USSR

TSEBULYA, G. G., et al, Spektroskopiya Atomov i Molekul [Spectroscopy of Atoms and Molecules -- Collection of Works] Kiev, Nauk. Dumka Press, 1969, pp 249-251 (translated from Referativnyy Zhurnal Fizika, No 6, 1970, Abstract No 6D542 by A. Ye. Cherednichenko)

agree well with the theory. The results presented indicate that the form of the boundary reflects the influence of volumetric disruptions of periodicity in the crystalline lattice.

2/2

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ON THE TRAINING OF POWER ENGINEERS IN THE USSR -U-

AUTHOR-(02)-TSEDERBERG, N.V., SMIRNOV, B.I.

COUNTRY OF INFO--USSR

SOURCE--MINSK, IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY, ENERGETIKA, NO 3, 1970, PP 52-58

DATE PUBLISHED-------70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES, ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--ELECTRIC POWER ENGINEERING, BIBLIOGRAPHY, TRAINING PROGRAM, ELECTRIC ENGINEERING PERSONNEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1682 STEP NO--UR/0143/70/000/003/0052/0058

CIRC ACCESSION NO--AT0123506

UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AT0123506
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROBLEM OF THE TRAINING OF POWER ENGINEERS BOTH IN PREREVOLUTIONARY RUSSIA AND IN THE USSR IS DISCUSSED. IT IS SHOWN THAT ALONG WITH DEVELOPMENT OF POWER ENGINEERING THE NUMBER OF POWER ENGINEERS INCREASED AND THE QUALITY OF THEIR TRAINING WAS IMPROVED.

UNCLASSIFIED

USSR

UDC 621.397

3

SOLOVEYCHIK, I.YE., DRAEKIN, R.I., YARMARKIN, K.K., LEUSSKAYA, G.V., SHARGORODSKAYA, F.M., KORNITENKO, G.G., TSEDIK, A.S.

"Electronic Device For Information Display"

Elektrosvyaz', No 1, Jan 1972, pp 59-63

Abstract: The paper describes an information display device of the desk type, intended for operation with an electronic computer through a telegraph communication channel. A block diagram of the device and the basic parameters of the unit are presented. The authors report that a new information display device was developed on the basis of the unit described, but few details are given. (An exterior view of the device is shown on the journal cover.) In the new device it is possible to reproduce 512 symbols (16 lines, 32 symbols to the line) of an ELT23LK9B screen. The set of reproducible symbols includes the Russian alphabet, figures, and special symbols--altogether 64 symbols. With an individual keyboard which has 47 figure-letter keys and 21 functional, it is possible to feed information into an electronic computer and to accomplish complete editing of the text with the aid of an electronic carriage (marker). The device contains a special exchange unit which makes it possible to operate with an electronic computer in GOST 10859-64 code and in code MTK-2. In addition, this unit provides coupling with the "Minsk-32" computer for the slow channel. 5 fig. 1 tab.

1/1

1/2 008 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--SYNTHESIS AND STEREOCHEMISTRY OF C SUB10 HYDROCARBONS OF THE CIS BICYCLO,3.3.0,OCTANE SERIES -U-

AUTHOR-(05)-AREFYEV, O.A., VOROBYEVA, N.S., MAKUSHINA, V.M., SOLODKOV, V.K., TSEDILINA, A.L.

COUNTRY OF INFO--USSR

SOURCE--NEFTEKHIMIYA 1970, 10(2), 165-73

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--STEREOCHEMISTRY, ORGANIC SYNTHESIS, CYCLOALKANE HYDROCARBON, OCTANE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0937 STEP NO--UR/0204/70/010/002/0165/0173

CIRC ACCESSION NO--AP0134663

UNCLASSIFIED

CIRC ACCESSION NO--AP0134663 PROCESSING DATE--04DEC70

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

1,2,DIMETHYLBICYCLO(3.3.0)OCT,2,EN,4,ONE (I) WAS PREPD. BY CONDENSATION OF 2,METHYLCYCLOPENTANONE WITH VINYLACETYLENE, DEHYDRATION OF THE CARBINOL WITH H SUB2 SO SUB4 TO II, AND FINALLY CYCLOHYDRATION WITH H SUB3 PO SUB4. BY A SEQUENCE OF REDNS. OF I, CIS,1,2,DIMETHYLBICYCLO(3.3.0)OCTANE WAS OBTAINED.

1,3,DIMETHYLBICYCLO(3.3.0)OCTANE WAS PREPD. BY DIENE CONDENSATION OF 1,FORMYL,1,CYCLOPENTENE WITH 1,3,BUTADIENE AND REDN. OF 1,FORMYL,3A,6,7,7A,TETRAHYDROINDAN INTO 1,METHYL,3A,6,7,7A,TETRAHYDROINDAN, WHICH WAS OXIDIZED (KMNO SUB4) TO 1,METHYL,1,2,CYCLOPENTANEDIACETIC AICD, WHICH, AFTER HEATING WITH BAO GAVE III. III WITH METHYL GRIGNARD AND THEN DEHYDRATION GAVE IV WHICH AFTER HYDROGENATION GAVE THE 1,3,COMPD. THE 3,7,DIMETHYLBICYCLOOCTANE WAS OBTAINED FROM THE CORRESPONDING DIKETONE BY MEMGI, DEHYDRATION ON AL SUB2 O SUB3, AND THEN HYDROGENATION OF THE UNSATD. COMPD. MIXT. OF 2,7,DIMETHYL AND 2,8,DIEMTHYL COMPDS. WERE SIMILARLY OBTAINED AS THE 1,2,DIMETHYL COMPDS. THE CONFORMATIONS OF THE DIMETHYL CIS,BICYCLO(3.3.0)OCTANES WAS DETD. FROM GAS LIQ. CHROMATOG. RETENTION TIMES AND CALCD. B.P. DATA.

FACILITY: INST. GEOL. RAZRAB. GORYUCH. ISKOP., MOSCOW, USSR.

USSR

UDC 621.371:551.510.535

GUREVICH, A. V., PARIYSKAYA, L. V., TUSHENTSOVA, I. A., and TSEDILINA, Ye. Ye.

"Trapping Radio Waves in the Ionospheric Waveguide Channel"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl. Sekts. 1 (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses; Section 1--collection of works) "Nauka," 1972, p 354 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10A334)

Translation: Pickup due to nonlinear processes and changes in the ionosphere along the beam trajectory (i.e., due to the longitude-latitude of the ionosphere nonuniformity) is studied. The frequency regions and radiation angles at which pickup occurs are investigated. For the specific model of a quiet ionosphere, the dependence of trapping conditions on the geographical coordinates of the radiation, the time of day, and the direction of the radiation, are examined. Resume

1/1

1/2 023 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--ELECTRIC FIELD IN THE EARTH'S IONOSPHERE AND MAGNETOSPHERE IN THE PRESENCE OF INHOMOGENEITY OF FAST PARTICLES -U-
AUTHOR--TSEDILINA, YE.YE.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, GEOMAGNETIZM I AERONOMIYA, VOL X, NO 3, 1970, PP 408-416

DATE PUBLISHED-------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, ATMOSPHERIC SCIENCES

TOPIC TAGS--ELECTRIC FIELD, IONOSPHERE, MAGNETOSPHERE, FAST PARTICLE, IONOSPHERIC INHOMOGENEITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0532 STEP NO--UR/0203/70/010/003/0408/0416

CIRC ACCESSION NO--AP0132723
UNCLASSIFIED

2/2 023 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132723

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR HAS OBTAINED A SOLUTION OF THE EQUATION FOR THE ELECTRIC FIELD IN THE EARTH'S IONOSPHERE AND MAGNETOSPHERE IN THE PRESENCE OF INHOMOGENEITY OF FAST PARTICLES. THE PAPER GIVES THE RESULTS OF NUMERICAL COMPUTATIONS. IT IS DEMONSTRATED THAT IMMEDIATELY AFTER THE APPEARANCE OF AN INHOMOGENEITY OF FAST ELECTRONS AND IONS IN THE MAGNETOSPHERE AND IONOSPHERE A COMPLEX PATTERN OF ELECTRIC FIELD DISTRIBUTION APPEARS. THIS ELECTRIC FIELD HAS A FOUR SECTOR QUADRUPOLE STRUCTURE. THE NATURE OF THIS FIELD IS RELATED TO THE EFFECT OF THE EQUATORIAL REGION OF THE IONOSPHERE (L IS SIMILAR TO 1.02) ON THE FIELD OF THE EFFECTIVE CHARGE CREATED BY INHOMOGENEITY OF THE ELECTRON CONCENTRATION PRESENT RATHER CLOSE TO IT. THE STRENGTH OF THIS FIELD IS DETERMINED BY THE INITIAL CONCENTRATION OF FAST PARTICLES AT THE MCXIMUN CF THE INHOMOGENEITY AND THE TOTAL CONDUCTIVITY OF THE IONOSPHERE. THE LATITUDE LONGITUDE DISTRIBUTION OF THE ELECTRIC FIELD, THE CHARACTERISTICS OF ITS QUALITATIVE STRUCTURE AND ITS MAXIMUM VALUES, ARE DIFFICULT TO PREDICT WITHOUT SPECIAL INVESTIGATIONS. THIS CAN BE ATTRIBUTED TO THE FACT THAT THE IONOSPHERIC FIELD IS DEPENDENT NOT ONLY ON THE FIELD STRENGTH IN THE EQUATORIAL PLANE, BUT ALSO ON THE PARAMETER L (THE COORDINATE L IS RELATED TO GEOMAGNETIC LATITUDE THETA IN THE IONOSPHERE: THETA EQUALS ARC COS (1-SQUARE ROOT OF L)).

FACILITY: INSTITUTE OF TERRESTRIAL MAGNETIXM, IONOSPHERE AND RADIO WAVE PROPAGATION.

UNCLASSIFIED

USSR

UDC: 537.266+537.311.33/:/537+525

TSEDRIK, M. S. and MARGOLIN, L. N.

"Dielectric Permeability of Triglycerine Sulphate Monocrystals in a Strong Electric Field"

Minsk, Doklady Akademii nauk BSSR, Vol. 14, No. 9, 1970, pp 802-805

Abstract: As a ferroelectric material, the behavior of triglycerine sulphate in a strong electric field has been insufficiently studied. The purpose of this article is therefore to investigate the conditions of the growth of such crystals on the change in their dielectric permeability in such fields. The measurements were made on an a-c bridge, for capacitances within the range of 40-20,000 pf, using specimens cut at right angles to the polar Y axis. The specimens were rectangular in shape, with an area of 0.6-1.2 cm^2 and 1.4-1.5 mm thick, subjected to a voltage of 50 Hz in frequency. It was found that in a weak electric field, the permeability rises slowly at first; as the field is increased, the permeability rises more sharply, achieving a maximum value at some particular level

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USSR

TSEDRIK, M. S. and MARGOLIN, L. N., Doklady Akademii nauk BSSR, Vol 14, No 9, 1970, pp 802-805

of the a-c voltage applied. Curves are given showing the variation in permeability under electric fields of various intensities for different temperature levels. A table of the parameters of the material for different conditions of crystal growth is also given. The authors are associated with the Institute of Solid State Physics and Semiconductors of the Belorussian Academy of Sciences, and the Minsk Pedagogical Institute imeni A. M. Gor'kiy.

2/2

USSR UDC: 8.74

SOKOLOVA, N. D., TSEGEL'SKIY, V. I. (Editors)

"Software for the 'Minsk-32' Computer. No 1"

Matematicheskoye obespecheniye EVM "Minsk-32". Vyp. 1. In-t mat. AN BSSR, Minsk. filial. n.-i. tsentra elektron. vychisl. tekhn. (cf. English above. Institute of Mathematics, Academy of Sciences of the BSSR, Minsk Affiliate of the Scientific Research Center for Electronic Computer Technology), Minsk, 1971, 136 pp, 40 k. (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V1035 K)

Translation: This collection of papers deals with the requirements for library programs, and also contains descriptions of programs of translations, calculation of elementary functions and some methods of numerical analysis. The programs are written in the "Minsk-32" symbolic coding language. It is noted that the collection is meant to include materials of a procedural type, descriptions of general-purpose programs, and materials on individual components of the system of software for the "Minsk-32" computer.

1/1

USSR

UDC 616.981.51-036.21(470.65)

BONDAREV, A. I., TONKONOZHENKO, A. P., TSEGOYEVA, V. K., and BURBANOVA, Ye. I., Severo-Osetinsk Republican Sanitary Epidemiological Station

"Natural Foci of Anthrax in Northern Osetia"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 10, Oct 70, pp 77-79

Abstract: Anthrax is widespread in the Severo-Osetinsk Autonomous Republic. No settlement in the region is free of this disease. Between 1958 and 1968, there were 239 anthrax cases among cattle and 59 cases among human beings. About 77 percent of these persons had had contact with infected farm animals. In 12 percent of the cases, the source of infection was not established, a fact which indicated that rodents and ectoparasites might carry and transmit the anthrax bacillus. In the present study, 802 rodents and 5,775 Ixodes and Gamasid ticks were examined for the presence of anthrax pathogen. Biotests were performed by injecting emulsions of the internal organs of the rodents and suspensions of the ticks into white mice. Culture media were inoculated with this material and incubated. Studies were made of the internal organs of the rodents and subjected to fluorescence microscopy. The results of all of the tests were negative. Further studies are necessary to establish

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BONDAREV, A. I., et al, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 10, Oct 70, pp 77-79

definitely the epidemiological and epizootiological significance of anthrax infections which occur naturally among rodents and ectoparasites.

2/2

1/2 039 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--NEW ELECTRON BEAM TUBE OPTICAL LASER BASED ON ELECTRON EXCITATION -U-
AUTHOR-(05)-KOZINA, G.S., KOSTINSKAYA, T.A., KURBATOV, L.N., TSEKHANOVICH, M.V., ALEKSEYEVA, L.A.
COUNTRY OF INFO--USSR

SOURCE--MOSCOW, RADIOTEKHNIKA I ELEKTRONIKA, VOL 15, NO 2, 1970, PP 365-367
DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--OPTIC PROPERTY, SEMICONDUCTOR LASER, GALLIUM ARSENIDE, ELECTRON BEAM EXCITATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1151 STEP NO--UR/0109/70/015/002/0365/0367

CIRC ACCESSION NO--AP0112254
UNCLASSIFIED

2/2 039 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112254

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONSTRUCTION AND CHARACTERISTICS OF A SEALED OFF SEMICONDUCTOR LASER WITH ELECTRON EXCITATION PRODUCED BY A GALLIUM ARSENIDE CRYSTAL ARE DESCRIBED. ITS BASIC CHARACTERISTICS ARE: PEAK POWER, 13 W. AVERAGE POWER, 100 MW. PULSE DURATION, 1 MICROSEC. PULSE FREQUENCY, UP TO 10KHZ. SAMPLES OF GALLIUM ARSENIDE AS N AND P TYPE WITH (1-4) TIMES 10 PRIME18 CM-3 CONCENTRATION OF IMPURITIES, COOLED TO LIQUID NITROGEN TEMPERATURE, ARE USED AS THE RADIATIVE ELEMENTS. THE DEPENDENCE OF PEAK, P SUBPULSE, AND AVERAGE, P SUB4, RADIATION POWERS ON PULSE ABSTRACT: FREQUENCY IS PLOTTED IN A GRAPH WHICH SHOWS THAT P SUBPULSE DECREASES WITH INCREASING FREQUENCY ABOVE 200 HZ AND THAT AT F EQUALS 10KHZ IS ONLY 17 PERCENT OF THE MAXIMUM VALUE. THE GRAPH ALSO SHOWS THAT THE AVERAGE POWER INCREASES TO A MAXIMUM AT 5-6KHZ. AN EFFICIENT WAY FOR INCREASING THE PEAK POWER IS TO INCREASE THE BEAM CURRENT DENSITY. AN INCREASE IN CURRENT DENSITY UP TO 30-40 A-CM PRIME2 WITHOUT CHANGING THE SPOT DIMENSION, MAKES IT POSSIBLE TO SUBSTANTIALLY INCREASE THE RADIATION POWER OF THE TUBE. IT IS CONCLUDED THAT THE OPTIMIZATION OF TUBE CHARACTERISTICS SHOULD PROCEED ALONG THE LINES OF RADIATIVE MATERIAL AND ELECTRON OPTIC SYSTEM IMPROVEMENT. A SCHEMATIC DIAGRAM OF THE TUBE IS PRESENTED.

UNCLASSIFIED

USSR

UDC 621.382.322:621.317.799

BINGELIS, A. YU., TSEKHANAVICHENE, N. A., EYDUKAS, D. YU.

"Measurement of the Transconductance of Field-Effect Transistors at High Frequencies"

V sb. Radioizmereniya. Materialy Nauchno-tekhn. konferentsii, 1969, (Radio Measurements. Materials of a 1969 Scientific-Technical Conference -- Collection of Works), Vil'nyus, 1969, pp 205-207 (from RZh-Elektronika i yeye primeneniye, No 4, Apr 70, Abstract No 4B466)

Translation: A description is given of a heterodyne circuit and a coaxial head (galovka) for measurement of the transconductance of field-effect transistors at frequencies up to 500 MHz. The construction of the coaxial head assures connection of the transistor without deformation of its leads with small values of parasitic parameters, power supply of direct current, and compatability of the channels of the circuit. 1 ill. 3 ref. V.P.

1/1

1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--PRESERVATION OF THE VAGUS NERVE IN GASTRECTOMY -U-

AUTHOR-(03)-MASYUKOVA, YE.M., TSEKHANOVICH, T.I., KOLOMINA, I.D.

COUNTRY OF INFO--USSR

SOURCE--KHIRURGIYA, 1970, NR 6, PP 39-43

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DIGESTIVE SYSTEM, SURGERY, JEJUNUM, PROTEIN METABOLISM, CARBOHYDRATE METABOLISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1769 STEP NO--UR/0531/70/000/006/0039/0043

CIRC ACCESSION NO--AP0129137
UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0129137

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ISSUE CARRIES THE RESULTS OF EXAMINATION OF 82 PATIENTS AT REMOTE PERIODS AFTER GASTRECTOMY; IN 18 CASES DURING THE OPERATION THE POSTERIOR CHORD OF THE VAGUS WAS PRESERVED. THE OPERATIONS WERE PERFORMED VIA THE ABDOMINAL APPROACH, THE CONTINUITY OF THE GASTROINTESTINAL TRACT WAS RESTORED WITH THE AID OF ESOPHAGOJEJUNOSTOMY. THE RESULTS OF CLINICAL EXAMINATION OF PATIENTS, AS WELL AS STUDIES OF THE PROTEIN CARBOHYDRATE METABOLSIM, AND THE FUNCTIONAL STATE OF THE LIVER IN PATIENTS AFTER GASTRECTOMY HAVE SHOWN THAT PARTIAL PRESERVATION OF THE PARASYMPATHETIC INNERVATION IS CONDUCTIVE TO A BETTER COMPENSATION OF THE LOST FUNCTIONS.

FACILITY: KAFEDRA GOSPITAL'NOY KHIRURGII TOMSKOGO MEDITSINSKOGO INSTITUTA.

UNCLASSIFIED

USSR

UDC 621.376.22

NEFED'YEV, Yu. A., KHVILIVITSKIY, T. G., TSEKHANOVICH, G. S.

"A High-Frequency Signal Amplifier With Combined Anode Modulation"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 4, Feb 72, Author's Certificate No 326695, Division H, filed 29 Jul 68, published 19 Jan 72, pp 206-207

Translation: This Author's Certificate introduces a high-frequency signal amplifier with combined anode modulation based on a vacuum-tube triode in a common-grid circuit. The plate circuit contains a parallel LC tank and a plate supply, while the cathode circuit contains an automatic biasing circuit with line-balancing resistor, and a source of high-frequency modulating voltage. As a distinguishing feature of the patent, the possibility of parasitic self-excitation of the amplifier through the grid circuit is prevented by adding a resistor in the automatic biasing circuit connected between the line-balancing potential and the common terminal of the amplifier.

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USSR

UDC 621.373.029.67

KOZINA, G. S., KOSTINSKAYA, T. A., KURBATOV, L. N., TSEKHANOVICH, M. V., ALEKSEYEVA, L. A.

"New Electron-Beam Tube-Optical Laser Based on Electron Excitation"

Moscow, Radiotekhnika i Elektronika, Vol 15, No 2, 1970, pp 365-367

Abstract: The construction and characteristics of a sealed-off semiconductor laser with electron excitation produced by a gallium-arsenide crystal are described. Its basic characteristics are:

peak power	- 13 w.
average power	- 100 mw.
pulse duration	- 1 microsec.
pulse frequency	- up to 10kHz.

Samples of gallium-arsenide as n- and p- type with (1-4) x 10^{18} cm-3 concentration of impurities, cooled to liquid nitrogen temperature, are used as the radiative elements. The dependence of peak, P_{pulse}, and average, P_r, radiation powers on pulse

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USSR

KOZINA, G. S., et al, Radiotekhnika i Elektronika, Vol 15, No 2, 1970, pp 365-367

Abstract: frequency is plotted in a graph which shows that P_{pulse} decreases with increasing frequency above 200 Hz and that at f = 10kHz is only 17 percent of the maximum value. The graph also shows that the average power increases to a maximum at 5-6kHz. An efficient way for increasing the peak power is to increase the beam current density. An increase in current density up to 30-40 A/cm^2 without changing the spot dimension, makes it possible to substantially increase the radiation power of the tube. It is concluded that the optimization of tube characteristics should proceed along the lines of radiative material and electron optic system improvement. A schematic diagram of the tube is presented. Orig. art has: 4 figures.

2/2

USSR UDC 621.385.032.21

KLEYNER, E. YU., and TSEKHANSKIY, A. L.

"Investigation of an Oxide-Coated Cathode in a Regime of Separate Pulses"

Dokl. Nauchno-tekhn. Konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg, 1970, Mosk. energ. In-t Sekts elektron. tekhn. Podsekts. elektron. priborov (Report of the Scientific-Technical Conference on the Results of Scientific-Research Work During 1968-1969, 1970. Moscow Power Engineering Institute, Elektronic Technology Section, Electronic Devices Subsection) Moscow, 1969, pp 89-97) (from RZh-Elektronika i yeye primeneniye, No 1, Jan 70, Abstract 1A5)

Translation: The causes were investigated for the variance of the forms of the pulses of an emission current and the voltage drop in a tube with an oxide-coated cathode, for which the effect of the following factors were separately investigated: 1) drain of donors in the oxide layer by the electrical field; 2) poisoning of the cathode by products of the decomposition of deposits during electron bombardment of the electrodes; and 3) change of the temperature of the oxide

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USSR

KLEYNER, E. YU., et al., Report of the Scientific-Technical Conference on the Results of Scientific-Research Work During 1968-1969, 1970. Moscow Power Engineering Institute, Electronic Technology Section, Electronic Devices Subsection, Moscow, 1969, pp 89-97

as a result of liberation of the Joule effect and the emission cooling of the cathode. The first two factors (the analysis of which requires additional experiments) determine the relation between the rate of decrease of the emission current in the pulse time and the emission recovery after it from the magnitude of the current being withdrawn and the temperature of the cathode, and also the change of the speed of these processes in the time of operation of the cathode. Five references. N. S.

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USSR

UDC 658.562:534.6

TSEKHANSKIY, K. R., and FRIDLYAND, V. I.

"A New, Reliable Apparatus for Operating Control of a Machine Vibration"

Moscow, Vibratsion. tekhnika (Vibration Engineering) 1972, pp 105-108 (from Referativnyy Zhurnal — Metrologiya i Izmeritel'naya Tekhnika, No 1, 1973, Abstract No 1.32.423)

Translation: In the Central Scientific Research Institute of Technology and Machine Building a new steady-state apparatus, type AVK5-5 has been developed for the operating control of vibration of fuel pumps of power units and other machines, making it possible to perform measurement of the sweep of the vertical and transverse components of vibratory motion alternately at all points where measuring transformers have been installed. Four to eight two-component piezoelectric vibration-measuring transformers, type 2PA-4, four to eight two-channel inlet devices, one two-channel measuring unit, a standard self-registering multiple-point potentiometer type PSR-1, an indicator dial and a switch for the measuring point are included in the assembly of the apparatus. (2 illustrations)

1/1

1/2 009 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--NEW EXAMPLES OF AMINO GROUP EXCHANGE IN A SERIES OF AROMATIC AZOMETHINES -U-

AUTHOR--TSEKHANSKIY, R.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 788-92

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AMINE DERIVATIVE, AZO COMPOUND, EXCHANGE REACTION, AROMATIC AMINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1947 STEP NO--UR/0366/70/006/004/0788/0792

CIRC ACCESSION NO--AP0125536

UNCLASSIFIED

2/2 009 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0125536

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AZOMETHINE EXCHANGE REACTIONS (SUCH AS 4,O SUB2 NC SUB4 H SUB4 CH:NPH PLUS PHCH:NC SUB6 H SUB4 NME SUB2,4 IN EQUILIBRIUM TO 4,O SUB2 NC SUB6 H SUB4 CH:NC SUB6 H SUB4 NME SUB2,4 PLUS PHCH:NPH) OR THE EXCHANGES OF AZOMETHINES WITH AROMATIC AMINES (SUCH AS PHCH:NPH PLUS 4,H SUB2 NC SUB6 H SUB4 OH IN EQUILIBRIUM PHCH: NC SUB6 H SUB4 OH,4 PLUS PHNH SUB2) IN ANHYD. MEDIA ARE REVERSIBLE. THE POSITION OF THE EQUIL. DEPENDS ON THE THETA ANGLE SUBTENDED BY THE N,C BONDS AT THE MOL. PLANE. WHEN THETA OF BOTH AZOMETHINES OR AZOMETHINE AND AMINE ARE SIMILAR THE EQUIL. IS SHIFTED TOWARDS THE LESS SOL. (OR PPTG.) COMPD.

FACILITY: CHUVASH. GOS. PEDAGOG. INST. IM. YAKOVLEVA, CHEBOKSARY, USSR.

UNCLASSIFIED

USSR

UDC 621.791.753.1

TARASOV, N. N., and TSEKHMISTER, I. M., Engineers, Kharkov Aviation Institute

"Current Field in Parts During Spot Welding with Peripheral Compression"

Kiev, Avtomaticheskaya Svarka, No 2, Feb 74, pp 9-11

Abstract: Plane models were used to construct the current field which develops during welding. For convenience of modeling the same materials were used as would be used in full-scale welding operations: M1 copper for electrodes and Kh18N9T steel and brass L62 as the welded material. For modeling the die material, made from R18 steel, Kh18N9T steel foil was used. The use of a compression die in spot welding reduces the depth of the hollow caused by the electrode but the nature of the current field is altered by the use of this die and must be compensated by the use of a larger electrode, a compensating insert (usually copper), or a combination of both. From this investigation it was possible to design electrodes of optimum geometry and then to determine, experimentally, the optimum welding modes of low-carbon steel and Kh18N9T steel with peripheral zone compression. Four figures, two tables, three bibliographic references.

1/1

USSR

UDC 621.791.763.1.001.5

TARASOV, N. M., Candidate of Engineering Sciences, and TSEKHMISTER, I. M., and BARUKHA, N. A., Engineers, Kharkov Aviation Institute

"Spot Welding With Peripheral-Zone Compression"

Moscow, Svarochnoye Proizvodstvo, No 1, 1973, pp 28-30

Abstract: An improved method of spot welding has been proposed (Author's Certificate No 354956) by the Kharkov Aviation Institute. A steel die is used which is pressed by a current-conducting rod on a copper strip previously soldered or tack welded to the piece being welded. Spot welds made with this method were stronger than without compression. The dent made by the electrode is larger when using the compression method, but this is the result of metal shrinkage during solidification and not electrode pressure. Thus, for spot welding of steels with compression of the peripheral zone of the spot the dent from the electrode is significantly diminished, joint deformation decreased, and decorative appearance improved. Welding with compression increases the weld zone in the plastic state and increases joint strength and its stability. Welding with compression requires increased electrode pressure, more careful placement of the electrodes, and their centering and alignment. Six figures, 3 bibliographic references.

1/1

USSR

UDC 666.266.52

DOTSENKO, A. V. and ZAKHAROV, V. K., and TSEKHOMSKIY, V. A., Candidate of Sciences

"Determination of the Constants of the Relaxation Process in Photochrome Glass"

Leningrad, Optiko-Mekhanicheskaya Promyshlennost', No 11, Nov 73, pp 29-31

Abstract: There is conducted a brief critical discussion of works dealing with investigation of the relaxation mechanisms in photochrome glass, that is to say, parameters of the relaxation process, the values of which do not depend upon the conditions of exposure, but are functions only of the composition of the glass and of the temperature at which decolorization takes place. An expression is proposed, which describes the process of destruction of the color centers. The constants of the relaxation process are found, and an investigation is made of the relationship of the relaxation constants to the wave length of the control beam. 1 figure. 4 tables. 7 references.

1/1

USSR

UDC:537.226+537.311.33]:539.16.04

ABROYAN, I. A., TSEKHNOVICHER, L. A.

"Radiation Conductivity and Formation of Defects in Semiconductors During Bombardment by Moderate-Energy Particles"

Tr. Leningr. Politekhn. In-ta [Works of Leningrad Polytechnical Institute], No. 311, 1970, pp. 139-145 (Translated from Referativnyy Zhurnal Fizika, No. 11, 1970, Abstract No. 11 Ye 1087 by A. Shub)

Abstract: The influence of volumetric and surface properties of a semiconductor on the stable radiation conductivity (RC) current is calculated by solving the equation for diffusion of non-equilibrium current carriers. The phenomenon of decreasing RC caused by ion bombardment is explained. It is demonstrated that under some conditions the inverse value of RC current depends linearly on the dose of preliminary ion bombardment, which fact agrees with experimental data. A method is suggested for comparing the effectiveness of destruction of semiconductors by ions of various types and energies.

1/1

USSR

UDC: 77.01:53

AYRAPETYANTS, A. V., SOBOLEVA, V. V., and TSEKHOMSKIY, V. A.

"Spectral Research on Photochrome Glass, Sensitized by Silver Halides"

Moscow, Zhurnal Nauchnoy i Prikladnoy Fotografii i Kinematofotografii, Vol I, No 1, Jan-Feb 72, pp 27-35

Abstract: The article deals with an investigation of the optical properties of photochrome glass, sensitized by silver chloride and silver bromide. Sensitivity spectra are determined for processes of coloration and light-caused decolorization for samples 2.5 mm thick. For silver chloride glass, the most effective light for coloration is with $\simeq$ 330 millimicrons, for decolorization, 450-1250 millimicrons; for silver bromide glass, light for coloration is 390 millimicrons, and for decolorization, 630 millimicrons. The influence of temperature upon the supplementary-absorption spectra was studied; also studied was the change of the supplementary-absorption spectra in processes of darkness-caused decolorization and decolorization by light of various wave lengths. The obtained results support the supposition of the colloidal nature of particles with a supplementary absorption band. Nine figures. 12 references.

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USSR

UDC: 621.373:530.145.6

+1

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.

1/1

USSR

UDC 669.71.051

TSEKHOVOL'SKAYA, D. I., MERENKOVA, B. M.

"Quantitative Analysis of the Mineralogical Composition of Alunite Ore by the Infrared Spectroscopy Method"

Tr. Vses. n.-i. i proyektn. in-ta alyumin., magn. i elektrodn. prom-sti (Works of the All-Union Scientific Research and Planning and Design Institute of the Aluminum, Magnesium and Electrode Industry), 1970, No 70, pp 17-23 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G114)

Translation: A procedure has been developed for quantitative analysis of kaolinite, alunite, and quartz in alunite ore from the Zaglikskoye bed by means of infrared spectroscopy. The analyzed concentration ranges are: 2.0-100% for kaolinite, 2.5-100 percent for alunite, and 4.0-100% for quartz. There are 4 illustrations, 2 tables, and an 8-entry bibliography.

1/1

1/2 008 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ALLOPHANIZATION OF KAOLINITE -U-

AUTHOR-(02)-TSEKHOVSKIY, YU.G., DMITRIK, A.L.

COUNTRY OF INFO--USSR

SOURCE--LITOL. POLEZ. ISKOP. 1970, (1), 79-85

DATE PUBLISHED-------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--KAOLIN, QUARTZ, CLAY, SOIL STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0804 STEP NO--UR/9103/70/000/001/0079/0085

CIRC ACCESSION NO--AP0119711

UNCLASSIFIED

2/2 008 UNCLASSIFIED

CIRC ACCESSION NO--AP0119711 PROCESSING DATE--23OCT7C

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ACCORDING TO LITERATURE DATA ALLOPHANE CAN BE SYNTHESIZED IN THE SOIL AS A RESULT OF INTERACTION BETWEEN THE SILICIC ACID AND AL HYDROXIDE, STEMMING FROM THE DESTRUCTION OF SOME PRIMARY AND SECONDARY MINERALS. STUDY OF WEATHERED PALEOCENE CHALK OF EAST KAZAKHSTAN HORIZONS INDICATES THAT ALLOPHANE CAN BE FORMED IMMEDIATELY FROM KAOLIN, BY ITS AMORPHIZATION. IN SOILS, INFLUENCED BY ALTERNATING DRY WET PERIODS, THE PROCESS OF ALLOPHANIZATION OF KAOLINITE CAN BE DETECTED BY OPTICAL AND ELECTRON MICROSCOPE METHODS. OBSERVABLE ARE STRONGLY CORRODED QUARTZ GRAINS COVERED WITH OPAL AND A COLLOMORPHIC CLAY SUBSTANCE. DTA OF WEATHERED CLAY SAMPLES SHOWS A DECREASE OF KAOLIN PEAKS AND THE APPEARANCE OF AN ADDNL. ENDOTHERMIC EFFECT AT SIMILAR TO 210DEGREES. IN SUCH SAMPLES THE GRADUAL AMORPHIZATION OF INITIALLY HEXAGONAL KAOLINITE PARTICLES IS OBSERVABLE. HOWEVER, ROUND ALLOPHANE PARTICLES DO NOT REPRESENT THE LAST STAGE OF AMORPHIZATION: THE ELECTRON MICROSCOPE SHOWS THAT ALLOPHANE PARTICLES DECOMP. FURTHER INTO FLOCCULENT AMORPHOUS PARTICLES. THE PRINCIPAL PROCESS IN SUCH SOILS REPRESENTS THE TRANSFORMATION OF SCALY CLAY INTO COLLOMORPHIC DISPERSED ALLOPHANIZED AND DEFORMED AGGREGATES OF AN INDEFINITE STRUCTURE, SHOWING THE CHEM. INSTABILITY OF KAOLIN UNDER THE DESCRIBED CONDITIONS. FACILITY: GEOL. INST., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.774.3

TSELIKOV, A. I., BONDARENKO, YE. S., POLUKHIN, P. I., and POTAPOV, I. N.,

"Development and Wide Introduction of New Technological Processes and Tube-Rolling Mills With Helical Motion for the Production of Hot-Rolled Tubes"

Moscow, Stal', No 12, 1972, pp 1107-1111

Abstract: Production of large-diameter tubes and equipment used during production processes are reviewed. The design and production of new mills capable of accepting material at a feeding angle of 14-15 or 15-17° has made Soviet production of tubes the most advanced in the world. Introduction of two-roll and three-roll mills will further increase the production of tubes while decreasing their cost. A schematic diagram of a two-roll mill is presented. Application of new technology at several metallurgical plants in the Urals region is discussed in broad terms. The emphasis is on increasing the feeding angles of the tube metal. Three-roll mills are planned for 1973, which will increase production effectiveness by 1.8-2.0 times. Mechanical properties of tubes produced at high feeding angles are discussed.

1/1

TSEL'NIKER, Yu. L.

Biology

Biological Sciences

SO: JPRS 55507
Q1 Jul 71

Voprosy fiziologii cheloveka i zhivotnykh (Questions of the Physiology of Man and Animals). Institute of Physiology imeni I. P. Pavlov. Leningrad, 1970, 238 pages with ill., 2400 copies, 1 r 85 k.

I. S. Malkina, Yu. L. Tsel'niker, and A. S. Yakshina. Fotosintez i dykhaniye podrostka. Metodicheskiye podkhody k izucheniyu balansa organicheskogo veshchestva (Photosynthesis and the Respiration of Second Growth. Methodical Approaches to the Study of the Balance of Organic Matter). Moscow, 1970, 184 pages, 1300 copies, 1 r 14 k.

- 177 -

USSR

UDC 622.362:622.778

VODYANITSKIY, YU. N., Candidate of Technical Sciences, TSELGI, and OSIPOV, YU. B., Candidate of Geological and Mineralogical Sciences, Moscow State University

"The Effect of a Magnetic Field on the Breakdown of Iron Coated Quartz Aggregates in Water"

Moscow, Steklo i Keramika, No 5, May 73, pp 8-10

Abstract: The authors study the magnetic properties of iron coated quartz aggregates and the structure of the iron bearing film on the surface of quartz particles. Lyuberetskiy quartz sand (SiO_2 97 percent) was used in the study. The following is the chemical composition of the iron bearing film by percent: 30 SiO_2, 26 Al_2O_3, 29 Fe_2O_3, 5 CaO, and 10 other. The magnetic susceptibility and magnetization of the sand and film were determined on magnetic scales at various temperatures and field intensity. At T=25°C the magnetic susceptibility of the sand does not depend on field intensity. The susceptibility of the iron bearing film at T=25°C is $x=15.5X10^{-6}$, while the paramagnetic susceptibility component is $x=12.10^{-6}$. In heating the iron bearing substance (iron-clay) to 700°C, magnetic susceptibility falls to $x=5.10^{-6}$ and the ferromagnetic component to zero. Variation in the intensity of magnetization of the iron bearing film was determined during heating and cooling in a field of H=7500 amp/cm. The heating curve has an inflection in the 240-270°C

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USSR

VODYANITSKIY, YU. N., et al, Steklo i Keramika, No 5, May 73, pp 8-10

range. This is evoked by the phase transition of a strongly magnetic mineral. A scanning electron microscope was used for studying the structure and thickness of the film. In order to calculate the number of aggregates, the sand was processed with a saturated Na_2SO_4 solution using the methodology for determining the cold resistance of concrete fillers (GOST 8269-64). The aggregates constitute 0.8-0.9 percent weight of the sand. The iron bearing aggregates appear to be the sources for increased Fe_2O_3 content. Iron bearing aggregate breakdown testing was done with the aid of a magnetic field in a Lyuberetskiy chamber. The results show that an alternating magnetic field of industrial frequency breaks down aggregates in water. This makes it possible to remove iron oxides from sand.

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USSR

UDC 621-183.2:778.4

TSELIKOV, A. I., Academician, MOROZOV, B. A., Doctor of Technical Sciences, SURKOV, A. I., Candidate of Technical Sciences, and SERGEYEV, A. V., Engineer

"Potentialities of the Application of Holography in Heavy Machinebuilding"

Moscow, Vestnik Mashinostroyeniya, No 9, Sep 73, pp 7-11

Abstract: The holographic installation developed by the All-Union Scientific Research, Planning, and Design Institute of Metallurgical Machinery is described by reference to its optical schema. The results of the application of holographic interferometry for the study of deformations and dislocations of various parts, a cramp, a supporting wall, a cast in block channel beam of a hydraulic press, produced of steel and organic glass, are discussed by reference to interferograms produced by the method of double exposure. From shown interference lines of a lead specimen was plotted the distribution diagram of elastic and plastic deformations for two changing load conditions. Such diagrams can be plotted for free surfaces of plastically deformable bodies independent from their form and their material; they provide an idea of the influence of the form of the part and also of the nature of its material on the character of the propagation of deformations. Seven figures.

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1/2 030 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--ANIONS OF DINITROMETHYL COMPOUNDS. V. CRYSTAL STRUCTURE OF THE POTASSIUM SALT OF PHENYLDINITROMETHANE -U-

AUTHOR-(04)-GRIGORYEVA, N.V., MARGOLIS, N.V., TSELINSKIY, I.V., SHOKHOR, I.N.

COUNTRY OF INFO--USSR

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

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

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

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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

CIRC ACCESSION NO--AP0104057

UNCLASSIFIED

2/2 030 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0104057

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

UNCLASSIFIED

Acc. Nr. AP0053772 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code UR0366

110924y Anions of dinitromethyl compounds. XV. Synthesis of aryldinitromethanes by the nitration of arylaldoximes with nitrogen pentoxide. Kolesetskaya, G. I.; Tselinskii, I. V.; Bagal, L. I. (Leningrad. Tekhnol. Inst. im. Lensoveta, Leningrad, USSR). *Zh. Org. Khim.* 1970, 6(2), 334–40 (Russ). The reaction of RCH:NOH (I) [R is 2-ClC_6H_4; 3-ClC_6H_4; 4-ClC_6H_4; 2-BrC_6H_4; 3-BrC_6H_4; 4-BrC_6H_4; 2-MeC_6H_4; 3-MeC_6H_4; 4-MeC_6H_4; 2-$MeOC_6H_4$; 3-$MeOC_6H_4$; 4-$MeOC_6H_4$; 3-NCC_6H_4; 4-NCC_6H_4; 2-FC_6H_4; 4-FC_6H_4; 2-$O_2NC_6H_4$; 3-$O_2NC_6H_4$; 4-$O_2NC_6H_4$; 5,2-$Cl(O_2N)C_6H_3$; 4,3-$Br(O_2N)C_6H_3$; 2,5-$Cl(O_2N)C_6H_3$; 5,2-$Br(O_2N)C_6H_3$; 4,3-$Br(O_2N)C_6H_3$; 3,4-$Br(MeOC_6H_3)$; 3,4-$O_2N(MeO)C_6H_3$; 2,5-$MeO(O_2N)C_6H_3$; 2,4-$Cl_2C_6H_3$; 2,4-$Me_2C_6H_3$; 2,4,5-$Me_2(ON)C_6H_2$; 2,4,3,5-$Me_2(O_2N)_2C_6H$; 2,-4,5-$(O_2N)_2(MeO)C_6H_2$; 2,3,5-$MeO(O_2N)_2C_6H_2$; 3,5,4-$(O_2N)_2$-$(MeO)C_6H_2$ with N_2O_5] gave $RCH(NO_2)_2$ (II) and RCHO. The yields of II depend on the position of the substituents; *o*-substituted I gave 20–30% II, other I give 45–60% II. Nitration of I (R = 4-$Me_2NC_6H_4$) gave 4,3,5-$Me_2N(O_2N)_2C_6H_2CH(NO_2)_2$. II give salts, such as $RCK(NO_2)_2$, which react with halogens to give $RC(NO_2)_2X$ (X is Cl or Br). Also I react with CH_2:-CHAc to give $RC(NO_2)_2CH_2CH_2Ac$.

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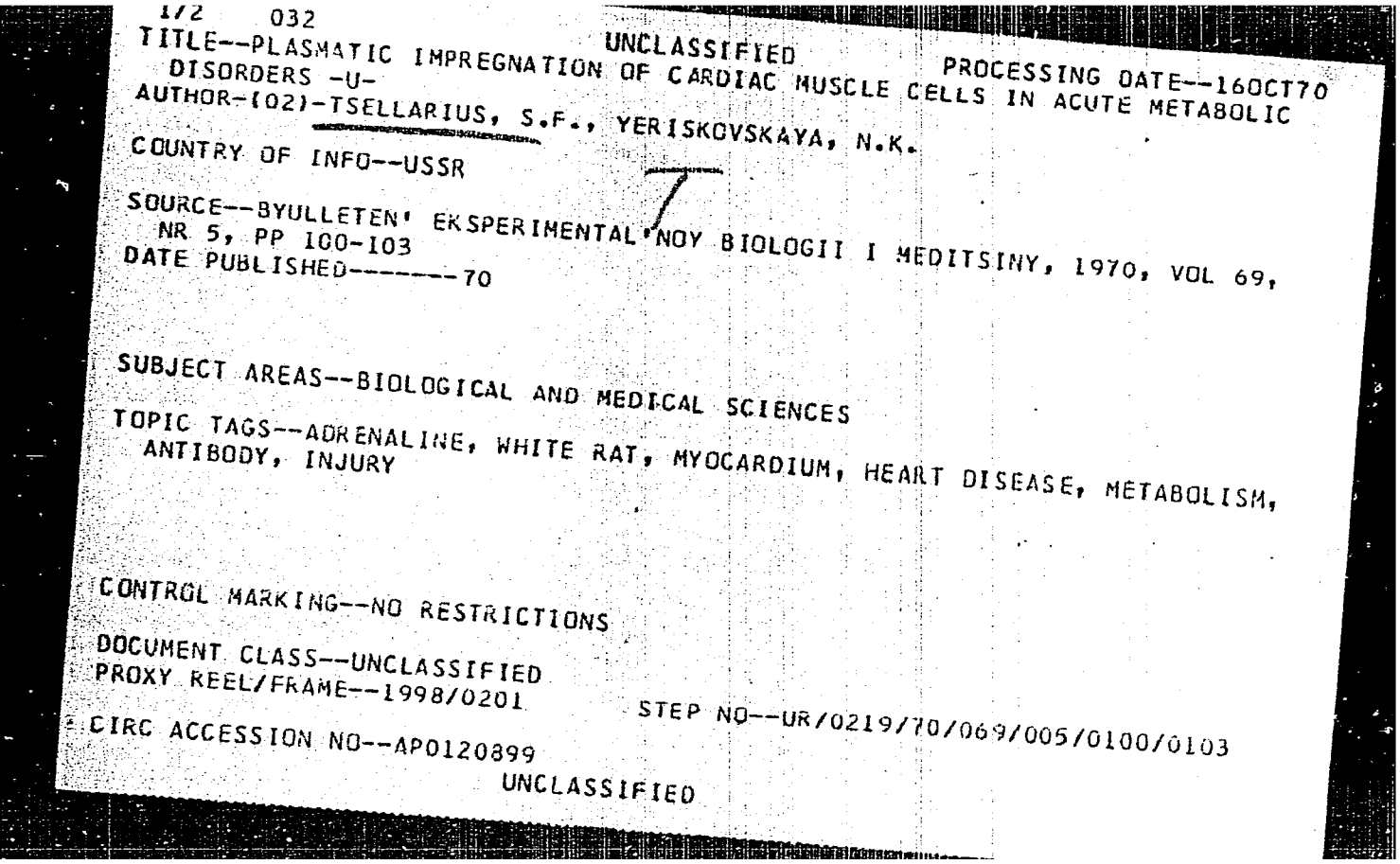


1/2 032 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--PLASMATIC IMPREGNATION OF CARDIAC MUSCLE CELLS IN ACUTE METABOLIC DISORDERS -U-
AUTHOR-(02)-TSELLARIUS, S.F., YERISKOVSKAYA, N.K.

COUNTRY OF INFO--USSR

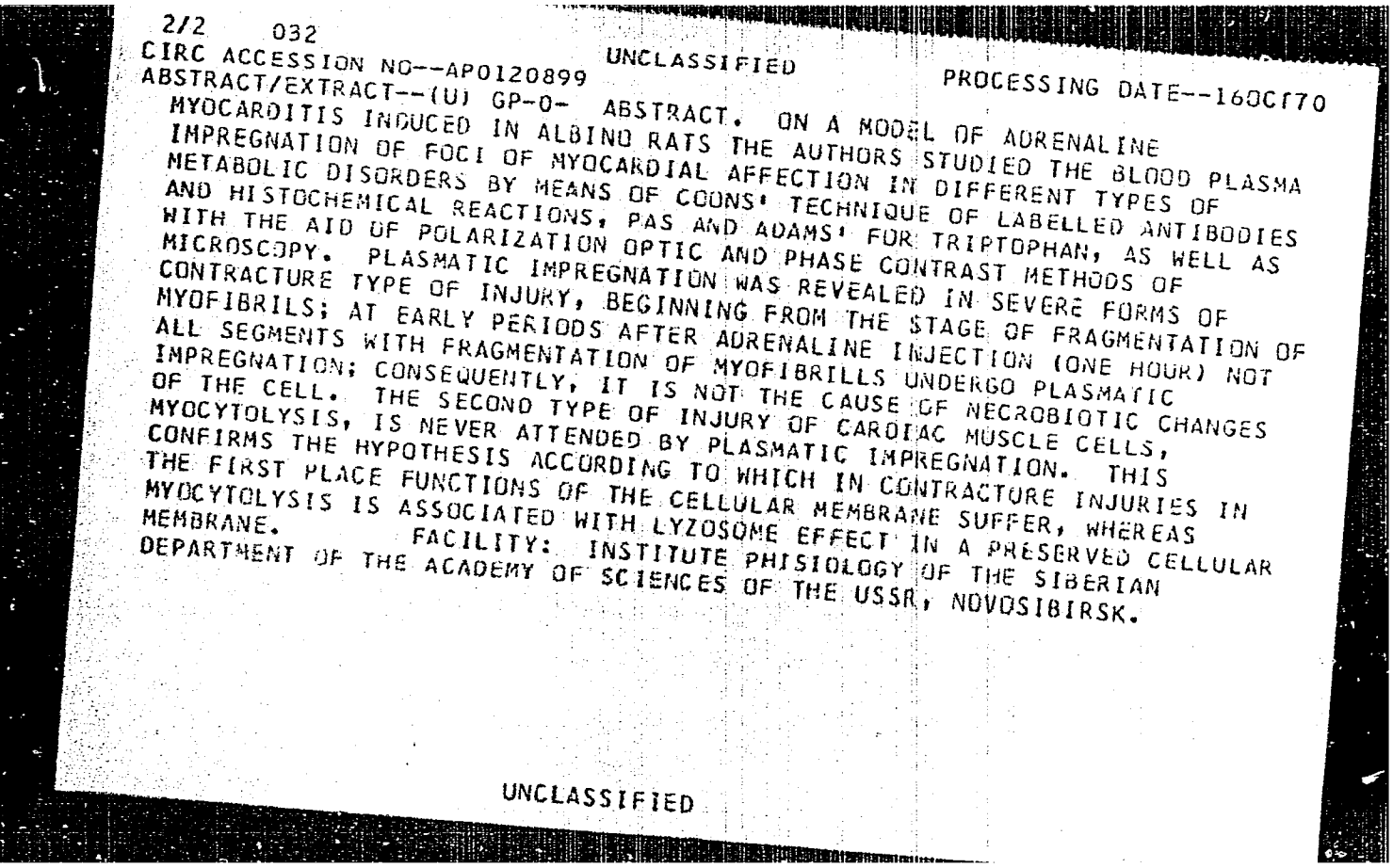
SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69, NR 5, PP 100-103
DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ADRENALINE, WHITE RAT, MYOCARDIUM, HEART DISEASE, METABOLISM, ANTIBODY, INJURY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0201 STEP NO--UR/0219/70/069/005/0100/0103
CIRC ACCESSION NO--AP0120899
UNCLASSIFIED



2/2 032 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120899

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON A MODEL OF ADRENALINE MYOCARDITIS INDUCED IN ALBINO RATS THE AUTHORS STUDIED THE BLOOD PLASMA IMPREGNATION OF FOCI OF MYOCARDIAL AFFECTION IN DIFFERENT TYPES OF METABOLIC DISORDERS BY MEANS OF COONS' TECHNIQUE OF LABELLED ANTIBODIES AND HISTOCHEMICAL REACTIONS, PAS AND ADAMS' FOR TRIPTOPHAN, AS WELL AS WITH THE AID OF POLARIZATION OPTIC AND PHASE CONTRAST METHODS OF MICROSCOPY. PLASMATIC IMPREGNATION WAS REVEALED IN SEVERE FORMS OF CONTRACTURE TYPE OF INJURY, BEGINNING FROM THE STAGE OF FRAGMENTATION OF MYOFIBRILS; AT EARLY PERIODS AFTER ADRENALINE INJECTION (ONE HOUR) NOT ALL SEGMENTS WITH FRAGMENTATION OF MYOFIBRILLS UNDERGO PLASMATIC IMPREGNATION; CONSEQUENTLY, IT IS NOT THE CAUSE OF NECROBIOTIC CHANGES OF THE CELL. THE SECOND TYPE OF INJURY OF CARDIAC MUSCLE CELLS, MYOCYTOLYSIS, IS NEVER ATTENDED BY PLASMATIC IMPREGNATION. THIS CONFIRMS THE HYPOTHESIS ACCORDING TO WHICH IN CONTRACTURE INJURIES IN THE FIRST PLACE FUNCTIONS OF THE CELLULAR MEMBRANE SUFFER, WHEREAS MYOCYTOLYSIS IS ASSOCIATED WITH LYZOSOME EFFECT IN A PRESERVED CELLULAR MEMBRANE. FACILITY: INSTITUTE PHISIOLOGY OF THE SIBERIAN DEPARTMENT OF THE ACADEMY OF SCIENCES OF THE USSR, NOVOSIBIRSK.

UNCLASSIFIED

USSR

TSEL'NIK, D. S. (Moscow)

UDC 532.522

"Concerning the Problem of a Jet Flowing Onto the Surface of a Heavy Liquid"

Moscow, Izvestiya Akademii Nauk SSSR, Mekhanika Zhidkosti i Gaza, No 2, 1973, pp 82-89

Abstract: Continuing a study published by the author in this journal in 1967, this article deals with the question of the non-uniqueness of the angle of incidence of a thin jet into water, and develops and improved mathematical formulation of the problem. The problem, which is two-dimensional, can be stated in the following manner: a jet of nonviscous, incompressible, weightless fluid with a density of ρ_1 flows out of a jet onto the surface of a motionless heavy liquid with a density of ρ_2. 6 figures. 6 references.

1/1

1/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--ON FLIGHT OSCILLATIONS OF ELECTRONS IN A MAGNETIC TRAP -U-

AUTHOR-(03)-VOLOSOV, V.I., PALCHIKOV, V.YE., TSELNIK, F.A.

COUNTRY OF INFO--USSR

SOURCE--LENINGRAD, ZHURNAL TEKHNICHESKOY FIZIKI, VOL 40, NO. 1, JAN 70, PP 134-137

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--MAGNETIC TRAP, PLASMA ELECTRON OSCILLATION, PLASMA INSTABILITY, MAGNETIC MIRROR, PLASMA DECAY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1411 STEP NO--UR/0057/70/040/001/0134/0137

CIRC ACCESSION NO--AP0125050

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0125050

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ACCUMULATION AND CONFINEMENT OF FAST ELECTRONS UP TO 100 KEV IN A MAGNETIC TRAP WERE STUDIED. OSCILLATIONS ASSOCIATED WITH THE OSCILLATING MOTION OF ELECTRONS BETWEEN MAGNETIC MIRRORS WHICH LIMIT THE DENSITY OF THE HOT PLASMA WERE THE BASIC TYPE OF INSTABILITY OBSERVED IN THE EXPERIMENT. SEVERAL FEATURES OF THESE OSCILLATIONS ARE DESCRIBED AND A QUALITATIVE EXPLANATION OF THE RESULTS IS PROPOSED. THE EXPERIMENTS WERE CONDUCTED IN A MAGNETIC TRAP OF DIAMETER 40 CM AND LENGTH 130 CM (THE DISTANCE BETWEEN MIRRORS). THE MAGNETIC FIELD WAS STATIONARY AND VARIED FROM 100 TO 300 OE AT THE CENTER. IN PRACTICALLY ALL EXPERIMENTS OSCILLATIONS WERE OBSERVED WITH A FREQUENCY 20-30 MHZ, WHICH IS CLOSE TO THE OSCILLATION FREQUENCY OF FAST ELECTRONS BETWEEN THE MAGNETIC MIRRORS. THE OSCILLATION FREQUENCY WAS INDEPENDENT OF THE MAGNETIC FIELD, THE DENSITY OF THE TRAPPED FAST ELECTRONS, AND THE DENSITY OF THE COLD PLASMA AND NEUTRAL GAS. THE OSCILLATIONS WERE OBSERVED BOTH DURING THE INJECTION PULSE AND DURING THE DECAY OF THE PLASMA FOR A SUFFICIENTLY LOW PLASMA DENSITY, SO THAT THE AMPLITUDE OF THE OSCILLATIONS DROPPED SLOWLY WITH TIME. LOW FREQUENCY OSCILLATIONS WITH A FREQUENCY OF 200-500 KHZ WERE OBSERVED SIMULTANEOUSLY WITH THE HIGH FREQUENCY OSCILLATIONS. THIS FREQUENCY COINCIDES IN ORDER OF MAGNITUDE WITH THE DRIFT FREQUENCY OF ROTATION OF THE PLASMA IN THE MAGNETIC TRAP.

UNCLASSIFIED

USSR

UDC 533.95

VOLOSOV, V. I., PAL'CHIKOV, V. Ye., TSEL'NIK, F. A.

"On Flight Oscillations of Electrons in a Magnetic Trap"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 40, No 1, Jan 70, pp 134-137

Abstract: The accumulation and confinement of fast electrons up to 100 kev in a magnetic trap were studied. Oscillations associated with the oscillating motion of electrons between magnetic mirrors which limit the density of the hot plasma were the basic type of instability observed in the experiment. Several features of these oscillations are described and a qualitative explanation of the results is proposed. The experiments were conducted in a magnetic trap of diameter 40 cm and length 130 cm (the distance between mirrors). The magnetic field was stationary and varied from 100 to 300 oe at the center. In practically all experiments oscillations were observed with a frequency 20-30 MHz, which is close to the oscillation frequency of fast electrons between the magnetic mirrors. The oscillation frequency was independent of the magnetic field, the density of the trapped fast electrons, and the density of the cold plasma and neutral gas. The oscillations were observed both during the injection pulse and during the decay of the plasma for a sufficiently low plasma density, so that the amplitude

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USSR

VOLOSOV, V. I., et al., Zhurnal Tekhnicheskoy Fiziki, Vol 40, No 1, Jan 70, pp 134-137

of the oscillations dropped slowly with time. Low-frequency oscillations with a frequency of 200-500 kHz were observed simultaneously with the high-frequency oscillations. This frequency coincides in order of magnitude with the drift frequency of rotation of the plasma in the magnetic trap.

2/2

USSR

UDC 621.791.72

ZYBKO, I. YU., TSEL'NIKER, YE. YA., and KRIVKO, M. A., Central Scientific Research Institute of Technology and Machine Building

"Electron Beam Welding of Heavy Steam Turbine Assemblies"

Kiev, Avtomaticheskaya Svarka, No 10, Oct 72, pp 59-62

Abstract: TsNIITMach/Tsentral'nyy Nauchno-Issledovatel'skiy Institut Tekhnologii i Mashinostroyeniya; Central Scientific Research Institute of Tekhnology and Machine Building/ has investigated the welding processes in the welding of steam turbine guide wheel and diaphragm vane blocks made from 2Kh11MBsh (EP291), 1Kh13, 1Kh16N13M2B (EI680), 15Kh1MF, and 12Kh1MF steels. Weldability of the steels was studied on electron-beam-welded samples 60 mm thick using a TsELS-1M unit. In joints of EP291 and 1Kh16N13M2B steels micro- and macro-cracks were absent. In EP291 the seams had individual pores 0.2-0.3 mm in diameter. It is possible that these pores formed as the result of incomplete degassification of the seam metal during welding. The short-time strength of weld joints at room temperature after heat treating (740°C anneal for two hours for EP291 and austenitization at 1100°C for one hour for EI680 steel was the same as the base metal, and at 300 and 600°C it amounted to 85-90% of the base metal's short-time strength. The impact strength of the seam metal for

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USSR

ZYBKO, I. YU., et al., Avtomaticheskaya Svarka, No 10, Oct 72, pp 59-62

EP291 (not preheated before welding) was 6 kg-m/cm^2 and with preheating to 400°C--10 kg-m/cm^2. The impact strength of the seam metal for EI680 steel after welding was 12 kg-m/cm^2, and after austenizing--15-18 kg-m/cm^2. The fatigue strength of EP291 welds at 20°C with symmetrical loading at 10^6 cycles was 32-32.5 kg/mm^2, and joints of EI680 steel--25 kg/mm^2. At 565°C the fatigue strengths were 25 and 17 kg/mm^2, respectively. The above results made it possible to develop the technology of welding vane blocks and to weld the unit of regular vanes for a K300-240 turbine, manufactured at the Leningrad Metals Plant imeni XXII Congress CPSU. The welding was done with the TsELS-2 unit developed jointly by TsNIITMash and the Institute of Electric Welding, the productivity of which is 30 vane blocks and 4 diaphragms per shift. Electron beam butt welds were made of dissimilar steels (12Kh1MF-1Kh13 and 15Kh1MF-15Kh11MF 30 mm thick. Shear tests at 20, 300, and 600°C showed that these welded pairs failed in the base metal. The tensile strengths of these pairs at 20°C was 52-56 kg/mm^2 for 15Kh1MF-15Kh11MF and 40-45 kg/mm^2 for 12Kh1MF-15Kh11MF. At 600°C the tensile strengths of these pairs were 38-40 and 30-32 kg/mm^2, respectively. 6 figures, 2 tables.

2/2

Acc. Nr: AP0036832

Ref. Code: UR 0016

PRIMARY SOURCE: Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, 1970, Nr 1, pp 137-139

CONCERNING INFLUENZA AS AN ANTHROPOZOONOSIS

Tsel'nikov, P. S.

Data are presented on the content of antihemagglutinins against influenza virus in the blood serum of various species of domestic and laboratory animals. A positive reaction of inhibition of hemagglutination against the influenza viruses A1 and B was obtained in high titres and in a considerable number of the animals examined, against the background of the absence of growth of the incidence of influenza of this etiology among the local population.

D.n.

REF 'FRA'

6

USSR

UDC 621.771.001

TSELOKOV, A. I., and GRICHKOV, A. I.

Teoriya Prokatiki (Theory of the Rolling Process), "Metallurgiya" Press, Moscow, 1970, 358 pp

Translation: A great number of experimental and theoretical studies have been carried out during recent years which have substantially broadened previous ideas on the process of metal deformation in rolling.

Characteristic of the modern theory of rolling are the wide use of the theorous of the mechanics of deformable bodies, the inclusion of a mathematical apparatus, and new, more accurate methods of experimental investigation.

These achievements in the theory of rolling are the scientific basis for the further development of rolling production, its improvement and intensification, the creation of new technological processes, and highly productive rolling mills.

The results of a series of investigations on the theory of rolling are generalized in this book. The aim was not the broad interpretation of various investigations, although many are of great interest. In general, original work by the authors were used.

Particular attention was given to the modern theory of longitudinal

USSR

TSELIKOV, A. I., and GRICHKOV, A. I., Teoriya Prokatki, "Metallurgiya" Press, Moscow, 1970, 358 pp

rolling of right-angled profiles.

Earlier published works of A. I. Tselikov are reviewed additions and refinements of individual assumptions.

Many works of A. I. Grishkov are published here for the first time. Among the most important of Grishkov's works, the following should be noted: investigation of widening and contact stresses; analysis of contact forces equilibrium, theoretical investigation of nonuniform distribution of metal motion at the source of deformation, determination of contact friction energy, etc.

The authors hope that the book will be useful in helping technologists in more accurately calculating the rolling process, and in assisting designers in determining the forces applied on the rollers, on which depend the roller mill dimensions, the power of its drive, and the allowable deformations of the rolled metal.

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TSELIKOV, A. I., and GRICHKOV, A. I., Teoriya Prokatki, "Metallurgiya" Press, Moscow, 1970, 358 pp

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TSELIKOV, A. I., and GRICHKOV, A. I., Teoriya Prokatki, "Metallurgiya" Press, Moscow, 1970, 358 pp

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USSR

TSELIKOV, A. I., and GRICHKOV, A. I., Teoriya Prokatki, "Metallurgiya" Press, Moscow, 1970, 358 pp

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USSR

TSELIKOV, A. I., and GRICHKOV, A. I., Teoriya Prokatki, "Metallurgiya" Press, Moscow, 1970, 358 pp

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USSR

TSELIKOV, A. I., and GRICHKOV, A. I., Teoriya Prokatki, "Metallurgiya" Press, Moscow, 1970, 358 pp

USSR

TSELIKOV, A. I., and GRICHKOV, A. I., Teoriya Prokatki, "Metallurgiya" Press, Moscow, 1970, 358 pp

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USSR

TSELIKOV, A. I., and GRICHKOV, A. I., Teoriya Prokatki, "Metallurgiya" Press, Moscow, 1970, 358 pp

9/9

1/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--MECHANISM OF THE SHILES REARRANGEMENT OF O,METHYL,DIARYL SULFONES; DUALITY OF THE REARRANGEMENT MECHANISM. REVERSIBLE CYCLIZATION OF

AUTHOR-(03)-DROZD, V.N., NIKONOVA, L.A., TSELYEVA, M.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 825-33

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SULFONE, INTRAMOLECULAR MECHANICS, CYCLIZATION, SULFINIC ACID, ANION, BENZENE DERIVATIVE, ORGANIC SULFUR COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2096 STEP NO--UR/0366/70/006/004/0825/0833

CIRC ACCESSION NO--AP0125680

UNCLASSIFIED

2/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125680

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CYCLIZATION OF PHSO SUB2 C SUB6 H SUB4 ME,O TO DIHYDROTHIOXANTHENE 10,10,DIOXIDE ANION IS A REVERSIBLE REACTION. IN THE CASE OF MORE SUBSTITUTED SULFONES SUCH AS PHSO SUB2 C SUB6 HME SUB4,2,3,5,6, THE CYCLIZATION TO 4A,9A,DIHYDRO,5,6,8,TRIMETHYLTHIOXANTHENE 10,10,DIOXIDE IS NOT REVERSIBLE. THE SMILES REARRANGEMENT OF THESE SULFONES TO SULFINIC ACID ANIONS PROCEEDS THROUGH THIOXANTHENE ANIONS WHICH MAY EITHER OPEN DIRECTLY OR FORM A SPIRO ANION FROM WHICH THE FINAL PRODUCT (SUCH AS PHCH SUB2 C SUB6 HSO SUB2 PRIME NEGATIVE O IS FORMED. FACILITY: MOSK. SEL'SKOKHOZ. AKAD. IM. TIMIRYAZEVA, MOSCOW, USSR.

UNCLASSIFIED

UDC 621.373.531(088.8)

USSR

SHLYKOV, N. A., NEMIROVSKIY, B. V., KLYUKIN, L. P., TSELYKOVSKIY, O. P.

"A Pulse Generator"

USSR Author's Certificate No 258377, Filed 14 Mar 66, Published 24 Apr 70 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10G168 P)

Translation: The time-mark circuit in the proposed pulse generator is connected between the negative pole of the auxiliary power supply and the collector of an auxiliary transistor which is connected in turn to the base of the main transistor through a capacitor in the time-mark circuit and the feedback winding of the transformer; the base of the auxiliary transistor is connected to the collector of the main transistor through a feedback resistor; the emitters of the main and auxiliary transistors are connected to the negative and positive poles of the auxiliary and main power supply sources. The circuit may be used over a wide frequency range since provision is made for switching the capacitance of the time-mark capacitor and for continuous control of the time-mark resistor. N. S.

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Extraction and Refining

USSR

UDC 669.243.881:669.046.542

VYCHEROV, V. G., TSEMEKHMAN, L. SH., SHIROKOVA, Z. F., and KUBACHEV, P. P.

"Carbon Behavior in Smelting Oxidized Nickel Ores to Ferronickel"

Moscow, Tsvetnyye metally, No 5, May 72, pp 21-23

Abstract: The principal factors responsible for carbon behavior in the process of smelting oxidized nickel ores resulting in frothing are the composition of the melt and the oxidizer consumption rate. The higher the consumption (all other conditions being equal), the higher the carbon solubility in the metal melt. Silicon and nickel are shown to reduce carbon solubility in iron while chromium has the opposite effect. It is shown here that frothing is caused primarily by the reaction of ferrous oxide with the carbon dissolved in the ferronickel. Addition of small amounts of ferrosilicon to the melt will eliminate frothing in the process of smelting to ferronickel, regardless of the melt's composition. Preliminary ore reduction with a gaseous agent will eliminate the presence of carbon in the melt. Simultaneous melting of both reduced and unreduced ores is shown to have practical application in that iron ore is more readily reduced at lower temperatures than magnesium ore and may require

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USSR

VYCHEROV, V. G., et al, Tsvetnyye metally, No 5, May 72, pp 21-23

much shorter time for the preliminary reducing roasting of the overall amount of ore. (1 illustration, 1 table, 5 bibliographic references)

2/2

USSR

UDC 535.853.23:533.9.07

BACHURINA, L. G., DEVYATKIN, I. I., PERMINOVA, V. M., TSEMKO, N. I., CHUPRINA, L. K.

"Microwave Plasma Solution Analyzer"

Dokl. Vses. soveshch. Optich. i titrometrich. analizatory zhidk. sred, 1971, Ch. 2 (Reports of the All-Union Conference on Optical and Titrometric Analyzers of Liquid Media, 1971, Part 2), Tbilisi, 1971, pp 130-134 (from RZh--Metrologiya i Izmeritel'naya Teklinika, No 3, Mar 72, Abstract No 3.32.1052)

Translation: A report is presented on a developed microwave plasma solution analyzer comprising a feed module, a microwave unit including a plasmotron and magnetron oscillator which is attached to the track of the DFS-8 or ISP-30 spectrograph. The microwave discharge is excited in a quartz tube through which argon, helium, nitrogen or air is blown with a flow rate of 8-30 liters/minute. The analyzed solution is introduced into the discharge tube in the form of an aerosol. The analyzer control panel is placed on the face panel of the feed unit. The photometric analysis was run with respect to the strongest spectral lines. The sensitivity of analyzing calcium and copper was determined as $1 \cdot 10^{-4}$ mg/ml, magnesium, strontium, zinc, cadmium, boron, iron and nickel, $1 \cdot 10^{-3}$ mg/ml, and phosphorus and silicon, $1 \cdot 10^{-2}$ mg/ml. There is 1 illustration, 1 table and a 4-entry bibliography.

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USSR

KRINOV, S. N., TSEMEL', G. I.

"Recognition of Unvoiced Plosives at the Ends of Words"

VI Vses. Seminar "Avtomat. Raspoznavaniye Slukhovykh Obrazov (ARSO VI) Dokl. i Soobshch. [Sixth All-Union Seminar on "Automatic Recognition of Auditory Patterns (ARSO VI), Reports -- Collection of Works], Tallin, 1972, pp 111-114 (Translated from Referativnyy Zhurnal, Kibernetika, No 1, 1973, Abstract No 1 V851 by the authors).

Translation: A study was performed using a device for separation of segmented characteristics, connected to a Minsk-22 computer. The characteristics of plosives used are: presence of closure and the parameters of the noise segment -- number of zero intersections of the signal and number of intervals between intersections of over 0.2 msec duration. The reliability of recognition of terminal p, t and k was 92%, based on material of 288 words spoken by 16 persons.

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USSR

UDC 8.74

KRINOV, S. N., TSEMEL', G. I.

"Recognizing Final Voiceless Plosives"

Tallin, VI Vses. seminar "Avtomat. raspoznavaniye slukhovykh obrazov (ARSO VI)". Dokl. i soobshch.--sbornik (Sixth All-Union Seminar on Automatic Recognition of Audible Patterns. (ARSO VI). Papers and Reports--collection of works), 1972, pp 111-114 (from RZh-Matematika, No 1, Jan 73, abstract No 1V851 by the authors)

Translation: The research was done by utilizing a device for isolating segmental features connected to a "Minsk-22" digital computer. The following were used as plosive features: the presence of a stop (occlusion) and parameters of the breath (sound) segment -- the number of zero intersections of the signal and the number of intervals between intersections with a duration of more than 0.2 ms. The reliability of recognition of final [unaspirated] p, t, and k was 92% based on material of 288 pronounciations by 16 speakers.

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USSR

UDC: 533.933

TSENDIN, L. D., Leningrad Polytechnical Institute imeni M. I. Kalinin

"On the Effect of Inelastic Collisions on the Law of Distribution of Electrons in an Electric Field"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 41, No 11, Nov 71, pp 2271-2277

Abstract: It is shown that in the Wentzel-Kramers-Brillouin approximation, matching of the distribution function on the boundary between the elastic and inelastic regions of electron collisions in microwave devices can be described by a single parameter. An iteration method is proposed for finding a solution in the case where the frequency of inelastic collisions is not continuously dependent on energy. A solution is found also in the low-energy region, and it is shown that distortion due to inelastic collisions may occur both in alternating and in steady electric fields. This distortion of the distribution function at low energies may be appreciable if

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TSENDIN, L. D., Zhurnal Tekhnicheskoy Fiziki, No 11, Nov 71, pp 2271-2277

there is an abrupt drop in the distribution function at high energies exceeding the first excitation potential. The plasma energy balance is analyzed. The author thanks V. Ye. Golant, A. P. Zhilinskiy, R. I. Lyagushchenko, and V. I. Fedorov for constructive criticism and discussion of the work.

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USSR

UDC 537.521

TSENDIN, L. D., Leningrad Polytechnical Institute imeni M. I. Kalinin

"The Effect of Step-by-Step Ionization on the Propagation of Ionization Waves in Inert Gases"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol XLI, No 8, 1971, pp 1553-1558

Abstract: This article concerns the propagation and stability of ionization waves in a gas discharge of a direct current during both direct and step-by-step ionization, taking into account actual boundary conditions in both cases. The density of the excitation and ionization are assumed to be functions of the local temperature of the electrons. From analysis of equations developed in other articles on this topic, it was established that plasma in which direct ionization is taking place is stable with respect to ionization waves. However, in the case of inert gases, instability can result from a distortion in the tail of the distribution function of the electrons, which occurs because the density of ionization is nonlinearly dependent on the concentration of plasma, or from step-by-step ionization of the metastable atoms. Step-by-step ionization replaces direct ionization as the current strength is increased. Dispersion equations are obtained for both types of oscillations -- high-frequency and low-frequency -- which occur in the gas discharge.

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1/2 017 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--STATIC ELECTRICITY ACCUMULATION IN POLYMER MATERIALS -U-

AUTHOR-(02)-STANKEVICH, K.I., TSENDROVSKAYA, V.A.

COUNTRY OF INFO--USSR

SOURCE--PLAST. MASSY 1970, (6), 65-7

DATE PUBLISHED-------70

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

TOPIC TAGS--CONSTRUCTION MATERIAL, POLYVINYL CHLORIDE, STATIC ELECTRICITY, PUBLIC HEALTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0708 STEP NO--UR/0191/70/000/006/0065/0067

CIRC ACCESSION NO--AP0136147

UNCLASSIFIED

2/2 017 UNCLASSIFIED

CIRC ACCESSION NO--AP0136147 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STATIC POTENTIAL (E IN V-CM) WAS DETD. OF POLY(VINYL CHLORIDE) TILES AND LINOLEUM IN VARIOUS BUILDINGS (HOSPITALS, YOUTH CLUB, RESEARCH INSTITUTE, PRIVATE DWELLING, TELEPHONE EXCHANGE). IN ALL CASES E LESS THAN OR EQUAL TO 240 WHEN THE RELATIVE AIR HUMIDITY (PHI) WAS GREATER THAN 25PERCENT. THIS E LEVEL DOES NOT HAVE ANY ADVERSE EFFECT ON HUMAN HEALTH (S. A. CHEBOTAREVA ET AL., 1968). WHEN PHI LESS THAN 25PERCENT, E MAY REACH 20,000.

UNCLASSIFIED

USSR

UDC 535.343

TSVELYKH, N. G., TSENDROVSKIY, V. A., (Kiev State University imeni T. G. Sevchenko)

"The Width of the Forbidden Zone and the Optical Properties of Thin Films of Gallium Phosphide"

Tomsk, Izvestiya VUZ Fizika (News of the Higher Educational Institutions, Physics), No 9(112), 1971, pp 88-92

Abstract: Vacuum-deposited gallium phosphide films (100-5000 Å thick) are studied to determine the temperature dependence of the width of the forbidden zone and the effects of film thickness. Dispersion is measured in the visible spectrum.

The substrates used were glass, quartz, and NaCl monocrystals. The optical width of the forbidden zone decreases with temperature. This effect is most pronounced for quartz and least for glass and is likely due to distortion of the film when the substrate expands with heat. The width increases with decrease in film thickness inversely as the square of the thickness. This

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TSVELYKH, N. G. et al, Izvestiya VUZ Fizika, No 9(112), 1971, pp 88-92

is interpreted as a quantum dimensional effect. Curves are shown for the optical density of GaP films as a function of wavelength, the dependence of absorption on photon energy for different substrate temperatures, and the dispersion in the range of 4000 to 10,000 Å.

Orig. art. has 5 figs. and 13 refs.

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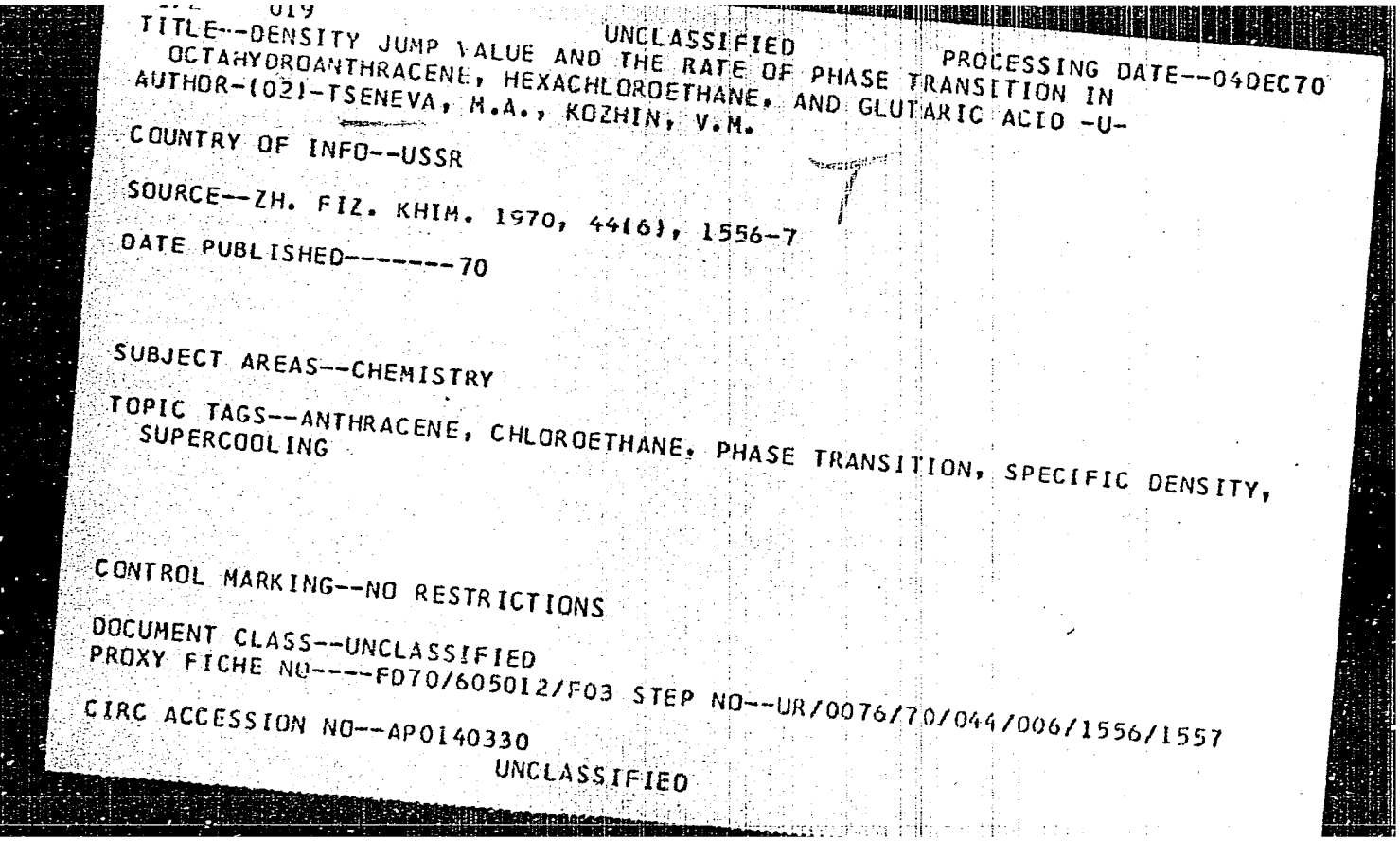


UNCLASSIFIED

TITLE--DENSITY JUMP VALUE AND THE RATE OF PHASE TRANSITION IN OCTAHYDROANTHRACENE, HEXACHLOROETHANE, AND GLUTARIC ACID -U-

AUTHOR-(02)-TSENEVA, M.A., KOZHIN, V.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(6), 1556-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ANTHRACENE, CHLOROETHANE, PHASE TRANSITION, SPECIFIC DENSITY, SUPERCOOLING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/F03 STEP NO--UR/0076/70/044/006/1556/1557

CIRC ACCESSION NO--AP0140330

UNCLASSIFIED

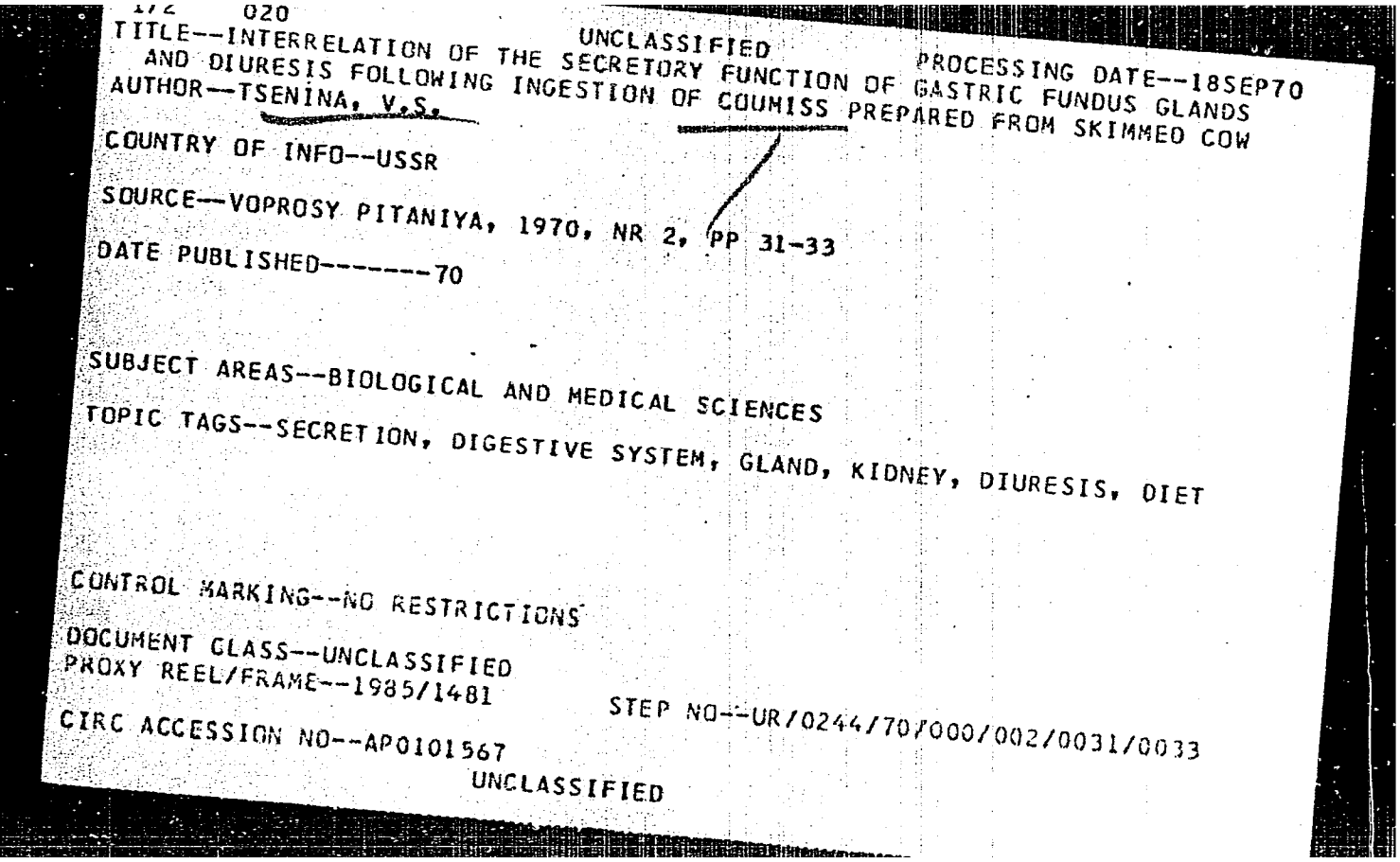
PROCESSING DATE--04DEC70

2/2 019 UNCLASSIFIED

CIRC ACCESSION NO--AP0140330 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE D. OF POWDERS OF THE 3 TITLE SUBSTANCES WAS MEASURED AT TEMP. INTERVALS NEAR THE PHASE TRANSITION POINT. THE D. JUMPS OF THE TITLE COMPDS., WHICH ARISE FROM THE PHASE TRANSITION, OCCURRED BETWEEN 64-6DEGREES FOR H SUB2 C(CH SUB2 CO SUB2 H) SUB2, BETWEEN 45-7DEGREES FOR C SUB2 CL SUB6, AND BETWEEN 63-5DEGREES FOR OCTAHYDROANTHRACENE. THE RATE OF THE PHASE TRNASITION IN THE TITLE COMPDS. WAS MEASURED AS A FUNCTION OF SUPERCOOLING. FACILITY: INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED



172 020 UNCLASSIFIED

TITLE--INTERRELATION OF THE SECRETORY FUNCTION OF GASTRIC FUNDUS GLANDS AND DIURESIS FOLLOWING INGESTION OF COUMISS PREPARED FROM SKIMMED COW

PROCESSING DATE--18SEP70

AUTHOR--TSENINA, V.S.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY PITANIYA, 1970, NR 2, PP 31-33

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SECRETION, DIGESTIVE SYSTEM, GLAND, KIDNEY, DIURESIS, DIET

CONTROL MARKING--NO RESTRICTIONS

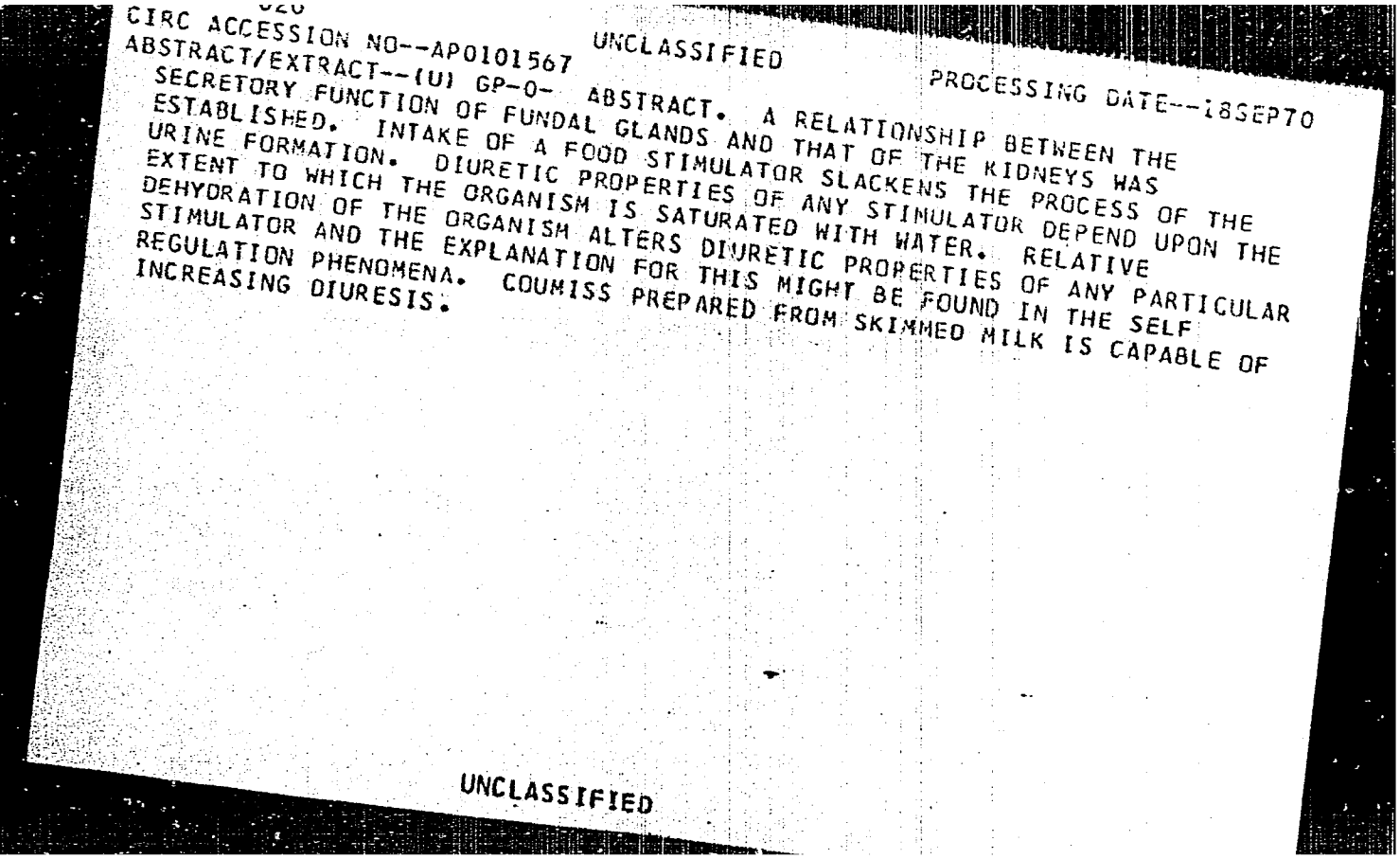
DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/1481

STEP NO--UR/0244/70/000/002/0031/0033

CIRC ACCESSION NO--AP0101567

UNCLASSIFIED



U20
CIRC ACCESSION NO--AP0101567 UNCLASSIFIED PROCESSING DATE--18SEP70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A RELATIONSHIP BETWEEN THE SECRETORY FUNCTION OF FUNDAL GLANDS AND THAT OF THE KIDNEYS HAS ESTABLISHED. INTAKE OF A FOOD STIMULATOR SLACKENS THE PROCESS OF THE URINE FORMATION. DIURETIC PROPERTIES OF ANY STIMULATOR DEPEND UPON THE EXTENT TO WHICH THE ORGANISM IS SATURATED WITH WATER. RELATIVE DEHYDRATION OF THE ORGANISM ALTERS DIURETIC PROPERTIES OF ANY PARTICULAR STIMULATOR AND THE EXPLANATION FOR THIS MIGHT BE FOUND IN THE SELF REGULATION PHENOMENA. COUMISS PREPARED FROM SKIMMED MILK IS CAPABLE OF INCREASING DIURESIS.

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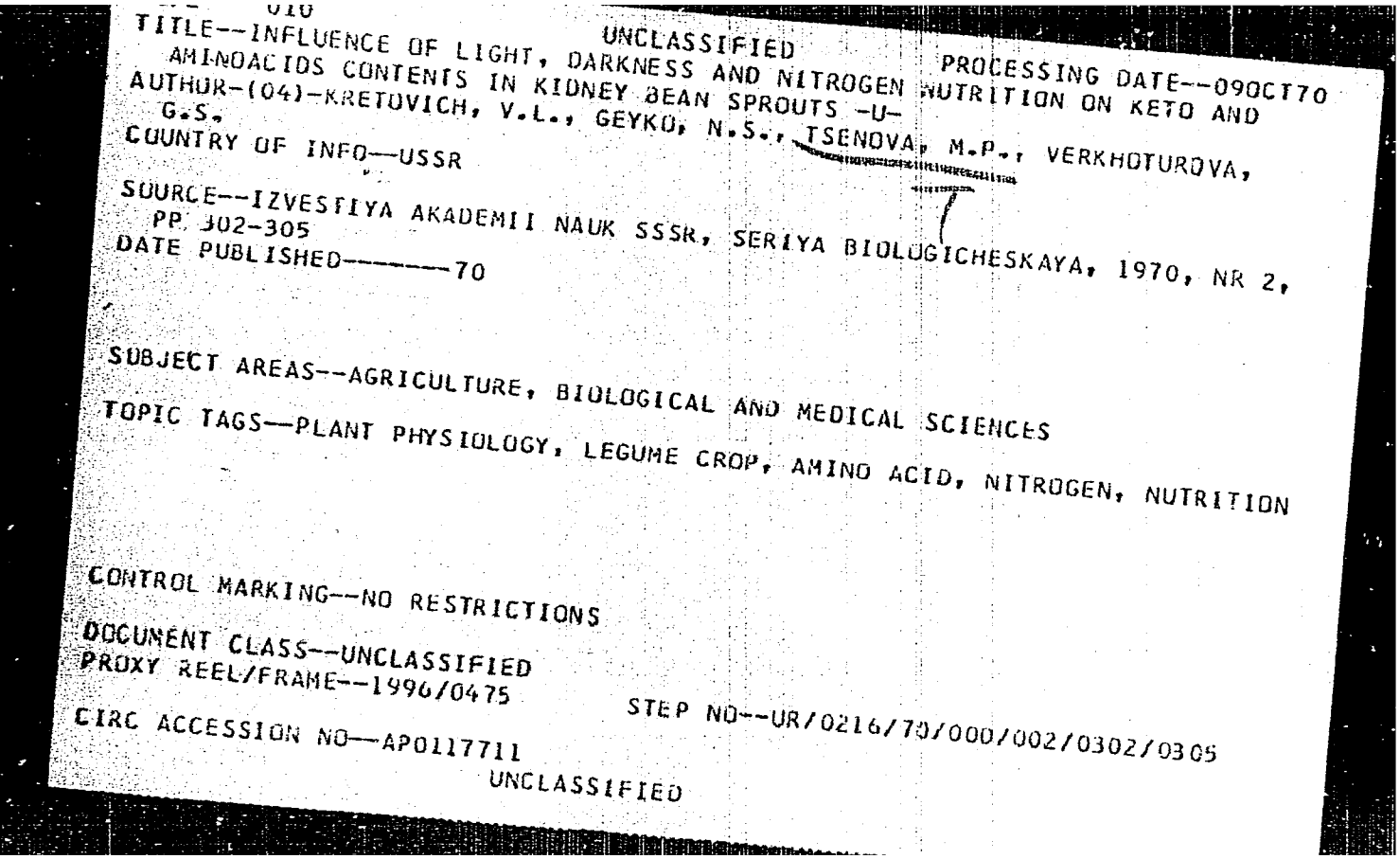
APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330006-2"



UNCLASSIFIED

TITLE--INFLUENCE OF LIGHT, DARKNESS AND NITROGEN NUTRITION ON KETO AND AMINOACIDS CONTENTS IN KIDNEY BEAN SPROUTS -U-

PROCESSING DATE--09OCT70

AUTHOR-(04)-KRETOVICH, V.L., GEYKO, N.S., TSENOVA, M.P., VERKHOTUROVA, G.S.

COUNTRY OF INFO--USSR

SOURCE--IZVESTIYA AKADEMII NAUK SSSR, SERIYA BIOLOGICHESKAYA, 1970, NR 2, PP 302-305

DATE PUBLISHED--------70

SUBJECT AREAS--AGRICULTURE, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PLANT PHYSIOLOGY, LEGUME CROP, AMINO ACID, NITROGEN, NUTRITION

CONTROL MARKING--NO RESTRICTIONS

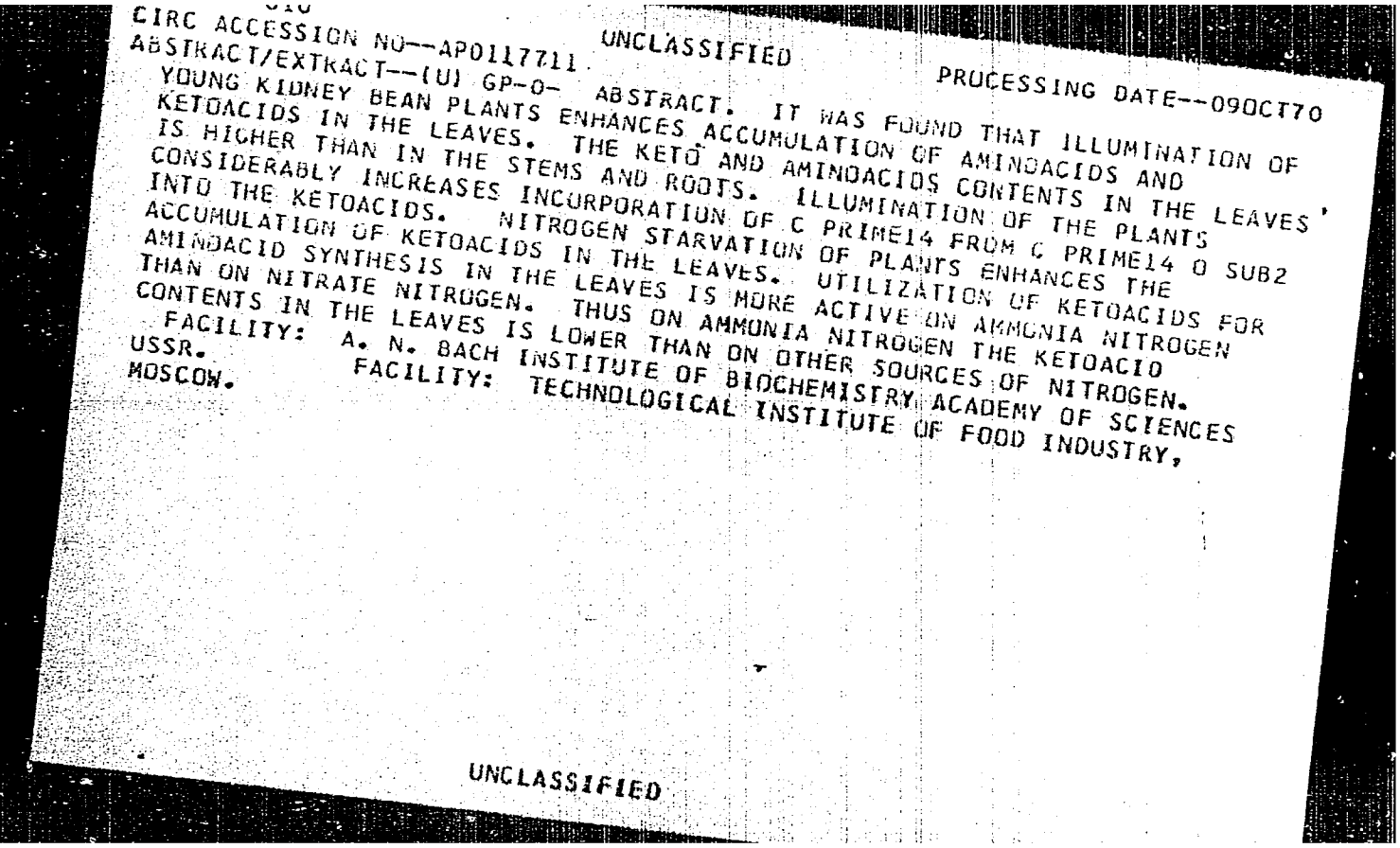
DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0475

STEP NO--UR/0216/70/000/002/0302/0305

CIRC ACCESSION NO--AP0117711

UNCLASSIFIED



CIRC ACCESSION NO--AP0117711 UNCLASSIFIED PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT WAS FOUND THAT ILLUMINATION OF YOUNG KIDNEY BEAN PLANTS ENHANCES ACCUMULATION OF AMINOACIDS AND KETOACIDS IN THE LEAVES. THE KETO AND AMINOACIDS CONTENTS IN THE LEAVES IS HIGHER THAN IN THE STEMS AND ROOTS. ILLUMINATION OF THE PLANTS CONSIDERABLY INCREASES INCORPORATION OF C PRIME14 FROM C PRIME14 O SUB2 INTO THE KETOACIDS. NITROGEN STARVATION OF PLANTS ENHANCES THE ACCUMULATION OF KETOACIDS IN THE LEAVES. UTILIZATION OF KETOACIDS FOR AMINOACID SYNTHESIS IN THE LEAVES IS MORE ACTIVE ON AMMONIA NITROGEN THAN ON NITRATE NITROGEN. THUS ON AMMONIA NITROGEN THE KETOACID CONTENTS IN THE LEAVES IS LOWER THAN ON OTHER SOURCES OF NITROGEN.

FACILITY: A. N. BACH INSTITUTE OF BIOCHEMISTRY, ACADEMY OF SCIENCES USSR. FACILITY: TECHNOLOGICAL INSTITUTE OF FOOD INDUSTRY, MOSCOW.

UNCLASSIFIED

USSR

UDC 543.70

SUDAKOV, F. P., OBUKHOVA, L.A., and TSENSKAYA, T.I., Moscow State University imeni M. V. Lomonosov, Moscow, Ministry of Higher and Secondary Specialized E ucation USSR

"Photometric Determination of Phosphorus by Formation of Molybdophosphates in Mixed Solutions"

Moscow, Zhurnal Analiticheskoy Khimii, Vol 25, No 4, Apr 70, pp 765-771

Abstract: Formation of 12-molybdophosphate in aqueous solutions of dimethylformamide, dioxane, acetone and ethanol, with 30-50% of the organic component, results in an appearance of a well defined UV maximum at 310-320 mμ, not found in aqueous solutions. The absorbance in mixed solutions is higher than in aqueous solutions, the molar extinction coefficient is $2.4 \cdot 10^4$ (312 mμ), $2.1 \cdot 10^4$ (310 mμ), $2.5 \cdot 10^4$ (318 mμ) and $1.8 \cdot 10^4$ (310 mμ) for molybdophosphate in dimethyl formamide, dioxane, acetone and ethanol solutions respectively. The phosphate and molybdate require a lower excess of molybdate for a quantitative reaction in mixed solutions. This reaction can be used for photometric determination of phosphorus. It is as simple as the water method, but more sensitive.

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USSR

TSENTER, L. S.

UDC 621.396.6-181.48

"Photo-Hookup as a Means of Increasing the Output of Acceptable Large Integrated Circuits"

Elektron. tekhnika. Nauch.-tekhn. sb. Mikroelektronika (Electronics Technology. Collected Scientific-Technical Works. Microelectronics), 1972, vyp.1(35), pp 43-49 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 V231)

Translation: The author studies problems associated with improving the quality and raising the output of acceptable, large integrated circuits by means of the selective photo-hookup of the connections. A mathematical model is proposed on the basis of which an algorithm is constructed for the photo-hookup. The photo-hookup equipment is described which operates the graphic tracts. Resume.

1/1

USSR

UDC 669.715.620.193.27.669.1

LYUBLINSKIY, Ye. Ya., TSENTER, Ya. A.

"Establishment of Optimal Content of Iron in Aluminum Protector Alloys"

Tr. Vses. N-i. i Proyektn. In-ta. Alyumin., Magn. i Elektrodn. Prom-sti [Works of All-Union Scientific Research and Planning Institute of the Aluminum, Magnesium and Electrode Industry], 1970, No. 71, pp. 135-140. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 I700 by the authors).

Translation: Results are presented from studies of the electrochemical properties of protector aluminum alloys of various purities. Comparison of technical and economic indicators forms the basis for recommendations of optimal Fe contents in the alloys. The parameters of protector alloys with broad polarization modes are established. 3 figs.

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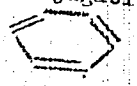
USSR

UDC 542.945+542.957.2+547.852.7

KAMAY, G. Kh. [decd.], CHERNOKAL'SKIY, B. D., GAVRILOV, V. I., TSENTOVSKIY, V. M., and TSENTOVSKAYA, V. S.; Kazan' Chemico-technological Institute imeni S. M. Kirov

"Quantitative Separation of the Combined Effect of the Substituent in Para-Substituted 10-Aryl-5,10-Dihydrophenarsazine Oxides"

Kiev, Teoreticheskaya i Eksperimental'naya Khimiya, Vol 8, No 3, 1972, pp 400-402

Abstract: Quantitative evaluation was carried out of the transmission of the effect of the substituent, through the induction and polar conjugation effects, in para-substituted 10-phenyl-5,10-dihydrophenarsazine oxides (I), on the protonation of oxygen at the arsenic atom. By solving the equation correlating the basicity of I with σ^{o} and σ_{R}^{+} constants of substituents it was shown that the transmission of the effect of the substituent is effected mainly by the induction effect, with a certain direct polar conjugation of the substituent and the reaction center in the system (X)—  — As —>(O).

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USSR

UDC 546.19 + 541.124.7

TSENTOVSKIY, V. M., GAMAYUROVA, V. S., ZAGIDULLINA, D. Sh., and CHERNOKAL'SKIY, B. D., Kazan' Chemical Technological Institute Imeni S. M. Kirov

"Ionization Constants of Arylarsonic Acids in Nonaqueous Media"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 12, Dec 72, pp 2702-2705

Abstract: The pK of eight arylarsonic acids were determined in nonaqueous media -- dimethylformamide [DMFA] and dimethylsulfoxide [DMSO] by means of potentiometric titration. In both the DMFA and DMSO arylarsonic acids titrate as monobasic acids with the exception of nitrohydroxyphenylarsonic acid which acts as a dibasic acid in DMSO. Depending on the substituent in the phenyl ring, the acid strength diminishes in the following order: $NO_2 + OH > NO_2 > H > CH_3 > CH_3O$ NH_2. Ortho substituted nitro- and amino-phenylarsonic acids are weaker than their para substituted analogs. Analyzing the pK values in different media shows that the arylarsonic acids increase in strength going from DMFA to DMSO to water. In comparison to water, DMFA and DMSO exert a differentiating action on arylarsonic acids. 1/1

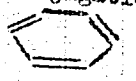
USSR

UDC 542.945+542.957.2+547.852.7

KAMAY, G. Kh. [decd.], CHERNOKAL'SKIY, B. D., GAVRILOV, V. I., TSENTOVSKIY, V. M., and TSENTOVSKAYA, V. S.; Kazan' Chemico-technological Institute imeni S. M. Kirov

"Quantitative Separation of the Combined Effect of the Substituent in Para-Substituted 10-Aryl-5,10-Dihydrophenarsazine Oxides"

Kiev, Teoreticheskaya i Eksperimental'naya Khimiya, Vol 8, No 3, 1972, pp 400-402

Abstract: Quantitative evaluation was carried out of the transmission of the effect of the substituent, through the induction and polar conjugation effects, in para-substituted 10-phenyl-5,10-dihydrophenarsazine oxides (I), on the protonation of oxygen at the arsenic atom. By solving the equation correlating the basicity of I with σ^{o} and σ_{R}^{+} constants of substituents it was shown that the transmission of the effect of the substituent is effected mainly by the induction effect, with a certain direct polar conjugation of the substituent and the reaction center in the system (X)—  — As —> (O).

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USSR

UDC 546.9 + 541.124.7

BARABANOV, V. P., TSENTOVSKIY, V. M., TRET'YAKOVA, A. YA., KHARRASOV F. M., and BREYENKOVA, V., Kazan' Chemical-Technological Institute Imeni S. M. Kirov

"Ionization Constants of Some Arylphosphonic, Aryltrichloromethylphosphinic, and Arylphosphonous Acids in Dimethylformamide and Acetone"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 5, May 73, pp 1147-1150

Abstract: Thermodynamic ionization constants for some aryl(alkyl)phosphonic and arylphosphinic acids in dimethylformamide at 25° were determined by the potentiometric method. It was established that the substituent at the phosphorus atom has a strong effect on the ionization of the acids. In connection with a change in electronegativity of the substituent, ethylphosphonic acid is weaker than the phenylphosphonic acid. Introduction of a chlorine atom into the para position of the phenyl group increases the proton donating ability of the compound. Replacing one hydroxyl group by trichloromethyl radical increases the acid strength by almost a 4 fold order.

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USSR

UDC 547.242

TSENTOVSKIY, V. M., BARABANOV, V. P., KHARRASAVA, F. M., and BUSYGINA, T. A.,
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"Study of Ionic Association of Onium Salts in Solutions. IV. Conductance of Tetraalkyl(aryl)phosphonium Halides in Acetone, Dimethylformamide and Nitromethane"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 8, Aug 71, pp 1659-1662

Abstract: The article describes results of a study of the conductance of tetraphenylphosphonium chloride, bromide and iodide and tetrabutyl-, tetraanyl- and tetrahexylphosphonium bromides in acetone, nitromethane and dimethylformamide. It is shown that the association capacity of ions is determined by the nature of the hydrocarbon radical of the phosphonium cation, as well as the nature of the anion, and is retained in the transition from acetone to nitromethane and dimethylformamide, despite the decrease in size of the solvated ion.

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USSR

UDC 546.94+541.124.7

BARABANOV, V. P., TSENTOVSKIY, V. M., TRET'YAKOVA, A. YA., ZAGIBULLINA, D. SH., KHARRASOVA, F. M., ERRE, E. A., and RAKHIMOVA, G. I., Kazan Chemical Technological Institute imeni S. M. Kirova

"Ionization Constants of Alkyl(aryl)phosphonic and Arylphosphonous Acids in Acetone"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 11, 1972, pp 2431-2434

Abstract: The influence of the nature of the substitution groups on the ionization constants was determined for the title compounds. The pK_a was determined in acetone from the potentiometric titration curve. The behavior of phosphinic and phosphonic acids in acetone is different from that in water. Compounds having two different pK_a values for the loss of two different protons in water show only one pK_a in acetone and it is much higher than either of the Pk_a's in the water environment. The Pk_a increases in the series: $p\text{-}ClC_6H_4 < C_6H_5$, $p\text{-}CH_2C_6H_4 <$ Et $< p\text{-}CH_3OC_6H_4$. The Pk_a in acetone may be calculated from the standard pK_a by the following formula:

$$pK = pK_{cr.} \pm \frac{E_{1/2} - E_{1/2\,cr.}}{0.059}$$

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USSR

UDC: 547.242

TSENTOVSKIY, V.M., BARABANOV, V.P., CHERNOKAL'SKIY, B.D., BAYRAMOV, R.B., and KAMAY, Gil'm, Kazan' Chemical Technological institute imeni S.M. Kirov, Kazan, Ministry of Higher and Secondary Specialized Education RSFSR

"Study of Ionic Association of Onium Salts in Solution. I. Conductivity of Tetraphenylarsonium Iodide in Acetone and Propyl Alcohol"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 4, Apr 70, pp 831-833

Abstract: The authors studied the conductivity of tetraphenylarsonium iodide in acetone at temperatures ranging from 20 to 40°, as well as in propyl alcohol at 25°. The form of the concentration dependence of the equivalent conductivity in acetone is complex. There is an increase in conductivity with an increase in concentration from $0.39 \cdot 10^{-4}$ to $3.12 \cdot 10^{-4}$ m., then a decrease in conductivity with a further increase in concentration. In propyl alcohol the dependence of λ on $\sqrt{c}$ is expressed by a straight line. The conductivity of the salt in

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USSR

TSENTOVSKIY, V. M., et al., Zhurnal Obshchey Khimii, Vol 40, No 4, Apr 70, pp 831-833

acetone increases with a rise in temperature, despite the fact that permittivity declines. It is suggested that with dilution in acetone there is a change in the structure of the particles participating in the transfer of electricity.

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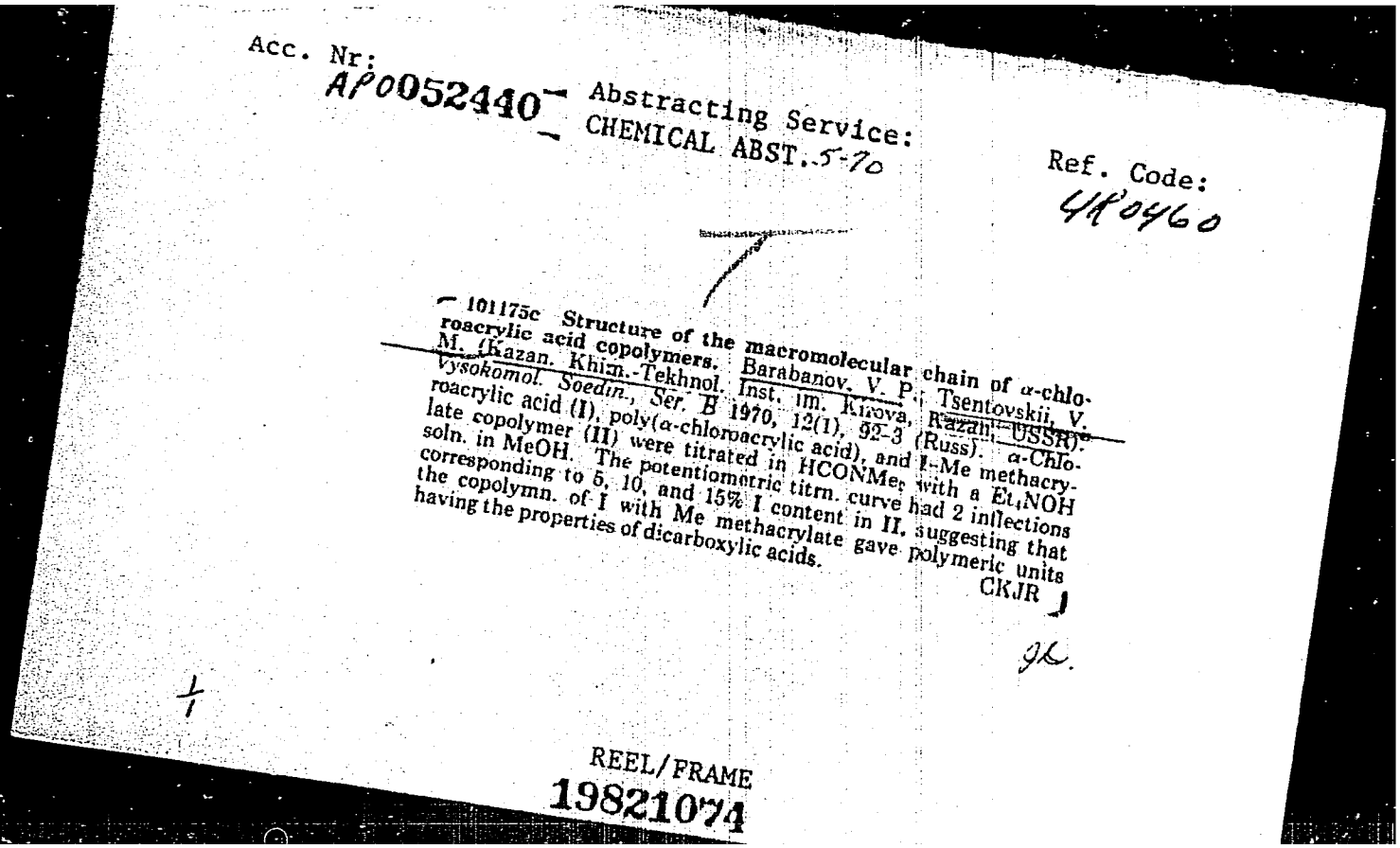

Acc. Nr: AP0052440 Abstracting Service: CHEMICAL ABST. 5-70

Ref. Code: 4R0460

101175c **Structure of the macromolecular chain of α-chloroacrylic acid copolymers.** Barabanov, V. P.; Tsentovskii, V. M. (Kazan. Khim.-Tekhnol. Inst. im. Kirova, Kazan', USSR). *Vysokomol. Soedin., Ser. B* 1970, 12(1), 52-3 (Russ). α-Chloroacrylic acid (I), poly(α-chloroacrylic acid), and I-Me methacrylate copolymer (II) were titrated in $HCONMe_2$ with a Et_4NOH soln. in MeOH. The potentiometric titrn. curve had 2 inflections corresponding to 5, 10, and 15% I content in II, suggesting that the copolymn. of I with Me methacrylate gave polymeric units having the properties of dicarboxylic acids.

CKJR

REEL/FRAME 19821074

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SYNTHESIS OF RUBIDIUM OZONIDE IN A FLUIDIZED BED -U-

AUTHOR-(02)-TSENTSIPER, A.B., DOBROLYUBOVA, M.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 690-2

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--OZONIDE, RUBIDIUM, CHEMICAL SYNTHESIS, FLUIDIZED BED

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/1161 STEP NO--UR/0062/70/000/003/0690/0692

CIRC ACCESSION NO--AP0121720
UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121720

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TECHNIQUES USED FOR OZONIZATION OF RBO SUB2 TO FORM RBO SUB3 WERE DESCRIBED EARLIER (VOL'NOV, ET AL.). PASSING AN O SUB2-O SUB3 MIXT. THROUGH RBO SUB2 IN A FLUIDIZED BED, THE LIMITING CONCN. OF RBO SUB3 FORMED DEPENDED ON TEMP. AND PASSES THEOUGH A MAX. AT SIMILAR TO ODEGREES. THE LIMITING CONCN. ATTAINED IS PROPORTIONAL TO GAS FEED RATE AND INVERSELY TO THE AMT. OF RBO SUB2 USED. POSSIBLE THE REACTION INVOLVES CHAIN EVENTS WHICH ACTIVATE RBO SUB2. SPECIMENS CONTG. UP TO 85PERCENT RBO SUB3 WERE PREPD. BY THIS METHOD. FACILITY: INST. OBSHCH. NEORG. KHIM. IM. KURNAKOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--REACTIONS OF ATOMIC OXYGEN WITH RUBIDIUM SUPERPEROXIDE AND RUBIDIUM OZONIDE -U-

AUTHOR-(02)-TSENTSIPER, A.B., DOBROLYUBOVA, M.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 692-4

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PEROXIDE, RUBIDIUM COMPOUND, OZONIDE, METAL OXIDE, GLOW DISCHARGE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/1332 STEP NO--UR/0062/70/000/003/0692/0694

CIRC ACCESSION NO--AP0121825

UNCLASSIFIED

2/2 021 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121825

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT. O GENERATED IN GLOW DISCHARGE IS INCAPABLE OF REACTION WITH EITHER RBO SUB2 OR RBO SUB3 IN THE TEMP. INTERVAL FROM 2 G EES TO MINUS 78DEGREES. WHEN RBO SUB2 SAMPLE COOLED BY LIQ. N WAS TREATED WITH A GAS STREAM CONTG. O SUB3 A BLUE COLOR OF LIQ. O SUB3 APPEARED ON THE SUPPORTING STEM FOR THE SAMPLE BUT THE COLOR OF RBO SUB2 WAS UNCHANGED. IF AFTER SUCH AN EXPOSURE TO O SUB3 THE DISCHARGE TUBE IS CUT OFF AND COOLING IS REMOVED THE COLOR OF THE RBO SUB2 SAMPLE BECAME MOMENTARILY ORANGE, THE COLOR OF RBO SUB3. EVIDENTLY FORMATION OF RBO SUB3 IS CONNECTED WITH DIRECTION REACTION OF RBO SUB2 WITH O SUB3 AS SUCH, IN A REACTION THAT OCCURS AT ABOVE MINUS 115DEGREES, I. E. SOMEWHAT ABOVE B. P. OF O SUB3. FACILITY: INST. OBSHCH. NEORG. KHIM. IM. KURNAKOVA, MOSCOW, USSR.

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