of such ducts differs sharply from soundproofing of plates of the same thickness. The measured and calculated, according to the "law of mass", soundproofing of cylindrical ducts differs sharply in magnitude and according to the character of change in frequency. At low frequencies the soundproofing increases because of the effect of tensile rigidity of the cylindrical shell. At high frequencies the duct "softens", and its soundproofing is analogous to that of a uniformly thick plate. The cylindrical ducts and shells during sonication on the inside are highly soundproof and surpass insulation of the uniformly thick plate by 40-60

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USSR

GUZHAS, D. R., TARTAKOVSKIY, B. D., IVUZ Mashinostroyeniye, No 2, Feb 70,
pp 32-37

db. It may be assumed that inside the duct there exist waves at which the deformation of the ducts is very small in the radial direction. At high frequencies the soundproofing and the duct, measured by this method, approaches that of a plate. The duct becomes "softer" from the effect of flexural strain. The conducted experimental studies overcome the practical difficulties in calculating soundproofing of cylindrical ducts and shells. The article was recommended by Doctor of Technical Sciences, Professor of the Moscow Higher Technical School imeni N. E. Bauman, Ye. Ya. Yudin.

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USSR

GUZHAVIN, V. V., IVANENKO, I. P., MAKAROV, V. V.

"Effect of the Geomagnetic Field on the Angular Distribution of Particles in an Electromagnetic Cascade"

Moscow, Yadernaya Fizika, Vol 14, No- 5, 1971, pp 1006-1013

Abstract: The particles discussed in this paper are charged particles falling in a cascaded shower in the atmosphere and deflected by the earth's magnetic field. This deflection leads to the asymmetry of the shower's three-dimensional characteristics with respect to the axis of the shower. The paper derives the basic equations of the theory accounting for the effect of the earth's magnetic field on the particles, with an approximation of small angles of multiple dispersion, and computes the angular distribution function of the shower without taking the ionization losses into account. This latter computation is done by the method of moments.

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1/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70
 TITLE--CALCULATION OF THE ABSOLUTE ENERGY OF X RAY EMISSION TRANSITIONS OF
 A HYDROGEN CHLORIDE MOLECULE IN AN APPROXIMATION OF THE UNIFIED ATOM
 AUTHOR--(05)-NIKOLAYEV, A.V., MAZALOV, L.N., MURAKHTANOV, V.V., SADOVSKIY,
 A.P., GUZHAYINA, T.I.
 COUNTRY OF INFO--USSR
 SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(1), 144-7
 DATE PUBLISHED-----70
 SUBJECT AREAS--CHEMISTRY
 TOPIC TAGS--HYDROGEN CHLORIDE, X RAY EMISSION, ELECTRON SHELL
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--2000/0595 STEP NO--UR/0020/70/191/001/0144/0147
 CIRC ACCESSION NO--AT0124292
 UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AT0124282

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ENERGY OF EMISSION TRANSITIONS WERE STUDIED FOR THE HCL MOL. TAKING INTO ACCOUNT THE DISTORTION OF THE ORBITALS DUE TO HOLES. THE RESULTS OF CALCNS. FOR 7 POSSIBLE HOLE CONFIGURATIONS ARE TABULATED. IT IS CONCLUDED THAT THE ENERGY BOUND IN THE DISTORTION OF THE ORBITAL IS RATHER LARGE AND CANNOT BE IGNORED, PARTICULARLY FOR HOLES IN THE INTERNAL SHELLS. FACILITY: INST. NEORG. KHIM., NOVOSIBIRSK, USSR.

UNCLASSIFIED

USSR

UDC 542.91:547.1'118

ARBUZOV, B. A., ZOROASTROVA, V. M., TUDRIY, G. A., GUZHENKOVA, A. V.,
Chemical Institute imeni A. M. Butlarov of Kazan State University imeni
V. I. Ul'yanov-Lenin

"Interaction of 2-6-dibenzylidene-cyclohexanone with trialkylphosphite and
dialkylphosphorous Acids"

Moscow, Izvestiya Akademii Nauk SSR -- Seriya Khimicheskaya, No 11, 1972,
pp 2545-2549

Abstract: The interaction of trimethyl and triethylphosphite with 2,6-
-dibenzylidenecyclohexanone was found to lead to the formation of cyclic
phosphorane (Ia), (Ib). The structure of the phosphoranes was checked
by the nuclear magnetic resonance and infrared spectral data. The properties
of these spectra are discussed. The interaction of 2,6-dialkylphosphites
forms dialkyl esters of 2-(6-benzylidenecyclohexanone)benzylphosphonic acid
and also cyclic esters depending on the temperature. The experimental pro-
cedures and results are given for the interaction of 2,6-benzylidenecyclo-
hexanone with trialkylphosphites, the saponification of the phosphoranes, the
interactions of phosphorane (Ia) with acetic anhydride, the interaction of
2,6-benzylidenecyclohexanone with trialkylphosphites in the presence of
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USSR

ARBUZOV, B. A., et al., Izvestiya Akademii Nauk SSR - Seriya Khimicheskaya, No 11, 1972, pp 2545-2549

$(\text{CH}_3\text{CO})_2\text{O}$, the interaction of phosphorane (Ia) with CH_3COOH , the interaction of 2,6-dibenzylidenecyclohexanone with trialkylphosphites in the presence of CH_3COOH , the interaction of 2,6-dibenzylidenecyclohexanone with $(\text{CH}_3\text{O})_2\text{POH}$, 2,6-dibenzylidenecyclohexanone with $(\text{C}_5\text{H}_2\text{O})_2\text{POH}$, 2,6-dibenzylidenecyclohexanone with $\text{P}(\text{OCH}_3)_3$ in the presence of methanol, and thermographic analysis of the enol derivative of phosphorane (Ib).

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GUZHEVSKIY, V. N.

SO:IPRS 5340.

12 1000 71

UGC: 614.55(57-21)

EXPERIENCE IN ORGANIZING HOSPITALIZATION AND HOSPITAL PHASES OF EMERGENCY SERVICES IN A LARGE INDUSTRIAL CITY

ИМП/ПЗЛД (РКЗ) (С)

Article by V.N. Guzhevskiy, A.S. Kazakov, Krivoy Rog Municipal Department of Public Health, Moscow, Sovetskoye Zhdanovskoye, Russian, No 5, 1971, published 20 October 1970, pp 17-21

The emergency service plays an extremely important part in the system of Soviet public health services. In no other nation of the world has this form of aid to the population been developed on the enormous scale it has in the USSR.

In the last few years, public health agencies have instituted a number of measures directed toward improving emergency services. Organization has today become one of the most important problems in Soviet public health service.

Until recently not enough attention was given in the special literature and official documents to the emergency service in the general public health system and especially to its links with other therapeutic and prophylactic institutions. It is only with the decision of the Board of the USSR Ministry of Health dated 25 January 1968 and the order of the USSR Minister of Health No 175, dated 6 August 1968, that this matter has been clarified. The organization of emergency aid was defined as an extremely important link in the general public health system. The organic link between emergency services and other forms of medical aid, as spelled out by direct orders of the USSR Minister of Health, broadening of the very concept of "emergency aid" and inclusion therein of all forms of emergency services at all of its various forms from the site of the accident to the specialized institution are the only correct way toward further development and improvement of emergency services.

* Released for purposes of discussion -- Editor's note.

GUZHEVSKIY, V. N.

SO:JPRS 55204 UDC: 616.43/45-C92(-21)
16 FEB 72

CONFERENCE IN ORGANIZING SPECIALIZED ENDOCRINOLOGICAL CARE IN A LARGE INDUSTRIAL CITY

Article by V. N. Guzhevskiy, A. G. Kozakova, O. S. Kerzyreva, Krivoy Rog Municipal Health Department, Moscow, SAVITSKOYE ZDOROVOKRUPNIYE, No. 1, 1971, submitted 22 June 1971, pp 16-21

Organization and improvement of medical care for individuals with pathology of the endocrine system is an urgent problem which requires the constant attention of public health agencies. Its importance is determined by the considerable increase in registered cases of endocrine pathology and especially of diabetes mellitus in the last decade, their duration and frequent exacerbations, and the possibility of serious complications.

The recorded incidence of diabetes mellitus in the adult population of Krivoy Rog over a ten-year period is shown on Table 1.

We see on Table 1 that there was a more than five-fold increase in number of registered cases of diabetes mellitus in 1970, as compared to 1961, and a 3.5-fold increase in new cases. In this same period the overall incidence of thyroid pathology rose by 13 percent.

Organization of medical care for individuals with endocrine pathology has not covered enough in the literature; no distinct positions have been taken with regard to dispensary care for such patients.

Yu. P. Shreva and R. S. Miroshchenko* (1970) write that they could not find any primary investigations pertaining to organization of specialized endocrinological care in cities. Yu. S. Gordon et al.† (1970) observe that the endocrinological service is relatively new, that it still does not have a tested structure or definitively established forms and methods of operation.

In the last few years a few articles have been published on organization of endocrinological care in cities, organizational forms have been proposed which, in our opinion, present many interesting elements but are not without

* SAVITSKOYE ZDOROVOKRUPNIYE, No. 3, 1970, p. 27.

1/2 023 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--EXPERIENCE IN ORGANIZING A SPECIALIZED NARCOTOLOGICAL SERVICE IN AN
INDUSTRIAL CITY -U-
AUTHOR--(02)-GUZHEVSKIY, V.N., OSTASHEVSKAYA, N.G.
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, SOVETSKOYE ZDRAVOOKHRANENIYE, RUSSIAN, NO 2, 1970,
SUBMITTED 20 FEBRUARY 1969, PP 24-27
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ALCOHOL, PUBLIC HEALTH, MEDICAL FACILITY, DRUG ABUSE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0709

STEP NO--UR/0753/70/000/002/0024/0027

CIRC ACCESSION NO--AP0132814

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

2/2 023

CIRC ACCESSION NO--AP0132814

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UNDER THE CONDITIONS OF CONSTRUCTION OF A COMMUNIST SOCIETY IN OUR COUNTRY THE SURVIVAL OF SUCH A REMNANT OF THE PAST AS ALCOHOLISM IS BECOMING INCREASINGLY LESS TOLERABLE. ALL UNITS OF THE PUBLIC HEALTH SERVICE MUST BE DRAWN INTO THE FIGHT AGAINST THIS SOCIAL ILL AND THERE MUST BE CONSTANT IMPROVEMENTS IN THE CORRESPONDING THERAPEUTIC AND ORGANIZATIONAL MEASURES. MANY AUTHORS FEEL IT IS DESIRABLE TO BROADEN THE NONHOSPITAL NARCOLOGICAL PROGRAM BY A GENERAL THERAPEUTIC NETWORK, WHILE AT THE SAME TIME NOT DENYING THE NEED FOR CREATING SPECIALIZED HOSPITAL WARD AND TREATMENT CENTERS. HOWEVER, WE HAVE NOT ENCOUNTERED ANY REPORTS IN THE LITERATURE ON THE OPERATION OF A SPECIALIZED NARCOLOGICAL SERVICE ESTABLISHED IN THE GENERAL NETWORK OF PUBLIC HEALTH SERVICES OF A LARGE INDUSTRIAL CITY SUCH AS EXISTS IN THE KRIVROY ROG IRON ORE BASIN. IN ORGANIZING NARCOLOGICAL ASSISTANCE FOR THE POPULATION OF KRIVROY ROG AND THE ENTIRE IRON ORE BASIN WE WERE GUIDED BY THE PRACTICAL NEED FOR IT, AS WELL AS THE RECOMMENDATIONS AND IDEAS OF A NUMBER OF AUTHORS WHOSE EXPERIENCE AND KNOWLEDGE OF NARCOLOGY WE ENDEAVORED TO APPLY UNDER OUR CONDITIONS. THREE YEARS HAVE NOW PASSED. WE FEEL THAT THE EXISTENCE OF A NARCOLOGICAL SERVICE IN THE CITY PUBLIC HEALTH SYSTEM HAS PROVEN ITSELF AND DESPITE INDIVIDUAL SHORTCOMINGS WHICH AT TIMES HAVE ARISEN DUE TO FACTORS BEYOND OUR CONTROL, HAS GIVEN POSITIVE RESULTS. FOR THIS REASON WE FEEL IT USEFUL TO SHARE OUR EXPERIENCE IN THE PRACTICAL ORGANIZATION OF A NARCOLOGICAL SERVICE.

UNCLASSIFIED

UDC 632.938.1:633.18

USSR

GUZHOV, Yu. L., Candidate of Biological Sciences, Docent, Patrice Lumumba Peoples Friendship University

"Varieties of Rice Resistant to Diseases and Pests"

Moscow, Zashchita Rasteniy, No 12, 1971, pp 48-49

Abstract: The need to select varieties of rice resistant to certain diseases and pests is stressed. India has developed strains which are immune to *Piricularia oryzae*, a particularly dangerous disease in that country and one also prevalent in the USSR, Japan, Ceylon, Thailand, and the USA. Study of more than 3,000 varieties of rice showed that the disease is most rampant in conditions of high humidity, where night temperatures do not exceed 26°C, and during the germination, tillering, and shaft formation stages of plant development. The entire plant above the ground may be affected by the disease, which causes it to turn brown and wither. Sources of the infection are seeds, plant remains, and wild grains. Fast-ripening varieties are most immune. These include Te-tep, Tadukan, Zenit, Norin 1, Norin 22, the new hybrids So. 25, 26, 29, 30, and the mutant Teychang 65. Systems are being developed in several countries for determining the disease resistance of various strains. Varieties Ch 13, T 141, and Vat 10 have been developed

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1/2 022 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EFFECT OF A COMPENSATING IMPURITY ON THE HOMOGENEITY OF MERCURY
DOPED GERMANIUM -U-
AUTHOR-(04)-GUZHVA, I.P., ROMANVCHV, D.A., CHERKASOV, A.P.,
KHARIONOVSKIY, YU.S.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2), 196-200

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GERMANIUM SINGLE CRYSTAL, SEMICONDUCTOR IMPURITY, RESISTIVITY,
PARTICLE DISTRIBUTION, MERCURY, ANTIMONY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/2000

STEP NO--UR/0363/70/006/002/0196/0200

CIRC ACCESSION NO--AP0105074

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105074

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HOMOGENEITY OF RESISTIVITY AND IMPURITY CONC. IN THE TRANSVERSE CROSS SECTION OF GE SINGLE CRYSTALS DOPED WITH HG, PARTIALLY COMPENSATED WITH SB WITH A HG LEVEL OF 0.087 EV WAS INVESTIGATED. THE PRIMARY REASON FOR THE HETEROGENEITY OF THE RESISTIVITY IN THE TRANSVERSE CROSS SECTION OF THE CRYSTALS CONSISTS IN NONUNIFORM DISTRIBUTION OF THE SB DUE TO THE DEVELOPMENT OF THE BOUNDARY EFFECT. THE HG IS DISTRIBUTED UNIFORMLY IN THE TRANSVERSE CROSS SECTION OF THE CRYSTALS, AND THE BOUNDARY EFFECT FOR HG AT A CONC. OF SIMILAR TO 5 TIMES 10 PRIME14-CM PRIME3 WAS NOT OBSD. THE EFFECT OF HETEROGENEITY OF THE SB ON THE HETEROGENEITY OF THE ELEC. PROPERTIES OF THE CRYSTALS DEPENDS ON THE DEGREE OF CONDENSATION. THE HETEROGENEITY OF THE CRYSTALS AT A LOW TEMP. CAN INCREASE TREMENDOUSLY DUE TO THE EFFECT OF RANDOM ACCEPTORS, IF THE CONC. OF THE LATTER IS CLOSE TO THE CONC. OF THE COMPENSATING IMPURITIES.

UNCLASSIFIED

USSR

6 UDC: 581.2

RUBIN, B.A., GUZHOVA, N.V., KARTASHOVA, YE. R., ANDREYCHUK, T.V., and MATVEYEVA, YE.S., Moscow State University imeni M.V. Lomonosov.

"Oxidative Apparatus of the Agent of Cotton Wilt (*Fusarium Oxysporum Vasinfectum*) of Different Pathogenicity"

Moscow, Doklady Akademii Nauk SSSR, Vol 191, No 2, Mar/70, pp 483-486

Abstract: Concurrent experiments and analytical observations on two strains of *Fusarium oxysporum vasinfectum*, the virulent FV-15 strain, and the avirulent FA-61 strain, show that the catalytic and cytochrome oxidase processes in mycelia of these fungi are localized in the structural elements in a manner similar to that in higher plants. But the intensity of any particular function or enzymatic activity in the two strains is not alike. Both catalysis and cytochrome oxidase activity in FV-15 are much higher than in FA-61. The content of protohematin correlates with the activity of porphyrin enzymes: these are higher in FV-15, indicating a much higher intensity in the porphyrin-mycelium exchange. Generally, the differences, concerning all phases of oxidative and metabolic processes, have a definite influence on the pathogenicity of the fungus. The degree of pathogenicity is correlated positively with the intensity of metabolic activity.

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Acc. Nr:

AP0050042

Abstracting Service:
CHEMICAL ABST. 5170

Ref. Code:

4R0368

6

94391q Interaction of a high-frequency discharge plasma with the surface of some dielectrics. Akishin, A. I.; Blyudov, E. V.; Guzhova, S. K.; Isaev, L. N.; Solov'ev, G. G.; Titov, V. I. (USSR). *Zh. Prikl. Spektrosk.* 1970, 12(1), 13-16 (Russ).
 An expt. was performed, imitating the effect of the ionic component of the upper atm. on some dielec. materials (satellite surfaces) present in a plasma of a high-frequency discharge. Optical properties, such as reflection and transmittance coeffs., of a series of dielec. materials were detd. in ionic plasmas of 5-40 eV energy. The reflection coeffs. of dielect. in the visible range decreased markedly due to interaction with O⁺, N⁺, H⁺, or He⁺. The effect of O⁺ was the greatest.

HMJR

IG

4

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REEL/FRAME
19801981

USSR

KHIZHNYAK, N. A. et al, Physics of Plasma and Problems of Controlled Thermonuclear Synthesis (collection), No 2, 1971, pp 5-52

In the second part longitudinal and transverse broadening of a plasmoid in a homogeneous field was studied. The experimental results obtained agree well qualitatively with theory (in the hydrodynamic approximation). Under the given conditions of the experiment it appeared that the basic process is the longitudinal thermal broadening and adiabatic cooling of the plasmoid; the rate of such broadening is at least 2 orders of magnitude greater than the rate of transverse broadening.

The article includes 34 figures. There are 54 bibliographic references.

2/2

USSR

AZOVSKIY, Yu. S., GUZHOVSKIY, I. T., KHIZHNYAK, N. A.

"Electric Polarization of a Plasma Flow in an Axisymmetric Magnetic Field"
Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 41, No 9, Sep 71, pp 1893-1900

Abstract: The authors continue their investigation of the interaction between plasma flows and axisymmetric magnetic fields. In their previous work ("Plasma Physics and Problems of Controlled Thermonuclear Synthesis", a collection of works, No 4, "Nauk. dumka", Kiev, 1970, p 5) the authors showed that many phenomena which are experimentally observed when an extended plasma flow interacts with a magnetic field (change in azimuthal induced current, radial compression, deceleration, and heating) are satisfactorily described in the qualitative approximation by a generalized "small compressed plasmoid" model. In this paper, an experimental and theoretical investigation is made of the behavior of electric polarization fields in a plasma flow interacting with an axisymmetric magnetic field. A comparison is drawn between experimental and theoretical curves for radial and axial fields of polarization in both homogeneous and nonhomogeneous magnetic fields. Eight figures, bibliography of eleven titles.

1/1

UDC 621.373.826:621.317.73

USSR

GUZHVA, V. G., ZINCHENKO, N. I., KOKODIY, N. G., KUZ'NICHEN, V. M.

"High-Speed Laser Radiation Pulse Energy Meter"

Radiotekhnika. Resp. mezhd. temat. nauch.-tekhn. sb. (Radio Engineering. Republic Interdepartmental Schematic Scientific and Technical Collection), No 19, 1971, pp 140-144 (from RZh-Radiotekhnika, No 1, 1972, Abstract No 1D457)

Translation: This instrument is designed for measuring the pulse energy and also the mean radiation power of lasers operating in the free generation mode and in the Q-factor modulation mode. About 9 percent of the transmitted radiation is shunted to the pyroelectric sensor which converts the radiation pulse to a voltage pulse with a duration of several milliseconds and with an amplitude proportional to the radiation pulse energy. The voltage pulse amplitude is measured by a peak volt meter. The measurement time was 2 seconds, and the time between measurements was 15 seconds. The instrument is calibrated by a calorimetric meter. The total error was $(-2 \pm 8)\%$. There are 4 illustrations and a 4-entry bibliography.

1/1

UDC: 577.4

USSR

MELIKHOV, A. N., ~~GUZIK, V. F.~~, KARELIN, V. P., MIRONOV, B. N.

"On Optimizing the Adjustment of Linear Digital Integrating Structures"

V sb. Vychisl. sistemy (Computer Systems--collection of works),
vyp. 47, Novosibirsk, 1971, pp 18-31 (from RZh-Kibernetika, No
8, Aug 72, Abstract No 8V452)

[No abstract]

1/1

- 25 -

006 UNCLASSIFIED PROCESSING DATE--27NDV70
TITLE--ALKYLATION OF PHENOL BY ISOBUTYL ALCOHOL ON THE MACROPOROUS CATION
EXCHANGER KU,2-12P -U-
AUTHOR--(05)-ISAGULYANTS, V.I., MELIKYAN, V.R., GUZIK, V.S., DVORTSOVA,
V.M., SUKHANOVA, N.A.
COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(5), 389

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ALKYLATION, PHENOL, BUTANOL, CATION EXCHANGE RESIN/(U)KUZ 12P
ION EXCHANGE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3008/0883

STEP NO--UR/0064/70/046/005/0389/0389

CIRC ACCESSION NO--AP0137911

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

2/2 006

CIRC ACCESSION NO--AP0137911

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. IN THE ALKYLATION OF PHOH BY ISO, BUDH, THE CATALYTIC ACTIVITY OF THE MACROPOROUS CATION EXCHANGER KU, 2-12P (STATIC EXCHANGE CAPACITY 4.85 MG EQUIV.-G, SP. SURFACE 30-40 M PRIME2-G, AND PARTICLE SIZE 0.355-2.0 MM) WAS CLOSE TO THAT OF THE UNMODIFIED RESIN KU, 2-8 FROM WHICH IT WAS DERIVED. AT 150 DEGREES WITH 30 PERCENT KU, 2-12P AND A PHOH ALC. RATIO OF 1:0.8, THE PRODUCT MIXT. CONTAINED 32 PERCENT PHOH, 3 PERCENT O AND 65 PERCENT P, TERT, BUC SUB6 H SUB4 OH.

UNCLASSIFIED

USSR

UDC 666.764.001.4

GUZMAN, I. Ya., IVANTSOVA, L. A., and MOISEYTSEVA, Z. K., Moscow Institute of Chemical Technology imeni D. I. Mendeleev

"Production and Properties of Refractories Made From Magnesium Oxide on Nitride and Complex Bonds"

Moscow, Ogneupory, No 11, Nov 72, pp 44-48

Abstract: Composite materials based on grains of fused magnesium oxide combined with silicon nitride, silicon oxynitride, and a complex bond consisting of forsterite, silicon carbide, and silicon nitride were produced by reaction caking. The composite and some of its properties are investigated. In comparison with grained refractories based on magnesium oxide, the composite materials possess lower porosity, higher strength, and higher thermal stability. The composite material also has good dielectric properties at increased temperatures. This material can be used at temperatures up to 1500°C in presence of thermal shocks. Three figures, 2 tables, 11 bibliographic references.

1/1

- 12 -

USSR

6
GUZMAN, I. YA., PURUSOVA, T. N., POLUBOYARINOV, D. N.,
KARPITOVSKAYA, M. N.

"Synthesis of Silicon Oxynitride"

Moscow, Ogneupory, No 3, Mar 70, pp 41-46

Abstract: A refractory material has been produced, consisting primarily of silicon oxynitride (Si_2ON_2); the optimal technological parameters for its synthesis are determined, and certain properties of the materials produced are described.

1/1

1/2 029 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--STRENGTH AND DEFORMATION OF OXIDE CERAMICS -U-

AUTHOR--(04)-ADUSHKIN, L.YE., BAKUNOV, V.S., GUZMAN, I.YA., POLUBOYARINOV,
D.N.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(4), 753-60

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--MODEL, CORUNDUM CERAMIC, OXIDE CERAMIC, CERAMIC PRODUCT
PROPERTY, POROSITY, MECHANICAL STRENGTH, PLASTIC DEFORMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/1447

STEP NO--UR/0363/70/006/004/0753/0760

CIRC ACCESSION NO--AP0130380

UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0130380

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRENGTH AND DEFORMATION OF MODEL STRUCTURES OF POROUS CORUNDUM CERAMICS OF A GRANULAR CONSTRUCTION WERE INVESTIGATED. AT CONST. COMPN., MICROSTRUCTURE, AND APPARENT D., THE TEST SAMPLES DIFFERED ONLY IN TEXTURE (THE GRAIN SIZE OF THE POLYCRYST. FILLER AND THE PORE SIZE DETD. BY IT). THE STRENGTH OF POROUS CERAMIC (AS COMPARED TO THE DENSE ONE) IS DECREASED DUE TO THE LOWER CONTACT STRENGTH, DECREASED CONTACT CROSS SECTION, AND DECREASED STRESS CONC. IN THE PORES. THE DEFORMATION RATE OF POROUS CORUNDUM CERAMICS OF GRANULAR CONSTRUCTION DOES NOT DEPEND ON THE PORE SIZE AND IS SIMILAR TO 1-2 AS GREAT AS THE DEFORMATION RATE OF CORUNDUM CERAMICS. AT 1350-1600DEGREES THE DEFORMATION OF THE STRUCTURE IS DETD. BY THE VERY SAME MECHANISMS AS THE DEFORMATION OF DENSE MATERIALS. THE OBSD. INCREASE IN THE DEFORMATION RATE IS ASSOCD. WITH THE INCREASE IN THE EFFECTIVE STRESSES ARISING IN THE MATERIAL AS A RESULT OF THE WEAKENING OF THE CROSS SECTION AND THE STRESS CONCNS. THE SUMMARY ACTION OF THE FACTORS INDICATED CAN IN THE 1ST APPROXN. BE CONSIDERED EMPIRICALLY FROM THE VALUE OF THE "LIMITING FRACTION OF THE CONTACT CROSS SECTION".

FACILITY: MOSK. KHIM.-TEKHMOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--SYNTHESIS OF SILICON OXYNITRIDE -U-
AUTHOR-(04)-GUZMAN, I.YA., PURUSOVA, T.N., POLUBOYARINOV, D.N.,
KARPILOVSKAYA, M.N.
COUNTRY OF INFO--USSR
SOURCE--OGNEUPORY 1970, 35(3), 41-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--SILICON COMPOUND, NITRIDE, DILATOMETRIC ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/0879 STEP NO--UR/0131/70/035/003/0041/0046
CIRC ACCESSION NO--AP0118048
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118048

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ACCORDING TO THE REACTION Si PLUS SiO_2 SUB2 PLUS N SUB2 EQUALS Si SUB2 ON SUB2 PLUS ONEHALF O SUB2 (1) OR $3Si$ PLUS SiO_2 SUB2 PLUS $2N$ SUB2 EQUALS $2Si$ SUB2 ON SUB2 (2) SYNTHETIC SILICON OXYNITRIDE WAS PREPD. THE THERMOGRAVIMETRIC AND X RAY ANAL. DATA SHOW THAT THE REACTIONS BEGIN AT 1000DEGREES AND FINISH AT 1450DEGREES. REACTION (2) HAS BETTER PROSPECTS FOR USE. TO PROVE THE ASSUMPTION THAT Si SUB2 ON SUB2 IS CREATED VIA THE INTERMEIDATE SiO , SAMPLES FROM A MIXT. SiO PLUS Si IN WT. RATIO 1.52:1 WERE PREPD. AND HEATED IN N AT 1450-70DEGREES. BY X RAYS ONLY THE PHASE Si SUB2 ON SUB2 WAS FOUND. A SLIGHTLY LOWERED WT. INCREASE (IN COMPARISON WITH THE THEORETICAL ONE) IN (2) IS CAUSED BY THE SiO ESCAPE. THE DILATOMETRIC MEASUREMENTS AT 20-700DEGREES OF SMPLES WITH VARIOUS $Si:SiO_2$ SUB2 RATIOS CONFIRM THE X RAY DATA. SAMPLES HEATED AT 1350DEGREES AND CONTG. A LARGE AMT. OF SiO_2 SUB2 SHOW THE QUARTZ EFFECT CONNECTED WITH TRANSFORMATION OF BETA TO ALPHA QUARTZ. THE COURSE OF DILATOMETRIC CURVES OF SAMPLES HEATED AT 1450DEGREES DEPENDS ON THE INITIAL COMPN. OF THE MASS. AT $Si:SiO_2$ SUB2 EQUALS 31.85:65.15 AT 170-280DEGREES THE EFFECT CORRESPONDING TO THE EXISTENCE OF CRISTOBALITE IS CLEARLY SHOWN. THE AV. COEFF. OF THERMAL EXPANSION IS 6.6 TIMES 10 PRIME NEGATIVE6 DEGREES. AT A RATIO 58.37:41.63 THE SMOOTHE COURSE OF DILATOMETRIC CURVES IS EVIDENT. THE COEFF. OF THERMAL EXPANSION EQUALS 2.13 TIMES 10 PRIME NEGATIVE6-DEGREE. FACILITY: MOSK. KHIM.-TEKHNL. INST. IM. MENDELEEVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

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UDC: 541.45:666.3/4:939.4

ADUSHKIN, L.YE., BANUNOV, V.S., GIZMAN, I.YA., and POLUBOYARENKO, D.M., Moscow
Institute of Chemical Technology imeni D.I. Mendeleev, Moscow, Ministry of Higher
and Secondary Specialized Education RSFSR

"Strength and Deformation of Oxide Ceramics"

Moscow, Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy, Vol
6, No 4, Apr 70, pp 753-760

Abstract: The article considers the effect of grain composition (size of filler grains and the pore size determined by them) on the strength and high-temperature deformation of corundum ceramics. The initial material was commercial G-1 brand alumina. A filler (single-fraction Al_2O_3 powder) and binder (finely dispersed Al_2O_3 precalcined at $1450^\circ C$) were used to prepare specimens with different structures (textures). The filler grain size varied from 50 to 1000 microns. The experimental specimens prepared were of practically identical phase composition, microstructure and porosity (32 percent) and differed only in texture, i. e. the number and size of the pores with an identical pore size distribution character.

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USSR

ADUSHKIN, L. YE., et al., Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy, Vol 6, No 4, Apr 70, pp 753-760

It was found that the strength of porous ceramics (as compared with dense ceramics) is reduced as a result of reduced contact strength, a decrease in the contact cross-section and the stress concentration of the pores. The deformation rate of porous corundum ceramics of granular structure does not depend on the pore size and is $\sim 1-2$ orders of magnitude higher than the deformation rate for dense corundum ceramics with corresponding crystal size. In the temperature range under study deformation is determined by the same mechanisms as the deformation of dense materials. The increase observed in the deformation rate is due to an increase in the effective stress which occurs in the material as a result of a decrease in the cross-section and stress concentration. The effect of porosity and pore size on the deformation rate may be considered in the first approximation from the value of the "limiting proportion of the contact cross-section."

2/2

USSR

UDC 621.375.82

GOLODENKO, N. N., GUZ'MICHEV, V. M.

"Heating and Evaporation of Metal by a Laser Pulse"

Radiotekhnika. Resp. mezhved. temat. nauch.-tekhn. sb. (Radioengineering. Republic Interdepartmental Thematic Scientific-Technical Collection), 1972, No. 23, pp 139-142 (from RZh-Fizika, No 1, Jan 73, Abstract No 1D950)

Translation: The equation for heat conductivity upon the absorption of a rectangular pulse of optical power at the boundary of a metal is solved. The coordinate origin is connected to the moving boundary. When a critical energy is exceeded, the portion of energy going into heating the sample drops rapidly, since a fundamental portion of the energy of the pulse is carried off by evaporation products. Authors' abstract.

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UNCLASSIFIED PROCESSING DATE--04DEC70
 /2 023
 TITLE--PYRIDOCABINE ANESTHESIA DURING INSTRUMENTAL DIAGNOSTIC
 INVESTIGATIONS IN PATIENTS WITH PULMONARY PATHOLOGY -U-
 AUTHOR--(05)-KUZIN, M.I., PRYANISHNIKOVA, N.T., OSIPOVA, N.A., KHADZHYEVA,
 S.H., GUZNOV, G.I.
 COUNTRY OF INFO--USSR
 SOURCE--KHIRURGIYA, 1970, NR 6, PP 58-62
 DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
 TOPIC TAGS--ANESTHETIC, DIAGNOSTIC METHODS, RESPIRATORY SYSTEM DISEASE,
 LUNG

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
 COXY FICHE NO----FD70/605003/009 STEP NO--UR/0531/70/000/006/0058/0062

ARC ACCESSION NO--A70139541

UNCLASSIFIED

12 020

UNCLASSIFIED

PROCESSING DATE-- 04DEC70

RC ACCESSION NO-- AP0139541

STRACT/EXTRACT--(U) GP-0- ABSTRACT. CLINICAL TRIALS OF PYRROMECAINE, A
NEW SOVIET MADE LOCAL ANESTHETIC, EFFECTED IN 102 PATIENTS WITH SURGICAL
PULMONARY PATHOLOGY DEMONSTRATED THIS PREPARATION CAPABLE OF PRODUCING
AN EFFECTIVE ANESTHESIA OF THE RESPIRATORY TRACT, ENSURING PERFORMANCE
OF COMPLICATED DIAGNOSTIC PROCEDURES (BRONCHOGRAPHY,
BRONCHOSPIROGRAPHY). AS REGARDS ITS POTENCY AND QUICKNESS OF
ANESTHETIC ACTION PYRROMECAINE IS SUPERIOR TO NOVOCAINE AND IS EQUAL TO
DICAINE. SIDE EFFECTS OF THE PREPARATION ARE INSIGNIFICANT.
FACILITY: KAFEDRA FAKUL'TETSKOY KHIRURGII I MII I. M. SECHENOVA,
INSTITUT FARMAKOLOGII, MOSKVA.

UNCLASSIFIED

Entomology

6 UDC: 632.934

USSR

VASECHKO, G.I., KUZNETSOV, M.V., SMELYANETS', V.P., GUZNYENOK, H.KH., Ukrainian Scientific Research Institute of Plant Protection, Institute of Organic Chemistry, Academy of Sciences, Ukrainian SSR

"Insecticidal Properties of Some Components of Essential Oils."

Kiev, Doklady Akademii Nauk Ukrainiskoy SSR, Seriya B, No 3, 1976, pp 275-278

Abstract: Essential oils with insecticidal properties are wide spread in the vegetable kingdom. Insecticidal properties of essential oils in wild, five-leaved grapes (which are almost never attacked by insects), conifers, grains and legumes, mint, etc. were determined. Oils were extracted and their active components isolated by chromatography. The LD 50 of oils with respect to insects was determined. Five insecticides were effective against the Colorado beetle, and many insecticides against larvae of Tribolium destructor, among which colamine (ethanolamine), obtained from germinating seeds, is rather effective. A substance synthesized by germinating rye seeds forms the basis for one of the least harmful and most powerful insecticides, fozalon.

1/1

USSR

UDC: 532.516

AVERIN, V. Z., YAKHNO, O. M., GUZOV, M. Z.

"Motion of a Viscous Liquid in a Rotating Tube"

Gidravlika i gidrotekhnika. Resp. mezhved. nauch.-tekhn. sb. (Hydraulics and Hydraulic Engineering. Republic Interdepartmental Scientific and Technical Collection), 1972, vyp. 14, pp 20-24 (from RZh-Mekhanika, No 7, Jul 72, Abstract No 7B624)

Translation: The paper presents the results of an experimental study of the radial pressure gradient in a rotating tube. The experiments were done on a tube with a length of 66 diameters. Measurements of the radial and axial components of the pressure gradient were taken on a hydrodynamically stabilized section. The experiments were done over a Reynolds number range of 10^3 - 10^5 . The peripheral velocity of the fluid at the wall of the tube varied from 10 to 200 $m \cdot s^{-1}$. Data are given on the pressure distribution along the radius of the tube for various angular velocities. Bibliography of 14 titles. V. D. Vilenskiy.

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USSR

JDC 621.314.61(C88.8)

GUZOVSKIY, I.G., RULLIS, YA.YA.

"A-C Voltage Sensor"

USSR Author's Certificate No 255395, filed 24 June 68, published 31 Mar 70 (from RZh--Elektronika i yeye primeneniye, No 11, November 1970, Abstract No 11B479P)

Translation: A device is proposed for checking and protection of the source of power supply for electronic apparatus. The protective device operates in the case when the pulsation magnitude of voltage at the output of a rectifier [vypryamitel'] exceeds a safe level. The device contains an input transformer; the circuit is charged by voltage of the secondary winding of this transformer across a TsD [expansion unknown] and a resistor. Voltage from the circuit is fed across a reference stabilatron to the input of an amplifier and later to the final protective element. The primary winding of the input transformer is connected to the output busbars of the controlled rectifier across a separation circuit. During an emergency regime, pulsation of the rectified voltage increases and leads to an increase of the voltage in the circuit. When this voltage exceeds the breakdown voltage of the stabilatron, a turn-on of the final protective element of the device takes place.
1 ill. L.R.

1/1

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USSR

UDO 621.316.722.1 (088.8)

GUZOVSKIY, I.G., VITOLIN'SH, ZH.K.

"Device For Voltage Regulation At The Output Of A Rectifier"

USSR Author's Certificate No 259182, filed 7 June 68, published 28 Apr 70 (from RZh--Elektronika i yeye primeneniye, No 11, November 1970, Abstract No 118494F)

Translation: A circuit is patented for a d-c voltage regulator with a series regulator transistor, and a single-stage d-c amplifier which is supplied from a rectifier [vypryemitel']. The distinctive feature of the circuit is the use in the rectifier of a network [tsepochka] of an electrolytic capacitor and a saturation choke coil connected in series. The saturation choke coil is controlled with the aid of a transistor by a d-c voltage signal at the collector of the regulator transistor. When the output voltage is small, the current of an auxiliary transistor equals zero. The saturation choke coil has a small resistance and the electrolytic capacitor is directly connected to the output of the rectifier. With a large output voltage, the resistance of the saturation choke coil is increased and the capacitor is disconnected from the output of the rectifier. Such a circuit increases the speed of response and improves the form of the output voltage of the rectifier. 1 ill. S.D.

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UDC: 911.3.616.927(575.1)

USSR

CHICHENIN, P. I., PULATOV, Ya. G., YUSUPOV, K. Yu., LI GVANKHVA, V. T., BADANOVA, L. A., KOVALEVA, F. S.

"The Prevalence of Typhoid-Paratyphoid Infections and the Means for Eradicating them in the Uzbek SSR"

V sb. Materialy XV Vses. s'ezda epidemiologov, mikrobiologov i infektzionistov, Tezisy dokl. Ch. I (Proceedings of the 15th All Union Conference of Epidemiologists, Microbiologists and Specialists in Infectious Diseases, Reports of Theses, Part I--collection of works) Moscow, 1970, pp 279 (from RZh-36. Meditsinskaya geografiya, No 1, Jan 71, Abstract No 1.36.250)

/No Abstract/

1/1

USSR

UDC 536.2.001.57

DALAKISHVILI, O. N. and GVANTSELADZE, SH. YE.

"Determination of the Transmission Function by Mathematical Modeling"

Moscow, Metrologiya, No 5, May 73, pp 63-66

Abstract: An electrical model of a cylindrical heat sensor is examined under conditions of a changing coefficient of heat transfer. Sensor modeling is accomplished by variable electrical resistance. Formulas are presented for determining the parameters of the electrical model. A method is proposed for determining the equivalent thermophysical parameters of a nonuniform heat sensor which makes it possible to establish the electrical model parameters and the transmission function. 1 figure, 2 bibliographic references.

1/1

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USSR

UDC 621.375.82

GAPRINDASHVILI, KH. I., GVATUA, SH. SH., NUMLADZE, V. V., KHANEVICHEV, V. A.,
and CHAVCHANIDZE, V. V.

"Threshold, Time, and Spectral Characteristics of a Fiber Laser"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No
2(14), Moscow, "Sov. Radio," 1973, pp 25-30 (English summary) (from RZh-
Fizika, No 10, Oct 73, Abstract No 10D833 from authors' abstract)

Translation: The article studies the time character and spectral composi-
tion of radiation in the prethreshold, threshold, and superthreshold states
of a fiber laser with the core doped with 6 wt.-% Nd_2O_3 . In the subthreshold
stage, simultaneously with a decrease in the pulse length, there is a narrow-
ing of the radiation spectrum of the active glass fiber to a quantity less
than 100 Å. At the threshold pumping energy the stimulated radiation is of a
quasicontinuous character and has a pulse length $\Delta\tau = 75 \pm 200$ microseconds and
a half-width $\Delta\lambda < 0.017$ Å. It is shown experimentally that all the time and
spectral stimulated-radiation characteristics known for solid-state lasers are
realized relatively simply in a fiber laser. Bibliography with 18 titles.

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USSR

UDC 678.746

VARDOSANIDZE, TS. N., GVATUA, SH. SH., GEORGADZE, YE. Z., KAPANADZE, V. I., MUMLADZE, V. V., KHANEVICHEV, V. A., CHAVCHANIDZE, V. V., Corresponding Member of the Georgian Academy of Sciences SSR, CHAGULOV, V. S., and CHKHIKVISHVILI, L. V., Institute of Cybernetics, Academy of Sciences Georgian SSR

"Several Spectral Characteristics of Polystyrene Activated with Europium Chelate"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSR, Vol 63, No 3, Sep 71, pp 581-584

Abstract: The spectral characteristics of Eu^{3+} chelates have been investigated by a number of authors both in methylmetacrylate and in alcohol solutions. In this article the authors investigate samples of polystyrene doped with 0.02-2 Wt % europium benzoyl acetate; the samples are 15 mm in diameter and 2 mm thick. They find that such a material exhibits a strong absorption in the region of 3000-4000 Å and the material of the base that is, polystyrene has strong absorption bands in the ultraviolet band of the spectrum; however, it is fully transparent from 3000 Å and up to 1.1 μ. The luminescence and absorption spectra are graphically illustrated. The authors find that polystyrene is a successful base for europium benzoyl acetate. The article contains 3 illustrations and 8 bibliographic entries.

1/1

2

UDC 615.281.8:547.678.3

USSR

YERMOL'YEVA, Z. V., Academician of the Academy of Medical Sciences USSR, KORNEYEVA, L. Ye., BALEZINA, G. I., NIKOLAYEVA, O. D., GVAZAVA, I. S., and FADEYEVA, L. L., Institute of Virology imeni D. I. Ivanovskiy of the Academy of Medical Sciences USSR and the Chemical Therapy Group of Academician of the USSR Academy of Medical Sciences Z. V. Yermol'yeva

"Tyleron as an Interferon Inductor"

Moscow, Antibiotiki, Vol 18, No 6, Jun 73, pp 517-520

Abstract: In the current investigation the harmlessness, interferonogenic activity, and protective action (against infectious viral diseases) of tyleron hydrochloride were tested by administering the drug to white mice hypodermically and orally and to monkeys orally. It was established that there is no toxic effect from various dosages of tyleron hydrochloride with either method of introduction. A marked interferonogenic action was obtained where tyleron hydrochloride was given to mice in dosages of 5, 10, and 20 mg/kg and where 25 mg/kg were administered to monkeys. Oral administration proved more beneficial, while no difference was found between a dosage given in one part daily and given in three equal parts daily. Combining tyleron and prodigiozan made it possible to cut the dosage of 1/2

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USSR

YERMOL'YEVA, Z. V., et al., Antibiotiki, Vol 18, No 6, Jun 73, pp 517-520

tyleron in half and increased the titer and length of interferon circulation in the blood by 50%. Tyleron was found to have a marked protective effect for influenza pneumonia in mice, despite low titers of circulating interferon. On the basis of this investigation, tyleron hydrochloride may be recommended as an effective interferon inductor.

2/2

- 22 -

USSR

UDC 532.516

GVELESIANI, A. I.

"On the Steady-State Thickness of a Liquid Film of Water on the Surface of Hailstones of Various Forms"

Tr. In-t geofiz. AN GruzSSR (Works of the Institute of Geophysics. Academy of Sciences Georgian SSR), 1972, Vol. 28, pp 174-178 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3E801)

Translation: The problem of determining the thickness of a water layer covering hailstones in a steady-state subcritical regime is solved. It is assumed that the water falls on the surface of the hailstone from a supercooled aqueous aerosol in which the hailstone is moving. The Navier-Stokes equation in which only viscous terms are retained is solved for the water film on the surface of a hailstone. The velocity profile found is used to determine the coefficient of heat transfer, which is assumed to be turbulent, however. Finally, the thickness of the liquid film is determined from the heat balance equation on the ice surface of the hailstone for a steady-state regime. Expressions are derived for the thickness of the film in cases when the hailstone has the shape of a sphere, a cylinder, and an ellipsoid of revolution. 6 ref. L. N. Maurin.

1/1

- 68 -

USSR.

UDC 621.357.7:669.265'74

AGLADZE, R. I., GVELESIANI, DZIL, F., RUBESH, L. L.

"Joint Electrodeposition of Chromium and Manganese"

O sovmeštnom elektroosazhdenii khroma i margantsa (Joint Electrodeposition of Chromium and Manganese), Institute of Inorganic Chemistry and Electrochemistry of the Georgian SSR Academy of Sciences, Tbilisi, 1971, 8 pp, a bibliography with 7 entries, No 3613-71 Dep. (from RZh-Khimiya, No 6 (II), Jun 72, Abstract No 6L312 Dep.)

Translation: A study was made of electrodeposition of thick deposits of Cr-Mn alloy from sulfate and chromate electrolytes. It is demonstrated that on introduction of $MnSO_4$ into the sulfate or chromate electrolyte, the codeposition of Mn is directly proportional to the concentration of the Mn ions in the electrolyte. Its maximum content in the alloy reaching 5% is limited by the solubility of $MnSO_4$ in the electrolyte. With an increase in D_c to 30 a/dm^2 , the Mn content in the alloy increases to 10%. The alcohol solubility of the VT alloy is 35%. It is demonstrated that the chromate electrolytes with the addition of potassium permanganate also insure a chromium-manganese alloy; however, they are not suitable for the deposition of thick deposits as a result of intense destruction of potassium permanganate in the electrolysis.

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USSR .

AGLADZE, R. I., et al., O sovmetstnom elektroosazhdenii khroma i margantsa, Institute of Inorganic Chemistry and Electrochemistry of the Georgian SSR Academy of Sciences, Tbilisi, 1971, 8 pp, a bibliography with 7 entries, No 3613-71 Dep.

The sulfate electrolytes are less convenient for obtaining high-quality galvanic coatings of Cr-Mn alloy. It is more convenient to use chromate electrolytes with KMnO_4 added.

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USSR

UDC 621.382.002

AMIRKHANOVA, I.B., ~~GVERDTSITELI, I.G.~~, GULDAMASHVILI, A.I., GOLUBOV, V.B.,
DANSAMIDZE, E.M., ZASLAVSKIY, S.A., KARPENKO, T.T.

"Doping Of Silicon By Ion Bombardment"

V sb. Radiats. fiz. nemet kristallov (Radiation Physics Of Nonmetallic Crystals--Collection Of Works), Vol 3, Part 2, Kiev, "Nauk.dumka." 1971, pp 111-122 (from RZh--Elektronika i yeye primeneniye, No 10, October 1971, Abstract No 103436)

Translation: Doping of n-silicon with a resistivity of 0.035--150 ohm.cm was conducted by polyenergetic beams of boron ions with a current density of 10 ma.cm⁻², and maximum energy of 300 plus or minus 0.150 kev with doses of 1 . 10¹⁵ -- 1 . 10¹⁷ cm⁻². The uniformity of doping was attained by scanning and amounted to 10 percent. Annealing of the doped specimens was conducted in a vacuum at a temperature of 500--700° C during the course of 30 min. The method of studying the specimens and the results obtained are described. 7 ill. 8 ref. I.M.

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USSR

UDC 621.382.002

GARBER, R.I., GVERDTSITELI, I.G., GNAP, A.K., GULDAMASHVILI, A.I., MODLIN, A.A.,
FEDORENKO, A.I.

"Study Of Radiation Damage Of Single Crystals Of Silicon After Doping With
Boron Ions With An Energy Up To 100 Kev"

V sb. Radiats. fiz. nemet. kristallov (Radiation Physics Of Nonmetallic Crystals--
Collection Of Works), Vol. 3, Part 2, Kiev, "Nauk.dumka," 1971, pp 133-138 (from
RZh--Elektronika i yeye primeneniye, No 10, October 1971, Abstract No 10B25)

Translation: The extent of radiation damage in the depth of a doping layer was
determined by the method of layered atomization [raspyleniye] by bombardment by
a beam of Ag^+ ions with an energy of 1 kev and a current density of 10 microamp.
 cm^{-2} with subsequent study of the pattern of the deposits on glass collectors
with a central 2-mm aperture for transmission of the beam of ions. 3 ill. 7 ref.
I.M.

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USSR

UDC 547.345+547.346

GVERDTSITELI, I. M. and GELASHVILI, Ye. S., Tbilisi State University

"Study of the Reaction of Hydrosilylation and Hydrogermylation of 3-Methyl-5-methoxypentyn-1-ole"

Leningrad, Zhurnal Obshchey Khimii, Sep 71, Vol 41, No 9, pp 2061-2066

Abstract: This report concerns the reaction of triethylsilane and triethylgermane with 3-methyl-methoxypentyn-1-ol-3 in the presence of Speier catalyst ($H_2PtCl_6 \cdot 6H_2O$) in isopropyl alcohol. It was found that in both cases the reaction involves addition at the triple bond and proceeds either according to Markovnikov's rule or contrary to it (cis- and trans-forms). Both NMR and IR spectra for both cases are provided. Identification of compounds, yields, physicochemical constants and other analytical results are presented in tabular form.

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USSR

UDC: 632.95

GVERDTSITELI, I. M., MUKHASHAVRIYA, A. L., TSIRGILADZE, T. V., ADAMIYA, S. V., TALIYA, D. P., TSINTSADZE, E. S., and KAPANADZE, G. G., Institute of Plant Protection, Academy of Sciences, Georgian SSR

"Study of the Toxicity of Certain Organotin Preparations for the European Spruce Bark Beetle (*Dendroctonus micans kugel*)"

K izucheniyu toksicheskikh svoystv nekotorykh olovoorganicheskikh preparatov protiv bol'shogo yelovogo luboyeda (*Dendroctonus micans kugel*) (cf. English above), Tbilisi, 1970, 8 pp, bibliogr. 4 titles (from RZh-Khimiya, No 23, 10 Dec 70, Abstract No 23 N726 Dep)

Translation: The toxicity of some new organotin unsaturated alcohols was studied under Georgian conditions. The preparations were effective in controlling the European spruce bark beetle both in the laboratory and in the field.

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1/2 012 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--REACTION OF TRIETHYLHYDROSTANNANE WITH ACETYLENIC AND
VINYLACETYLENIC TERTIARY ALCOHOLS -U-
AUTHOR--(03)-GVERDTSITELI, I.M., ADAMIYA, S.V., KATSITADZE, M.M.
COUNTRY OF INFO--USSR
SOURCE--SOOBSHCH. AKAD. NAUK GRUZ. SSR 1970, 57(1), 65-8
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ORGANOTIN COMPOUND, ALIPHATIC ALCOHOL, TERTIARY ALCOHOL,
CATALYTIC HYDROGENATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605013/B06 STEP NO--UR/0251/70/057/001/0065/0068
CIRC ACCESSION NO--AP0140350
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--04DEC79

CIRC ACCESSION NO--AP0140350

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERMAL AND CATALYTIC
 HYDROSTANNATION OF ACETYLENIC AND VINYL ACETYLENIC TERTIARY ALCS. WAS
 STUDIED. ET SUB3 SNH ADDED TO THE TRIPLE BONDS OF (HO)AC TRIPLE BOND CH
 AT 80-90DEGREES UNDER N TO GIVE TRANS (HO)ACH:CHSNET SUB3, WHERE A
 EQUALS ME SUB2 C, MEETC, MEPRC, ME(ISO-PR) C, CYCLOPENTYLIDENE, AND
 CYCLOHEXYLIDENE. A(OH)C TRIPLE BOND C, CH:CH SUB2 AND ET SUB3 SNH GAVE
 A(OH)CH:C(SNET SUB3)CH SUB2 CH SUB2 SNET SUB3 AND A (OH)CH:C(SNET
 SUB3)CH:CH SUB2, WHERE R EQUALS ME SUB2 C AND MEETC. ME SUB2
 C(OH)CH:C(SNET SUB3) CH:CH SUB2 HYDROGENATED OVER RANEY NI GAVE ME SUB2
 C(OH)CH:CETSJET SUB3. FACILITY: TBILIS. GOS. UNIV., TBILISI,
 USSR.

UNCLASSIFIED

USSR

UDC: 535.243

~~GVERDTSITELI, T. A.~~, SHARIKADZE, A. P., CHARUYEV, N. G., KOVZCHASHVILI, U. A.,
Scientific Research Institute of Automation of Production Processes in Indus-
try

"A Photometer"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,
No 7, Mar 72, Author's Certificate No 329408, Division G, filed 15 Jun 70,
published 9 Feb 72, p 161

Translation: This Author's Certificate introduces a photometer containing
two radiation sources with two light filters, a modulator, a commutator,
three photoreceivers, amplifiers, and a registration module. Two of the
photoreceivers produce commutating signals. As a distinguishing feature of
the patent, the sensitivity of measurements is improved by introducing
integral interrupters into the circuit for registration of the intensity
of the working and comparison signals. The interrupters operate in the
line switch mode, and their control elements are connected to the outputs
of the commutating signal amplifiers. These integral interrupters are con-
nected to alternating current sources in parallel with storage capacitors.

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USSR

GVERDTSITELI, T. A., USSR Author's Certificate No 329408

Two slots are made in the commutating disc. These slots are no longer than the diameter of the light filters, and are located at different distances from the center of the disc.

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Computer Technology

USSR

UDC 621.391.2

GVIL'DIS, I. Yu., LASHAS, A. V., BACHAUSKENE, M. I., GUDYALIS, L. P.

"Relative Comparison of Some Rules of Classification in the Case of Low Probabilities of Errors"

Vil'nyus, Nauchnyye trudy vysshikh uchebnykh zavedeniy Lit. SSR. Avtomatika i vychislitel'naya tekhnika (Scientific Works of Institutions of Higher Education of the Lithuanian SSR. Automation and Computer Technology), No 2, 1970, "Mintis", pp 5-13

Abstract: A relative comparison is made in this article of some rules of classification in the case where the probabilities of errors are small. This kind of classification enables determination of the best rule in the sense of error probability for the given objects. Determination of the best rule of classification is carried out as a check on the statistical hypothesis of comparison of two probabilities. It is proposed that the frequencies of rejection be used in the case of a limited number of objects to be tested. Algorithms which realize relative comparison are presented for some rules of classification, and the experimental results of such a comparison are given. Four tables, one illustration, bibliography of nine titles.

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