"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 008 UNCLASSIFIED

CIRC ACCESSION NO--AP0116891 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO A MIXT. OF 0.1 MOLE OF A PHENOL AND 5 ML H SUB3 PO SUB4 WAS ADDED DROPWISE 0.1 MOLE DIALKYLISOPROPENYLETHYNYLCARBINOL, AND THE MIXT. HEATED 30 HR AT 60-70DEGREES TO GIVE 2,1,R PRIME1 (RO) C SUB6 H SUB3 CR PRIME2 R PRIME3 C TRIPLE BOND CC ME:CH SUB2,4 (R, R PRIME1, R PRIME2, R PRIME3, PERCENT YIELD, B.P. (MM), N PRIME20 SUBD AND D PRIME20 GIVEN): (SHOWN ON MICROFICHE).

FACILITY: INST. ORG. KHIM., EREVAN, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

Immunology

USSR

UDC 616-006-092.4

VARDOSANIDZE, E. SH., and MEUNARGIYA, V. V., Institute of Oncology, Ministry of Health Georgian SSR

"An Immunofluorescent Study of Surface Antigens Induced by Human Adenovirus Type 12 in Various Systems of Cell Cultures"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSR, Vol 63, No 3, 1971, pp 713-716

Abstract: Adenovirus type 12, incubated with other cells, induces the formation of surface antigens in human amniotic A-1 cells and in hamster embryonic cells, though not in mouse embryonic cells. This is revealed by the indirect fluorescent antibody method: after addition of specific antibodies (obtained from hamsters repeatedly vaccinated with adenovirus) to the culture, fluorescent rings are formed on human amniotic and hamster embryonic cells. These antibodies interact neither with the virus or its antigen nor with control cultures. It is therefore concluded that the adenovirus induces the formation of specific antigens on the membrane of the host cell, which may endow the cell with antitumor immunity.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 678.746

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

"Several Spectral Characteristics of Polystyrene Activated with Europium Chelate"

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

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

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

VARENIK, Yu. R., SLAVUTSKIY, Ye. I. UDC: 518.5:681.3.06

"Preparation of Initial Data for Stochastic Prognosis Systems"

V sb. Neyrobionika (Neurobionics--collection of works), Kiev, 1970, pp 236-240 (from RZh-Matematika, No 11, Nov 71, Abstract No 11V856)

Translation: A mathematical model is considered for accommodation of the initial data in the memory of a stochastic prognosis system. A system of medical diagnosis is taken as an example. The memory of the system is modeled by a finite graph G in which each vertex corresponds to some state of the patient and a set of treatment methods which are used, two vertices being connected by an arc if and only if a transition is possible from a state corresponding to one vertex into a state corresponding to another. The procedure for calculating the statistical characteristics and transitions from state to state is presented. Digital computer programmed realization is based on construction of a vector whose components are graph vertices reflecting the course of an illness of a given patient. V. Mikheyev.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC: 518.5:681.3.06

VARENIK, Yu. R., SLAVUTSKIY, Ye. I.

"Preparation of Initial Information for Stochastic Prognosis Systems"

V sb. Neyrobionika (Neurobionics--collection of works), Kiev, 1970, pp 236-240 (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V856)

Translation: The paper deals with a mathematical model for accommodation of initial information in the memory of a stochastic prognosis system as illustrated by a medical diagnosis system. The memory of the prognosis system is modeled by a finite graph G, each of whose vertices is put into a one-to-one correspondence with some state of the patient and treatment complex. Two vertices are joined when and only when a transition is possible from the state corresponding to one vertex to that corresponding to the other. A procedure is given for calculating the statistical characteristics and the transitions from state to state. The digital computer program realization is based on construction of a vector whose components are graph vertices which map the course of the illness for the given patient.
V. Mikheyev.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC: 518.5:681.3.06

VARENIK, Yu. R., SOBOLEVA, E. N.

"On a Model for Predicting the Flow of a Pathological Process in an Organism"

V sb. Neyrobionika (Neurobionics--collection of works), Kiev, 1970, pp 241-243 (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V854)

Translation: The following problem is considered.

Let a given specific pathological process be characterized by symptoms M_i from a set M, where $0<i\leqslant n$. Any combination of symptoms from M is called a state of the organism. These states are given on the set A, and let A_j be the elements of this set.

Then

$$I=\sum^{n} C_n^i.$$

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

VARENIN, Yu. R., SOBOLEVA, E. N., Neyrobionika, Kiev, 1970, pp 241-243

The entire pathological process is broken up into k periods. Each period is designated by $k_r | < r < k$. Then A_{jk_r} will characterize the j-th state in the k_r-th period. In order to predict the most probable nature of development of the pathological process, it is necessary to find the maximum probability of the transition $P_{max} A_{jk_r}$ to $A_{j'k_{r+1}}$, where j' may be equated with j and designates a state different from j. V. Mikheyev.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 026 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--EUROPIUM (I) CENTERS IN POTASSIUM IODIDE -U-

AUTHOR-(04)-~~VARENKO, G.D.~~, AVDONIN, V.P., ZAZUBOVICH, S.G., PLACHENOV, B.T.

COUNTRY OF INFO--USSR

SOURCE--OPT. SPEKTROSK. 1970, 28(2), 284-8

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--SINGLE CRYSTAL, LUMINESCENCE, EUROPIUM, CRYSTAL LATTICE STRUCTURE, BETA IRRADIATION, POTASSIUM IODIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0087 STEP NO--UR/0051/70/028/002/0284/0288

CIRC ACCESSION NO--AP0054884

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 026 UNCLASSIFIED

CIRC ACCESSION NO--AP0054884 PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. LUMINESCENCE OF KI SINGLE CRYSTALS CONTG. EUI SUB3 WAS INVESTIGATED. THESE CRYSTALS EXHIBIT A WEAK BAND AT 480 NM, IN ADDN. TO THE MAIN BAND AT 428, WHEN THE CONCN. OF EU DOES NOT EXCEED 10 PRIME NEGATIVE4 MOLE PERCENT. CONVERSION OF 1 BAND INTO ANOTHER WAS INVESTIGATED AS A FUNCTION OF THE CONCN. OF THE F CENTERS, TEMP., AND BETA IRRADN. POLARIZATION CHARACTERISTICS OF THE LUMINESCENCE WAS ALSO DETD. THE 480 NM LUMINESCENCE IS DUE TO THE PRESENCE OF EU(I) IN THE LATTICE AND IS ASSOCD. WITH POINT DEFECTS, PROBABLY ANIONIC VACANCIES. POLARIZATION STUDIES INDICATE THAT DEFECTS ARE IN THE DIRECTION OF THE C SUB4 CRYST. AXIS.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC: 623.962.396

VARENTSOV, B. A., KRASYUK, N. P., TUPITSYN, L. A., SHAPERIN, I. L.

"Experimental Studies of the Radar Characteristics of Objects by the Method of Hydroacoustic Modeling"

Tr. Sev.-Zap. zaoch. politekhn. in-t (Works of the Northwest Polytechnical Correspondence Institute), 1972, No 20, pp 13-15 (from RZh-Radiotekhnika, No 12, Dec 72, abstract No 12G33 [résumé])

Translation: The paper describes an equipment complex for studying the radar characteristics of different objects by methods of hydroacoustic modeling. The measurement procedure is given.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 537.311.33:514.28

KONOZENKO, I.D., VINETSKIY, V.L., VARENTSOV, M.D., YERITSYAN, G.N., SEMENYUK, A.K., STARCHIK, M.I., KHIVRICH, V.I.

"Effect Of Certain Factors On The Processes Of Formation Of Radiation Defects In Silicon And Germanium During Gamma Irradiation"

V sb. Radiatsion. fiz. nemet. kristallov (Radiation Physics Of Non-Metallic Crystals--Collection Of Works), Minsk, "Nauka i tekhn.," 1970, pp 22-44 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2B26)

Translation: The kinetics are studied of the buildup of radiation defects in Si and n- and p-type Ge during Gamma irradiation. The effect of the charge state and temperature on the formation of recombination centers is considered as well as the effect of dosage, the intensity of Gamma irradiation, concentration, preliminary irradiation and other factors on the formation of radiation defects. 32 ref. V.B.

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AS USSR

JPRS 54563
26 NOV 71

I. M. GUBKIN AND HIS SCIENTIFIC LEGACY

[Article by Corresponding Member of the AS USSR [M. I. Varentsov] Moscow, Vestnik Akademii Nauk SSSR, Russian, Vol 41, No 9, September 1971, pp 125-130]

In September of this year the scientific community of our country is marking the 100th anniversary of the birth of a very eminent Soviet geologist, Academician Ivan Mikhaylovich Gubkin.

I. M. Gubkin was born in the village of Pozanyakovo of Muromskiy Uyezd of Vladimirskaya Guberniya. After graduation from school and a teacher's seminary he worked as a rural teacher. Then, after completing the courses of the St. Petersburg Teachers' Institute, he taught in the city schools in St. Petersburg, and only in 1903 entered the St. Petersburg Mining Institute, from which he was graduated at 39 years of age.

But whereas the path of Gubkin in geological science proved to be a long one, his growth as a scientist, on the contrary, was very rapid. In a little more than ten years he became one of the leading specialists of the then Geological Institute and the author of many scientific works. In those years he established the nature of the position of horizons of light petroleum at Maykop, compiled the world's first original structural map (later it became a model for the cartography of the underground relief of so-called "hand-shaped" petroleum deposits), and carried out a cycle of investigations of the tectonics and stratigraphy of the Southwestern Caucasus and the Ashgeron peninsula which were of great importance not only for all subsequent work in those regions but also in many petroleum and gas regions both of our and of foreign countries.

When the October revolution occurred the question of whose side he was on had already been solved for Gubkin. "By 1917," Ivan Mikhaylovich recalled, "I had begun to understand that there is no science without politics, that a scientist

VARENTSOV, M.I.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

Ion Exchange

USSR

UDC 543.544

PEVNITSKAYA, M. V., LAVRENT'YEV, YU. G., and VARENTSOV, V. I., Institute of the Physicochemical Principles of Mineral Raw Material Processing of the Siberian Department of the Academy of Sciences USSR, Institute of Geology and Geophysics of the Siberian Department of the Academy of Sciences USSR

"Experimental Study of Concentration Profiles in Ion Exchange Membranes"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 44, No 11, Nov 70, pp 2952-2954

Abstract: The article demonstrates the possibility of using x-ray spectrum local analysis with the aid of an electron probe for the study of concentration profiles in ion exchange membranes. The distribution of Cu^{+2}, Ca^{+2}, Na^{+} ions in a heterogeneous (MK-40) and homogeneous (MK-100) membrane was studied. Concentration profiles were obtained during ion transfer in a constant electric field. Stationary profiles are given for Cu^{+2} ions in an MK-40 membrane and Ca^{+2} ions in an MK-100 membrane.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC: 541.135-145:541.183.12

PEVNITSKAYA, M. V., VARENTSOV, V. K., Institute of Physical and Chemical Bases of Processing Raw Materials, Novosibirsk

"Concentration Polarization on Strongly Ionized Ion-Exchange Membranes in Dilute Electrolyte Solutions"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya AN SSSR, Seriya Khimicheskikh Nauk, Vyp. 6, No 14 (179), Nov 70, pp 8-13

Abstract: The authors study polarization on strongly ionized cation-exchange and anion-exchange membranes in solutions with various characteristics at concentrations of less than 0.1 N. The cation-exchange specimens were heterogeneous membranes based on KU-2 and various binders (polyethylene, polyvinyl chloride, polyfluoroethylene copolymer 42 L), and also homogeneous membranes produced by both chemical and radiation grafting of sulfogroups (MK-100, FK-3, MPFK-26). The anion-exchange membranes were based on strongly basic AV-17 resin and polyethylene binder. Polarization of these membranes was studied in NaCl, NaOH and HCl solutions. It was found that polarization characteristics for all investigated membranes are analogous regardless of the nature of the solution. The limiting currents on cation-exchange membranes in HCl

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

PEVNITSKAYA, M. V., et al, Izvestiya Sibirskogo Otdeleniya AN SSSR, Seriya Khimicheskikh Nauk, Vyp. 6, No 14 (179), Nov 70, pp 8-13

and on anion-exchange membranes in NaOH are lower than the theoretically calculated values by a factor of 2-3. The schlieren method is used to show that intense agitation of the solution takes place at the surface of the membrane with currents greater than the limiting value, this action being more pronounced for cation-exchange membranes.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

Ion Exchange

USSR

UDC: 541.135-145:541.183.12

PEVNITSKAYA, M. V., VARENTSOV, V. K., Institute of Physical and Chemical Bases of Processing Raw Materials, Novosibirsk

"A Study of Polarization at Anion-Exchange Membranes in Dilute Solutions of Electrolytes"

Novosibrisk, Izvestiya Sibirskogo Otdeleniya AN SSSR, Seriya Khimicheskikh Nauk, Vyp. 6, No 14 (179), Nov 70, pp 13-18

Abstract: The behavior of anion-exchange membranes during passage of direct current is studied as a basis for improving the process of electrodialysis. The study was based on heterogeneous and homogeneous ion-exchange films with various concentrations of strongly basic and weakly basic groups. The behavior of the ion-exchange membrane during passage of current was determined from the change in resistance of the membrane-solution system and from polarization measurements. For some membranes, a study was made of the change of pH of the solution as a function of the distance to the diaphragm at currents larger than the limiting value. The hydrodynamic conditions in the layer near the membrane were also studied as a function of the nature of the anion-exchange membranes. The schlieren method was used for this purpose. Polarization of the membranes was studied in sodium chloride and hydrochloric acid

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

PEVNITSKAYA, M. V., et al, Izvestiya Sibirskogo Otdeleniya AN SSSR, Seriya Khimicheskikh Nauk, Vyp. 6, No 14 (179), Nov 70, pp 13-18

solutions. It was found that the experimentally determined limiting currents for weakly basic membranes agree with theoretical calculations only for acids. In neutral solutions, the experimental values are lower than those calculated. Regardless of the type of membrane in NaOH solutions, the experimentally found currents are generally lower than the theoretical values by a factor of 2-3. The over-voltage at twice the limiting current is 2-5 volts higher than for cation-exchange membranes. This is apparently due to interaction between the membrane material and the electrolyte. If the logarithm of limiting current is plotted against the logarithm of concentration, the resultant graphs can be divided into two segments with slopes of 1.31-1.33 and 0.9 respectively. The values of the limiting current in the first region agree with theoretical data, while those in the second region are too high.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

Ion Exchange

UDC 541.183.123 + 541.133

VARENTSOV, V. K., and PEVNITSKAYA, M. V., Institute of Physico-Chemical Principles for Reprocessing of Mineral Raw Material, Siberian Branch Academy of Sciences USSR, Novosibirsk

"Electroconductivity of Ion-Exchange Membranes and Nonhomogeneity of Their Structures"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Khimicheskikh Nauk, No 2 (214), Mar 73, pp 3-8

Abstract: Electroconductivity of a series of ion exchange membranes has been studied in relationship to the nature of ionogenic groups, the technology of preparation (homogeneous and heterogeneous), and complete exchange capacity, as well as the nature, concentration and temperature of the solution. It has been established that the conductivity of ion exchange resin is affected principally by the spacial distribution of fixed ionogenic groups and not so much by their quantity. The nature of the nonhomogeneity of the ion exchange resin appears to have no effect on the conductivity.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 017 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--AUTOMATIC RECORDING OF BREAKDOWN DURING THE IONIZATION AGING OF POLYMER FILMS -U-

AUTHOR-(04)-DOMKIN, V.S., KOTLOV, YU.V., VALYASHOV, V.V., VARENTSOVA, N.V.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB. 1970, 36(5), 566-7

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, METHODS AND EQUIPMENT

TOPIC TAGS--MATERIAL TESTING EQUIPMENT, IONIZATION, PLASTIC FILM, ELECTRODE POTENTIAL, AUTOMATIC EQUIPMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/1972 STEP NO--UR/0032/70/036/005/0566/0567

CIRC ACCESSION NO--AP0132233

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 G17 UNCLASSIFIED

CIRC ACCESSION NO--AP0132233 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TESTED FILM IS CLAMPED TO A GROUNDED METAL PLATE AND 30-35 ELECTRODES ARE CONTACTED WITH ITS SURFACE. THE ELEC. POTENTIAL OF THE ELECTRODES IS INCREASED AT THE SAME RATE UNTIL THE FILM UNDER THE ELECTRODE(S) BECOMES COND. (IONIZED). AN APP. IS DESCRIBED AND SHOWN IN A DIAGRAM WHICH RECORDS THE VOLTAGE AT WHICH THE ELEC. FILM BREAKDOWN TAKES PLACE UNDER EACH OF THE ELECTRODES.

FACILITY: VLADIMIR. NAUCH.-ISSLED. INST. SIN. SMOL, VLADIMIR, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 032 UNCLASSIFIED

TITLE--THE PREPARATION OF PHANTOM MODELS FROM EPOXY RESIN -U- PROCESSING DATE--16OCT70

AUTHOR--VARES, E.YA.

COUNTRY OF INFO--USSR

SOURCE--STOMATOLOGIYA, 1970, VOL 49, NR 3, PP 67-68

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TOOTH, ANATOMIC MODEL, DENTAL MATERIAL, EPOXY RESIN, HARDNESS, DENTISTRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0075 STEP NO--UR/0511/70/049/003/0067/0068

CIRC ACCESSION NO--AP0120775

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 032 UNCLASSIFIED

CIRC ACCESSION NO--AP0120775 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SUMMARY. DURING THE ACQUISITION OF THE MANUAL SKILL FOR THE PREPARATION OF TEETH IT IS NECESSARY TO MAKE PHANTOM MODELS FOR STUDENTS. IT IS VERY DIFFICULT TO FIND THE REQUIRED NUMBER OF DIFFERENT TEETH; THE AUTHOR PROPOSES TO MAKE PHANTOM MODELS FROM EPOXY RESIN, WHICH BY ITS HARDNESS CORRESPONDS TO NATURAL TEETH. THE TECHNOLOGH OF MAKING SUCH MODELS IS DEPICTED. FACILITY: KAFEDRA ORTOPEDICHESKOY STOMATOLOGII DONETSKOGO MEDITSINSKOGO INSTITUTA IM. A. M. GOR'KOGO.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 029 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--STUDY OF SOME PROPERTIES OF HIGH MOLECULAR FIBRINOGEN TRYPTIC HYDROLYSIS PRODUCTS -U-

AUTHOR-(05)-BELITSER, V.O., VARETSKA, T.V., TSINKALOVSKA, S.M., POZDNYAKOVA, T.M., ORLOVSKA, N.M.

COUNTRY OF INFO--USSR

SOURCE--UKRAYNS'KIY BIOKHIMICHNIY ZHURNAL, 1970, VOL 42, NR 2, PP 165-174

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FIBRINOGEN, HYDROLYSIS, POLYMERIZATION, TRYPSIN, AMINO ACID, ELECTROPHORESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1677 STEP NO--UR/0300/70/042/002/0165/0174

CIRC ACCESSION NO--AP0106423

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

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UNCLASSIFIED

CIRC ACCESSION NO--AP0106423 PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS KNOWN THAT HIGH MOLECULAR WEIGHT PRODUCTS FORMED DURING PROTEOLYTIC DEGRADATION OF FIBRINOGEN, INHIBIT THE FIBRIN MONOMER POLYMERIZATION. THE EXISTENCE OF COMPLEMENTARY STRUCTURES CHARACTERISTIC FOR THE SPECIFIC POLYMERIZATION CENTERS IN THESE FRAGMENTS MAY BE POSTULATED. HIGH MOLECULAR WEIGHT PRODUCTS, APPEARING DURING DEGRADATION OF FIBRINOGEN MOLECULE BY LOW CONCENTRATIONS OF TRYPSIN (ENZYME SUBSTRATE RATIO 1:2500 BY WEIGHT) WERE STUDIED. THEY WERE SEPARATED FROM TRYPTIC HYDROLYZATE OF FIBRINOGEN BY GEL FILTRATION ON SEPHADEX G 150. IT WAS SHOWN THAT DURING HYDROLYSIS LASTING FOR 120 HOURS AND MORE THESE PRODUCTS WERE GREATLY CHANGED IN THEIR ANTIPOLYMERIZING ACTIVITY, BEHAVIOUR IN GEL FILTRATION AND POLYACRYLAMIDE GEL ELECTROPHORESIS AND N TERMINAL AMINO ACIDS AS WELL. THE MOST ACTIVE AND AT THE SAME TIME THE LEAST HETEROGENEOUS PRODUCTS WERE PRODUCED DURING THE PROLONG HYDROLYSIS OF FIBRINOGEN BY TRYPSIN.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

GOLIK, A. Z.; ADAMENKO, I. I.; VARETSKIY, V. V. (Kiev State University)

"Study of the Velocity of Ultrasonic Propagation at Frequencies of 0.62-10 Mc in n-Hexane, n-Heptane, n-Octane, and Cyclohexane at Pressures up to 2500 Atm. and Temperatures up to 120°C"

Kiev, Ukrainskiy Fizicheskiy Zhurnal; December, 1972; pp 2048-51

ABSTRACT: The paper describes the methods and results of studies on ultrasonic velocity propagation in n-hexane, n-heptane, n-octane, and cyclohexane within a frequency range of 0.62-10 Mc at pressures up to 2500 atm. and temperatures up to 120°C. It is shown that within the ranges of temperatures, pressures, and frequencies studied, sonic velocity dispersion is absent for all parafins under study. For liquids in which the P-V-T relation is described by the Tait equation the dependence of $\frac{c^2\rho^2}{\gamma}$ on the pressure is linear.

At pressures from 1 to 2000 atm. a regularity is observed in the disposition of the sonic velocity polytherms: the greater the energy of collective interaction, the greater the ultrasonic propagation velocity within the ranges of temperature and pressure studied. At pressures of 2000 atm. and higher the differences in ultrasonic velocities for all the liquids studied are within the limits of experimental error (less than 0.2%).

Using the Bridgman model on two mechanisms of the effect of pressure on the structure of the liquids, the authors came to the conclusion that with an increase in pressure the packing varies in a similar manner for n-hexane, n-heptane, and n-octane particles and at 2000-2500 atm. is similar to the packing of cyclohexane molecules.

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1/2 014

UNCLASSIFIED

TITLE--EXPERIMENTAL ADOPTION OF A HYDROGEN PRODUCTION PLANT -U-

PROCESSING DATE--04DEC70

AUTHOR-(03)-VARFOLOMEYEV, D.F., YEGOROV, YE.A., TYURIN, V.V.

COUNTRY OF INFO--USSR

SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (5), 28-30

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HYDROGEN PRODUCTION, CHEMICAL PLANT, CATALYST, CARBON MONOXIDE, CHEMICAL PURIFICATION, HYDROGEN SULFIDE, ORGANIC SULFUR COMPOUND, METHANE, ETHANE, PROPANE/(U)GIAP3 CATALYST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/809 STEP NO--UR/0318/70/000/005/0028/0030

CIRC ACCESSION NO--AP0140250

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 014

UNCLASSIFIED

CIRC ACCESSION NO--AP0140250 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DRY PLATFORMING GAS, CONTG. H 53.3 AND CH SUB4, C SUB2 H SUB6, AND C SUB3 H SUB8 46.7 VOL. PERCENT WAS HEATED TO 400DEGREES AND ITS S CONTENT (60 MG PER M PRIME3 AS H SUB2 S AND ORG. S) WAS REMOVED AT 5 ATM ON A CU-ZN CATALYST, THEN MIXED WITH 1:3.5 STEAM AT 400DEGREES, PASSED THROUGH A CONVERSION FURNACE AND THEN THROUGH TUBES CONTG. CATALYST GIAP-3. THE GAS CONVERTED AT 750DEGREES WAS COOLED TO 412DEGREES AND ENTERED THE CO CONVERTER, WHERE THE REACTION, CO PLUS H SUB2 O FORMS AND IS FORMED FROM CO SUB2 PLUS H SUB2, OCCURS IN 2 STAGES AT 430DEGREES. THE CONVERTER GAS WAS COOLED TO 210DEGREES BY MEANS OF A WASTE HEAT BOILER. CO SUB2 WAS REMOVED BY MONOETHANOLAMINE PURIFICATION. FACILITY: UFIM, NPZ, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 015 UNCLASSIFIED

TITLE--RECOVERY OF A TRAP PRODUCT ON THERMAL CRACKING APPARATUS -U- PROCESSING DATE--13NOV70

AUTHOR-(03)-VARFOLOMEYEV, D.F., URAZAYEV, F.KH., STEKOLSHCHIKOV, M.N.

COUNTRY OF INFO--USSR

SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (5), 7-8

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, PROPULSION AND FUELS

TOPIC TAGS--THERMAL-CRACKING, LIQUID FUEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1950 STEP NO--UR/0318/70/000/005/0007/0008

CIRC ACCESSION NO--AP0133794

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

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UNCLASSIFIED

CIRC ACCESSION NO--AP0133794 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A TRAP MATERIAL CONTG. GREATER THAN OR EQUAL TO 20PERCENT WATER WAS HEATED TO 140-50DEGREES AND MIXED WITH OVERFLOW FROM A HIGH PRESSURE EVAPG. COLUMN AND THEN WITH CRACKING RESIDUE IN THE LOW PRESSURE EVAPORATOR. THE THROUGHPUT OF THE PLANT REMAINED CONST., GIVING STD. FUEL FROM THE CRACKING RESIDUE.

FACILITY: UFIMSK. NPZ, USSR.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 621.382

VERGUNAS, F. I., Doctor of Physical and Mathematical Sciences, IVANOVA, G. A., ABDIYEV, S., REPIN, A. V., VARFOLOMEYEV, I. N., Engineers

"Some Possibilities of Using Optoelectronic Switches in Microelectronic Circuits"

Moscow, Pribory i Sistemy Upravleniya, No 2, 1972, pp 45-46

Abstract: The OEK-2 optoelectronic converters -- a film photoresistor and gallium phosphide light diode couple mounted in the TO-5 housing -- were described previously [F. I. Vergunas, et al., Pribory i sistemy upravleniya, No 1, 1972]. In the present article a study is made of the possibilities of using OEK-2 in phase automatic frequency control circuits, in automatic phase control systems and as a controllable divider. The operating characteristics of the OEK-2 in the various applications are described. Some advantages of the three mentioned circuits using the OEK-2 include the following, respectively: 1) the filter band width switching circuit using the OEK-2 is very simple, does not require regulation and has an intake of no more than 10-20 milliwatts; 2) absence of a galvanic coupling between the control voltage from the discriminator and the signal the phase of which must be reversed in the automatic phase control system; 3) application of a photoresistor as the controllable element permits a divider to be obtained which is linear in a broad range of operating voltages

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VERGUNAS, F. I., et al., Pribory i Sistemy Upravleniya, No 2, 1972, pp 45-46

-- from units of microvolts to several volts, the control signal is quite small, and electrical decoupling is insured between the controlling and controlled signals.

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USSR UDC: 621.372

VARFOLOMEYEV, I. N., YERMOLEYEV, A. A., ROZANOV, M. Ya., STRAUTMANIS, G. F.

"A Generalized Method of Analyzing Active Microelectronic RC Filters"

Teor. elektrotekhnika. Resp. mezhved. nauch.-tekhn. sb. (Theoretical Electrical Engineering. Republic Interdepartmental Scientific and Technical Collection), 1971, vyp. 11, pp 86-93 (from RZh-Radiotekhnika, No 3, Mar 72, Abstract No 3A128)

Translation: The paper shows the necessity of four basic steps in design of microelectronic active RC filters. Particular attention is given to the first stage of design -- analysis. A generalized method is proposed for analyzing microelectronic RC filters in the steady-state mode on the BESM-4 digital computer. Three illustrations, five tables, bibliography of five titles. Resumé.

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BIOLOGY

bionics

USSR

UDC 577.15+577.3.001.57+557.3:535.2/.3.04

BEREZIN, I. V., VARFOLOMEYEV, S. D., and MARTINEK, K. Moscow State University imeni M. V. Lomonosov

"Cis-Trans-Isomerization of Cinnamoyl-α-Chymotrypsin Under the Effect of Light, and Modeling of Molecular Mechanisms of Optical Reception"

Moscow, Doklady Akademii Nauk SSSR, Vol 193, No 4, Aug 70, pp 932-935

Abstract: Only recently has the experimental basis for representing the mechanism of the primary act of photoreception been established. Modeling of this process is of extreme importance, because it is easier to study and comprehend the overall physical and chemical aspects of the molecular mechanisms of light in biological systems. In addition modeling the photoreception mechanism, as an element of chemical bionics, may lead to the creation of artificial, light-sensitive systems operating according to the principle of the visual organs of animals. The absorption of light quanta in the photoreceptor cells of the retina affects many light-sensitive pigments. All the pigments contain as a chromophoric group an 11-cis-retinal group, bonded in the form of a Schiff's base to the NH_2-group of specific albumins. The first stage of the mechanism of vision includes the following processes: 1) trans-photostereoisomerization of the 11-cis-retinal

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

BEREZIN, I. V., et al, Doklady Akademii Nauk SSSR, Vol 193, No 4, Aug 70, pp 932-935

group, 2) the dark process, which is a chain of conformational changes of apoprotein, with the last reaction a hydrolysis step leading to the formation of free all-transretinal and opsin; 3) the further course of the transformation process of light consists of signal amplification, (which may be enzymatic). These processes were studied with certain chymotrypsin derivatives proposed as models. Deacylation of cis-cinnamoyl-α-chymotrypsin, synthesized by the authors, does not take place even at the optimum pH for the catalytic action of chymotrypsin. Rather, the compound has to be converted into the trans-isomer by irradiation with UV light, which is rapidly deacylated into trans-cinnamic acid and the free enzyme. The enzymatic photo-initiation process leads to an amplification of the primary light signal as a result of the accumulation of reaction products.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

SNETKOVA, Yu. I., and VARGA, I. I.

UDC 669.71'721.042.6

"Possible Evaluation of the Quality of AMg6 Alloy Ingots"

Tekhnol. legkikh splavov. Nauchno-tekhn. byul. VILSa (Technology of Light Alloys. Scientific and Technical Bulletin of All-Union Institute of Light Alloys), 1970, No 3, pp 46-49 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 G205 by G. SVODTSEVA)

Translation: Heating tests reveal additional possibilities for evaluating the quality of AMg6 alloy ingots. The rate of the thermal diffusion processes on which the evaluation is based is determined by the presence of both primary dendritic porosity, which forms during crystallization and secondary porosity, which develops during homogenization, as well as by ingot gas-content level. Three illustrations. Bibliography of four titles.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 015 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--SELECTIVITY OF STYRENE OXIDATION BY PALLADIUM CHLORIDE IN WATER -U-

AUTHOR-(04)-ZAKHAROVA, L.M., VARGAFTIK, M.N., MOISEYEV, I.I., KATSMAN, L.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 700-2

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--STYRENE, OXIDATION, PALLADIUM CHLORIDE, LITHIUM PERCHLORATE, CARBONYL COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1906

STEP NO--UR/0062/70/000/003/0700/0702

CIRC ACCESSION NO--AP0123690

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 015 UNCLASSIFIED

CIRC ACCESSION NO--AP0123690 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KINETIC DATA WERE REPORTED ALONG WITH PRODUCT DISTRIBUTION IN THE OXIDN. OF PHCH:CH SUB2 BY PDCL SUB2 IN H SUB2 O, RUN AT 25DEGREES WITH LICLO SUB4 TO MAINTAIN CONST. IONIC STRENGTH IN HCL OR HCLO SUB4 SOLN. THE REACTION GAVE PHCH SUB2 CHO, ACPH, UNREACTED PHCH:CH SUB2 AND SOME BZH. THE CARBONYL COMPDS. WERE FORMED IN SUMMARY 98PERCENT YIELD BASED ON CONVERTED HYDROCARBON.

FACILITY: INST. OBSHCH. NEORG. KHIM. IM. KURNAKOVA, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC: 536.23

VARGAFTIK, N. B., VOSHCHININ, A. A., BERZHENTSEV, V. V., STUDNIKOV, Ye. L.,
Moscow Aviation Institute imeni S. Ordzhonikidze

"Experimental Determination of the Thermal Conductivity of Sodium Vapor"

Moscow, Teplofizika Vysokikh Temperatur, Vol 11, No 2, Mar/Apr 73, pp 422-423

Abstract: A previous paper (Vargaftik, N. B., Voshchinin, A. A., Teplofizika Vysokikh Temperatur, Vol 5, No 5, 1967) gave the results of measurements of the thermal conductivity of sodium vapor by the method of coaxial cylinders. In these experiments, the fraction of radiant heat transfer was 20-40%. To reduce the percentage of radiation, the authors of this paper made a new installation with a working gap of 0.2 mm instead of the 0.6 mm used in the previous research. The measurements were made at 1095 K and 2000-50000 N/m^2. In spite of the relatively low pressures, the concentration of diatomic molecules varied considerably (from 1 to 10%). The thermal effects of the reaction were considerable, affecting both the thermal conductivity and the effective heat capacity. The results of the experiments are tabulated. The experimental error is about 6%. It is

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USSR

VARGAFTIK, N. B. et al., Teplofizika Vysokikh Temperatur, Vol 11, No 2, Mar/Apr 73, pp 422-423

found that at about 1100 K (the principal isotherm) the ratio of thermal conductivities of sodium vapor at 50000 and 10000 N/m^2 is about 1.30, which agrees well with data in the literature obtained by another method.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

VARGAFTIK, N. B. and KERZHENTSEV, V. V., Moscow Aviation Institute imeni S. Ordzhonikidze

UDC: 536.23

"Experimental Study of the Coefficient of the Thermal Conductivity of the Vapors of Cesium"

Moscow, Teplofizika Vysokikh Temperatur, Vol 10, No 1, Jan-Feb 1972, pp 57-65

Abstract: The authors present the results of measuring the coefficient of the thermal conductivity of cesium vapors using the method of coaxial cylinders in the 680-1080°K temperature interval and at pressures of 0.001-1.3 bar. Two series of experiments on the thermal conductivity of cesium vapors were performed. The results show that the values of the criteria Le=0.30 and Le=0.32 indicate the closeness of the results for both sets of experiments with respect to the effect of the dissociation reaction on thermal conductivity. The discreptancy in λ/λ_1 for the experimental points of both series at a given c_p/c_{p1} is 2 percent. The resulting experimental data are generalized on the basis of equations proposed for the thermal conductivity of dissociating gases. Original article: seven formulas, three tables, five figures, and 15 bibliographic entries.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC: 538.576.5:621.396.96

VARGANOV, M. Ye., KANAREYKIN, D. B., POMEKHIN, V. A.

"Transformations of the Polarized Basis in Statistical Modeling of the Dispersion Characteristics of Objects"

Moscow, Radiotekhnika i Elektronika, Vol 17, No 4, Apr 72, pp 730-736

Abstract: A statistical model of a radar target is defined as an adequate statistical description of the dispersion operator of the target defined in some polarization basis as a random function of coordinates and time. In the general case, the statistical model of an object is a multidimensional law of the probability distribution of its dispersion operator. One of the most widely used methods for synthesizing such a model iw statistical modeling of the dispersion characteristics of the object. In the general case, the polarization basis of the radar station may not coincide with that of the dispersion operator on the initial modeling stage. This paper examines a procedure for transformation of the polarization basis as part of a general algorithm for statistical modeling of dispersion characteristics. Principles are defined which govern the change in the dispersion operator of an object due to transformations of this type.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC: 621.396.677.85

VARGANOV, [illegible] Ye. and MOROZOV, V. N.

"Radar Reflector for Polarization Measurements"

Leningrad, Izvestiya VUZ -- Priborostroyeniye, No. 8, 1970, pp 10-14

Abstract: The authors describe experiments conducted on standard reflectors widely used for measuring the dispersion characteristics of radar targets and for tuning and calibrating radar equipment. Knowing the geometrical dimensions of these reflectors, the researcher can analytically determine their effective dispersion area. The reflector used in these experiments was of the Van Atta type, a grid of individual elements interconnected by pairs of equally long lines. The polarization characteristics of this reflector and the extent of their control -- in particular, verification of the possibility of imitating, through the use of the reflector, radar targets of various types -- were investigated. The experimental reflector consisted of 16 linearly polarized elements, and the antenna elements were optimal overlapping rectangular horns of 135 by 90 mm, arranged on a metallic panel covered on the horn side by radiation-absorbent material. A frequency of 9370 MHz was used, and the equipment was standard transceiver equipment used in polarization measurements.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 539.4:536.453

FRALKENZON, A. G., DIKUSAR, L. D., VARGASOVA, E. V., MOROZOV, V. G.

"Stand for Tensile Testing at Elevated Temperatures, Method of Plotting True Stress Diagrams"

Tr. sib. n.-i. in-t metrol. (Transactions of the Siberian Scientific Research Institute of Metrology), 1969, Vyp. 1, pp 99-105 (from RZh-Mekhanika, No 3, March 1970, Abstract No 3V1094)

Translation: A vacuum heat chamber is described that makes it possible, by using the UM-5 lever-pendulum machine, to test specimens for tensile strength at temperatures up to 1100° and vacuum levels up to $3 \cdot 10^{-5}$ mm Hg. The curve $S = S(\psi)$, where S = true stress and ψ = relative necking of the cross-sectional area of the specimen was plotted from results of the simultaneous photographing with the Start camera of the test specimen and the UM-5 power scale machine in the course of testing.

A. Ye. Kalinnikov

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

FRALKENZON, A. G., VARGASOVA, E. V., KISELEV, YU. A. UDC 539.4

"Uniform Elongation as a Limiting Characteristic of Metal Plasticity"

Tr. Sib. n.-i. in-t metrol. (Transactions of the Siberian Scientific Research Institute of Metrology), 1969, Vyp. 1, pp 38-46 (from RZh-Mekhanika, No 3, March 1970, Abstract No 3V1009)

Translation: A comparative analysis is presented of seven methods of determining the limiting uniform deformation δ_{uni}, for tension of specimens consisting of six grades of steel. It is shown that the method of determining δ_{uni} for two-section specimens (Monakhov, N. I., Tr. Mosk. in-ta inzh. zh.-d. transp. [Transactions of the Moscow Institute of Railway Transport Engineers], 1961, Vyp. 131, pp 218-229) is better than other methods in reflecting the values of δ_{uni} of the materials studied found according to GOST [State Standards] 11701-66. Bibliography: 5 entries.

A. Ye. Kalinnikov

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USSR

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UDC 539.4

FRALKENZON, A. G., VARGASOVA, E. V., KUGAYEVA, A. A.

"Relationship Between Elongation of Specimen and Construction of Its Cross-Sectional Area in Drawing"

Tr. Sib. n.-i. in-t metrol. (Transactions of the Siberian Scientific Research Institute of Metrology), 1969, Vyp. 4, pp 25-37 (from RZh-Mekhanika, No 3, March 1970, Abstract No 3V1008)

Translation: It has been experimentally shown that a curve $\varepsilon = \varepsilon(\psi)$, where ε and ψ are, respectively, axial deformation and relative constriction of the cross-sectional area of a specimen, consists of three sections, the first of which corresponds to uniform deforming of the specimen over its length, the second is characterized by weak localization of deformation and is restricted to the point $\psi = \varepsilon$, and the third is a straight line and exhibits the property $\varepsilon < \psi$. The effect of multiplicity of the specimen (ratio of length of working section of the specimen to its diameter) on the shape of the curves $\varepsilon = \varepsilon(\psi)$ and the limiting values of the components of total deformations are shown. Bibliography: 11 entries.

A. Ya. Kalinnikov

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 539.4

FRALKENZON, A. G., VARGASOVA, E. V.

"Working Formula for Determination of Limiting Uniform Elongation at Different Temperatures and Test Rates"

Tr. Sib. n.-i. in-t metrol. (Transactions of the Siberian Scientific Research Institute of Metrology), 1969, Vyp. 1, pp 47-68 (from RZh-Mekhanika, No 3, March 1970, Abstract No 3V1010)

Translation: From literature data it is shown that in a wide range of temperatures and deformation rates the limiting value of deformation of a specimen under tension, δ_{ten}, characterized by the absence of localization of deformation within the limits of its working length, is determined by the expression $\delta_p = (n\delta_{tot} - \psi_{neck})/(n-1+\psi_{neck})$ where n = multiplicity of the specimen, δ_{tot} and ψ_{neck} = respectively, limiting values of the total deformation and the relative necking of the cross-sectional area of the specimen upon rupture. Bibliography: 12 entries.

A. Ye. Kalinnikov

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

VARGIN, A. N. et al., Teplofizika Vysokikh Temperatur, Vol 10, No 4, Jul/Aug 72, pp 732-737

and ultraviolet regions of the spectrum. The experimental results are compared with calculations for pure carbon dioxide. Satisfactory agreement is observed in the region below 3500 A (i. e., at this wavelength and shorter). In the long-wave region where the Swan C_2 molecular system begins to make itself felt, the theoretical curve lies much lower than the experimental data, which fact is attributed to the composition of the gas assumed for the initial data of the calculations.

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UDC: 551.55

USSR

VARGIN, A. N., PASYNKOVA, L. M., TREKHOV, Ye. S., Moscow Engineering Physics Institute

"Emittance of Carbon Dioxide Plasma at Temperatures of 7000-9000°K in the Spectral Interval of 2100-10,000 Å"

Moscow, Teplofizika Vysokikh Temperatur, Vol 10, No 4, Jul/Aug 72, pp 732-737

Abstract: The emittance distribution of a carbon dioxide plasma is determined at atmospheric pressure over a broad spectral interval of 2100-10,000 Å at temperatures of 7000, 8000, and 9000°K. The results are given in the form of graphs. The distributions found for intensities at wavelengths longer than 6000 Å show characteristic differences from the distributions at shorter wavelengths -- at 7000°K the line emission is very weak and the principal contribution is from molecular systems, one of the strongest being the Swan C_2 system. At 9000°K there is a sharp increase in the emission contribution from the line spectrum. At wavelengths shorter than 5650 Å there are breaks in the curve for intensity as a function of wavelength on the strongest lines in the visible

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 616.988.25-036.21(474.5)

ChUMAKOV, M. P., MOTEYUNAS, L. I., BYChKOVA, M. V. and VARGIN, V. V., Institute of Polyomyelitis and Viral Encephalitides, Academy of Medical Sciences USSR, Moscow, and Lithuanian Republic Sanitary-Epidemiological Station, Vilnyus

"Study of Natural-Focus Infections in the Lithuanian SSR. I. Rate of Infection of Ixodid Ticks with Uukuniemi and Tickborne Encephalitis Viruses in Different Ecological and Faunal Regions"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 5, 1973, pp 83-87

Abstract: A total of 29 virus strains - 12 tickborne encephalitis and 17 Uukuniemi -- were isolated from about 14,000 adult ticks collected from 1969 to 1971 in 4 of the 5 ecological and faunal regions of Lithuania. (Two Uukuniemi virus strains isolated in 1970 from Ixodes ricinus ticks were the first strains of this virus to be found in the USSR). Tickborne encephalitis virus strains were isolated both from Ix. ricinus (11) and from Ix. persulcatus (1), while Uukuniemi virus strains were isolated only from Ix. ricinus. These arboviruses were isolated almost 3 times as often from ticks collected in June as from those collected in August. The number of individuals immune to Uukuniemi virus in the regions where it was isolated was 4.8 times greater

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

ChUMAKOV, M. P., et al., Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 5, 1973, pp 83-87

than in other regions (17.3 and 3.6%, respectively). Thus, the level of immunity to this virus is directly correlated with the infection rate of the ticks.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 576.858.25.097.5

SEMENOV, B. F., and VARGIN, V. V., Institute of Poliomyelitis and Virus Encephalitides, Academy of Medical Sciences USSR, Moscow

"Changes in the Properties of Antibodies During Immune Response of Rabbits to Inoculation With West Nile Virus. The Characteristics of Homologous and Heterologous Activity of Immunoglobulins in Hemagglutination-Inhibition Tests"

Moscow, Voprosy Virusologii, No 5, Sep/Oct 72, pp 540-544

Abstract: Rabbits were immunized with various doses of live virus and virus inactivated with formaline and absorbed on aluminum hydroxide, and blood samples were collected at 2-5 day intervals for 7 weeks. The physical and chemical properties of the antibodies were determined by the 2-mercaptoethanol test and by gel-filtration through Sephadex G-200. It was established that changes observed in antibody specificity were not due to a substitution of IgM antibodies with the IgG type, but that they were conditioned by the dose of the virus, its physical condition (live or inactivated and absorbed), and by the time factor. IgM and IgG antihemagglutinins reacting only with homologous virus were identified. Type 19S antibodies interacting with West Nile, Ntaya, St. Louis, and Japanese excephalitis viruses and those interacting with West Nile, Ntaya, St. Louis, Japanese encephalitis, and Ilheus viruses were described. A functional heterogenicity of the antihemagglutinins in IgM and IgG immunoglobulins is postulated.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR UDC: 621.373:530.145.6

VARGIN, V. V., KUZNETSOV, A. Ya., VEYNBERG, T. I., STEPANOV, S. A., TSEKHOMSKIY, V. A.

"Ferromagnetic Glass"

USSR Author's Certificate No 267032, filed 17 Jan 64, published 16 Jul 70, (from RZh-Radiotekhnika, No 2, Feb 71, Abstract No 2D274 P)

Translation: This Author's Certificate introduces a ferromagnetic glass which includes SiO_2, Fe_2O_3, Al_2O_3, CaO, BaO, CdO, ZnO, PbO, TiO_2 and Na_2O. To increase the electrical resistance and softening temperature, the glass contains these components in the following amounts (mol.%): SiO_2 40-60; Fe_2O_3 7-20; Al_2O_3 10-20; CaO up to 20; BaO up to 20; CdO up to 10; ZnO up to 10; PbO up to 10; TiO_2 up to 10; Na_2O up to 20.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 576.858.097.5.077

VARGIN, V. V., and SEMENOV, B. F., Institute of Poliomyelitis and Virus Encephalitides, Academy of Medical Sciences USSR, Moscow

"Use of the Color Test for Titration of Antibodies to West Nile Fever Virus in Microvolumes of Serum"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 70, pp 500-502

Abstract: A modification of the Huang color test was used to determine antibodies to West Nile fever virus (strain B-956) in sera (volumes of 0.6 ml and 0.075 ml) from immunized rabbits. Neutralization of cytopathic activity was studied simultaneously. The results of titrating the antibodies were very close in all cases, indicating that the color test is as sensitive as other available methods. It is suggested that the color test be used for research on other arboviruses, in view of the good results obtained in experiments with St. Louis encephalitis virus and the cytopathic variant of Tahyna virus.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 576.858.73.098.396.332

KAVERIN, N. V., and VARICH, H. L., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Synthesis of Complementary Virus-Induced RNA in Two Strains of Newcastle Disease Virus"

Moscow, Voprosy Virusologii, No 6, Nov/Dec 71, pp 693-697

Abstract: In chick embryo cell cultures inoculated with the Beaudette strain of Newcastle disease virus, virus-induced RNA accumulates about twice as fast as in cells infected with the Tomilinskiy strain. The distribution of RNA into sedimentation strata and the ratio of "plus" to "minus" chains are similar in both strains. Upon fractionation of the cell extract, the virus-induced RNA is distributed between the polyribosome and the postribosome zones of the sucrose density gradient in an almost identical manner for both strains. After simultaneous inoculation of one culture with both strains, the rate of RNA synthesis is close to that observed in infection with the Tomilinskiy strain. The results indicate that a regulatory mechanism exists at the level of RNA transcription. Possibly, a regulating factor is present in cells infected with the Tomilinskiy strain. In double infection, this factor inhibits RNA synthesis induced by the Beaudette strain.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR UDC 669.24'28'293'294',295'296.017.3

VARICH, N. I., and PETRUNINA, A. N., Dnepropetrovsk State University

"Metastable Phases in Binary Nickel Alloys Crystallized at Rapid Cooling Rates"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 33, No 2, Feb 72, pp 335-338

Abstract: The phase composition of Ni-Mo, Ni-Ta, Ni-Nb, Ni-Ti, and Ni-Zr alloys was investigated at an alloy cooling rate of 10^7-10^6 deg/sec. These cooling rates were achieved by blowing the cupel of the melt (2000°C) with a jet of compressed helium onto the surface of the copper cylinder which rotated at the rate of 8000 rpm. This cooling method produced films 0.01-0.02 mm thick. For each of the alloys the authors determined the equilibrium solubility at the eutectic temperature, eutectic point and region of homogeneity for the high-temperature phase, the maximum solubility, and the maximum supersaturation of the solid solution. It was determined that the rapid cooling rates produce a metastable phase with the simplest grain structure which is formed as the result of the increased rate of nucleation and subsequent growth. Two figures, 3 tables, 8 bibliographic references.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

UDC 669.24'26'292:548.5

USSR

VARICH, N. I., and PETRUNINA, A. N., Dnepropetrovsk State University, Department of Physics of Metals

"Crystallization of Ni-Cr and Ni-V Alloys at Superhigh Cooling Rates"

Ordzhonikidze, Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, No 2, 1972, pp 92-95

Abstract: This study concerns certain crystallization characteristics of Ni-Cr and Ni-V alloys at cooling rates of 10^7 to 10^8 deg/sec effected by blowing out droplets of the melt (with compressed helium) onto the surface of a copper cylinder rotating at 8000 rpm. This method of cooling produces 0.01-0.03-mm films for x-ray diffraction and metallographic analyses to determine their phase compositions and crystal lattice periods. The data on variations of the crystal lattice periods, microhardness, and microstructure values of both alloys are reflected in curves showing them as a function of composition. (2 illustrations, 1 table, 6 biblio. references)

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 536.4:669.715:669.018

VARICH, N. I., and SHEYKO, T. I.

"Thermal Expansion of Al-Mo and Al-Zr Alloys, Produced With High Cooling Rates"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 30, No 2, Aug 70, pp 443-445

Abstract: With cooling rates on the order of 10^4-$10^{6°}$/sec from the liquid state, a significant expansion of the area of the solid solution is noted in alloys of aluminum with transition metals. This process is accompanied by the appearance of metastable phases and changes in a number of physical properties of the solid solution. One of the most important peculiarities of the metastable solid solutions is their high temperature stability. This work presents a study of the changes in the coefficient of linear expansion of Al-Mo and Al-Zr alloys in the 23-450° interval. Foil specimens 0.09-0.1 mm thick were produced by cooling a drop of the melt on a rotating copper drum.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 023 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--EFFECT OF SUPERHEATING ON THE STRUCTURE AND PHASE COMPOSITION OF ALUMINIUM-TUNGSTEN ALLOYS -U-

AUTHOR-(02)-VARICH, N.I., LYUKEVICH, R.B.

COUNTRY OF INFO--USSR

SOURCE--IZVEST. AKAD. NAUK SSSR, METALLY, MAR.-APR. 1970, (2), 216-219

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ALLOY PHASE COMPOSITION, ALUMINUM ALLOY, TUNGSTEN ALLOY, METAL QUENCHING, SOLID SOLUTION, INTERMETALLIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1247 STEP NO--UR/0370/70/000/002/0216/0219

CIRC ACCESSION NO--AP0136658

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 023 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136658

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF SUPERHEATING AND QUENCHING FROM THE MOLTEN STATE ON THE STRUCTURE AND PHASE COMPOSITION OF AL-W ALLOYS WAS STUDIED. ON QUENCHING FROM THE MELT THERE WAS A CONSIDERABLE INCREASE IN THE SUPERSATURATION OF THE SOLID SOLUTION, DEPENDING ON THE DEGREE OF SUPERHEATING. ON QUENCHING ALLOYS CONTG. W 3-5 WT. PERCENT FROM TEMP. CLOSE TO THE LIQUIDUS, A LARGE NUMBER OF WELL DISPERSED AL SUB4 W PARTICLES WERE OBSERVED; IN ORDINARY SOLIDIFICATION THESE NEVER OCCURRED. UNDER SLIGHTLY DIFFERENT CIRCUMSTANCES AN AL SUB5 W PHASE WAS FORMED.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 014 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--COMPARATIVE STUDY OF THE EFFECTIVENESS OF PURIFICATION OF NEWCASTLE DISEASE VIRUS BY CHROMATOGRAPHY ON DEAE CELLULOSE AND

AUTHOR-(03)-VARICH, N.L., LIPKIND, M.A., KAVERIN, N.V.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 1, PP 27-31

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--NEWCASTLE DISEASE VIRUS, CHROMATOGRAPHY, CELLULOSE, HEMAGGLUNINATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/0070 STEP NO--UR/0402/70/000/001/0027/0031

CIRC ACCESSION NO--AP0103750

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

UNCLASSIFIED PROCESSING DATE--18SEP70

2/2 014

CIRC ACCESSION NO--AP0103750

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TWO METHODS OF PURIFICATION OF NEWCASTLE DISEASE VIRUS: CHROMATOGRAPHY ON DEAE CELLULOSE AND ULTRACENTRIFUGATION IN POTASSIUM TARTRATE SOLUTIONS WERE COMPARED. BOTH METHODS PRODUCE A HIGHLY PURIFIED PREPARATION, WHICH IS INDICATED BOTH BY CLOSE CORRELATION OF A NUMBER OF PARAMETERS IN PREPARATIONS PURIFIED BY BOTH METHODS AND BY RESULTS OF CENTRIFUGATION OF CHROMATOGRAPHICALLY PURIFIED VIRUS IN SUCROSE DENSITY GRADIENT. TOTAL LOSSES OF THE VIRUS IN PURIFICATION CONSTITUTE 61-65PERCENT USING POTASSIUM TARTRATE SOLUTIONS AND 80PERCENT IN CHROMATOGRAPHIC PURIFICATION. INACTIVATION OF THE VIRUS DETERMINED BY RATIO OF INFECTIOUS AND HEMAGGLUTINATING PROPERTIES IS INSIGNIFICANT IN BOTH METHODS OF PURIFICATION.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--NONLINEAR PROPERTIES OF TRIGLYCINE SELENATE -U-

AUTHOR-(02)-VARIKASH, V.M., PUPKEVICH, P.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., FIZ. 1970, 13(2), 151-2

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--DIELECTRIC CONSTANT, ALTERNATING VOLTAGE, ORGANOSELENIUM COMPOUND, GLYCINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1023 STEP NO--UR/0139/70/013/002/0151/0152

CIRC ACCESSION NO--AT0119890

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0119890

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF ALTERNATING FIELD VOLGAGE, TEMP., AND POLARIZATION (P) ON THE DIELEC. CONST. (EPSILON) WERE STUDIED AROUND THE PHASE TRANSITION TEMP. THE RELATION WPI(1-EPSILON MINUS 1-EPSILON SUB0) EQUALS 3BETARHO PRIME2 WAS OBEYED WITH BETA EQUALS 3.9 TIMES 10 PRIME NEGATIVE10 C.G.S. UNITS.

FACILITY: MINSK. RADIOTEKH. INST., MINSK, USSR.

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Free Radicals

4

UDC 541.13+541.515+542.941+661.718.1

USSR

IL'YASOV, A. V., KARGIN, Yu. M., LEVIN, Ya. A., MOROZOVA, I. D., MEL'NIKOV, B. V., VARINA, A. A., SOTNIKOVA, N. N., and GALEYEV, V. S., Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, USSR Acad. of Sciences

"Electrochemically Generated Free Radicals. 6. The Reduction Mechanism of Certain Organophosphorus Compounds, and the Electron Paramagnetic Resonance Spectra of the Anion Radicals Formed"

Moscow, Izvestiya Akademii Nauk SSR, Seriya Khimicheskaya, No 4, 71, pp 770-776

Abstract: A series of organophosphorus compounds was studied in connection with their electrochemical reduction, using several methods. The electron paramagnetic method was applied in the case of electrochemically generated anion radicals of triphenylphosphine, its oxides, and the diethyl ester of β-styrylphosphosphonic acid.

Graphical data accompanying the paper include classical and commutated polarograms for the various compounds, and electron paramagnetic spectra for free radicals; numerical electrochemical data are given for nine organophosphorus compounds tested.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--POSITRON ANNIHILATION IN QUARTZ IRRADIATED BY FAST NEUTRONS -U-

AUTHOR-(04)-BARTENEV, G.M., TSYGANOV, A.D., VARISOV, A.Z., PROKOPYEV, YE.P.

COUNTRY OF INFO--USSR

SOURCE--FIZIKI, 1970, VOL 58, NR 6, PP 1904-1910

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--POSITRON, PARTICLE ANNIHILATION, QUARTZ, NEUTRON IRRADIATION, PHOTON EMISSION, ANGULAR DISTRIBUTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0029 STEP NO--UR/0056/70/058/006/1904/1910

CIRC ACCESSION NO--AP0120729

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120729

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF FAST NEUTRON IRRADIATION ON THE ANGULAR DISTRIBUTION OF ANNIHILATION V QUANTUM PAIRS IN CRYSTAL AND FUSED QUARTZ IS INVESTIGATED. IT IS FOUND THAT THE HALFWIDTH OF THE CORRELATION CURVES CORRESPONDS TO THE VARIATION OF THE QUARTZ DENSITY. FROM AN ANALYSIS OF VARIOUS POSITRON STATES IN QUARTZ PRECEDING ANNIHILATION AND ON BASIS OF THE EXPERIMENTAL DATA IT IS CONCLUDED THAT VARIATION OF THE HALF WIDTH IS DUE TO THE APPEARANCE IN THE CORRELATION CURVES OF A NARROW COMPONENT WHOSE INTENSITY DEPENDS ON THE RADIATION DOSE. THE NARROW COMPONENT IS DUE TO ANNIHILATION DECAY OF PARA POSITRONIUM ATOMS PRODUCED IN IRRADIATED QUARTZ.

FACILITY: GOSUDARSTVENNYY PEDAGOGICHESKIY INSTITUT IM. V.I. LENINA.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 020 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--EFFECT OF IRON VALENCE STATE ON THE ANGULAR DISTRIBUTION OF ANNIHILATION GAMMA QUANTA IN IRON OXIDES -U-

AUTHOR-(03)-BARTENEV, G.M., TSYGANOV, A.D., VARISOV, A.Z.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(2), 669-70

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--CHEMICAL BONDING, IRON, IRON OXIDE, X RAY ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0124 STEP NO--UR/0181/70/012/002/0669/0670

CIRC ACCESSION NO--AP0054920

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 020 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054920

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF THE METAL CATION VALANCE STATE IN OXIDES WAS STUDIED ON THE ANGULAR CORRELATION OF THE ANNIHILATION PAIRS OF GAMMA QUANTA. THE ANGULAR DISTRIBUTION OF THE ANNIHILATION RADIATION WAS DETD. IN THE FE OXIDES: FEO, FE SUB2 O SUB3, AND FE SUB3 O SUB4. HALFWIDTHS OF THE CURVES AND THE EFFECTIVE CHARGES OF THE O ION AS DETD. FROM THE HALFWIDTH, ARE TABULATED. AS THE OXION. STATE OF FE INCREASES, THE SHIFT OF THE K EDGE INCREASES AND BROADENING OF THE ANGULAR CORRELATION CURVE TAKES PLACE. THE EFFECTIVE CHARGE OF THE O ION INCREASES IN THE SERIES FEO, FE SUB3 O SUB4, AND FE SUB2 O SUB3. THE EFFECTIVE CHARGE OF THE FE ION IN THE ABOVE SERIES IS, RESP., 1.0, 1.6, AND 1.95. THUS, VARIATION OF THE VALANCE STATE OF FE CAUSES A SHIFT OF THE K EDGE OF THE X RAY ABSORPTION SPECTRUM AND BROADENING OF THE ANGULAR DISTRIBUTION OF ANNIHILATION PAIRS OF GAMMA QUANTA INDICATING A VARIATION OF THE DEGREE OF IONIC CHARACTER OF CHEM. BONDING.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--EFFECT OF ADDITIVES OF TRACE FERTILIZERS ON THE TEMPERATURE OF MODIFICATION TRANSITIONS AND ON THE CRYSTAL LATTICE PARAMETERS OF

AUTHOR-(05)-GANZ, S.N., VARIVODA, I.KH., KUZNETSOV, I.YE., DINKEVICH, I.D., LARINA, L.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(4), 732-5

DATE PUBLISHED--------70

SUBJECT AREAS--AGRICULTURE, CHEMISTRY

TOPIC TAGS--AMMONIUM NITRATE, CRYSTAL LATTICE, TRACE ELEMENT, NITROGEN FERTILIZER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1627 STEP NO--UR/0080/70/043/004/0732/0735

CIRC ACCESSION NO--AP0127118

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0127118

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF CU(NO SUB3)SUB2, MG(NO SUB3)SUB2, ZN(NO SUB3)SUB2, MNSO SUB4, AND NA SUB2 B SUB4 O SUB7 ADMIXTS. (0.3-2PERCENT) ON THE MONOCLINIC ROTHORHOMBIC TRANSITION TEMP. OF NH SUB4 NO SUB3 WAS INVESTIGATED. THE GREATEST EFFECT WAS OBSD. FOR 0.5PERCENT ZN(NO SUB3)SUB2, STABILIZING THE ORTHORHOMBIC MODIFICATION AT A TEMP. HIGHER BY SIMILAR TO 5.1DEGREES. THE CRYSTAL LATTICE PARAMETERS WERE DETD. FOR 15 MIXTS. AND FOR PURE NH SUB4 NO SUB3. FACILITY: DNEPROPETROVSK. KHIM. TEKHNOL. INST., DNEPROPETROVSK, USSR.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--PRODUCTION OF CONSIDERABLE AMOUNT OF RIBOFLAVIN BY SOME YEAST STRAINS OF THE DEBARYOMYCES GENUS -U-

AUTHOR-(03)-SHAVLOVSKIY, G.M., KSHEMINSKAYA, G.P., VARIVODA, M.I.

COUNTRY OF INFO--USSR

SOURCE--MIKROBIOLOGIYA, 1970, VOL 39, NR 2, PP 327-330

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RIBOFLAVIN, YEAST, ASPARAGINE, IRON, CULTURE MEDIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/1407 STEP NO--UR/0220/70/039/002/0327/0330

CIRC ACCESSION NO--AP0054270

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054270

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ALL 5 STUDIED STRAINS OF DEBARYOMYCES KLOCKERI AND ONE STRAIN OF D. GUILLIERMONDI REQUIRED BIOTIN. YEAST AUTOLYSATE AND ASPARAGINE STIMULATED GROWTH OF THESE STRAINS. THREE STRAINS OF D. KLOCKERI (U-102, U-104, AND U-105) AND ONE STRAIN OF D. GUILLIERMONDII (U-106), WHEN GROWN ON IRON DEFICIENT MEDIA, ACCUMULATED CONSIDERABLE AMOUNT OF RIBOFLAVIN (20 TO 60 MUG-ML) IN THE CULTURAL BROTH. THE PRESENCE OF IRON IN THE MEDIUM AT A CONCENTRATION OF 0.1 TO 0.2 MUG-ML INHIBITED RIBOFLAVIN SYNTHESIS BY THE CULTURES. FREE RIBOFLAVIN AND FMN WERE FOUND IN THE CULTURAL BROTH OF D. KLOCKERI U-102 AND D. GUILLIERMONDII U-106. THE CONCENTRATION OF FMN WAS 3.5 TO 3.6PERCENT OF THE TOTAL CONTENT OF FLAVINES ACCUMULATED BY THE CELLS IN THE MEDIUM.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--PRODUCTION OF CONSIDERABLE AMOUNT OF RIBOFLAVIN BY SOME YEAST STRAINS OF THE DEBARYOMYCES GENUS -U-

AUTHOR-(03)-SHAVLOVSKIY, G.M., KSHEMINSKAYA, G.P., VARIVODA, M.I.

COUNTRY OF INFO--USSR

SOURCE--MIKROBIOLOGIYA, 1970, VOL 39, NR 2, PP 327-330

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RIBOFLAVIN, YEAST, ASPARAGINE, IRON, CULTURE MEDIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/1407 STEP NO--UR/0220/70/039/002/0327/0330

CIRC ACCESSION NO--AP0054270

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054270

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ALL 5 STUDIED STRAINS OF DEBARYOMYCES KLOCKERI AND ONE STRAIN OF D. GUILLIERMONDI REQUIRED BIOTIN. YEAST AUTOLYSATE AND ASPARAGINE STIMULATED GROWTH OF THESE STRAINS. THREE STRAINS OF D. KLOCKERI (U-102, U-104, AND U-105) AND ONE STRAIN OF D. GUILLIERMONDII (U-106), WHEN GROWN ON IRON DEFICIENT MEDIA, ACCUMULATED CONSIDERABLE AMOUNT OF RIBOFLAVIN (20 TO 60 MUG-ML) IN THE CULTURAL BROTH. THE PRESENCE OF IRON IN THE MEDIUM AT A CONCENTRATION OF 0.1 TO 0.2 MUG-ML INHIBITED RIBOFLAVIN SYNTHESIS BY THE CULTURES. FREE RIBOFLAVIN AND FMN WERE FOUND IN THE CULTURAL BROTH OF D. KLOCKERI U-102 AND D. GUILLIERMONDII U-106. THE CONCENTRATION OF FMN WAS 3.5 TO 3.6PERCENT OF THE TOTAL CONTENT OF FLAVINES ACCUMULATED BY THE CELLS IN THE MEDIUM.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--REACTION OF DIMETHYLDICHLOROSILANE WITH HYDROQUINONE -U-

AUTHOR-(04)-ANDRIANOV, K.A., VARLAMOV, A.V., KHANANASHVILI, L.M., RUBINA, N.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(3), 611-13

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYNUCLEAR HYDROCARBON, BENZENE DERIVATIVE, ORGANIC SILANE, CHLORINATED ORGANIC COMPOUND, HYDROQUINONE, HETEROCYCLIC BASE COMPOUND, OLIGOMER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0899 STEP NO--UR/0079/70/040/003/0611/0613

CIRC ACCESSION NO--AP0124560

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 010 UNCLASSIFIED

CIRC ACCESSION NO--AP0124560 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING 44 G HYDROQUINONE WITH 80.96 G ET SUB3 N AND 52.2 G ME SUB2 SICL SUB2 IN CH SUB6 H SUB6 UNDER INERT ATM. GAVE IN 2.5 HR 68.4PERCENT PRODUCT, B. 220-86DEGREES, AFTER FINAL HEATING WITH 0.6 G ZNO IN VACUO AT 350-450DEGREES TO DEPOLYMERIZE THE INITIAL OLIGOMER. THE DISTD. MATERIAL YIELDED, ON CRYSTN. FROM C SUB6 H SUB6, 49.7PERCENT I, M. 108-11DEGREES, AND 12.7PERCENT II, M. 180-2DEGREES. THE ORIGINAL OLIGOMER IS A MIXT. OF HIOC SUB6 H SUB4 OSIME SUB2-P) SUBX CL UNITS. FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

Communications

USSR

UDC: 621.396.2:621.371.1

VARLAMOV, G. I., DUBKOV, E. A., KOLOTYGIN, Yu. V., SPIVAK, V. B.

"Call Signal Automation for a Personal Radio Call System"

Tr. nauch.-tekhn. konferentsiy Kaluzh. obl. sovet nauch.-tekhn. o-v (Works of Scientific and Technical Conferences. Kaluga Regional Council of Scientific and Technical Societies), Kaluga, 1970, pp 73-77 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6A196)

Translation: The paper describes the structure of a module in an automatic system for calling a certain subscriber by a combination of two frequencies out of eight, assuming a certain sequential order of frequencies. Call reliability is improved by multiple repetition of the signal. The principal component of the module is the subscriber identifier which is used for setting up different combinations of controlling signals corresponding to subscriber numbers. According to the signal given by the subscriber identifier, a call signal oscillator unit generates the call signal. The figures of merit are given for the circuits of various elements in the module. Three illustrations. N. S.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC: 621.315.592

CHIGOGIDZE, Z. N., KHUCHUA, N. P., GUTNIK, L. M., KHARATI, R. G., VARLAMOV, I. V., BEKIREV, U. A., TYUTYUN, A. A.

"Concerning the Mechanism of Failure of Gunn Diodes"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 6, No 9, Sep 72, pp 1670--1676

Abstract: Devices based on the Gunn effect operate most effectively at high bias voltages; however, increasing the voltage causes breakdown of the device. At present there is no unanimous opinion on the mechanism of failure and degradation of Gunn diodes. In this paper the authors investigate coplanar Gunn diodes with plane-parallel and annular electrode configurations both with and without a silicon dioxide passivating coating. The diodes were tested in the pulse mode. It is shown that in accordance with previously available experimental data the failure of Gunn diodes takes place as a result of formation of a shorting channel between the contacts of the device. Information is obtained on the dynamics of the visible portion of the breakdown by means of motion picture photography of this process through an optical microscope. It is shown that silicon dioxide passivation of the

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

CHIGOGIDZE, Z. N. et al., Fizika i Tekhnika Poluprovodnikov, Vol 6, No 9, Sep 72, pp 1670-1676

active region has an appreciable effect on the nature of the visible portion of the breakdown and on the ratio of the breakdown voltage to the threshold voltage. A microscopic x-ray analysis is made of the composition of the contact regions and the channel on various stages of thermal breakdown. It is found that a transverse magnetic field affects the position of the shorting channels and the ratio of the breakdown voltage to the shorting voltage. A study is made of Gunn diode emission in the infrared region of the spectrum at voltages close to the breakdown voltage. It is concluded that the cause of failure of Gunn oscillators at high bias voltages is the formation of current strings caused by the development of an S-shaped current-voltage curve due to impact ionization when a strong field domain passes over the specimen. The authors thank M. S. Shur for discussing the results of the paper, and N. N. Mamatsashvili for taking part in the measurements.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

8

UDC 621.391.63

AVTONOMOV, V. A., BORISOV, B. S., GRUDININ, A. S., VARLAMOV, I. V., KANDYBA, Pe, Ye., KOLYASNIKOV, V. A., KRASYUK, B. A., MESKIN, S. S., PETRUSEVICH, V. A., POLTORATSKIY, E. A., RAVICH, V. N., and CHICHERIN, L. A.

"High-Spped Optical-Electronic Switch"

Elektron. tekhnika. Nauch.-tekhn. sb. Mikroelektronika (Electronics Technology. Scientific-Technical Collection. Microelectronics), 1971, Issue 2(28), pp 3-8 (from RZh-Elektronika i yeye primeneniye, No 8, August 1971, Abstract No 8B321)

Translation: An optical-electronic pair is developed, on the basis of which a hybrid microcircuit is produced which assures a high galvanic decoupling and is compatable with respect to the input and output parameters with integrated logic circuits manufactured by domestic industry. 4 ill. 4 ref.
Summary.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 681.325.65

POLTORATSKIY, E. A., VARLAMOV, I. V., AVTONOMOV, V. A., and OVCHINNIKOV, V. V.

"A Logic Threshold Device"

USSR Author's Certificate No 278751, Filed 5 Jun 69, Published 3 Dec 70 (from Referativnyy Zhurnal -- Avtomatika, Telemekhanika, i Vychislitel'naya Tekhnika, No 8, 1971, Abstract No 8B134 P)

Translation: A logic threshold device is proposed which contains a diode-resistor adder and a discriminator made from a tunnel diode and a transistor. Their purpose is to increase the operational reliability of the device and to expand its logic capabilities. The discriminator contains supplementary photodiodes, and the adder contains electroluminescent diodes and a tunnel diode. The anode and cathode of the tunnel diode are joined to the anodes of the electroluminescent diodes and optically connected with the photodiodes of the discriminator, whose anodes, in turn, are connected via tunnel diodes to the bases of the transistors.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 621.396.6-181.48

BORISOV, B. S., VARLAMOV, I. V., and LAVRISHCHEV, V. P.

"Optoelectronic Microcircuits for Galvanic Uncoupling"

Elektron. prom-st'. Nauch.-tekhn. sb. (Electronics Industry. Collected Scientific-Technical Works), 1972, No 2, pp 70-73 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 V213)

Translation: An example is given for the classification of optoelectronic uncoupling microcircuits. Data is given on the use of light diodes and photoreceptors in these circuits. Four new microcircuits are described: hybrid switching device (optoelectronic pair of plus amplifiers), commutators of high voltage circuits, direct current commutator up to 50v based on semiconductor triodes, and an analog signal commutator. Original article: six illustrations and ten bibliographic entries. N.S.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

Microelectronics

USSR

UDC 621.383.52.072.1

VARLAMOV, I.V., KALADZE, M.K., PETRUSEVICH, V.A., RZHANOV, A.YE.

"Spectral Characteristics Of Silicon Photoresistors And The Parameters Of An Optoelectronic Switch"

Sb. nauch.tr. po probl. mikroelektron. Mosk. in-t elektron.tekhn.(fiz.-mat seriya) [Collection Of Scientific Works On Problems Of Microelectronics.Moscow Institute Of Electronics Technology. (Physico-Mathematical Series)],1972,Issue 9,pp 109-114 (from RZh:Elektronika i yeye primeneniye, No 10, Oct 1972,Abstract No 10B243)

Translation: The dependence was studied of the photo emf of a photoresistor operating in an optoelectron switch paired with a GaAs light-emitting diode. The photoresistor was produced by building up of an epitaxial layer of n-Si with a resistivity of 1 ohm.cm and a thickness of 13 micron on a p-Si wafer with a resistivity of 10 ohm.cm and a thickness of 200 micron. The upper emitter and the collector of the junction were fulfilled by planar technology with the method of diffusion of P and B. The depth of occurrence of the junctions amounted to 1.5 and 3 microns,respectively. The spectral characteristics of each p-n junction were measured at light intensities corresponding to the linear section of the lux-voltage characteristics of each junction. During illumination of the

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USSR

VARLAMOV, I.V., et al. Sb.nauch.tr. po probl.mikroelektron. Mosk.in-t elektron tekhn. (fiz.-mat. seriya), 1972, Issue 9, pp 109-114

structure by light with λ = 0.93 micron, corresponding to the maximum of the radiation spectrum of the GaAs light-emitting diode, the process of generation of the free carriers involves the entire volume of the crystal including all three junctions; however, the maximum response of all the structure is found in the region of the shorter waves. Oscillograms were taken of the transient processes during connection of the photoresistor, and the voltage characteristics with various currents across the emitter and at various temperatures. 4 ill. 4 ref. I.V.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 621.383.52.072.1

VARLAMOV, I.V., DESHEVOY, A.S., KALADZE, M.K., PETRUSEVICH, V.A., RZHANOV, A.YE.

"Measurement Of The Impedance Of Photoresistors In The Pinch-Off Region And At The Section Of Negative Differential Resistance"

Sb.nauch.tr.po probl.mikroelektron. Mosk. in-t elektron.tekhn. (fiz.-mat.seriya) [Collection Of Scientific Works On Problems Of Microelectronics. Moscow Institute Of Electronics Technology. (Physico-Mathematical Series)], 1972, Issue 9, pp 100-108 (from RZh:Elektronika i yeye primeneniye, No 10, Oct 1972, Abstract No 10B242)

Translation: A device for measurement of impedance which uses the method of phase detection is described, and some of the measured parameters of the 4-layer structures at the section with negative resistance of the volt-ampere characteristics are presented. 4 ill. 5 ref. I.V.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 017 UNCLASSIFIED PROCESSING DATE--04DEC70

ITLE--RARE EARTH HYDROXYNITRILOTRIACETATES IN AN AQUEOUS SOLUTION -U-

UTHOR-(05)-VARLANOVA, G.L., MITROFANOVA, N.D., MARTYMENKO, L.I., PECHUROVA, N.I., VARLAMOV, V.G.

OUNTRY OF INFO--USSR

OURCE--ZH. NEORG. KHIM. 1970, 15(5), 1239-43

ATE PUBLISHED--------70

UBJECT AREAS--CHEMISTRY

OPIC TAGS--RARE EARTH COMPOUND, ACETATE, COMPLEX COMPOUND, LANTHANUM COMPOUND, CESIUM COMPOUND, YTTRIUM COMPOUND, IONIC BONDING, POTENTIOMETRIC TITRATION

ONTROL MARKING--NO RESTRICTIONS

OCUMENT CLASS--UNCLASSIFIED

ROXY REEL/FRAME--3008/0947 STEP NO--UR/0078/70/015/005/1239/1243

IRC ACCESSION NO--AP0137975

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

2/2 017 UNCLASSIFIED

IRC ACCESSION NO--AP0137975 PROCESSING DATE--04DEC70

BSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPN. AND STABILITY CONSTS. (K) OF HYDROXYNITRILOTRIACETATE COMPLEXES OF IONS OF THE LA TO LU RARE EARTH ELEMENTS AS WELL AS Y AND CS WERE DETD. BY POTENTIOMETRIC TITRN. AT 20DEGREES AND IONIC STRENGTH OF 0.2. THE VALUE OF K (TIMES 10 PRIME NEGATIVE5) RANGES FROM 1.17 FOR LA TO 73.94 FOR LU. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 017 UNCLASSIFIED

TITLE--RARE EARTH HYDROXYNITRILOTRIACETATES IN AN AQUEOUS SOLUTION -U-

PROCESSING DATE--04DEC70

AUTHOR-(05)-VARLAMOVA, G.L., MITROFANOVA, N.D., MARTYNENKO, L.I., PECHUROVA, N.I., VARLAMOV, V.G.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(5), 1239-43

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--RARE EARTH COMPOUND, ACETATE, COMPLEX COMPOUND, LANTHANUM COMPOUND, CESIUM COMPOUND, YTTRIUM COMPOUND, IONIC BONDING, POTENTIOMETRIC TITRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0947

STEP NO--UR/0078/70/015/005/1239/1243

CIRC ACCESSION NO--AP0137975

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UNCLASSIFIED

CIRC ACCESSION NO--AP0137975 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPN. AND STABILITY CONSTS. (K) OF HYDROXYNITRILOTRIACETATE COMPLEXES OF IONS OF THE LA TO LU RARE EARTH ELEMENTS AS WELL AS Y AND CS WERE DETD. BY POTENTIOMETRIC TITRN. AT 20DEGREES AND IONIC STRENGTH OF 0.2. THE VALUE OF K (TIMES 10 PRIME NEGATIVE5) RANGES FROM 1.17 FOR LA TO 73.94 FOR LU. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

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USSR

UDC 547.245+547.241+547.244

ANDRIANOV, K. A., VARLAMOVA, N. V., KOLCHINA, A. G., SEVERNYY, V. V., and SHAPATIN, A. S.

"Synthesis and Study of Properties Bis(organophosphinoxy)dibutoxy Titaniums"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 7, Jul 70, pp 1560-1565

Abstract: The authors previously studied the synthesis of some bis(organophosphinoxy)dibutoxy titaniums by the condensation of tetrabutoxytitanium with phosphorus monoacids or acid monochlorides. In the present article the authors report using an analogous method to obtain similar compounds containing a catecholoxy or methylene-o-carboranene group at the phosphorus. The synthesis of the former was through the corresponding acid monochloride, the latter through 1,2-methylene-o-carboranenephosphoric acid. The resistance of these and the previously synthesized compounds to thermooxidative degradation was studied. It was found that thermooxidative degradation is accompanied by loss of the organic part of the monomers. Given the same titanium framework, the comparative resistance to thermooxidative degradation for similar compounds is determined by the stability of the organic phosphorus framework.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

ANDRIANOV, K. A., et al., Zhurnal Obshchey Khimii, Vol 40, No 7, Jul 70, pp 1560-1565

Monomers containing alkoxy or aroxy groups at the phosphorus are the least stable, the monomer with two phenyl radicals the most stable. The monomer containing a methylene-o-carboranene group at phosphorus loses this grouping during thermooxidative degradation.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC: 621.396.6.017.72

SEVERNYY, V. V., UKLONSKIY, D. A., VARLAMOVA, N. V., MINSKER, Ye. I.

"Heat Conducting Organosilicon Materials"

Obmen opytom v radioprom-sti (Experience Pooling in the Radio Industry), Vyp. 10, Moscow, 1970, pp 39-40 (from RZh-Radiotekhnika, No 2, Feb 71, Abstract No 2V320)

Translation: The overall thermal conductivity of a given device may drop appreciably as a result of an increase in contact thermal resistance when there are air gaps between contacting surfaces. These resistances are reduced by using heat conducting pastes, those with an organosilicon base in particular. Among these are thixotropic pastes designed merely for filling gaps and not for cementing, and pastes of the "Elastosil" type which harden after application and may also act as cements or sealants. Data on these pastes are given. Three tables. N. S.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

1/2 010 UNCLASSIFIED

TITLE--ELECTROMECHANICAL START UP TIME CONSTANT OF A WAVE TYPE ELECTRIC MOTOR -U-

PROCESSING DATE--02OCT70

AUTHOR-(03)-BERTINOV, A.L., VARLEY, V.V., KOLOSKOV, M.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. VUZ. ELEKTROMEKHANIKA, JAN. 1970, P. 51-56

DATE PUBLISHED----JAN70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--SERVOMOTOR, TRANSIENT ELECTROMAGNETIC FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0372

STEP NO--UR/0144/70/000/000/0051/0056

CIRC ACCESSION NO--AP0102384

UNCLASSIFIED

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2/2 010 UNCLASSIFIED

CIRC ACCESSION NO--AP0102384 PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF THE TRANSIENT RESPONSE CHARACTERISTICS OF A NEW SERVO ELECTRIC MOTOR WHICH INVOLVES A COMBINATION OF AN ELECTROMECHANICAL ENERGY CONVERTER WITH WAVE TRANSMISSION. THE MOTOR IS CHARACTERIZED BY THE PRESENCE OF TWO MOMENTS: (1) THE MOMENT CREATED BY THE FORCES OF A ROTATING ELECTROMAGNETIC FIELD, AND (2) THE MOMENT ARISING AT THE OUTPUT TRANSMISSION SHAFT DUE TO THE CONVERSION OF WAVE DEFORMATION INTO SLOW ROTATION. THE ENERGY METHOD IS USED TO CALCULATE THE MOMENT OF INERTIA OF AN ELASTIC ROTOR DURING WAVE DEFORMATION. THE SYNCHRONOUS ELECTROMAGNETIC MOMENT AT THE STATOR SURFACE, WHICH CAUSES A DISPLACEMENT OF THE DEFORMATION WAVE, IS ALSO CALCULATED. EXPRESSIONS ARE OBTAINED FOR THE ELECTROMECHANICAL START UP TIME CONSTANTS OF REACTIVE WAVE MOTORS AND WAVE MOTORS WITH EXCITATION. EXPERIMENTAL RESULTS ARE OUTLINED, AND IT IS SHOWN THAT THE RESPONSE OF A WAVE MOTOR IS MUCH FASTER THAN THAT OF AN ASYNCHRONOUS ELECTRIC SERVO MOTOR WITH A HOLLOW ROTOR.

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VARLI, K. V.

UDC 669.017.3

EFFECT OF TUNGSTEN ON THE LAVES PHASE STRUCTURE IN THE CO-NB-W SYSTEM

[Article by K. V. Varli, N. P. D'yakonova, N. V. Orlova, Ya. S. Umanskiy, Moscow Steel and Alloy Institute, Department of Roentgenography and Physics of Metals; Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, Russian, No 1, 1972, submitted 2 July 1971, pp 115-117]

In the Co-Nb-W ternary system, the following crossections were investigated: 1A -- Co_2Nb -- Co_2W -- the section runs along the boundary of the region of homogeneity of the Laves phase ($MgCu_2$ type) from the Nb side; section 1B is parallel to section 1A and passes through the middle of the region of homogeneity of the Co_2Nb phase [1], that is, it is shifted toward higher Co content; section 2 -- Co_3Nb ($MgNi_2$ type) [1] -- Co_3W (Mg_3Cd type) [2]; section 3 -- Co_3Nb -- Co_3W. The compositions of the investigated alloys are presented in Table 1.

Table 1
Composition of the investigated alloys

		at. %		
		Co	Nb	W
1A	1	66.7	33.3	—
	2	66.7	24.3	5.0
	3	66.7	23.3	10.0
	4	66.7	18.3	15.0
	5	66.7		33.3
1B	6	70	30.0	—
	7	70	25.0	5.0
	8	70	21.0	10.0
	9	70	15.0	15.0
2	10	75	25.0	—
	11	75	20.0	5.0
	12	75	15.0	10.0
	13	75	10.0	15.0
3	10	75	25.0	—
	14	71	22.0	4.0
	15	73	19.0	8.0
	16	73	16.0	12.0
	17	70	11.0	19.0
	18	66.7	-	33.3

JPRS 65942
9 May 72

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

UDC 669.15 - 194:621.785.7.001.5

VARLI, K. V., GORCHAKOVA, E. N., LANSKAYA, K. A., RIVLIN, A. M., and SKAKOV, Yu. A.,
Moscow Institute of Steel and Alloys

"Structural and Phase Changes in Ferrite Steel During Heat Treatment"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Chernaya Metallurgiya, No 9, 1970, pp 117-121

Abstract: A study was made of structural and phase changes in EP-503 ferrite steel containing 8% W during heat treatment. The tests were conducted 1) after forging with 960-840°C end temperature, with subsequent water and furnace cooling; and 2) after hardening at 1200°C with subsequent water cooling. The temperature interval of the Fe_2W phase precipitation and related changes in hardness, lattice period of solid solution, and electric resistance were determined. Microstructures of the steel after forging, hardening, and tempering under various conditions are presented, and results are given of metallographic analysis of the steel after hardening at 1200°C. The lattice period of a solid solution of forged samples at certain temperatures is smaller than that of hardened samples, owing to the precipitation of Fe_2W phase particles during forging. The variation of particle size and lattice periods of the Fe_2W phase with tempering temperature we determined.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203430001-6

USSR

VARLYGO, YU. V.

UDC: 621.372

"Properties of Circuits With Thermistor and Posistor on Infra-low Frequencies"

V sb. Materialy Nauch.-tekhn. konf. Leningr. Elektrotekhn. in-t svyazi. Vyp. 4 (Materials of the Scientific and Technical Conference of Leningrad Electrical Engineering Institute of Communications--collection of works, No 4), Leningrad, 1971, pp 39-42 (from RZh-Radiotekhnika, No 3, Mar 72, Abstract No 3A114)

Translation: The paper discusses problems of constructing an oscillator and filter for infralow frequencies based on a thermistor and posistor. It is shown that such functional devices have promise for microelectronic realization. Resumé.

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RAD/ /R-760 /5-ARP-73
Dec 72

(5)

Semenova, V. I. Electromagnetic wave reflection during oblique incidence on a moving ionization front. IVUZ Radiofiz, no. 5, 1972, 665-674.

An extensive theoretical analysis is given of the interaction of a monochromatic wave with a plasma boundary. The particular case considered is of inclined incidence of monochromatic TE and TM waves upon a sharply defined boundary of a plasma half-space, where the plasma is generated by ionizing radiation acting on a neutral gas. For simplicity the incident pulse is assumed arbitrarity narrow and the dielectric constant outside the plasma is taken to be unity. It is shown that when the E-field normal to plane of incidence, the solution for the inclined incidence case is essentially the same as for normal incidence. With the TM wave, however, inclined incidence is shown to generate two axial waves in addition to the transverse ones, at any given frequency of the incident wave. Formulas for the reflection and transmission of the latter are obtained and analyzed in terms of the idealized plasma parameters.

Kuznetsov, A. Ya., I. S. Varnasheva, A. A. Poplavskiy, and G. P. Tikhomirov. Destruction of reflective dielectric coatings by laser radiation. OMP, no. 3, 1972, 39-42.

The resistance of reflective coatings to laser radiation was studied using zinc sulfide and magnesium fluoride coatings. The coatings were applied by thermal evaporation in a vacuum, and the reflection factor was R = 90% at λ = 0.7 μ. The flux falling upon the specimen was controlled

VARNASHEVA, I. S.

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UNCLASSIFIED

TITLE--POSSIBLE SUBSTITUTION OF DICUMYL PEROXIDE DURING THE VULCANIZATION OF URETHANE RUBBERS WITH SOME ORGANIC PEROXIDES -U-

PROCESSING DATE--23OCT70

AUTHOR-(03)-VARNAVITSKAYA, L.A., ORLENKO, G.P., KURANOVA, G.F.

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2/2 021 UNCLASSIFIED

CIRC ACCESSION NO--AP0119396 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SKU-I RUBERS (I), FILLED WITH 50 PARTS LAMP BLACK, WAS VULCANIZED IN THE PRESENCE OF 2-8 PARTS 2,2,BIS(4,4,BIS(TERT-BUTYLEPEROXY)CYCLOHEXYL)PROPANE (II) OR 1,4,BIS(TERT-BUTYLPEROXYISOPROPYL)BENZENE (III) AT 100-80DEGREES FOR 20-60 MIN. OPTIMUM CONTENTS OF II AND III WERE 5 AND 4 PARTS, RESP.; OPTIMUM VULCANIZATION TEMPS. WERE 130 AND 143DEGREES, RESP. INCREASED FILLER CONTENT AND VULCANIZATION TEMP. GAVE INCREASED HARDNESS AND 100 AND 300PERCENT ELONGATION. I VULCANIZATES HAD SUPERIOR MECH. PROPERTEIS AND THE PECULIAR ODOR OF PHAC WAS ELIMINATED. FACILITY: VSES. NAUCH.-ISSLED. INST. SIN. KAUCH. IM. LEBEDEVA, LENINGRAD, USSR.

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UDC 669.11-154:094.1.23:295

VARNAVSKIY, I. N., GUREVICH, Yu. G., and KAMYSHEV, G. N., Orenburg Polytechnic Institute, Orsk-Khalilov Metallurgical Combine

"Formation of Nonmetallic Inclusions In the Deoxidation of Iron With Titanium"

Moscow, Izvestiya Uchebnykh Vysshikh Zavedeniy--Chernaya Metallurgiya, No 6, Jun 73, pp 53-56

Abstract: An iron rod 5.0-6.0 mm in diameter and 65 mm long was placed in a magnesite crucible and heated in a resistance furnace to 1570°C where titanium was added to the metal surface through a quartz tube. Melting was sustained from 5 to 15 min. after which the crucible was removed from the furnace and quenched in water. Titanium was added so that its distribution along the rod length was 0 to 0.3-1.5%. Oxygen and nitrogen content in the initial samples was equal, which made it possible to study the composition and nature of inclusions for the different concentrations of titanium, oxygen, and nitrogen in the iron. It was found that the primary products from reduction of iron with titanium are molten oxides of the type $nFeO.mTiO_2$. According to the degree of increasing the ratio of Ti/O_2, solid Ti_2O_3 and TiO are crystallized from the melt, and with high concentrations of nitrogen--TiN (solid). Since solid crystals of inclusions of oxides and titanium nitride separate out on molten

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