"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 030 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--EXPERIENCE IN THE USE OF PNEUMOGRAPHY IN THE DIAGNOSIS OF DISEASES OF SUBMANDIBULAR SALIVARY GLANDS, PNEUMOSUBMANDIBULOGRAPHY -U-

AUTHOR-(03)-MOCHULSKIY, A.S., PLINER, M.A., TILIMA, O.A.

COUNTRY OF INFO--USSR

SOURCE--STOMATOLOGIYA, 1970, VOL 49, NR 3, PP 66-67

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ORAL DISEASE, SALIVARY GLAND, PNEUMOGRAPHY, RADIOGRAPHY, DIAGNOSTIC MEDICINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0504 STEP NO--UR/0511/70/049/003/0066/0067

CIRC ACCESSION NO--AP0131127

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 030 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131127

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THROUGH A SYSTEM OF TWO [illegible]'S APPARATUS THE AUTHORS INSUFFLATED OXYGEN UNDER THE MUSCLES OF THE SUBMENTAL REGION AND UNDER CONTROL OF THE X RAY SCREEN PREPARED ROENTGENOGRAMS OF SUBMAXILLARY SALIVARY GLAND FROM BOTH SIDES. IN A NUMBER OF CASES TOMOGRAMS WERE RECORDED AND THE INVESTIGATION WAS COMBINED WITH SIALOGRAPHY. ON THE ROENTGENOGRAMS THERE ARE DISTINCTLY SEEN CONTOURS OF THE GLAND, FORM AND ITS LOBAR STRUCTURE AND INTERRELATION WITH THE SURROUNDING TISSUES.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

PLINER, P. G., PETRUSHKIN, P. S., and KASHCHEGULOV, M. D., Anesthesiology Department, Pavlodar Oblast Hospital

"Chlorophos Poisoning"

Alma-Ata, Zdravookhraneniye Kazakhstana, No 8, 1971, pp 75-76

Abstract: A 32-year-old female was brought to the hospital unconscious 1 1/2 hours after drinking 5 grams of the organophosphorus insecticide chlorophos (Dipterex). Emergency tracheal intubation, artificial respiration, gastric lavage, intravenous injections of calcium chloride, cocarboxylase, prednisolone, and so forth failed to restore natural breathing. Direct blood transfusions and repeated injections of ATP were ineffectual and artificial ventilation with a respirator, injections of atropine, glucose, and vitamins were required before the patient regained consciousness (16 hours after admission to the hospital). Acute chlorophos poisoning is becoming increasingly common. Victims should be brought to a resuscitation center or to a surgical hospital with a resuscitation department and treated by a team headed by an anesthesiologist and a specialist in resuscitation techniques.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ON THE ROLE OF THE A-FACTOR IN THE STREPTOMYCINE BIOSYNTHESIS -U-

AUTHOR-(05)-TOVAROVA, I.I., KORNITSKAYA, YE.YA., PLINER, S.A., SHEVCHENKO, L.A., ANISOVA, L.N.
COUNTRY OF INFO--USSR

SOURCE--IZVESTIYA AKADEMII NAUK SSSR, SERIYA BIOLOGICHESKAYA, 1970, NR 3, PP 427-434
DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--STREPTOMYCIN, BIOSYNTHESIS, ACTINOMYCES, BACTERIA MUTATION, TRANSAMINASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0495 STEP NO--UR/0216/70/000/003/0427/0434

CIRC ACCESSION NO--AP0126244

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0126244

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DATA ARE DISCUSSED CONCERNING THE A-FACTOR CONTENTS IN VARIOUS ACTINOMYCES STREPTOMYCINI STRAINS. THE PRESENCE OF THE A-FACTOR IN ACTIVE STREPTOMYCINE PRODUCERS (STRAINS 3213 AND G-51 WAS SHOWN AS WELL AS IN SOME MUTANT STRAINS WITH DISTURBED BIOSYNTHESIS. ALL THE MUTANTS WHICH HAVE FAILED TO SYNTHESIZE THE A-FACTOR DO NOT PRODUCE ANY STREPTOMYCINE, WHILE ADDITION OF THE A-FACTOR RESTITUTES THEIR ABILITY TO PRODUCE THE ANTIBIOTIC. NEOMYCINE AND CANAMYCINE PRODUCENTS DO NOT FORM ANY A-FACTOR IN THE COURSE OF FERMENTATION AND CONSEQUENTLY THIS SUBSTANCE DOES NOT PARTICIPATE IN THE BIOSYNTHESIS OF THE SAID ANTIBIOTICS. IN THE ABSENCE OF THE A-FACTOR THE INACTIVE MUTANT 1439 DOES NOT PRODUCE ANY STREPTIDINE AND DISPLAYS A LOW TRANSAMIDINASE ACTIVITY. WHEN GROWN IN THE PRESENCE OF THE A-FACTOR THIS STRAIN HAS A HIGH TRANSAMIDINASE ACTIVITY AND SYNTHESIZES CONSIDERABLE AMOUNTS OF STREPTIDINE AND STREPTOMYCINE. THESE OBSERVATIONS SUGGEST THAT THE A-FACTOR PARTICIPATES IN THE FORMATION OF THE STREPTIDINE PART OF THE STREPTOMYCINE MOLECULE. FACILITY: INSTITUTE OF CHEMISTRY OF NATURAL PRODUCTS, ACADEMY OF SCIENCES, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

UDC 669.293:168

USSR

LYAKISHEV, N. P., PLINER, Yu. L., and RUBINSHTEYN, Ye. A.

Niobium in Ferrous Metallurgy (Niobiy v chernoy metallurgii), Moscow, "Metallurgiya" Press, 1971, 216 pages, 103 illustrations, 66 tables, 446 bibliographic references.

Translation of Annotation: The book outlines the physicochemical properties of niobium and its compounds with elements contained in various steels produced by the home industry as well as of slag systems with niobium oxides. The effects of niobium as an alloy component on the service properties of various steel groups are discussed. Data are presented on ores with niobium concentrations and on the characteristics of their reduction with carbon, silicon, and aluminum. Contemporary techniques of smelting ferroniobium and other niobium-containing alloys are considered, including methods of their addition to the steel bath. A technical-economic evaluation of various methods for producing ferroniobium is proposed. The book is intended for engineering and technical personnel of metallurgical plants and may be of interest to students in related specializations.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

LYAKISHEV, N. P., et al., Niobium in Ferrous Metallurgy (Niobiy v chernoy metallurgii), Moscow, "Metallurgiya" Press, 1971, 216 pages, 103 illustrations, 66 tables, 446 bibliographic references.

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Ch. 2.	Effect of Niobium on the Properties of Steel	39
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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC: None

GUREVICH, S. B., BABIN, L. V., AND PLIS, A. I.

"Doppler Effects in Acoustical Holography"

Leningrad, Zhurnal tekhnicheskoy fiziki, No 2, 1972, pp 398-408

Abstract: The purpose of this paper is to obtain accurate relationships for locating, expanding, and resolving the restored holographic image in acoustics, to analyze the aberrations that arise in scanning, and to explain the applicability of the mutuality principle in acoustical holography. The term "Doppler effects" is defined as those acoustical effects which arise during recording of the hologram when the radiator and/or the receiver is moved in the acoustical field of the object, and which affect the localization, enlargement, and resolution capability in the restored image. "Scanning" is defined as mechanically or non-mechanically shifting the sound radiator or receiver in the field of the object. Acoustical holography without reference sources when the receiver is moved at ultrasonic velocities is discussed, and conditions for the reliability of the mutuality principles are derived for two specific cases. The authors are connected with the A. F. Ioffe Physico-Technical Institute at Leningrad.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC 538.3

PLIS, A. I., and SAFIKHODZHAYEV, N. M., Physics Institute imeni P. N. Lebedev, Academy of Sciences USSR

"On the Theory of Vavilov-Cerenkov Radiation in Anisotropic Media in the Presence of a Boundary"

Yerevan, Izvestiya Akademii Nauk Armyanskoy SSR, Fizika, Vol 6, No 5, 1971, pp 364-369

Abstract: An earlier article by N. M. SAFIKHODZHAYEV considered the problem of the study of a charged point particle moving in an isotropic medium over a crystal with various orientations of the optical axis. The present article considers peculiarities of Vavilov-Cerenkov radiation in the case where the particle moves in a uniaxial crystal along the interface between the isotropic medium. The optical axis of the crystal is perpendicular to the interface. The angular and spectral distributions of wave radiation are found for both the crystal and isotropic medium at various particle velocities.

The authors thank B. M. BOLOTOVSKIY, V. YE. FAFOMOV, and S. N. STOLYAROV for discussing the results.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--MODERNIZATION OF THE CONTINUOUS ACTION PNEUMATIC GRAVIMETRIC MEASURING DEVICE DN-20-3A -U-

AUTHOR-(03)-PISKAREV, YU.A., PLIS, G.A., MASLOV, A.D.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VOLOKNA 1970, (3), 71-2

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--GRAVIMETER, FLOW RATE, ELECTROMAGNETISM, ELECTRIC VIBRATOR, POLYVINYL CHLORIDE, ACRYLONITRILE, ACRYLIC COPOLYMER/(U)DN203A GRAVIMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3009/0111 STEP NO--UR/0183/70/000/003/0071/0072

CIRC ACCESSION NO--AP0128976

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0138976

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE DEVICE IS MODIFIED BY USE OF A CONST. FREQUENCY (50 HZ) VIBRATING FEEDER, WHOSE OUTPUT CAN BE CONTROLLED BY CHANING THE AMPLITUDE OF VIBRATIONS PRODUCED BY AN ELECTROMAGNETIC VIBRATOR. THE MODIFICATION GIVES A MORE LINEAR RELATION BETWEEN THE FLOW RATES OF POLYMER (SUCH AS POLY(VINYL CHLORIDE) OR ACRYLONITRILE COPOLYMERS) AND AIR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ELECTRIFICATION OF USSR AND STANDARDIZATION OF ELECTRIC EQUIPMENT -U-

AUTHOR--PLIS, G.S.

P

COUNTRY OF INFO--USSR

SOURCE--STANDARTY I KACHESTVO, 1970, NR 4, PP 12-16

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., ENERGY CONVERSION (NON-PROPULSIVE)

TOPIC TAGS--ELECTRIC EQUIPMENT, ELECTRIC NETWORK, ENGINEERING STANDARD, INDUSTRIAL STANDARD, ELECTRIC POWER ENGINEERING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/1768 STEP NO--UR/0422/70/000/004/0012/0016

CIRC ACCESSION NO--AP0101815

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0101815

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE DISCUSSES THE MAJOR STAGES IN THE REALIZATION OF V. I. LENIN'S PLAN OF GOELRO (STATE PLAN FOR ELECTRIFICATION OF RUSSIA) BY THE ELECTROTECHNICAL INDUSTRIES. IN THIS CONNECTION STANDARDIZATION IS REGARDED AS AN INDISPENSABLE CONDITION AND THE MOST EFFICIENT TOOL OF A HARMONIOUS DEVELOPMENT OF ELECTRICAL POWER ENGINEERING AND ELECTRICAL EQUIPMENT.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 018 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--THE LEVEL OF NON ESTERIFIED FATTY ACIDS IN THE BLOOD OF THE DEVELOPING CHICKS AND ITS HORMONAL REGULATION -U-

AUTHOR-(03)-MAZINA, T.I., PLISETSKAYA, E.M., LEYBSON, L.G.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EVOLYUTSIONNOY BIOKHIMII I FIZIOLOGII, 1970, VOL 6, NR 2, PP 172-178

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FATTY ACID, BLOOD PLASMA, BIRD, INSULIN, HORMONE, ADRENALINE, NORADRENALIN, ACTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0363 STEP NO--UR/0385/70/006/002/0172/0178

CIRC ACCESSION NO--A0[illegible]

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 018 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0132992

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDIES HAVE BEEN MADE ON THE CONTENT OF NON ESTERIFIED FATTY ACIDS (NEFA) IN THE BLOOD PLASMA OF CHICKS. THE LEVEL OF NEFA WAS FOUND TO BE DEPENDENT ON THE SEASON OF HATCHING. NEFA CONCENTRATION INCREASES FROM THE 1ST TO 3RD DAYS AFTER HATCHING ATTAINING MAXIMUM TO THE 7TH DAY AND DECREASING ON FURTHER DEVELOPMENT. INJECTIONS OF INSULIN, GLUCAGON AND GROWTH HORMONE RESULT IN A SHARP INCREASE OF NEFA CONTENT IN THE BLOOD PLASMA. THE EFFECT OF ADRENALIN AND NORADRENALIN DEPENDS ON THE INITIAL LEVEL OF NEFA: AT LOW INITIAL CONCENTRATIONS THESE SUBSTANCES INCREASE THE LEVEL OF NEFA, WHEREAS AT HIGH ONES THEY DECREASE IT. THE EFFECT OF ACTH WAS STUDIED IN 5 TO 11 DAYS OLD CHICKS. IT INCREASES NEFA CONTENT ONLY IN 5 DAYS OLD CHICKS BEING INEFFECTIVE IN ALL OTHER CASES. SINGLE INJECTION OF CORTISOL DOES NOT AFFECT NEFA CONTENT IN THE BLOOD PLASMA.

FACILITY: INSTITUTE OF EVOLUTIONARY PHYSIOLOGY AND BIOCHEMISTRY, USSR ACADEMY OF SCIENCES, LENINGRAD.

END ABSTRACT

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 013 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--MODEL CALCULATIONS OF POINT DEFECT CHARACTERISTICS IN A FACE CENTERED CUBIC LATTICE -U-

AUTHOR--PLISHKIN, YU.M., PODCHINENOV, I.YE.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(3) 958-9

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--COPPER, CRYSTAL LATTICE DEFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0653 STEP NO--UR/0181/70/012/003/0958/0959

CIRC ACCESSION NO--AP0105832

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 013 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0105632

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON A CRYSTALLITE OF RECTANGULAR SHAPE, REPRESENTING A PART OF AN IDEAL FCC. LATTICE AND CONTG. SEVERAL HUNDRED ATOMS, BOUNDARY CONDITIONS WERE APPLIED WHICH IMITATE THE TRANSITION TO INFINITE ELASTIC CONTINUUM. THE ELASTIC CONSTS., CALCD. BY MEANS OF A CHOSEN POTENTIAL FUNCTION, ARE GIVEN FOR CU. THE ACCOUNT OF THE EFFECT OF THE INTERACTION OF 2ND NEIGHBORS LEADS TO QUAL. DIFFERENT CONCLUSIONS, NAMELY: THE MOST STABLE IS THE BODY CENTERED CONFIGURATION OF THE INTERSTITIAL ATOM.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 028 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--COMPLEX TREATMENT OF PATIENTS WITH SOME DISEASES OF THE GASTRO INTESTINAL TRACT -U-

AUTHOR--ONISHCHUK, V.F., PLISKEVICH, A.P., TKACH, V.N.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 3, PP 44-47

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--GASTROINTESTINAL SYSTEM, DUODENUM, LESION, SURGERY, DIGESTIVE SYSTEM DISEASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0965 STEP NO--UR/0475/70/000/003/0044/0047

CIRC ACCESSION NO--AP0102904

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 028 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102904

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FAVOURABLE RESULTS ARE REPORTED OF EMPLOYMENT OF PHYSICAL AND OTHER COMPLEX HEALTH RESORT FACTORS IN THE TREATMENT OF 240 PATIENTS WITH CHRONIC GASTRITIS, 737 WITH GASTRIC AND DUODENAL ULCER, 450 OF WHICH UNDERWENT VARIOUS GASTRIC OPERATION. IMMEDIATE RESULTS PROVED SATISFACTORY IN 93.9PERCENT. REMOTE RESULTS WERE FAVOURABLE IN 76PERCENT OF PATIENTS.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 008 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--PREPARATION OF CELLULAR MATERIALS -U-

AUTHOR-(02)-PLISOV, A.K., LAVROVSKIY, YU.A.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 260,883

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970, 47(4)

DATE PUBLISHED--06JAN70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ISOCYANATE, THIOCYANATE, SILICATE, ALKALI METAL COMPOUND, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0979 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0119848

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

UNCLASSIFIED PROCESSING DATE--16OCT70

2/2 008

CIRC ACCESSION NO--AA0119848

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CELLULAR MATERIALS WERE PREPD. BY COMBINING ISOCYANATES OR ISOTHIOCYANATES, WATER, AND OTHER ADDITIVES, SUCH AS ALKALI METAL SILICATES.

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Acc. Nr: AP0050117 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: UR 0506

99452v Carcinogenic properties of s-triazine derivatives. Pliss, G. B.; Zabezhinskii, M. A. (N. N. Petrov Res. Inst. Oncol., Leningrad, USSR). *Vop. Onkol.* 1970, 16(1), 82-5 (Russ). Simazine (2-chloro-4,6-bis(ethylamino)-sym-triazine) and cyanuric acid (2,4,6-trihydroxytrihydro-sym-triazine) were applied s.c. once a week at 60 mg to rats and 10 mg to mice, and 5 times weekly during feeding at 30 mg to rats and 5 mg to mice, and at 2–3 drops of a 20% soln. in C_6H_6 smeared onto the skin of the mice. The 2 s-triazine derivs. had a low blastomogenic action, with tumors appearing in 30% of the cases after an av. latent period of 1.5 years. A characteristic feature of simazine action was the development of sarcomas at the site of s.c. injection.

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19810018

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

Acc. Nr: AP0048860 Abstracting Service: GEOPHYSICAL ABST. 5/70 Ref. Code: UR0459

91934h Infrared spectroscopic studies of the structure of high-molecular-weight succinimides and their initial components. Plev, T. N.; Glavati, O. L.; Popovich, T. D. (Gos. Nauch.-Issled. Inst. Neftekhim. Promst., USSR). Vysokomol. Soedin., Ser. A 1970, 12(1), 31-46 (Russ). The ir spectra of alkenylsuccinimide motor oil detergent additives (I), e.g. OLOA-1200, S-12, S-20, S-23, S-22, S-25, and 45, as well as of their starting materials, viz., polyisobutylene (II) and polypropylene (III), alkenylsuccinic anhydrides (IV), and polyethylenepolyamines were systematically studied. The data obtained afforded a means of exercising control over the production technology and the identification of I. The condensation of II and III with maleic anhydride can be controlled by a band at 1790 cm^{-1}, whereas the degree of amination can be evaluated by bands at 1670 and 1710 cm^{-1}. A correlation between the ir spectra and the structure of I, II, and III indicated a spontaneous conversion of IV into alkenylsuccinic acid (due to hydrolysis). The hydolysis rate can be studied as a function of polymer structure and other physicochem. factors by a band at 1715 cm^{-1}. CKJR

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REEL/FRAME
19800627

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC 669.184.266:14.018.2

KACHUR, B.K., KUKURUZNYAK, I.S., NIKIFOROV, B.V., TARAPUNOV, N.P., UMNOV, V.D. POGORELYY, V.P., GALATCH, YE.G., KHARCHENKO, B.V., and [redacted]
(Ukrainian Scientific Research Institute of Metals, Krivoy Rog Metallurgical Plant)

"Smelting of Low-Alloy Steel in a 130-ton Converter"

Moscow, Metallurg, No 9, Sep 71, pp 14-16

Abstract: A description is given of the technology of smelting low-alloy steels (OST-1, OST-2, 25G2C, and 35GC) in 130-ton oxygen converters at the Krivoy Rog Metallurgical Plant. Pig iron (881 kg per ton of steel) containing 0.6-0.9% Mn, 0.4-0.8% Si, not more than 0.06% S, and not more than 0.1% P, is poured into the converter at 1250-1350°C. Fresh burnt lime (65 kg), limestone (15-20 kg), and fluorspar (2-5 kg) per ton of steel were used as slag forming materials. The use of liquid alloying elements (75% FeMn, 65% FeSi and SiMn) in the ladle makes it possible to reduce the expenditure of ferroalloys, to improve the macro- and microstructure of the metal, and to minimize the content of nonmetallic inclusions. The steel obtained satisfies the requirements of GOST 5058-65.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC 669.184.144.66

YUGOV, P. I., UMNOV, V. D., and PLOKHIKH, V. A.

"Study of the Mechanism of Slaf Formation in an Oxygen Converter"

Proizvodstvo Chernykh Metallov (Production of Ferrous Metals -- Collection of Works), No 75, Metallurgiya Press, 1970, pp 116-122

Translation: Studies are performed in a 130 T oxygen converter on the mechanism of slag formation during blowing of cast iron, %: 4.2 C, 0.97 Mn, 0.67 Si, 0.041 S, 0.056 P. The melts were cooled with Fe ore. The slag forming materials used were lime (CaO = 85-87%) and feldspar. Blowing was with oxygen of 98.6% purity at a feed rate of 2.8 $m^3/(min \cdot T)$. The principal technological factors determining the nature and rate of dissolution of lime in the slag are the intensity of oxidation of silicon and manganese at the beginning of blowing; the content of MnO and FeO in the primary slag; the relationship of MnO and SiO_2 in the slag; the use of complex materials (fluxed sinter, Fe-ore briquettes, Mn ore, return slag) containing prepared components of the primary slag; the distribution of the additives of slag forming materials during blowing, taking into account the nature of oxidation of elements in the cast iron; the quality and physical state of the lime used. 3 figures; 1 tables.

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USSR UDC 681.326.77(088.8) 681.325.65.181.48

PELIPEYKO, V. A., PLOKS, V. O., et al.

"Device for Testing Microelectronic Logic Circuits"

USSR Author's Certificate No 273343, Filed 27/01/69, Published 18/09/70 (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 5, 1971, Abstract No 5B133P)

Translation: There are well-known devices for testing complex microelectronic logic circuits containing a control unit, input, output and memory registers, a programmable power supply, an amplitude selector, a digital comparison circuit, an input signal shaper, a starting unit, an indicator unit, a number printer, and input and output devices. Shortcomings of such devices include either complete absence of any possibility of testing the dynamic characteristics of complex logic circuits or severe limitation of capabilities in this respect by the comparatively low speed of the memory and control devices, which cannot perform the operations of calculation and comparison and recording of test information at the cycle frequency required for dynamic testing of microelectronic logic circuits. The purpose of this invention is to increase the program flexibility of the static and dynamic tests, expand the capabilities for dynamic investigations of microelectronic

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PELIPEYKO, V. A., et al., USSR Author's Certificate No 273342, Filed 27/01/69, Published 18/09/70 (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 5, 1971, Abstract No 5B133P)

logic circuits in the nanosecond range, and increase the effectiveness of its utilization in laboratory and production conditions. This is achieved by including a time selector in the device -- the inputs of which are connected to the outputs of the circuit being tested, while its outputs are connected to the inputs of the amplitude selector -- and a controlled delay line -- the input of which is connected to the shaping output of the starting unit, while its output is connected to the controlling input of the time selector; the controlling input is connected to the control unit.

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USSR UDC: 681.327.66

PELIPEYKO, V. A., PLOKS, V. O., ZHULYAKOV, V. I., POSVISOVSKIY, M. S., Institute of Electronics and Computer Technology of the Academy of Sciences of the Latvian SSR

"A Device for Checking Microelectronic Logic Circuits"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 20, 1970, Author's Certificate No 273342, filed 27 Jan 69, p 68

Abstract: This author's certificate introduces a device for checking microelectronic logic circuits. The device contains a control module, input, output and memory registers, a programed power supply, amplitude selector, digital comparison circuit, input signal shaper, actuating unit, indicator unit, digital printer and input and output devices. As a distinguishing feature of the patent, monitoring precision and effectiveness are improved by adding a time selector whose inputs are connected to the outputs of the circuit to be checked, while the time selector outputs are connected to the inputs of the amplitude selector. Also incorporated in the checker is a controlled delay line whose input is connected to the shaping input of the actuating unit, while the output is connected to the controlling input of the time selector, and the controlling input is connected to the control module.

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BERKOVICH, L. B., and PLOTINSKIY, YU. M.

"Heuristic Methods of Solving Certain Maritime Fleet Management Problems"

V sb. Aktual'n. vopr. tekhn. kibernetiki (Urgent Questions in Technical Cybernetics -- Collection of Works), Moscow, "Nauka," 1972, pp 153-157 (from RZh-Matematika, No 3, Mar 73, Abstract No 3V617 from authors' abstract)

Translation: Using the example of the problem of the monthly scheduling of the disposition of ships, the authors discuss certain fundamental difficulties encountered in solving problems in operational maritime transport planning. Arguments in favor of creating heuristic algorithms for such problems are presented, and the basic ideas and most important details of the heuristic scheduling algorithm are discussed.

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UDC: 656.25-50

MITYUSHEV, S. I., Chairman of the Department of Communications of UEMIIT, FILIMONOV, B. M., Chief Engineer, Computing Center of the Sverdlovsk Road, SUKHORUKOV, V. G., Engineer, MATSKEVICH, S. N., Engineer, PLOTTISIN, R. I., Engineer

"A System for Continuously Checking the Reliability of Transmitted Information"

Moscow, Avtomatika, Telemekhanika i Svyaz', No 6, Jun 72, pp 12-14

Abstract: A system is described for continuously checking the reliability of data transmission in railway communications systems. The system covers the entire communication channel from the primary document to the computer storage unit. The basis of the procedure is guarding against errors in the primary document by introducing a mod 10 check. A check digit is computed and entered in the primary coded documentation. The check digits give the information of the primary document a certain immunity to interference inasmuch as they make error detection possible. Three versions of the mod 10 check system are examined on the basis of a digital message made up of six digits. A block diagram for data transmission with continuous reliability check is presented and described in detail.

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1/2 012 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--USE OF A FACTOR PLANNING METHOD FOR THE STUDY AND OPTIMIZATION OF A CATALYTIC PROCESS -U-

AUTHOR-(05)-BLANDIN, YU.V., KALININA, E.V., KUDRYAVTSEV, B.M., MUSHENKO, S.V., PLOTITSINA, L.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM. TEKHNOL. TOPL. MASEL 1970, 15(3), 42-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HYDROGENATION, FATTY ACID, ALCOHOL, CHEMICAL PLANT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1487 STEP NO--UR/0065/70/015/003/0042/0045

CIRC ACCESSION NO--AP0112481

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

212 5012 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112481

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METHOD WAS APPLIED TO THE DIRECT HYDROGENATION OF SYNTHETIC FATTY ACIDS TO ALCS., BY USING THE FEED SPACE VELOCITY, BOTTOM REACTOR TEMP., MOLE RATIO OF FEED TO H, AND CONTENT OF FATTY ACIDS ABOVE C SUB16 IN THE FRACTION AS VARIABLES. THE OPTIMIZATION CRITERION WAS THE HIGHER PRODUCTIVITY OF THE PLANT, WHICH WAS 0.175 HR PRIME NEGATIVE1, 246DEGREES, AND RATIO 1:50, RESP. THE PRODUCTIVITY WAS THUS INCREASED BY 35PERCENT OVER THAT OBTAINED UNDER CONDITIONS SUGGESTED BY THE ALL UNION SCIENTIFIC RESEARCH INSTITUTE FOR PETROCHEMISTRY (0.13 HR PRIME NEGATIVE1).

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 005 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--THE CONVERGENCE OF TAYLOR SERIES IN THE SPACES OF SUMMABLE ANALYTIC FUNCTIONS -U-

AUTHOR--PLUTKIN, A.I.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK LENINGRADSKOGO UNIVERSITETA, NO 1, MATEMATIKA, MEKHANIKA, ASTRONOMIYA, 1970, NR 1, PP 52-59

DATE PUBLISHED--------70

SUBJECT AREAS--MATHEMATICAL SCIENCES

TOPIC TAGS--TAYLOR SERIES, CONVERGENT SERIES, ANALYTIC FUNCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0395 STEP NO--UR/0043/70/000/001/0052/0059

CIRC ACCESSION NO--AP0055180

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2/2 005 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0055180

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. LET U BE THE OPEN UNIT DISK IN Z PLANE AND SIGMA LEBESGUE MEASURE IN U. IT IS PROVED THAT IF A FUNCTION D, REGULAR IN U, IS BOUNDED AND (1"DIVIDED BY D) PRIME IS THE ELEMENT OF L PRIME2 (DSIGMA), THE SYSTEM (Z PRIMEN) FORMS A BASE IN THE SPACE OF ALL ANALYTIC FUNCTIONS F SUCH THAT F MAGNITUDE OF PRIMEP IS INTEGRABLE IN RESPECT TO THE MEASURE D MAGNITUDE OF PRIME2 DSIGMA (P IS GREATER THAN OR EQUAL TO 2). SOME PROPERTIES OF THIS BASE ARE STUDIED.

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UNCLASSIFIED PROCESSING DATE--17JUL70

TITLE--A NEW TECHNIQUE OF FORMING AN ALTIFICIOGICAL LINING FOR THE PREVENTION OF THROMBOGENESIS ON PROSTHESES OF THE CARDIOVASCULAR SYSTEM

AUTHOR--PETROVSKIY, B.V., SHUMAKOV, V.I., STEPANOV, G.A., PASTIKIN, I.L.

COUNTRY OF INFO--USSR

SOURCE--KHIRURGIYA, 1970, NR 1, PP 69-74

DATE PUBLISHED--------70

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C
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SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CARDIOVASCULAR SYSTEM, PROSTHESIS, THROMBOSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1977/1711 STEP NO--UR/0531/70/000/001/0069/0074

CIRC ACCESSION NO--AP0044856

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

Acc. Nr: AP0044856 Ref. Code: UR0531

PRIMARY SOURCE: Khirurgiya, 1970, Nr 1, pp 69-74

A NEW TECHNIQUE OF FORMING AN AUTOBIOLOGICAL LINING FOR THE PREVENTION OF THROMBOGENESIS ON PROSTHESES OF THE CARDIOVASCULAR SYSTEM

B. V. Petrovskiy, V. I. Shumakov, G. A. Stepanov, I. L. Plotkin

The authors propose a new technique of forming an autobiological lining on prostheses of the cardiovascular system, which consists in that on the electroconducting prosthesis in vitro and in the blood flow a positive electric potential is given, conducive to a rapid precipitation of trace elements and proteins of the blood. On the prosthesis there is formed a firmly-bound autobiological lining preventing the formation of thrombi. The authors conducted 52 experiments in vitro and 30 acute experiments with introduction of an electric potential on the prosthesis in the blood stream. The article contains a detailed description of the technique of forming the lining, as well as the method of recording of the autobiological lining. The biochemical and morphological composition of the lining formed by the galvanic technique was studied.

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VOL'F, L. A., GILLER, S. A., KOTETSKIY, V. V., MEOS, A. I., PLOTKIN, L. L., and VITULSKAYA, N. V., Leningrad Institute of Textile and Light Industry imeni S. M. Kirov; Institute of Organic Synthesis, Academy of Sciences Latvian SSR; Leningrad Sever Manufacturing Society

"Antimicrobial Fibers Produced From Compounds of Nitrofuran Series"

Riga, Fiziologicheski Opticheski Aktivnyye Polimernyye Veshchestva, "Zinatne," 1971, pp 150-154

Abstract: Acetylation pf polyvinyl alcohol (PVA) fibers with aldehydes of 5-nitrofuran series resulted in fibers capable of producing covalent ionic bonds, or coordination linkage between medicinal substances and polymers. The nitrofuran compounds used in this work had the following chemical structure:

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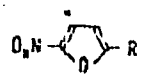
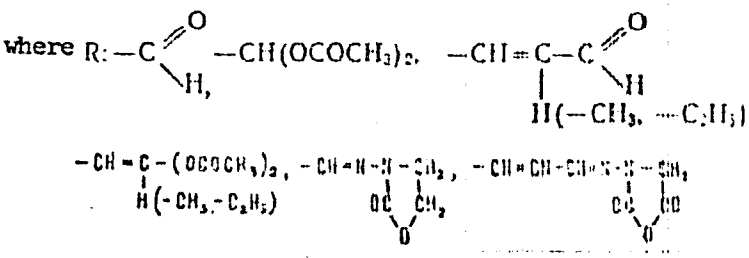
VOL'F, L. A., et al., Fiziologicheski i Opticheski Aktivnyy Polimernyye Veshchestva, "Zinatne," 1971, pp 150-154



where R: 

Among all compounds tested, 5-nitrofurfural (NF), β-(5-nitrofuril-2)-acrolein (NFA), and their acetates such as furazolidone and furagin were of greatest interest. The acetylation of PVA fibers with aldehyde of 5-nitrofuran series is based on the ability of functional groups of polymer to react with carbonyl groups and to form acetylcyclobuthyleneglycol-1,3 links according to

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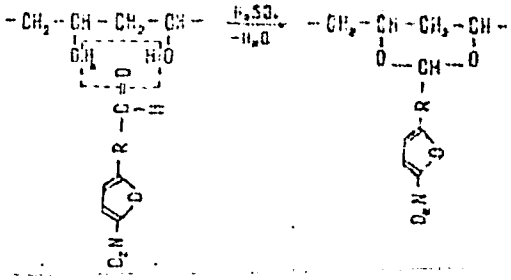
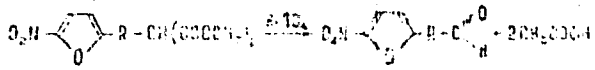
VOL'F, L. A., et al., Fiziologicheski i Opticheski Aktivnyy Polimernyye Veshchestva, "Zinatne," 1971, pp 150-154



In the case of acetates the reaction proceeds as



The substitution extent of hydroxyl groups of PVA was 18-25 mole % under optimal acetylation conditions. The obtained fibers were mechanically strong, stable to sterilization by boiling, contained numerous capillaries, and possessed high antimicrobial activity. More than 28% of the antibacterial substances could be incorporated into fibers. Experiments with a natural

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VOL'F, L. A., et al., Fiziologicheski i Opticheski Aktivnyy Polimernyye Veshchestva, "Zinatne," 1971, pp 150-154

cellulose were not very successful. Only cellulose esters were capable of reacting with aldehyde of 5-nitrofuran compounds and forming useful fibers. Compounds of 5-nitrofuran series were incorporated into polyamide, polyester, polyformaldehyde, and polypropylene fibers during their molding. The obtained fibers possessed high antibacterial properties along with good mechanical properties. All of the fibers can be used for sutures, blood vessel substitutes, contraceptive devices, and for other medical uses.

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VITUL'SKAYA, N. V., VOL'F, L. A., GILLER, S. A., YEGOROV, B. A., KOTETSKIY, V. V., PLOTKIN, L. L., and YANOVSKAYA, N. B., Leningrad Institute of Textile and Light Industry imeni S. M. Kirov; Institute of Organic Synthesis, Academy of Sciences Latvian SSR

"New Fibers for Medical Use"

Riga, Fiziologicheski i Opticheski Aktivnyye Polimernyye Veshchestva, "Zinatne," 1971, pp 145-149

Abstract: In order to increase the X-ray contrast effect of surgical suture materials, films and fibers were prepared from aqueous solutions of polyvinyl alcohol (PVA) with addition of barium sulfate in various concentrations (0.5-20%). The best contrast was obtained with 150 μ PVA film containing 10 and 20 $BaSO_4$. A lower dose (1%) of $BaSO_4$ did not produce desired results. Sutures were prepared from PVA with admixture of polyformaldehyde, $BaSO_4$, barium chloride, and collargol. The prepared fibers were thermostabilized at 220°C for 10 min and acetylated in water bath containing 20% β-(5-nitro-furyl-2)-acrolein and 20% H_2SO_4 at 70°C for 2 hrs. The ready to use fibers were mechanically strong, stable in hot water (boiling for 1 hr produced only 10% shrinkage), and possessed high antimicrobial properties, especially toward

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VITUL'SKAYA, N. V., et al., Fiziologicheski i Opticheski Aktivnyye Polimernyye Veshchestva, "Zinatne," 1971, pp 145-149

Staphylococcus aureus, Escherichia coli, Trichophyton group, and other bacteria. Good results were obtained with polyformaldehyde fibers with 5 and 10% $BaSO_4$, PVA with iodine-containing organic compounds. The obtained fibers were used for the manufacturing of such surgical materials as sutures, cotton, nets, contraceptive devices, etc., which presently are undergoing medical testing.

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USSR UDC 681.325.3:612.377.622.13

GEYSHIS, M. I., YEVTEYEV, F. Ye., IZRAILEV, Yu. S., KUSHLIN, V. I., and PLOTKIN, M. A.

"On Achieving a High-Precision, High-Speed Matrix System"

Izv. Leningr. Elektrotekhn. In-ta (News of Leningrad Electrical Engineering Institute), No 92, 1971, pp 47-50 (from Referativnyy Zhurnal -- Avtomatika, Telemekhanika, i Vychislitel'naya Tekhnika, No 8, 1971, Abstract No 8B376, by B. K.)

Translation: A decoding matrix system for use in digital-analog converters which function in communication systems with pulse-code modulation is described. The decoding matrix consists of a nine-bit ohmic divider of the R-2R type and sources of current, which are controlled by symmetric diode keys. The sources of current are formed by switching on the sources in series with a source of standard voltage of resistors with a resistance of 20 kilohms. An expression for evaluating the admissible root-mean-square deviation of the resistances of the matrix is derived. The basic technical data is presented for the matrix system, which is made in the form of a functionally completed assembly based on thin-film technology. It is pointed out that the time needed for establishment of a transient process in the

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GEYSHIS, M. I., et al., Izv. Leningr. Elektrotekhn. In-ta (News of Leningrad Electrical Engineering Institute), No 92, 1971, pp 47-50 (From Referativnyy Zhurnal — Avtomatika, Telemekhanika, i Vychislitel'naya Tekhnika, No 8, 1971, Abstract No 8B376, by B. K.)

system does not exceed $5 \cdot 10^{-9}$ seconds, given a root-mean-square voltage error of (0.088-0.16) δ, where δ is the quantization size. 1 illustration.

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UDC 621.391:519.2

PLOTKIN, Ye. I.

"Integral Structural Classifiers which are Invariant with Respect to Noninformative Signal Parameters"

Material nauchno-tekhn. konferentsii. Leningr. elektrotekhn. in-t svyazi. Vyp. 2 (Materials of the Scientific and Technical Conference. Leningrad Electrotechnical Communications Institute, Vyp. 2), Leningrad, 1970, pp 3-7 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A90)

Translation: In this article the possibility of synthesizing the algorithms of structural classifiers of oscillations of a given functional relation with respect to the criterion of invariance with respect to their parameters based on comparison of integral estimates of the phase coordinates of the signal is demonstrated.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC 621.372.061

PLOTKIN, Ye. I., ARZUMANYAN, Yu. V.

"Nonlinear Structural Filter Under the Effect of Oscillations of Complex Shape"

Materialy nauchno-tekhn. konferentsii Leningr. elektrotekhn. in-t svyazi. Vyp 2 (Materials of the Scientific and Technical Conference. Leningrad Electrotechnical Communications Institute. Vyp. 2), Leningrad, 1970, pp 7-12 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A140)

Translation: This article contains an analysis of the operation of a nonlinear structural filter which is under the effect of deterministic and stochastic signals. It is demonstrated that the filter has a number of peculiarities distinguishing it from known nonlinear converters.

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Receivers and Transmitters

USSR

UDC 621.391.14

ZAYEZDNYY, A. M., PLOTKIN, Ye. I., CHERKASSKIY, Yu. A., Members of the Scientific and Technical Society of Radio Engineering, Electronics and Communications imeni A. S. Popov

"Signal Processing Based on Using the Structural Properties of the Signals"

Moscow, Radiotekhnika, Vol 26, No 9, Sep 71, pp 18-24

Abstract: The authors discuss the representation of signals in terms of their structural relations as illustrated by a class of structural models derived by comparing certain phase coordinates of a signal according to some rule. Examples are given of application of the structural model to synthesis of signal processing algorithms. Receivers are designed which are invariant to certain classes of interference. Bibliography of 19 titles.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

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UDC: 621.391.19

ZAYEZDNYY, A. M., PLOTKIN, Ye. I., RABOTKIN, O. N., TRAKHTMAN, V. Yu., SIROTA, O. L.

"A Speech Recognition Device"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 18, 1970, Author's Certificate No 271921, Filed 17 Mar 69, p 117

Abstract: This Author's Certificate introduces a speech recognition device which contains an analyzer, a decision unit, and a logical processing unit. As a distinguishing feature of the patent, the reliability of speech pattern recognition is improved by adding a phase coordinate shaping circuit and a boundary hypersurface simultation unit connected in series. The inputs of the phase coordinate shaping circuit are connected to the inputs and outputs of the analyzer, while the outputs of the boundary hypersurface simulation unit are connected to the inputs of the decision unit.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

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UDC: 621.391.81

PLOTKIN, Ye. I.

"Structural Correlation Filters and Their Use for Rejection of Signals With Parameters Which are Unknown A Priori"

V sb. Materialy Nauch.-tekhn. konf. Leningr. elektrotekhn. in-t svyazi. Vyp. 1 (Materials of the Scientific and Technical Conference of Leningrad Electrical Engineering Institute of Communications--collection of works, No 1), Leningrad, 1971, pp 31-35 (from RZh-Radiotekhnika, No 3, Mar 72, Abstract No 3A71)

Translation: A structural correlation filter is synthesized which rejects signals of a given type in accordance with the condition of invariance to changes in their parameters. The filter enables extremization for signals of known shape. Resumé.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC 621.371.029.51

VILENSKIY, I. M. and PLOTKIN, V. V.

"Effect of Artificial Gradients in the Ionosphere on Propagation in the Long-Wave Range"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl. Sekts. 1 (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses; Section 1--collection of works) "Nauka," 1972, pp 261-269 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10A326)

Translation: The mechanism of the origin of the gradients in complex dielectric permeability in the absorption of the extraordinary component of a wave whose frequency is close to gyromagnetic, in the ionosphere, and the influence of this effect on radio wave propagation, are considered. Three illustrations. A. L.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 031 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--ANTIMICROBIC MATERIALS IN SURGERY -U-

AUTHOR-(02)-MILONOV, O., PLUTKINA, N.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA GAZETA, OCTOBER 2, 1970, P 3, COLS 4-7

DATE PUBLISHED--02OCT70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CELLULOSE, BACTERICIDE, FILTRATION, MACROMOLECULE, SYNTHETIC FIBER, SUTURE, SURGERY, STAPHYLOCOCCUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605037/F09 STEP NO--UR/9034/70/000/000/0003/0003

CIRC ACCESSION NO--AN0142466

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 031 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AN0142466

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE DISCUSSES NEW METHODS FOR MAKING BACTERICIDE MATERIALS, SUCH AS ADDING THE BACTERICIDE TO THE FUNCTIONAL GROUPS OF MACROMOLECULES OF THE MODIFIED CELLULOSE OR INTRODUCING IT INTO THE POLYMER SOLUTION WHEN MAKING THE FIBER. ANTIMICROBIC CELLULOSE MATERIALS MANUFACTURED BY THE MOSCOW TEXTILE INSTITUTE AS PROPOSED BY PROFESSOR Z. ROGOVIN CAN BE USED IN HOSPITALS AS ROBES, BEDDING, AIR FILTERS, IN THE FOOD INDUSTRY, WATER FILTERS UNDER FIELD CONDITIONS, FOR STORING STERILE INSTRUMENTS, ETC. PROFESSORS A. MEOS AND L. VOL, F OF THE LENINGRAD TEXTILE INSTITUTE PROPOSED A TECHNIQUE OF FIXING MEDICINAL MATERIALS IN SYNTHETIC FIBERS. SUCH MATERIALS AS STREPTOMYCIN, GUINOSOL, ETC. CAN BE INTRODUCED INTO POLYVINYL ALCOHOL FIBERS. A "LETILAN" FIBER WITH HIGH ANTIMICROBIC PROPERTIES HAS BEEN DEVELOPED AND IS BEING USED IN CLINICS IN THE FORM OF ANTIINFECTION SUTURE MATERIALS, KNITTED AND VASCULAR PROSTHESES. OTHER USES OF "LETILAN" ARE ALSO MENTIONED. THE SCIENTIFIC RESEARCH INSTITUTE OF CLINICAL AND EXPERIMENTAL SURGERY IN COLLABORATION WITH ACADEMICIAN B. PETROVSKIY, L. PLOTKIN, ET AL. (LENINGRAD) HAVE DEVELOPED VASCULAR POLYETHYLENE TERAPHTHALATE PROTHESES WITH A SILVER THREAD. TESTS HAVE SHOWN THAT WEARING OF BACTERICIDE TREATED CLOTHING BY PATIENTS FOR 5 TO 7 DAYS REDUCED THE TOTAL NUMBER OF SKIN MICROORGANISMS AS WELL AS THE NUMBER OF STAPHILOCOCCIC COLONIES.

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USSR

UDC 534.3

PLOTKINA, N. L.

"Investigation of Musical Tone Signals as Represented by a Set of Multiplicative Components"

V sb. Materialy Nauch -tekhn. konf. Leningr. elektrotekhn. in-ta svyazi. Vyp. 3 (Materials of the Scientific-Technical Conference of Leningrad Electrical Engineering Institute of Communication. No. 3 -- Collection of Works), Leningrad, 1971, pp 260-264 (from RZh-Fizika, No 3, Mar 72, Abstract No 3Zh598)

Translation: It is shown that the spectrum of the logarithm of the modulus of the process characterizing the tone of musical instruments has two essentially different regions. The nonuniformity of the spectrum at infralow frequencies gives information on the properties of the envelope of the initial process. Resume.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC 615.468.6:615.462].015.2:64.202

PLOTKINA, N. S., KHOKLOVA, V. A., and VITAL'SKAYA, N. V., Institute of Clinical and Experimental Surgery, Leningrad Institute of Textiles and Light Industry imeni S. M. Kirov

"Some Characteristics of the Antimicrobial Effect of Modified Chemical Fibers"

Moscow, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 11, 1972, pp 96-97

Abstract: Polyvinyl alcohol fibers impregnated with letilan (nitrofurylacrolein) possessed an antibacterial effect toward Staphylococci which sharply increased after autoclaving the fibers at 1.2 atm for 20 min. The letilan in these fibers suppressed the growth of all pathogenic strains of Staphylococci and of fungi from the Candida genus in concentrations of 10 million microbial cells/ml. Letilan was also active against Escherichia coli in a concentration of 1 million cells/ml, and against Proteus in concentration of 100,000 cells/ml. However, it was inactive against Bacillus pyocyaneus. The antibacterial properties of these fibers impregnated with letilan were not altered after 24 hr exposure to physiological solution, alcohol, pus, bile, urine, and dry heat at 160°C for 3 hr. Their antibacterial activity sharply decreased after contact with blood. Similar effects on microbes was observed in the case of

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PLOTKINA, N. S., et al., Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 11, 1972, pp 96-97

polyvinyl alcohol fibers impregnated with polyacrylic acid containing neomycin (14%) or streptomycin (12%). The fibers with neomycin suppressed the growth of a larger number of strains than streptomycin, although their effect in liquid media was identical. The antibacterial effect of these fibers did not change after exposure to physiological solution, alcohol, urine, bile, blood, autoclaving, and boiling. The polypropylene fibers containing 0.5% furagine suppressed the growth of Staphylococcus in a concentration of 10-100 millions cells/ml and to a lesser extent of Escherichia coli (1-10 millions cells/ml). These fibers did not lose their antibacterial properties after contact with blood, pus exudate, urine, bile, physiological solution, autoclaving, and dry heat. However, boiling and alcohol killed their antibacterial properties. The use of the above fibers as surgical material is recommended.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--ANTIMICROBIAL TIN CONTAINING CELLULOSIC MATERIALS -U-

AUTHOR-(05)-ARTEMOVA, YU.V., VIRNIK, A.D., PLOTKINA, N.S., ZEMLYANSKIY, N.N., MAKAROVA, R.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., TEKHNOL. TEKST. PROM. 1970, (1), 93-6

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, MATERIALS

TOPIC TAGS--WOOD CHEMICAL PRODUCT, FABRIC, ORGANOTIN COMPOUND, BACTERICIDE, STAPHYLOCOCCUS AUREUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0746 STEP NO--UR/0324/70/000/001/0093/0096

CIRC ACCESSION NO--AT0132848

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0132848

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CELLULOSIC FABRICS WITH 9PERCENT GRAFTED ACRYLIC ACID WERE SOAKED 10 HR AT 20DEGREES IN AQ. SOLNS. CONTG. 0.05-5PERCENT (BY WT. OF FABRIC) ME SUB3 SNOH, ET SUB3 SNOSNET SUB3, OR BU SUB3 SNOSNBU SUB3. ALTERNATELY, THE FABRIC WAS BOILED IN AN ACETONE SOLN. OF PH SUB3 SNOH. THE TREATED FABRICS INHIBITED THE GROWTH OF STAPHYLOCOCCUS AUREUS AND OTHER BACTERIA ON AGAR, AND THE EFFECT PERSISTED AFTER SEVERAL LAUNDERING CYCLES. BEST RESULTS WERE OBTAINED WITH ET SUB3 SNOSNET SUB3 AND BU SUB3 SNOSNBU SUB3. FACILITY: MOSK. TEKST. INST., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--SOME COMPENSATORY MECHANISMS OF THE TRACE ELEMENT METABOLISM DISORDER IN PATHOLOGY -U-

AUTHOR-(05)-BALA, YU.M., AKSENOV, G.I., KOPYLOVA, L.M., LIFSHITS, V.M., PLOTKO, S.A.

COUNTRY OF INFO--USSR

SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 4, PP 81-84

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TRACE ELEMENT, PATHOLOGY, METABOLISM, ENZYME, NICKEL, MAGNESIUM, VANADIUM, ERYTHROCYTE, PROTEIN, HYPOXIA, ANEMIA, BLOOD CIRCULATION, MYOCARDIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/0264 STEP NO--UR/0504/70/042/004/0081/0084

CIRC ACCESSION NO--AP0127854

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 041 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127854

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON THE BASIS OF EXAMINATION OF 1200 PATIENTS WITH DIFFERENT DISEASES AND 300 ANIMAL THE AUTHORS DISCUSS THE ROUTES OF INVOLVEMENT OF TRACE ELEMENTS INTO THE COMPENSATORY AND ADAPTATIONAL PROCESSES. ONE OF THEM IS THE PARTICIPATION OF TRACE ELEMENTS IN ENZYMATIC REACTIONS. THREE MAIN COMPENSATORY MECHANISMS CAN BE SINGLED OUT: 1. A RESIDUAL ACCUMULATION OF NICKEL, MAGNESIUM, VANADIUM IN ERYTHROCYTES EXPECIALLY IN THE FRACTION OF NONHEMOGLOBIN PORTEINS OCCURRES IN DIFFERENT HYPOXIC CONDITIONS (ANEMIA, CIRCULATORY INSUFFICIENY). IT COULD BE ASSUMED THAT THIS ACCUMULATION IS ASSOCIATED WITH THE FUNCTION OF ENZYMES, WITH THEIR ACTIVIZATION WITH IONS OF HEAVY METALS. THIS REACTION DEVELOPS RATHER EARLY AND DOES NOT DEPEND UPON THE CASES PROVOKING HYPOXY. 2. PATHOLOGICAL AFFECTION OF A PORTION OF SOME IMPORTANT ORGAN NECESSITATES AND INTENSIFIED FUNCTIONING OF INTACT PORTIONS. THE CONTENT OF A NUMBER OF BIOLOGICALLY IMPORTANT TRACE ELEMENTS DECREASES AND IN THE SURROUNDING AREA, INCREASES. THE MENTIONED COMPENSATORY SHIFTS ARE ASSOCIATED WITH PECULIARITIES OF METABOLISM IN THESE TISSUES AND DEPEND UPON THE STAGE OF THE DISEASE. 3. DISTINCT PARTICIPATION OF TRACE ELEMENTS IN COMPENSATORY REACTIONS IS OBSERVED IN SO CALLED "ACUTE SYNDROMES" DEVELOP IN MYOCARDIAL INFARCTION. FACILITY: KAFEDRA FAKUL'TETSKOY TERAPII AND TSENTRAL'NAYA N-I LABORATORIYA VORONEZHSKOGO MEDITSINSKOGO INSTITUTA.

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1/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--CIRCULATORY DISTURBANCES IN THE SKIN OF THIGH STUMP DEPENDING ON TYPE OF THE PROSTHESIS SOCKET -U-

AUTHOR-(02)-KALCHENKO, A.S., PLOTNIK, L.G.

COUNTRY OF INFO--USSR

SOURCE--ORTOPEDIYA, TRAVMATOLOGIYA I PROTEZIROVANIYE, 1970, NR 5, PP 11-14

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SKIN PHYSIOLOGY, BLOOD CIRCULATION, AMPUTATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0748 STEP NO--UR/9115/70/000/005/0011/0014

CIRC ACCESSION NO--AP0131343

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0131343

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESULTS OF CAPILLAROSCOPIC AND CAPILLAROGRAPHIC STUDIES (266) OF SKIN OF THE THIGH STUMPS IN 38 AMPUTEES EQUIPPED WITH THIGH PROSTHESES WITH TOTAL CONTACT RECEIVING SOCKETS AND VACUUM FIXATION ARE PRESENTED. CAPILLAROSCOPY WAS USED AS AN OBJECTIVE METHOD, AND AS THE MOST SIMPLE, HARMLESS AND, AT THE SAME TIME, SUFFICIENTLY INFORMATIVE PROCEDURE. THE OBTAINED DATA OF CAPILLAROSCOPY AND CAPILLAROGRAPHY PERMIT JUDGEMENT ABOUT THE PERIPHERAL BLOOD CIRCULATION IN THE THIGH STUMP DEPENDING ON THE METHOD OF CONTACT WITH THE PROSTHESIS SOCKET. THE CLINICAL OBSERVATIONS AND CAPILLAROSCOPIC STUDIES REVEALED THE TOTAL CONTACT SOCKET TO BE MORE PHYSIOLOGICAL THAN THE SUSPENDED SOCKET. FACILITY: KHAR'KOV. INSTITUTA PROTEZIROVANIYA, ORTOPEDII I TRAVMATOLOGII IM. M. I. SITENKO.

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USSR

PLOTNIKOV, A. D.

"Analytic Representation of a Function in 2^m-Valued Logic"

Mnogoyustoych. Elementy i ikh Primeneniye [Multistable Elements and Their Applications -- Collection of Works], Moscow, Sov. Radio Press, 1971, pp 88-94, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract No 3 V352 by G. Gavrilov).

Translation: Suppose M is the set of all m-digit binary numbers. If the values of $f(X_1, \ldots, X_n)$ and its arguments belong to set M, it is called a Z-function. Certain Z-functions of one and two arguments (Z is negative, Z is a conjunction, Z is a disjunction, linear shift by one digit to the left and linear shift by one digit to the right) are introduced (as initial functions). It is demonstrated that any Z-function except one (equal to the so-called characteristic constant null) can be represented in a special form (an analogue of the ideal dnf).

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC 621.375.82

GLAZER, A. A., NIKITINA, T. F., PANTELEYEV, V. I., PLOTNIKOV, A. F., POPOV, YU. M., POTAPOV, A. P., SELEZNEV, V. N., TAGIROV, R. I., and SHUR, YA. S.

"Using GaAs and Nd Lasers for Optical Writing on MnBi Film"

Kratkiye Soobshch. po fiz. (Brief Communications on Physics) No 12, 1972, pp 9-12 (from RZh-Fizika, No 7, 1973, Abstract No 7D1088)

Translation: The possibility of using a GaAs semiconductor laser for recording information on a ferromagnetic film of MnBi is experimentally investigated. MnBi film 700 Å thick, which has undergone condensation in a vacuum on glass substrates of 0.1-0.2 mm in thickness, is used. For recording information, a GaAs laser with a threshold current of 2 amp at 77° K and a p-n junction width of 400 μ is used. It is shown that the laser's minimum pumping current at which recording is possible is 80 amp, whereas the radiation power is 20 w. The energy density of the radiation on the film is then $6 \cdot 10^{-9}$ J/μm². With a monopulse neodymium laser, an evaluation of an information recording density equal to 2500 lines/cm is made. It is noted that the use of a semiconductor laser with a junction width not exceeding 20 μ permits reducing the power to a fraction of a watt. Bibliography of four.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC [537.226+537.311.33]:[537+535]

VAVILOV, V. S., PLOTNIKOV, A. F., SOKOLOVA, A. A., and SHUBIN, V. E.

"Electron Injection From Semiconductor and Metal Into Dielectric Due to Illumination of Au-InSb Oxide-InSb Structures"

Kratkiye soobshch. po fiz. (Brief Communications on Physics), 1971, No 4, pp 40-47 (from RZh-Fizika, No 10, Oct 71, Abstract No 10ME791 by V. B. S.)

Translation: An investigation was made of illumination-induced electron injection from a semiconductor (and metal) into a dielectric, as well as intrinsic and extrinsic photoconductivity of the dielectric in Au-InSb oxide-InSb structures. The authors consider the processes of charge exchange of traps localized in the dielectric under the action of the illumination of MDP [metal-dielectric-semiconductor (?)] structures by IR and visible radiation.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC 534.1:62-251

PLOTNIKOV, A. M. and KHARITONOV, L. A.

"Some Features of Rotor Vibrations in Elastically Suspended Housings"

Moscow, Dinamika Gibk. Rotorov--Sbornik (The Dynamics of Flexible Rotors--Collection of Articles), Nauka, 1972, pp 61-64 (from Referativnyy Zhurnal--Aviatsionnyye i Raketnyye Dvigateli, No 1, 1973, Abstract No 1.34.27. Resume)

Translation: Some constructions, in particular aircraft engines, are essentially distinguished by the fact that the elastically suspended engine housing possesses considerable inertia; in this case the housing is connected to the rotor only partially, i.e., the intrinsic rotation of the housing (under the influence of the propeller moment) is absent. Differential equations of the vibrations of such a system are compiled and solved, with account taken of the indicated design feature, and the critical state of the shaft ducts is investigated. Due to the absence of the intrinsic rotation of the housing about the longitudinal axis, its moment of inertia about this axis does not enter into the linear differential equations of the vibrations of the part. The relationships of the critical state of the shaft ducts to the relations of the inertial characteristics of the system were obtained by electronic computer.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC: 619.616.981.42:614.44:636

PLOTNIKOV, E. S., Chief Specialist, Main Administration of Veterinary Medicine, Ministry of Agriculture USSR

"Methods of Prophylaxis and Eradication of Animal Brucellosis"

Moscow, Veterinariya, No 12, Dec 70, pp 35-39

Abstract: The present state of development of Soviet agricultural production in kolkhozes and sovkhozes requires that brucellosis infection be eradicated by appropriate measures. Serological methods are available for the diagnosis of this disease. The most sensitive methods involve blood serum studies for cattle. A comprehensive study of brucellosis in deer was made in various northern regions of the Soviet Union to ascertain the value of various immunological methods. A palpebral allergic method has been developed and has found wide use in combination with serological methods. It can be used as check on the effectiveness of various antibrucellosis measures.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 029 UNCLASSIFIED

TITLE--GASES IN SOME MERCURY DEPOSITS IN THE NORTHWESTERN CAUCASUS AND TYPES OF NATURAL GAS DELIVERY INTO MINE FACES -U-

PROCESSING DATE--11DEC70

AUTHOR-(02)-FRIDMAN, A.I., PLOTNIKOV, I.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., GEOL. RAZVED. 1970, 13(1), 79-85

DATE PUBLISHED-------70

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

TOPIC TAGS--MINING ENGINEERING, SAFETY ENGINEERING, NATURAL GAS, HEXANE, CARBON DIOXIDE, HYDROGEN, NITROGEN, HELIUM, ARGON, MERCURY, MINERAL DEPOSIT, QUALITATIVE ANALYSIS, QUANTITATIVE ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605060/F03 STEP NO--UR/0151/70/013/001/0079/0085

CIRC ACCESSION NO--AT0144411

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

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CIRC ACCESSION NO--AT0144411 UNCLASSIFIED PROCESSING DATE--11DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NATURAL GAS (HEXANE, CO SUB2, H, N, H SUB2 S, HE, AND AR) OCCURRING WITH HG MINERALIZATION IN SANDSTONE, CONGLOMERATE, AND GRAVEL IS STUDIED. THE MODE OF MIGRATION AND LOCALIZATION VARIES WITH THE TYPE OF CEMENTING MATERIAL. QUANT. AND QUAL. ANALS. OF GAS LEAKAGE ARE STUDIED TO CLASSIFY THE METHOD OF DELIVERY. FACILITY: MOSK. GEOLOGORAVZED. INST. IM. ORDZHONIKIDZE, MOSCOW, USSR.

INST. of Geological Prospecting
Imeni S. ORDZHONIKIDZE

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

Acc. Nr: AP0045002 Abstracting Service: 5/70 Ref. Code: UR0109

INTERNAT. AEROSPACE ABST.

A70-22409 Correlation functions and spectra of oscillations modulated in amplitude, phase, and frequency by random processes (Korreliatsionnye funktsii i spektry kolebanii, modulirovannykh po amplitude, faze i chastote sluchainymi protsessami). O. E. Antonov and I. A. Plotnikov. *Radiotekhnika i Elektronika*, vol. 15, Jan. 1970, p. 84-91. In Russian.

Derivation of a formula for the correlation function of an oscillation which is simultaneously modulated in amplitude, phase, and frequency by random stationary normal processes having an arbitrary degree of mutual correlation. For specific forms of modulating processes, calculations are made of the spectra of oscillations modulated in only two of three parameters (amplitude and phase, amplitude and frequency, and phase and frequency). It is shown that the presence of correlation between the modulating processes shifts the spectral density maximum away from the carrier frequency.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC 519.3:51:62-50

PLOTNIKOV, V. I., Gorkiy State University imeni N. I. Lobachevskiy

"Necessary Conditions of Optimality for General Type Control Systems"

Moscow, Doklady Akademii Nauk SSSR, Vol 199, No 2, 11 Jul 71, pp 275-278

Abstract: The authors formulate a single unified plan for proving the necessary criteria of optimality for a wide class of problems for optimizing objects with distributed parameters described by nonlinear functional systems of evolutionary and stationary equations from mathematical physics, including as a specific case all the most important classes of problems associated with nonlinear systems of parabolic, hyperbolic, and elliptical types as well as with systems such as the Darboux-Course systems, with integral and various mixed types, etc.

The authors take into account a number of natural limitations which follow from the physical essence of the problems without making any simplifying assumptions. They further look at the minimax case.

Mathematical proof is used by the authors to support their position. The article contains a bibliography of 14 titles.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

Acc. Nr.: AP0042364

Ref. Code: UR0203

JPRS 50162

Angular Dimensions of Solar Corpuscular Streams

(Abstract: "Angular Dimensions of Solar Corpuscular Streams," by A. A. Danilov and K. Ya. Plotnikov, Institute of Space Physics Research and Aeronomy, Yakutsk Affiliate Siberian Department Academy of Sciences USSR; Moscow. Geomagnetizm i Aeronomiya, Vol X, No 1, 1970, pp 134-136)

Geomagnetic activity has semiannual variations with a maximum near the equinox and a minimum near the solstices. This phenomenon is related to the fact that the intensity of solar corpuscular radiation in the equatorial plane is less than over the latitudes of zones of spot formation. A semiannual wave of magnetic activity arises as a result of change in the annual value $\Delta\varphi = \varphi_a - \varphi_E$, where φ_a is the heliolatitude of the zone of spot formation, φ_E is the earth's heliolatitude. With the 11-year cycle φ_a varies in the range ± 8-35° and therefore the same change should be characteristic of the semiannual wave of magnetic activity. This makes it possible to investigate the geometric dimensions of solar corpuscular streams. The initial material for the analysis was the three-hour K-indices for the Yakutsk Observatory for 1938-1965, that is, for almost three solar cycles. (Nonlinearity of the scale of the K-index is unimportant since it

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is only necessary to find the minimum of the semiannual wave in the 11-year cycle.) Computations presented here indicate that the mean angular dimension of a solar corpuscular stream is about 30°. In the cross section the stream is circular or elliptical.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

Acc. Nr: AP0046626 Abstracting Service: CHEMICAL ABST. Ref. Code: 4R 0131

82457c Experimental mathematical method for determination of the thermal stability of refractories. Plotnikov, I. A. (Mosk. Inzh.-Ekon. Inst. im. Ordzhonikidze, Moscow, USSR). *Ogneupory* 1970, 35(1), 53–7 (Russ). The thermal stability coeff. of refractory materials (K_t) was calcd. from the formula: $K_t = R_2/R_1.\delta.\Delta t.N$ hr/m. (R_1 the initial strength of a refractory article, kg/m²; R_2 the strength of the refractory article after thermal treatment, kg/m²; δ the thickness of the article, m; Δt the difference of the temps. on the both surfaces of the article; N the no. of thermal changes during 1 hr of the examn., hr⁻¹). Methods of detg. the components of the formula were developed. Two examples of calcg. K_t are given.

W. J. Skorski

REEL/FRAME

19781936

18

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC:541.113

ANTANOVICH, A. A., PLOTNIKOV, M. A., SAVEL'YEV, G. Ya., Moscow

"Area of Applicability of Virial Equation of State With Various Numbers of Virial Coefficients"

Novosibirsk, Fizika Goreniya i Vzryva, Vol. 6, No. 3, Sep 70, pp. 267-272

Abstract: The most general form of the equation of state suitable for use over a broad range of gas temperatures is the virial form of the equation. Some results are presented in this article from numerical investigation of the area of applicability of this equation using various numbers of terms in the virial series. These results can be used in the practice of thermodynamic calculations, since in many cases definition of the optimal number of terms in the series depending on the required calculation accuracy is important both from the standpoint of decreasing error resulting from using insufficient numbers of terms and from the standpoint of decreasing the volume of computation by reducing the number of terms as greatly as possible. The investigation is performed for nitrogen in the temperature

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USSR

UDC:541.113

ANTANOVICH, A. A., PLOTNIKOV, M. A., SAVEL'YEV, G. Ya., Novosibirsk,
Fizika Goreniya i Vzryva, Vol. 6, No. 3, Sep 70, pp. 267-272

range from 300-3000°K. The results indicate that in the 1000-3000°K range, the use of five virial coefficients is quite sufficient for practical application of the equation at pressures up to several tens of kilobars. At temperatures over 3000°K, the pressure at which the formula can be used exceeds 100 Kbar.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

Heat, Combustion, Detonation

USSR

UDC:534.113-532.593

PLOTNIKOV, M. A., CHERNYAVSKAYA, R. A., SHMELEVA, A. F., Moscow

"Determination of the Thermodynamic Properties of Gases at Pressures Over 10-15 Kbar"

Novosibirsk, Fizika Goreniya i Vzryva, Vol. 6, No. 3, Sep 70, pp. 263-267

Abstract: A number of practical applications, including calculation of processes of explosion and compression of gases by strong shock waves and other problems require determination of the thermodynamic properties of strongly compressed gases. Recent machine calculations of the fourth and fifth virial coefficients using the Leonard-Jones intermolecular interaction potential have significantly expanded the area of applicability of the virial equation for the state of a gas into the area of pressures of 30-40 Kbar and higher for gases with spherically symmetrical nonpolar molecules. Precise experimental data on the thermodynamic properties available for a number of gases allow semiempirical corrections to be introduced to this formula, thereby expanding the area of practical appli-

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC:534.113+532.593

PLOTNIKOV, M. A., CHERNYAVSKAYA, R. A., SHMELEVA, A. F., Novosibirsk,
Fizika Goreniya i Vzryva, Vol. 6, No. 3, Sep 70, pp. 265-267

cation of the equation over a broader temperature and pressure interval. Examples from the literature are presented. At higher pressures, the Tate equation suggested for description of the compressibility of liquids at high pressures is applicable for description of the behavior of gaseous nitrogen. In correspondence with the methodology described, the thermal and caloric properties of nitrogen were calculated in the 16-20 Kbar pressure range at 700-3000°K. The results of the calculation are presented in tabular form.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC: 531.01

PROSKURYAKOV, G.M. and PLOTNIKOV, P.K.

"Dynamics of Two-Degree Gyroscope Accounting for Elastic-Damping Properties of the Structure"

Saratov, Nauch. Tr. Saratov. Politekhn. In-t (Transactions of Saratov Polytechnic Institute), 1972, vyp 55, pp 69-74 (from Referativnyy Zhurnal-Mekhanika, 1973, Abstract No 2A130 by N.P. Stepanenko)

Translation: The linearized approach of the problem on motion of two-degree gyroscope is investigated, taking into account the elasticity of its elements. Assuming a constant speed of the gyromotor, it is shown that the gyroscope dynamics are characterized with sufficient accuracy by the dynamics of the integrating aperiodic coupling with proper selection of its parameters. Approximate formula for the determination of these parameters are obtained.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

PLOTNIKOV, P.K.

DETERMINING THE GIMBAL ERRORS OF AN ASTATIC GYROSCOPE WITH ALLOWANCE FOR ITS DRIFT

UDC 531.5

[Article by P. K. Plotnikov; Leningrad. Izvestiya VUZ, Priborostroyeniye, Russian, No 8, 1972, pp 77-81]

The gimbal errors are investigated for an astatic gyro (AG) having a vertical spin axis at the initial moment of time. The gyroscope possesses drift, and the vehicle rotates through wide angles. As opposed to [1,2], the differential equations of motion have been integrated up to final analytical formulas for the AG gimbal errors when the disturbing torque at the inner gimbal mounting axis is constant.

The process of measuring the rotational angles of an object relative to an AG rotor "drifting" in free space is presented in Figure 1, where the arrangement of the AG and vehicle are shown (a) along with the rotation diagrams of their associated coordinate trihedrons (b, c, and d), and where $O(x_0y_0z_0)$, $Ox_1y_1z_1$, and $Oxyz$ are the respective right-handed orthogonal coordinate systems of the inertial (ISK), vehicular, and local reference frames. Moreover, ψ, ξ, and ϕ are the rotation angles of the object, α, β, and γ are the rotation angles of the local coordinate system (the AG case) in inertial space, and θ_1 and φ_1 are the instrument's aspect angle readings.

Rotations of the vehicle relative to the case and the case relative to the ISK are described by the following matrix equations for transformations of the coordinates:

$$[x_1y_1z_1] = C_\theta C_{\varphi_1}[x_0y_0z_0] = C[x_0y_0z_0] \quad (1)$$

$$[xyz] = B_\alpha B_\beta B_\gamma[x_1y_1z_1] = B[x_1y_1z_1] \quad (2)$$

$$C = C_\theta C_{\varphi_1}, B = B_\alpha B_\beta B_\gamma \quad (3)$$

where B and C are coordinate transformation matrices and C_{θ_1}, C_{φ_1}, B_α, B_β, and B_γ are the coordinate transformation matrices for discrete rotations corresponding to the angles θ_1, φ_1, ..., γ.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 029

UNCLASSIFIED

TITLE--DETERMINATION OF THE CONTENT OF SOME ELEMENTS IN SYNTHETIC FIBERS WITH RADIOACTIVE ISOTOPES -U-

PROCESSING DATE--04DEC70

AUTHOR-(04)-VOLF, L.A., KHISLAVSKIY, A.G., PLOTNIKOV, R.I., ZHODZISHSKIY, G.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VOLOKNA 1970, (2), 32-3

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--SYNTHETIC FIBER, RADIOACTIVE ISOTOPE, CADMIUM ISOTOPE, X RAY ABSORPTION, SCINTILLATION COUNTER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0041

STEP NO--UR/0183/70/000/002/0032/0033

CIRC ACCESSION NO--AP0132336

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 029

CIRC ACCESSION NO--AP0132336 UNCLASSIFIED PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONTENT OF SOME ELEMENTS (HAVING AN AT. NO. GREATER THAN OR EQUAL TO 16) IN SYNTHETIC FIBERS HAS DETD. FROM X RAY ABSORPTION DATA. THE EXPTS. WERE CONDUCTED IN AN X RAY PHOTOMETER, USING PRIME 109 CD AS AN IRRADN. SOURCE AND SCINTILLATION COUNTER AS A DETECTOR. THE METHOD WAS RAPID (5 MIN) AND ACCURATE.

FACILITY: LITLP IM. KIROVA, LENINGRAD, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--X RAY DETERMINATION OF IRON IN ROCKS -U-

AUTHOR-(03)-GURVICH, YU.M., PLOTNIKOV, R.I., POPOV, N.V.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB., 1970, 36, (3), 294-295

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--CHEMICAL ANALYSIS, ROCK, GEOCHEMISTRY, IRON, X RAY ANALYSIS, SPECTROGRAPHIC ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0906 STEP NO--UR/0032/70/036/003/0294/0295

CIRC ACCESSION NO--AP0131492

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0131492

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN X RAY RADIOMETRIC METHOD OF DETERMINING FE IN POWDER SAMPLES OBTAINED FROM ROCKS IS PROPOSED. WITHOUT ALLOWING FOR LOCAL VARIATIONS IN MACROSCOPIC ROCK COMPOSITION THE ERROR IS SIMILAR TO 10PERCENT. IF A CALIBRATION CURVE IS FIRST PLOTTED FOR EACH GEOLOGICAL SITE OR TYPE OF MATERIAL, THIS ERROR IS REDUCED BY A FACTOR OF 2. THE ERROR IS NO HIGHER THAN THAT ENCOUNTERED IN CONVENTIONAL X RAY METHODS BASED ON ABS. INTENSITIES.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 016 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--USE OF X RAY FLUORESCENCE ANALYSIS WITH RADIOISOTOPE FOR DETERMINATION OF CHEMICAL COMPOSITION OF ROCK ND ORES IN MOTION -U-

AUTHOR-(04)-PSHENICHENYY, G.A., OCHKUR, A.P., PLOTNIKOV, R.I., GOGANOV, D.A.

COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. (USSR); 28: 67-8 JAN, 1970

DATE PUBLISHED----JAN70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--MINERAL FORMATION ANALYSIS, FLUORESCENCE SPECTRUM, RADIOACTIVE ISOTOPE, ZIRCONIUM ORE, TITANIUM OXIDE, METALLURGIC PROCESS CONTROL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0212 STEP NO--UR/0089/70/028/000/0067/0068

CIRC ACCESSION NO--AP0105288

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 016 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0105288

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESCRIPTIONS ARE GIVEN OF THE DESING AND PERFORMANCE OF A RADIOISOTOPE X FLUORESCENCE METHOD FOR ORE SAMPLE ANALYSIS ON A CONVEYOR BELT. TESTS WERE MADE OF CONTINUOUS SAMPLE CONTROL OF TI AND ZR ON THE CONVEYER AND COMPARED WITH THE LABORATORY DATA. SOURCE OF COMBINED PRIME55 FE (5.9 KEV) AND PRIME109 CD (22 KEV) WERE USED FOR EXCITATION OF THE K SERIES OF TITANIUM (TIK SUBALPHA EQUALS 4.5 KEV) AND ZIRCONIUM (ZRK EQUALS 15.7 KEV). RESULTS OBTAINED SHOWED THE METHOD SUITABLE FOR DETERMINING THE ORE CONTENT OF ELEMENTS WITH ATOMIC NUMBER OF 20 HIGHER, WHOSE LUMINESCENCE IS SUFFICIENTLY STRONG TO PENETRATE 5 TO 10 CM THICK AIR LAYERS.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC 621.317.382/.384+621.375.826

PLOTNIKOV, V. A., and CHASTUKHINA, L. N.

"A Device for Measuring the Power of a Helium-Neon Laser"

Moscow, Pribory i Tekhnika Eksperimenta, No 4, Jul/Aug 71, pp 189-190

Abstract: The paper describes a simple power meter for continuous emission in the band from 10 nW to 1 μW for a helium-neon laser wavelength of 0.63 μ. The device is based on an FD-7K silicon photodiode. Measurement accuracy is at least 10 percent. The device has a constant sensitivity of 1.03±0.06 V/W in the range from 10 nW to 2 μW of output power. The threshold of sensitivity attributable to noises of the photodiode and amplifier is 1 nW on the working wavelength for a signal-to-noise ratio of 1 at the output of the amplifier. Extraneous exposure of the photodiode is prevented by using an interference filter with a passband of 5 nm in the middle of the maximum as well as a diaphragm with an iris which can be adjusted from 0.2 to 6 mm.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC 537.563:547.341

BOGOLYUBOV, G. M., PLOTNIKOV, V. F., IGNAT'YEV, V. M., and IONIN, B. I., Leningrad Technological Institute imeni Lensovet

"Organic Derivatives of the V-VII Group Elements. XV. Mass-Spectra of Unsaturated Phosphine Oxides"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 3, Mar 71, pp 517-520

Abstract: Mass spectra and appearance potentials of the basic ions of diethylpropylphosphine, diethyl-trans-propenylphosphine, diethy-cispropenylphosphine, diethylpropenylphosphine, and diethylallenylphosphine oxides are reported. Only few peaks with intensities higher than 1.0% appear in these spectra. The intensity of molecular and β-ions is small, the α- and π-ions predominating there. The intensity values M^+ in the mass spectra obtained agree with the localization of the positive charge on the molecular ion of phosphine oxides, specifically at the oxygen atom of the phosphoryl group. The relationship between the intensities of positive molecular ions and of the rear-ranged ones indicates intramolecular hydrogen bonding in trans-diethylpropenylphosphine oxide. Mass spectral conversions of phosphine oxides depend on participation of ionic mesomeric system including phosphoryl group.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR UDC: 621.374

PL[redacted] V. G.

"Pulse Circuits Based on Ferrites and Semiconductors"

Impul'snyye skhemy na ferritakh i poluprovodnikov, izd. 2-ye, ispr. i dop. (cf. English above. Second Edition, Revised and Enlarged), Kuybyshev, Knigoizdat, 1971, 111 pp ill. 24 k. (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5G248 K)

Translation: The book describes pulse circuits based on ferrites and semiconductor devices: shift registers, logic elements, pulse generators and shapers; schematic diagrams are given as well as practical recommendations and computational formulas. Use of the described circuits is considered together with new trends in the design of ferrite elements: the use of transformers, biaxes, plates and thin films.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

USSR

UDC: 621.391.037.713

PLOTNIKOV, V. G.

"A Comparison of Specific Communications Systems Based on Generalized Quantitative Evaluations"

Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR (Works of Academic Institutes of Communications. Ministry of Communications of the USSR), 1970, vyp. 51, pp 3-13 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5A22)

Translation: Quantitative estimates of the effectiveness of specific discrete data transmission systems are calculated, and some conclusions are drawn from the results of the calculation. Resumé.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--EFFECT OF THE NATURE OF DIFFICULTY SOLUBLE HYDROXIDES ON THE ADSORPTION OF THALLIUM, I -U-

AUTHOR-(02)-PLOTNIKOV, V.I., GIBOVA, E.G.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK. KAZ. SSR, SER. KHIM, 1970, 20(2), 12-19

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HYDROXIDE, THALLIUM, ADSORPTION, MAGNESIUM, LANTHANUM, GALLIUM, ZIRCONIUM, IRON, TITANIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/1341 STEP NO--UR/0360/70/020/002/0012/0019

CIRC ACCESSION NO--AP0121834

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121834

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COPPTN. OF TL(I) WITH HYDROXIDES OF METALS SHOULD BE APPROACHED FROM THE POINT OF VIEW OF ACID BASE INTERACTIONS WHICH RESULT IN THE FORMATION OF SOLID SOLNS. OF THE RESP. CHEM. COMPDS. IN AN EXCESS OF THE HYDROXIDE. THE COPPTN. OF TL WAS A FUNCTION OF THE CHARACTER OF THE HYDROXIDE CARRIER AND INCREASED IN THE ORDER MG, LA SMALLER THAN Y SMALLER THAN GA SMALLER THAN YB SMALLER THAN TH SMALLER THAN ZR SMALLER THAN FE SMALLER THAN TL.

FACILITY: INST. YAD. FIZ., ALMA ATA, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--OPTIMAL PROCESSES WITH TWO GROUPS OF CONTROL PARAMETERS -U-

AUTHOR-(02)-ZAKHAROV, G.K., PLOTNIKOV, V.I.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL VYCHISLITEL'NOI MATEMATIKI I MATEMATICHESKOI FIZIKI, VOL. 10, JAN.-FEB. 1970, P. 55-66

DATE PUBLISHED--------70

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

TOPIC TAGS--OPTIMAL AUTOMATIC CONTROL, AUTOMATIC CONTROL PARAMETER, NONLINEAR AUTOMATIC CONTROL SYSTEM, INTEGRODIFFERENTIAL EQUATION, FUNCTIONAL EQUATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1979/1553 STEP NO--UR/0208/70/010/001/0055/0066

CIRC ACCESSION NO--AP0047881

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0047881

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DERIVATION OF NECESSARY CONDITIONS OF OPTIMALITY IN THE FORM OF THE MAXIMUM PRINCIPLE FOR A NONLINEAR PROBLEM WITH TWO GROUPS OF CONTROL PARAMETERS. NECESSARY CONDITIONS OF OPTIMALITY ARE PROVEN FOR A GENERAL NONLINEAR CASE WHERE THE CONTROL PLANTS ARE CONTROLLED WITH THE AID OF TWO OR MORE DIFFERENT GROUPS OF CONTROLS, EACH OF WHICH POSSESSES FUNCTIONAL TRAITS PECULIAR ONLY TO IT, THUS PREVENTING THE DIFFERENT GROUPS FROM BEING COMBINED INTO A SINGLE CLASS. THE METHOD EMPLOYED IN DERIVING THESE CONDITIONS IS SHOWN TO BE APPLICABLE TO THE SOLUTION OF A WIDE CLASS OF OPTIMAL PROBLEMS IN WHICH THE BEHAVIOR OF THE CONTROL PLANT CAN BE DESCRIBED BY INTEGRAL EQUATIONS, INTEGRODIFFERENTIAL EQUATIONS, EQUATIONS WITH A DELAY, ETC. IN DEVELOPING THIS METHOD, AN ATTEMPT IS MADE TO REDUCE TO A MINIMUM THE REQUIREMENTS IMPOSED ON THE RIGHT HAND SIDES OF THE EQUATIONS AND ON THE FUNCTIONAL. FOR EXAMPLE, THE EXISTENCE OF A DERIVATIVE WITH RESPECT TO T IS NOT REQUIRED IN THE NONAUTONOMOUS CASE.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

1/2 - 024 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--COPRECIPITATION OF SMALL AMOUNTS OF GALLIUM WITH SOME METAL HYDROXIDES -U-

AUTHOR-(04)-PLOTNIKOV, V.I., GIBOVA, E.G., KOCHETKOV, V.L., CHINAEVA, V.P.

COUNTRY OF INFO--USSR

P

SOURCE--VESTN. AKAD. NAUK KAZ. SSR 1970, 26(2), 67-8

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--GALLIUM, HYDROXIDE, ALUMINUM COMPOUND, IRON COMPOUND, TITANIUM COMPOUND, ZIRCONIUM COMPOUND, CHEMICAL PRECIPITATION, RARE EARTH COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1981/0440 STEP NO--UR/0031/70/026/002/0067/0068

CIRC ACCESSION NO--AP0059461

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

2/2 024 UNCLASSIFIED

CIRC ACCESSION NO--AP0050461 PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF THE NATURE OF THE HYDROXIDE COLLECTOR ON THE COPPTN. OF GA WAS STUDIED. THE COPPTN. INCREASES WITH HYDROXIDES OF THE FOLLOWING METALS AL IS LESS THAN SC IS LESS THAN FE IS LESS THAN TI IS LESS THAN ZR IS LESS THAN TH. AT THE BEGINNING OF MAX. PPTN. OF GA (PH 6), THE HYDROXIDES ARE NEARLY COMPLETELY PPTD. IN THE CASE OF LA AND MG, THE COPPTN. CURVE IS MORE COMPLEX. AN INCREASE IN PH LEADS TO THE DISSOLN. OF THE GA HYDROXIDE PPT. BUT WITH THE BEGINNING OF PPTN. OF LA AND MG HYDROXIDES, IT IS AGAIN PPTD. THE COPPTN. OF GA WITH HYDROXIDES OF THE RARE EARTH ELEMENTS INCREASES IN THE SERIES ER IS LESS THAN DY IS LESS THAN TB IS LESS THAN GD. THE COPPTN. OF GA DEPENDS ON THE NATURE OF THE HYDROXIDE COLLECTOR. GA IS CAPTURED BY THE METAL HYDROXIDES FORMING COMPOS. OF THE GALLATE TYPE. THE EFFECT OF THE ORDER OF MIXING OF THE SOLNS., TEMP., AMTS. OF GA AND COLLECTOR IN THE SAMPLE, CONCN. OF SALTS, ETC. DIFFERS LITTLE FROM LITERATURE DATA, E.G., FOR IN.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202430003-5

PLOTNIKOV, V. I.

SO: JPRS 54204
23 OCT 71

UDC: 616.33-089.87-06:616-007.271

CLINICAL MANIFESTATIONS AND DIAGNOSIS OF CICATRICIAL STRICTURE OF AN ANASTOMOSIS FOLLOWING RESECTION OF THE CARDIA AND GASTRECTOMY

[Article by V.I. Plotnikov, A.M. Ignatov, Institute of Experimental and Clinical Oncology, USSR Academy of Medical Sciences, Moscow; Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, Russian, No 8, 1971, pp 73-77]

The development of pharmacology, anesthesiology, and improvement of surgical techniques has resulted in the fact that gastrectomy and cardial resection have become common operations. However, while there is extensive coverage of studies pertaining to survival and general pathomorphological disturbances in the organism following these operations in the world literature, the condition of anastomoses long after the surgery has been little studied. Only a few works based on isolated cases deal with such a rather frequent and dangerous complication as cicatricial stricture of an anastomosis (Ye.A. Yemel'yanova, 1957; I.F. Krupachev; A.S. Lur'ye; M.I. Talayev; A.A. Cheyda; Benedict, 1960; Lu Yun-K'an et al.; Rossetti, 1957; Nissen, 1962, and others).

Impaired passage of food is the chief sign of cicatricial stricture of an anastomosis. In the opinion of several authors, dysphagia associated with cicatricial stricture appears 3-4 weeks after surgery (Ye.A. Yemel'yanova, 1955; Yu.K. Kvashnin and Yu.M. Pantsyrev; Popov et al.; Aanesen; Benedict). The decrease in dysphagia observed by some authors some time after its appearance is indicative of an inflammatory component (Yu.K. Kvashnin and Yu.M. Pantsyrev; Nissen, 1962; Rossetti, 1963). That it is possible for cicatricial stricture to appear toward the end of the first month after surgery is also indicated by experimental investigations which confirm formation of scar tissue at this time (F.F. Beloyartsev; B.Ye. Peterson, 1960; V.I. Rottenberg and L.Ye. Denisov). Even though the first symptom of stricture may appear 3-4 weeks after surgery, the final formation of cicatricial tissue in the zone of the anastomosis takes 2-3 months. It is not always, by far, that dysphagia due to cicatricial stricture presents a tendency toward progressing (Ye.A. Yemel'yanova, 1955; Yu.K. Kvashnin and Yu.M. Pantsyrev, 1957; Rossetti, 1963). This is also indicated by our studies of patients in whom the stricture was demonstrated only roentgenologically and it was not clinically manifested for a long period of time. However, such a long existing stricture can be detected by "altering the type of food" (Rossetti, 1957) or when the anastomosis is obstructed by a foreign body. Thus, R.T. Panchenkov observed a patient who developed an acute obstruction by the pit of a plum six years after gastrectomy. The reports of Benedict

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PLOTNIKOV, V. M., PODRESHETNIKOV, V. A.

"Pneumatic Relay"

USSR Author's Certificate No 287402, Filed 14/12/67, Published 27/01/71, (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, 1971, Abstract No 11 A78 P).

Translation: A pneumatic relay is suggested which contains a multiple-membrane unit with a shaft, the axial channel of which is connected to the power supply through a chamber formed by membranes, and a valve group with a common plate and two concentric seats, one of which can be moved. In order to expand the functional capabilities of the relay, it contains a second valve group, located symmetrically with respect to the first group on the other end of the multiple-membrane unit. In one version of the relay, the axial channel of the shaft of the multiple-membrane unit is connected to the power supply through a chamber consisting of membranes with equal effective areas. 2 figures.

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PLOTNIKOV, V. N., SUKHANOV, V. A.

"Some Problems of the Formation of Attribute Space 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 229-240 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V659)

Translation: A study was made of the problems of the formation of independent attributes on the basis of the initial set of correlated parameters. For this purpose, linear transformation is used which permits the parameters with special statistical properties (minimal or maximal dispersions) to be found. This procedure offers the possibility of formulating a small number of new informative attributes. The information value of the attributes is defined by an approximate formula.

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LEBEDEV, B. I., PLOTNIKOV, V. N.

"Some Statistical Aspects of Pattern Recognition"

V sb. Avtomat. upr. i vychisl. tekhn. (Automatic Control and Computer Engineering -- collection of works), Vyp. 10, Moscow, Mashinostroyeniye Press, 1972, pp 6-40 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V660)

Translation: A study was made of the general statement and mathematical model of the pattern recognition problem as a problem in extremitization of a functional of the quality of the recognition automaton. The search for the family of extremals and the sorting among them are carried out in the training process of the automaton by variation of some of its parameters.

Finding the recognition scheme offers the possibility of constructing the sequence of the solution of the standard recognition problem.

Determination of the schematic and the sequence of solving pattern recognition problems permits us to proceed to the investigation of the basic methods of solving the problem. Such methods are classified in this paper by the similarity measures used and by the procedures for determining the statistical descriptions of the separate classes of patterns. From the point of view of the procedure used for constructing the statistical descriptions of the separate classes a study was made of algorithms with rigid logic and adaptive algorithms.

In this paper attention has also been given to the problems of selecting

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