

USSR

VASIL'YEV, YE. A.

"Approximation of the Probability Distribution of the Length of a Speech Signal Excursion"

Tr. Altaysk. Politekhn. In-ta [Works of Altay Polytechnical Institute], 1973, No 18, pp 5-9 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V205)

Translation: Broad introduction of digital methods of processing and transmission of continuous signals requires more complete study of clipped speech signals. Establishment of the regularities relating the probability characteristics of a clipped signal to the parameters of the articulation apparatus and the energy spectrum of the signal is a pressing problem. These problems are closely related to the study of the length of the excursion of a random function beyond a certain level. The significant mathematical difficulty arising in the solution of problems of determination of distributions are the reason for the slight penetration of probabilistic methods into the area of investigation of clipped speech. A method is presented below for approximation of the distributions, based on well-developed methods of investigation of excursions.

Author's view

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UDC: 621.374.33

VASIL'YEV, Ye. A., DENISOV, A. S., SUVOROV, V. M., SHCHETKOVSKIY, A. I.

"A Nanosecond Coincidence Circuit"

Tr. 7-y Konferentsii po yadern. elektron. T. 2, Ch. 2 (Works of the Seventh Conference on Nuclear Electronics. Vol 2, Part 2), Moscow, Atomizdat, 1970, pp 167-170 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7G314)

Translation: In this coincidence circuit, each channel consists of an input limiter based on two semiconductor diodes, two amplifiers, a transistorized limiter, and a shaper based on transistor with delay line connected in the emitter circuit, with a sampling element common to all channels and based on a tunnel diode, and an output emitter follower. The circuit is made in the form of a standardized module with bilateral printed circuit; this prevents "creep-through" in a single channel. Bibliography of two titles. N. S.

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UDC: 621.385.6

VASIL'YEV, Ye. I., KANAVETS, V. I., and LOPUKHIN, V. M.

"Electronic Conductivity and Efficiency of a Klystron Resonator"

Kiev, Izvestiya VUZ SSSR--Radioelektronika, No 9, 1972, pp 1146-1153

Abstract: Complaining that insufficient attention has been devoted by the literature to the question of frequency characteristics, the authors develop in this paper a method for determining the electronic conductivity and frequency characteristics of an output klystron resonator and present some of the results of their analysis. In their computations, they consider the effect of the Coulomb forces and the inverse motion of the electrons. The computation of the electronic conductivity is made for rectangular current bunchings at the resonator input, the duration of the bunchings being equal to one-fourth and one-eighth the oscillation period. Such bunchings can be obtained in optimized bunchers of multi-resonant klystrons. The method developed by the authors permits nonlinear computation of the conductivity components, and indicates that optimal modes of resonator operation are possible when the resonators have ordinary Q and wave resistance values.

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UDC 621.385.624.001.5

BURNEYKA, K. P., GOLOVANOVA, V. V., VASIL' YEV, YE. I., KANAVETS, V. I.,
LOPUKHIN, V. M.

"Bunching Quality Index and Electronic Efficiency of a Quadrupole-Resonator
Klystron"

Moscow, Radiotekhnika i Elektronika, Vol XVI, No 4, 1971, pp 561-564

Abstract: The processes in a quadrupole-resonator klystron with a beam of given
perveance are calculated considering the effect of coulomb forces and the return
movement of electrons in the output resonator. Approximation of the given field
and the one-dimensional disc model of the beam were used. The correspondence
between the magnitude of the bunching quality index and the electron efficiency
is investigated. When studying the relations between the bunching quality index
and the electron efficiency it is necessary to consider the optimizing effect
of the space charge on the processes of formation of the cluster and power take-
off. In the example of a four-resonator klystron it is demonstrated that when
selecting the optimal parameters of the buncher and output resonator the value
of the bunching quality index and the electron efficiency approximately coincide.
For nonoptimal parameters of the buncher the electron efficiency can be larger
than the bunching quality index. The two variables are plotted according to
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BURNEYKA, K. P., et al., Radiotekhnika i Elektronika, Vol XVI, No 4, 1971,
pp 561-564

calculated values as a function of a variety of parameters: voltage on the next to the last resonator, width of the output gap for various amplitudes of the high-frequency field in the gap with optimal phase, for various phases with optimal amplitude, and for optimal phase and amplitude.

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1/2 014 UNCLASSIFIED PROCESSING DATE--13SEP70
 TITLE--DIFFRACTION OF A TWO DIMENSIONAL ELECTROMAGNETIC WAVE ON DIELECTRIC
 CYLINDER WITH AN ARBITRARY SHAPE OF THE TRANSVERSE SECTION -U-
 AUTHOR--(02)-SOLUDUKHOV, V.V., VASILYEV, YE.N. ✓
 COUNTRY OF INFO--USSR
 SOURCE--ZHURNAL TEKHNICHESKOI FIZIKI, VOL. 40, JAN. 1970, P 47-53
 DATE PUBLISHED-----70
 SUBJECT AREAS--PHYSICS
 TOPIC TAGS--ELECTROMAGNETIC WAVE DIFFRACTION, ELECTROMAGNETIC WAVE
 PHENOMENON
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--1979/1618 STEP NO--UR/0057/70/040/000/0047/0053
 CIRC ACCESSION NO--AP0047940
 UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0047940

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOLUTION OF THE PROBLEM OF DIFFRACTION OF A TWO DIMENSIONAL ELECTROMAGNETIC WAVE ON A HOMOGENEOUS DIELECTRIC CYLINDER WITH AN ARBITRARY SHAPE USING A SYSTEM OF INTEGRAL EQUATIONS WITH RESPECT TO THE EQUIVALENT CURRENTS ON THE CYLINDRICAL SURFACE. THIS EQUATION SYSTEM IS SOLVED USING A DIGITAL COMPUTER. EXAMPLES ARE PRESENTED FOR ILLUSTRATING THE METHOD USED, AND A COMPARISON WITH THE RESULTS OBTAINED BY OTHER METHODS IS PRESENTED.

UNCLASSIFIED

USSR

VASIL'YEV, YU. A.

"Bayes Solution in a Problem of Separation of a Continuous Signal"

Tr. Altaysk. Politekhn. In-ta [Works of Altay Polytechnical Institute],
1973, No 18, pp 16-21 (Translated from Referativnyy Zhurnal Kibernetika,
No 10, 1973, Abstract No 10V207)

Translation: It is suggested that an unstable random process with sud-
den changes in characteristics be used as a model of a speech signal.
In order to use the model in automatic speech command recognition sys-
tems, the problem of separation of such an unstable process into certain
objectively existing message components is studied.

Author's view

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1/2 018 UNCLASSIFIED PROCESSING DATE--300C770
TITLE--RATE OF HYDROGEN CHEMISORPTION ON PLATINUM STUDIED WITH A RING DISK
ELECTRODE -U-
AUTHOR-(03)-HONZ, J., VASILYEV, YU.B., BAGOTSKIY, V.S.
COUNTRY OF INFO--USSR
SOURCE--ELEKTROKHIMIYA 1970, 6(3), 325-8
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PLATINUM ELECTRODE, IONIZATION CONSTANT, HYDROGEN, ADSORPTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/1134 STEP NO--UR/0364/70/006/003/0325/0328
CIRC ACCESSION NO--AP0121693
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121693
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TYPICAL CURVES FOR RING POTENTIAL
OR LOG PARTIAL H PRESSURE IN THE LIQ. JET, AGAINST LOG C.D. ON THE DISK
AT CONST. SPEED OF ROTATION, SHOW A LINEAR RELATION OVER A WIDE RANGE.
ADSORPTION RATES FOR CONST. H PRESSURE BUT DIFFERENT SPEEDS OF ELECTRODE
ROTATION ARE PRACTICALLY IDENTICAL, POINTING TO THE ABSENCE OF DIFFUSION
BOUNDARIES. FOR A POTENTIAL OF 0.05 V, THE ADSORPTION RATE IS SIMILAR
TO 0.75 SEC PRIME NEGATIVE 1, CORRESPONDING TO A C.D. PER UNIT PT
SURFACE OF 0.16 MA-CM PRIME2, BEING MUCH LOWER THAN THE IONIZATION RATE
OF H FOR THE SAME POTENTIAL, MEASURED UNDER STATIONARY CONDITIONS ON A
SMOOTH PT. ELECTRODE (2-4 MA-CM PRIME2). FACILITY: POLYAROGP.
INST. IM. GEIROVSKOGO, PRAGUE, CZECH.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--ADSORPTION OF ANIONS OF PHOSPHORIC ACID, CHLORIDE, AND IODIDE ON
THE SURFACE OF A SMOOTH PLATINUM ELECTRODE -U-
AUTHOR--(03)-PIRTSKHALAVA, DZH., VASILYEV, YU.B., BAGOTSKIY, V.S.
COUNTRY OF INFO--USSR
SOURCE--ELEKTROKIMIYA 1970, 6(1), 110-14
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ELECTROLYTE, SULFURIC ACID, PHOSPHORIC ACID, CHLORIDE, IODIDE,
ADSORPTION, PLATINUM ELECTRODE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/1942 STEP NO--UR/0364/70/006/001/0110/0114
CIRC ACCESSION NO--AP0115750
UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0115750

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STUDIES WERE CARRIED OUT IN 10 PRIME NEGATIVE7 TO 1N KCL AND KI SOLNS. WITH N H SUB2 SO SUB4 AS AUXILIARY ELECTROLYTE. THE EXTENT OF ANION ADSORPTION ON SMOOTH PT WAS DETD. FROM ITS EFFECT ON THE ADSORPTION OF H AND O. AT 0.1 V THE MAX. ADSORPTION OF I PRIME NEGATIVE WAS REACHED AT A CONC. OF 10 PRIME NEGATIVE4 N. UNDER THESE CONDITIONS I OCCUPIED IS SIMILIAR TO 90PERCENT OF THE SPOT ON THE SMOOTH PT CAPABLE OF ADSORBING H. THIS WOULD CORRESPOND TO 1.9 TIMES 10 PRIME NEGATIVE9 G-ION-CM PRIME2 OF TOTAL SURFACE. FOR CL THE MAX. WAS REACHED AT GREATER THAN 0.3 V AND A CL PRIME NEGATIVE CONC. IS GREATER THAN 10 PRIME NEGATIVE2 N. THE HIGHEST ADSORPTION WAS OBTAINED AT 0.7 V IN 0.1N KCL UNDER WHICH CONDITIONS IT WAS 1.6 TIMES 10 PRIME NEGATIVE9 G-ION-CM PRIME2. THE ADSORPTION ISOTHERM FOR H SUB3 PO SUB4 WAS HARD TO OBTAIN BECAUSE OF THE CHANGES OF PH WITH CHANGES OF CONC. OF THE ACID AND BECAUSE OF THE COMPETITION IN THE ADSORPTION OF H SUB2 PO SUB4 PRIME NEGATIVE AND HSO SUB4 PRIME NEGATIVE. THE RATE OF ADSORPTION OF I PRIME NEGATIVE AT 0.4 V. WAS 4.69 THETA PER SEC., FOR CL PRIME NEGATIVE AT 0.6 V. IT WAS 3.2 TIMES 10 PRIME3 THETA PER SEC. AND FOR H SUB2 PO SUB4 PRIME NEGATIVE AT 0.7 V. WAS 6.7 TIMES 10 PRIME NEGATIVE3 THETA PER SEC. FACILITY: INST. ELEKTROKHM., MOSCOW, USSR.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE—30OCT71
TITLE—ADSORPTION AND ELECTROOXIDATION OF METHANOL ON DIFFERENT FACES OF
PLATINUM SINGLE CRYSTAL -U-
AUTHOR—(03)—VASILYEV, YU.B., PYSHNOGRAYEVA, I.I., BAGOTSKIY, V.S.
COUNTRY OF INFO—USSR ✓
SOURCE—ELEKTROKIMIYA 1970, 6(3), 433-6
DATE PUBLISHED—70
SUBJECT AREAS—CHEMISTRY
TOPIC TAGS—ADSORPTION, ELECTROLYTIC OXIDATION, METHANOL, PLATINUM, SINGLE
CRYSTAL
CONTROL MARKING—NO RESTRICTIONS
DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FRAHE—2000/0651 STEP NO—UR/0364/70/006/003/0433/0436
CIRC ACCESSION NO—AP0124323
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT7.

2/2 023

CIRC ACCESSION NO--AP0124323

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

ABSTRACT. TESTS WERE CONDUCTED WITH MEQH
 SOLNS IN N H SUB2 SO SUB4 FOR VARIOUS CRYSTALLOGRAPHIC ORIENTATIONS.
 EXPTL. DATA REVEALED THAT WITH RESPECT TO MEQH ADSORPTION, DEHYDRATION,
 AND OXIDN. REACTIONS, THE ELECTROCATALYTIC ACTIVITY OF A PT ATOM AT THE
 FACE OF THE SINGLE CRYSTAL WITH THE DENSEST PACKING IS SOMEWHAT HIGHER,
 PROBABLY BEING INFLUENCED BY ITS NEIGHBORS, THAN FOR THE OTHER FACES.
 THE BOUNDARIES OF THE GRAINS AND THE ANGLES AND FACES OF PARTICULAR
 CRYSTALS ON THE POLYCRYST. SURFACE DO NOT HAVE ANY EFFECT ON CATALYTIC
 ACTIVITY. FACILITY: INST. ELEKTROKHM., MOSCOW, USSR.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--EFFECT OF MOLECULAR STRUCTURE ON THE ADSORPTION AND
ELECTROOXIDATION OF ALIPHATIC ALCOHOLS -U-
AUTHOR--(05)-VASILYEV, YU.B., YANCHUK, B., NIKOLOV, I., BESKUROVAINAYA,
S.S., BAGGTSKIY, V.S.
COUNTRY OF INFO--USSR
SOURCE--ELEKTROKIMIYA 1970, 6(4), 597-601
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ADSORPTION, ALIPHATIC ALCOHOL, MOLECULAR STRUCTURE,
DEHYDRATION, ELECTROCHEMICAL EFFECT, OXIDATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1293 STEP NO--UR/0366/70/006/004/0597/0601
CIRC ACCESSION NO--AP0154967

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0134957

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ME TO HEXYL ALIPHATIC ALCS. WERE STUDIED. THE ADSORPTION OF THESE ALCS. ON SMOOTH Pt AT LOW TEMP. (25DEGREES) IS RELATED TO A LOSS OF 2 H ATOMS LOCATED NEAR THE ALPHA,C. BRANCHING OF THE MOL. OR THE PRESENCE OF CONSTITUENTS AT THE ALPHA,C. LOWERS THE ADSORPTION. THE ADSORPTION AT LOWER TEMPS. RESULTS FROM DEHYDROGENATION AT THE ALPHA,C, THAT AT 50-80DEGREES FROM DEHYDROGENATION OF THE RADICALS OF THE MOL., AND THAT AT 90-100DEGREES BY VIRTUE OF C C BOND BREAKING. THE POLARIZATION CURVES OF ELECTROOXIDN. OF THE ALCS. SHOW THAT THE MAX. UNSTEADY STATE CURRENT IN ALL CASES CHANGED WITH THE ELECTRODE COVERAGE. GENERALLY, AS THE CHAIN OF THE AL. LENGTHENED, THE RATE OF DEHYDROGENATION AS WELL AS THE RATE OF ELECTROOXIDN. DECLINED. FACILITY: INST. ELEKTROKHM., MOSCOW, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--EFFECT OF SOLUTION PH ON THE ADSORPTION OF METHANOL ON AN IRIIDIUM
ELECTRODE -U-
AUTHOR--(03)-SEDOVA, S.S., VASILYEV, YU.B., BAGOTSKIY, V.S.
COUNTRY OF INFO--USSR
SOURCE--ELEKTROKHIMIYA 1970, 6(2) 202-4
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--HYDROGEN ION CONCENTRATION, ADSORPTION, METHANOL, IRIIDIUM,
ELECTRODE, POTASSIUM COMPOUND, HYDROXIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0458 STEP NO--UR/0364/70/006/002/0202/0204
CIRC ACCESSION NO--AP0107064
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--020CT70

CIRC ACCESSION NO--AP0107064
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE ADSORPTION OF H AND ME-OH ON SMOOTH IR ELECTRODES IMMERSSED IN PHOSPHATE BUFFERED SOLNS. AT DIFFERENT PH VALUES AND IN N KOH WAS STUDIED AT 26DEGREES. THE FREUNDLICH ADSORPTION ISOTHERM OF H IN KOH WAS LINEAR FOR H PRESSURE P SUBH2 FROM 10 PRIME NEGATIVE 12 TO 1 ATM, THETA SUBH EQUALS KIP SUBH2 PRIME ONE HALF PRIME 1-N, WHERE N EQUALS 4.3 TO 4.8. FOR MEOH IN N KOH, THE THETA-CONCN. PLOT WAS ALSO LINEAR AND THE VLAUE OF N EQUALS 4.65. THE PHI (COVERAGE) WAS A MAX. AT 0.2V. THE EFFECT OF PH WAS SUCH THAT THE LOG THETA REACHED A MIN. AT PH SIMILAR TO 4 (AT PHI BETWEEN 0.4-0.5V) AND REACHED A MAX. AT PH SIMILAR TO 10. THE RATE OF ADSORPTION IN N KOH WAS LESS THAN THE RATE IN N H SUB2 SO SUB4. THESE DATA SHOWED THE SIMILAR EFFECT OF PH ON THE ADSORPTION OF H AND MEOH.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--EFFECT OF CRYSTALLOGRAPHIC ORIENTATION ON THE OVER VOLTAGE OF
HYDROGEN AND OXYGEN LIBERATION ON PLATINUM -U-
AUTHOR--(04)-PYSHNOGRAYEVA, I.I., SKUNDIN, A.M., VASILYEV, YU.B.,
BAGOTSKIY, V.S.
COUNTRY OF INFO--USSR
SOURCE--ELEKTROKIMIYA 1970, 6(1), 142-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PLATINUM ELECTROCHEMISTRY PROPERTY, SINGLE CRYSTAL PROPERTY,
CRYSTAL ORIENTATION, GAS PROPERTY, HYDROGEN, OXYGEN, ACID CORROSION,
SULFURIC ACID, ELECTRODE POTENTIAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/0765 STEP NO--UR/0364/70/006/001/0142/0146
CIRC ACCESSION NO--AP0104211
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0104211

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EVOLUTION OF H AND O IN N H SUB2 SO SUB4 SOLN. ON THE VARIOUS FACES OF A PT MONOCRYSTAL AND ON POLYCRYSTALS WAS STUDIED. THE EVOLUTION OF H WAS SIMILAR ON THE VARIOUS FACES OF THE MONO AND POLYCRYSTAL, HOWEVER, THE RATE OF THE PROCESS DECREASED IN THE FOLLOWING ORDER: FACE (111) IS GREATER THAN POLYCRYSTAL IS GREATER THAN FACE (100). EXCHANGE CURRENT COMPUTED PER 1 CM PRIME² OF ACTUAL ELECTRODE SURFACE ALSO DECREASES IN THE SAME ORDER. IN GOING FROM FACE (111) TO FACE (100) THE MAGNITUDE OF EXCHANGE CURRENT CHANGES BY ALMOST 1 ORDER. THE ACTUAL ENERGY OF ACTIVATION REMAINED PRACTICALLY UNCHANGED BY CHANGING CRYSTALLOGRAPHIC ORIENTATION. THE EVOLUTION OF O DID NOT CHANGE BY CHANGING THE ORIENTATION OF THE CRYSTAL, HOWEVER THE RATE OF EVOLUTION AND THE EXCHANGE CURRENT DECREASED IN THE SAME SEQUENCE AS DID H. BY GOING FROM FACE (111) TO FACE (100) THE CURRENT DROPS FOR O BY A FACTOR OF 5. THUS, CATHODIC EVOLUTION OF H AND ANODIC EVOLUTION OF O DROPS CONSIDERABLY WHEN GOING FROM A TIGHTLY PACKED CRYSTAL FACE TO A FACE PACKED LESS TIGHTLY. A PT POLYCRYSTAL OCCUPIES A POSITION BETWEEN THESE 2 FACES.

UNCLASSIFIED

USSR

UDC: 528.526.6

LAVROV, V. N., ZHITOMIRSKIY, I. B., LUKOVATYY, Yu. S., YAKOVLEVA, N. P.,
VASIL'YEV, Yu. F., All-Union Scientific Research Institute of Mining Geo-
mechanics and Surveying

"A Miniaturized Surveyor's Gyrocompass"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,
No 9, Mar 72, Author's Certificate No 331253, Division G, filed 21 Jul 67,
published 7 Mar 72, p 117

Translation: This Author's Certificate introduces a miniaturized surveyor's gyrocompass which contains a theodolite with autocollimation system, a trigger and a gyro attachment with pendulum sensing element on a torsion suspension and strip current feed. As a distinguishing feature of the patent, the design provides for compensation of the torque of the torsion suspension and the current feed. The current feed is made in the form of strips bent in the vertical or horizontal plane with their ends fastened to the sensing element at a distance r from its axis of rotation, where r is defined by the formula

$$r = aD \left(\frac{\sqrt{DK}}{IE} + b - c \right).$$

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JAVROV, V. N. et al., USSR Author's Certificate No 331253

where D is the distance between the fixed ends of the current feed strips, K is the stiffness of the torsion suspension, a , b and c are numerical coefficients which depend on the shape of the bend in the strips, and IE is the rigidity of the current feed strips.

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1/2 029 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--METABOLIC BREAKDOWN OF BENZO(A)PYRENE BY CELLS OF DIFFERENT MAMMALS
IN VITRO AND THE TOXIC EFFECT OF POLYCYCLIC HYDROCARBONS ON THESE CELLS
AUTHOR--(05)--BELITSKIY, G.A., VASILYEV, YU.M., IVANOVA, O.YU., LAVROVA,
N.A., PRIGOZHINA, YE.L. ✓
COUNTRY OF INFO--USSR
SOURCE--VOP. ONKOL. 1970, 16(2), 53-8
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--HYDROCARBON, METABOLISM, TOXICOLOGY, CAT, CELL PHYSIOLOGY,
EMBRYOLOGY, LEUKOCYTE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/1689 STEP NO--UR/0506/70/016/002/0053/0058
CIRC ACCESSION NO--AP0103455
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0103455

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RAT CELLS SENSITIVE TO THE TOXIC ACTION OF HYDROCARBONS ACTIVELY METABOLIZED BENZO(A)PYRENE (I). METABOLISM WAS SLOWER IN PIG AND CAT CELLS WHICH WERE MORE RESISTANT TO THE TOXIC ACTION OF I AND 7,12-DIMETHYLBENZO(A)ANTHRACENE. NORMAL EMBRYONIC FIBROBLASTS CELLS IN VITRO AND LEUKOCYTES FROM THE PERIPHERAL BLOOD OF HEALTHY HUMANS WERE ALMOST INSENSITIVE TO THE TOXIC ACTION OF THESE HYDROCARBONS AND METABOLISM OF I DEVELOPED MORE SLOWLY. THE SENSITIVITY OF CELLS TO THE TOXIC ACTION OF THE HYDROCARBONS SEEMS TO DEFINITELY CORRELATE WITH THEIR ABILITY TO METABOLIZE THESE COMPOS.

FACILITY: INST. EXP. CLIN. ONCOL., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 539.3:534.1

RAKHMATULIN, I. SH., VASIL'YEV, YU. M., KONENKOV, YU. K.

"Transfer Impedances of Finite Cylindrical Shells Under Random Vibration Perturbation"

Nauchn. raboty in-tov okhrany truda VTsSPS (Scientific Works of the Institutes of Labor Conservation of the All-Union Central Trade-Union Council), 1969, No 59, pp 69-71 (from RZh-Mekhanika, No 5, May 70, Abstract No 5V243)

Translation: The problem of the transfer properties of a bounded closed cylindrical shell with one fastened and one free end on which a kinematic random excitation acts is considered. L. N. Nagornov.

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Graphite

USSR

UDC 621.893

VASIL'YEV, YU. N., Candidate of Chemical Sciences, and YEMEL'YANOVA, V. M.,
and FUGOL', V. A., Candidates of Technical Sciences

"Antifriction Graphite Material"

Moscow, Mashinostroitel', No 2, Feb 74, p 42

Abstract: A new antifriction graphite material ATG, being produced in experimental batches, has been designated for use in friction assemblies operating at temperatures up to 650° C. It contains special compounds that increase its wear resistance at room temperature by approximately 10 times and insure a good lubricating capability at temperatures up to 650° C. Seals made of ATG, 1000-mm diameter, worked for more than 500 hours at 600° C, 4-kgf/cm² load, and 1-m/sec slip rate, and preserved their efficiency. The same was true for ATG piston rings after 100 hours at 600-650° C and a pressure of 3-5 kgf.cm².

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USSR

UDC 546.26-162:541.183

VASIL'YEV, YU. N., and FUGOL', V. A.

"Adsorption of Phosphoric Anhydride on Graphite at 300° C"

Moscow, Neorganicheskiye Materialy, Vol 10, No 1, Jan 74, p 162

Abstract: The magnitude of phosphoric anhydride adsorption was measured on graphite AG-1500 at 300° C in relation to phosphoric anhydride partial pressure in the gas phase. The graphite was placed in a crucible which was suspended in a quartz vessel containing phosphoric anhydride. The vessel had a one-millimeter opening through which the steel wire supporting the crucible passed and had a ratio of vessel to opening diameter which would provide the required phosphoric anhydride partial pressure which was equal to the pressure of the anhydride vapors at the coolest part of the vessel. Two electric heaters were used -- the top heater maintained the graphite at 300° C while the bottom heater created the temperature to the required magnitude of partial pressure. The upper end of the steel wire was fastened to the beam of an analytical balance. Prior to measuring adsorption, the graphite was heated to 300° C by the top heating element to a constant weight (5 g); then the bottom heater was

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VASIL'YEV, YU. N., and FUGOL', V. A., Neorganicheskiye Materialy, Vol 10, No 1, Jan 74, p 162

switched on and graphite weight measured every 30-40 minutes until a constant weight was achieved. It was noted that there was a sharp rise in the absorption curve at values of $\lg P/P_s = -1.5$ which gave evidence of the start of two dimensional condensation. One figure, three bibliographic references.

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USSR

UDC 546.26-162,541.183,539.62

VASIL'YEV, YU. N., and FUGGL', V. A.

"Effect of Phosphoric Anhydride Adsorption on Graphite Friction and Wear"

Moscow, Neorganicheskiye Materialy, Vol 10, No 1, Jan 74, pp 159-161

Abstract: A study was made to explain the phenomenon of the lubricating properties of graphite. The hypothesis was made that, upon heating, phosphates decompose with the liberation of phosphoric anhydride which is adsorbed on the graphite and preserves its lubricating qualities at 300-600° C where the adsorption of water vapors on graphite is not possible. Another goal was to find a means of increasing the wear resistance of antifriction graphite. Antifriction graphite grade AG-1500, produced by electrode technology at 2500° C from petroleum coke, coal coke, and natural coke, was used. Graphs from produced data showed that the coefficient of friction was low for a 1-20% degree of coating with the corresponding rate of wear increasing starting with about a 20% degree of coating when the graphite surface was coated with molecules of phosphoric anhydride and tested at 300° C. The relationship of friction coefficient and wear rate (for a constant load of 5 kG/mm²) to partial pressure of phosphoric anhydride vapors rises sharply when the partial pressure exceeds 1 mm Hg. From mathematical treatment of the experiment the authors

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USSR

VASIL'YEV, YU. N., and FUGOL', V. A., Neorganicheskiye Materialy, Vol 10, No 1, Jan 74, pp 159-161

were able to determine the magnitude of the two-dimensional gas pressure which was numerically equal to lowering surface energy. This value was on the order of 50 dyne/cm. It was concluded that a partial pressure of phosphoric anhydride of about 1.5 mm Hg makes it possible to expand the temperature interval of using antifriction graphite in dry friction from 300 to 600° C. Three figures, nine bibliographic references.

2/2

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USSR

UDC 546.26-162

VASIL'YEV, YU. N. and STARCHENKOVA, N. V.

"Friction and Wear of the New Antifriction Graphite Ag-T in Open Air at Temperatures Up to 600°C"

Moscow, Izvestiya Akademii nauk SSSR, Neorganicheskiye materialy, Vol 8, No 3, Mar 72, pp 451-453

Abstract: A study has been made on the wear intensity and friction coefficient of the new antifriction graphite material Ag-T as a function of loading and temperature. The new material was prepared by impregnating graphite Ag-1500 with phosphorus compounds. The treatment is said to reduce the oxidation rate of graphite in air to a factor of twenty as well as to improve the friction characteristics at high temperatures. The testing temperatures in this study were 150-600°C and the loads --1.5-19 Kg/cm² at rates of 9 m/sec. It is shown that the experimentally derived relationships between the wear intensity of the Ag-T graphite and the applied

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USSR

VASIL'YEV, YU. N., et al, Izvestiya Akademii nauk SSSR, Neorganicheskiye materialy, Vol 8, No 3, Mar 72, pp 451-453

load agree in form with the equation of the fatigue theory of wear. Use was made of the experimental data on friction and wear to calculate the fatigue constant as a function of temperature. It is suggested that the shape of this curve is determined by the adsorption of both water vapors and phosphoric anhydride vapors. (2 illustr., 5 biblio. ref).

2/2

1/2 037 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--EFFECT OF PHOSPHORUS COMPOUNDS ON THE OXIDATION RATE AND RATE OF
WEAR OF SYNTHETIC GRAPHITE -U-
AUTHOR--(02)-VASILYEV, YU.N., YEMELYANOVA, V.M. ✓
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2), 201-6
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--GRAPHITE, PHOSPHORUS COMPOUND, WEAR RESISTANCE, OXIDATION
RATE, OXIDATION INHIBITION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1993/0704 STEP NO--UR/0363/70/005/002/0201/0206
CIRC ACCESSION NO--AP0113568
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--16OCT70

2/2 037

CIRC ACCESSION NO--AP0113568

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

ABSTRACT. THE EFFECT OF P COMPS. ON OXIDN. KINETICS OF GRAPHITE WAS INVESTIGATED. THE MECHANISM OF INCUBATION WAS ALSO STUDIED WITH THE PURPOSE OF SELECTING MORE EFFECTIVE INCUBATORS. THE FOLLOWING PHOSPHATE CONTG. INCUBATORS WERE USED: H SUB3 PO SUB4, P SUB2 O SUB5, H SUB3 PO SUB4-H SUB3 BO SUB3, KH SUB3 PO SUB4, AND CR(H SUB2 PO SUB4) SUB3. P COMPS. DECREASE THE RATE OF WEAR OF GRAPHITE. AN INHIBITION MECHANISM IS PROPOSED.

UNCLASSIFIED

UDC: 666.896

USSR

✓
~~VASILYEV, YU. N.~~, and YEMEL'YANOVA, V. M.

"Effects of Phosphorus Compounds on the Oxidation Rate and Wear Intensity of Synthetic Graphite"

Moscow, Neorganicheskiye Materialy, Vol 6, No 2, Feb 70, pp 201-206

Abstract: Self-lubricating graphite materials are used in friction joints which are suitable for service at high (≥ 1000 -- 1500°C) temperatures in a reducing or a neutral medium. In open air, graphite materials oxidize at an appreciable rate. To reduce the oxidation rate, it is advisable to impregnate the material with phosphorus compounds. This study concerns the effect of various phosphorus compounds on the oxidation rate as well as of the mechanism of inhibition in order to select more effective inhibitors. AG-1500 antifriction graphite was used as the experimental material. The inhibitors were aluminum phosphate, zinc diethyl-orthophosphate, aluminum diethylorthophosphate, polymethylphenylsiloxane with a phosphorus-containing hardening agent, phosphoric acid, phosphorus pentoxide, and others. The graphite was pressure-impregnated with inhibitor solutions in an autoclave. The friction tests were conducted on a laboratory friction machine

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USSR

VASIL'YEV, YU. N., and YEMEL'YANOVA, V. M., Neorganicheskiye Materialy, Vol 6, No 2, Feb 70, pp 201-206

simulating end-type seals. Tables in the original article show graphite oxidation rate as a function of the partial pressure of oxygen, effect of oxidation time of graphite impregnated with aluminum phosphate on oxidation rate, wear intensity as a function of temperature, and rate constants for both inhibited and untreated graphite. It was found that phosphorus compounds reduce the wear intensity of graphite. Various suggestions are made regarding the mechanism of inhibition.

2/2

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USSR

UDC 621.396.6-181.43

ANDROSHCHUK, A. F., VASIL'YEV, YU. P., STAVROVICH, N. V.

"Prospects for Creating Thin-Film Rhenium Resistor Microcircuits"

Tr. VNIi elektroizmerit. priborov (Works of the All-Union Scientific Research Institute of Electrometering Devices), 1971, No 10, pp 108-114 (from RZh-Radiotekhnika, No 7, Jul 72, Abstract No 7V297)

Translation: A study was made of the time stability of thin-film rhenium resistors with a specific resistance of 100 ohms/square. The optimal conditions for depositing the rhenium on the UVN-2M-1 device are developed. The prospects for utilizing rhenium as the material for manufacturing thin-film highly stable resistor microcircuits based on it is proved experimentally.

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USSR

UDC 621.391.84:621.391.883.2

VASIL'YEV, YU. P., SMIRNOV, V. N.

"Some Characteristics of Two-Step Binary-Quantized Signal Detection"

Izv. Leningr. elektrotekhn. in-ta (News of the Leningrad Electrotechnical Institute), 1971, No 98, pp 24-26 (from RZh--Radiotekhnika, No 1, 1972, Abstract No 1A55)

Translation: According to the investigated method, the detection of binary-quantized signals is realized in two steps: comparison of the sum of the signals stored in m soundings with the threshold \bar{z} , and, in the case of satisfaction of the selected criterion, further storage of signals for $N - m$ soundings with subsequent comparison of the total number after N -soundings with the threshold k_0 . The probability of correct detection is defined. It is demonstrated that there is an optimum in the set of values of \bar{z} , m , k_0 and the probability that the noise will exceed the quantization threshold. The bibliography has 1 entry.

1/1

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172 011

UNCLASSIFIED

PROCESSING DATE--02OCT70

TITLE--HEAT STABILIZATION OF POLY(ETHYLENE TEREPHTHALATE) ACCOMPANIED BY AN INCREASE IN MOLECULAR WEIGHT -U-

AUTHOR--(03)-VASILYEV, YU.P., KREMER, YE.B., AIZENSHEIN, E.M.

COUNTRY OF INFO--USSR

SOURCE--KHM. VOLGNA 1970 (2) 15-17

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--THERMAL STABILITY, POLYETHYLENE TEREPHTHALATE, MOLECULAR WEIGHT, CARBONATE, PHENOL, PHOSPHORIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1514

STEP NO--UR/0183/70/000/002/0015/0017

CIRC ACCESSION NO--AP0112508

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--APC112508

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE OPTIMUM AMT. OF (PH) SUB2 CO (I) USED TO INCREASE THE THERMAL STABILITY AND MOL. WT. OF POLY(ETHYLENE TEREPHTHALATE) (II) IS 2PERCENT ADDED TO THE POLYMER MELT, WHICH IS THEN KEPT IN VACUO 20 MIN AT 275DEGREES. PROPOSED REACTION SCHEMES EXPLAINING THESE INCREASES INVOLVE BLOCKING END OH GROUPS AND JOINING POLYMER CHAINS BY CARBONATE BONDS, GIVING PHENOL AS A BY PRODUCT. THE SCHEMES ARE SUPPORTED BY USE OF H SUB3 PO SUB4 OR H SUB3 PO SUB3 TO BLOCK THE END OH GROUPS, WHICH REDUCES THE EFFECTIVENESS OF I, AND BY THE INCREASING CO SUB2 H-OH END GROUP RATIO WITH INCREASING MOL. WT. OF II STABILIZED BY I. STABILIZATION BY PHENOXY RADICALS FROM THERMAL DECOMP. OF I IS SUPPORTED BY LESS EFFECTIVE STABILIZATION BY (RO) SUB2 CO OR PHENOL.

UNCLASSIFIED

USSR

UDC 531.781.087.92

AGARONIK, V. Ya., VASIL'YEVA, A. A., and DAYCHIK, M. L.

"Investigation of Characteristics of High-Temperature Resistance Tensors"

V Sb. "Issled. Temperatur. Napryazheniy" [In the Collection "Investigations of Thermal Stresses"], Moscow, "Nauka", 1972, pp 103-132 (from Referativnyy Zhurnal, No 11, Nov 72, 32. Metrologiya i Ismeritel'naya Tekhnika. Single Issue. Abstract No 11.32.369)

Translation: Methods and results are reported on investigations in the temperature range of up to 650°C of temperature and time characteristics used in high-temperature resistance tensors, wires 30 μ in diam., of Constantan, Nichrome, chromium and nickel containing alloys Kh20Ni30Y_u and Kh20Ni30Y_uD, nickel-molybdenum alloy NiMo23KhY_u, and ferro-chromium-aluminum alloys OKh21Y_u5PM, OKh21Y_u9, and OKh21Y_u10. The principal increment dependences of the electric resistance of wires at isothermic aging were established and the critical temperatures for each alloy were determined above which a stabilization of the specific resistance and of the temperature coefficient of resistance tensors are impossible. The possibility is indicated to create self-thermobalanced resistance tensors in the interval of up to 350°C of chromium and nickel containing alloys Kh20Ni30Y_u and Kh20Ni30Y_uD. Temperature and time characteristics

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USSR

AGARONIK, V. Ya., et al., V Sb. "Issled. Temperatur. Napryazheniy", 1972,
pp 103-132

of resistance tensors of the alloy containing chromium and nickel in the temperature range of up to 500°C are presented. Twenty two illustr., seven tables, thirteen biblio. refs.

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1/2 - 007

UNCLASSIFIED

PROCESSING DATE--02OCT70

TITLE--DETERMINATION OF THE NUMBER OF ELECTRONS TAKING PART IN THE
ELECTROOXIDATION OF STERICALLY HINDERED PHENOLS USING AN ANODIC
AUTHOR--(03)-KORSHUNOV, I.A., VODZINSKIY, YU.V., VASILYEVA, A.A.

COUNTRY OF INFO--USSR

SOURCE--ELEKTROKHIMIYA 1970, 6(2) 277-80

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ELECTROLYTIC OXIDATION, PHENOL, ELECTRODE POLARIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0463

STEP NO--UR/0364/70/006/002/0277/0280

CIRC ACCESSION NO--AP0107069

UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107069

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLARIZATION CURVES WERE OBTAINED ON A REVOLVING ELECTRODE WITH A CLEARLY EXPRESSED AREA OF CRIT. CURRENT. WITH ALL COMPS. STUDIED ONE ELECTRON TRANSITION TAKES PLACE IN A NEUTRAL AND ALK. MEDIUM. ON THE POLAROGRAMS UNDER THESE CONDITIONS THERE IS ONLY ONE WAVE. IN AN ACIDIC MEDIUM 2,4,6-TRI-TERT-BUTYLPHENOL AND 2,6-DI-TERT-BUTYL-4-METHYLPHENOL SHOW 2 CLEARLY SPED. WAVES. THE NO. OF ELECTRONS CALCD. FROM THE 1ST WAVE IS CLOSE TO ONE. ELECTROOXIDN. OF 4,4 PRIME -THIOBIS(6-TERT-BUTYL-2-METHYLPHENOL), 4,4 PRIME -THIOBIS(6-TERT-BUTYL-3-METHYLPHENOL), 2,2 PRIME -THIOBIS(6-TERT-BUTYL-4-METHYLPHENOL), DICRESYLOLPROPANE ON A STATIONARY ELECTRODE AT PH 2 PRODUCES ONE WAVE CORRESPONDING TO A 2 ELECTRON TRANSITION. WITH 2, 2 PRIME -METHYLENEBIS(6-TERT-BUTYL-4-METHYLPHENOL) IN AN ACIDIC MEDIUM, 2 BADLY SPED. WAVES ARE FOUND. WITH A REVOLVING ELECTRODE THE SEPN. OF THE WAVES IS RATHER DISTINCT, HOWEVER. ELECTROCHEM. GENERATION OF PHENOXYL RADICALS SHOWS THAT THE 2ND WAVE APPEARS OWING TO THE OXIDN. OF THE PHENOXYL RADICALS ADSORBED ON THE ELECTRODE.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70
 TITLE--EFFECT OF HERBICIDES ON THE YIELD OF SUNFLOWER AND ON THE QUALITY
 OF THE OIL --U-
 AUTHDR--(03)--BEBEKH, N.D., POPOV, P.S., VASILYEVA, D.S.
 COUNTRY OF INFO--USSR
 SOURCE--KHIM. SEL. KHOZ. 1970, 8(2), 129-30 ✓
 DATE PUBLISHED-----70
 SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
 TOPIC TAGS--HERBICIDE, VEGETABLE OIL/(U)ALIPUR HERBICIDE, (U)AVADEX
 HERBICIDE, (U)IFK HERBICIDE, (U)PROMETRYNE HERBICIDE
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--2000/1368 STEP NO--UR/0394/70/008/002/0129/0130
 CIRC ACCESSION NO--AP0125016
 UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125016

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATIONS WERE MADE IN 1964-6 IN REGIONS WITH VARIOUS SOIL AND CLIMATIC CONDITIONS. THE FOLLOWING HERBICIDES WERE APPLIED: ALIPUR (4 KG), AVADIX (2 KG), LFK (IPC) (12 KG), PROMETRYNE (2 KG-HA). PROMETRYNE DID NOT INHIBIT MICROFLORA, COULD BE DECOMP. DURING 3-4 MONTHS, AND IT DID NOT ACCUMULATE IN SUNFLOWER SEEDS. HERBICIDES WERE APPLIED BEFORE PRESOWING CULTIVATION. ANNUAL WEEDS WERE MAINLY ENCOUNTERED ON SOWN AREAS. AVADIX AND IPC DESTROYED CHIEFLY MONOCOT WEEDS, WHILE PROMETRYNE AND ALIPUR AFFECTED MAINLY DICOTS AND HERBACEOUS PLANTS. INCREASES IN SEEDS YIELD OF 1.5-2 AND EVEN 3 QUINTALS-HA WERE OBTAINED. NO CHANGE IN THE OIL YIELD OR ITS QUALITY WAS FOUND. FACILITY: VSES. NAUCH.-ISSLED. INST. MASLICH. KUL'TUR, KRASKODAR, USSR.

UNCLASSIFIED

USSR

UDC 547.258.2

RAZUVAYEV, G. A., LATYAYEVA, V. N., VYSHINSKAYA, L. I.,
VASIL'YEVA, G. A.

"Reactions of Biscyclopentadienyldiphenyltitanium With Lithium-organic Compounds"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70,
pp 2033-2038

Abstract: Reaction of biscyclopentadienyldimethyltitanium with phenyllithium and biscyclopentadienyldiphenyltitanium (I) with methyllithium occurs with reduction of titaniumorganic compounds, yielding methane, benzene, metallic lithium, cyclopentadienyllithium, and a nonsymmetric compound of divalent titaniumphenylmethyltitanium. When (I) was reacted with benzyltitanium in a 1:1 ratio, benzene, cyclopentadienyllithium, and a nonsymmetric compound of trivalent titanium: cyclopentadienylphenylbenzyltitanium were obtained. Reaction of (I) with three moles of benzyltitanium gave benzene, toluene, dibenzyl, metallic lithium, cyclopentadienyllithium and phenylbenzyltitanium. It is proposed that all of these
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USSR

RAZUVAYEV, G. A., et al, Zhurnal Obshchey Khimii, Vol 40, No 9,
Sep 70, pp 2033-2038

reactions occur through the formation of a reversible onium complex which breaks down through a homolytic break of the Ti-R bond, yielding cyclopentadienyllithium and a nonsymmetric titanium organic compound.

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- USSR

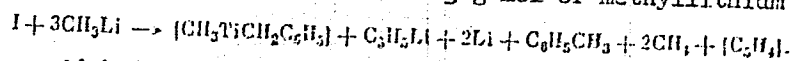
UDC: 547.258.2

RAZUVAYEV, G. A., LATYAYEVA, V. N., ~~VASTIL'YEVA, G. A.~~ VYSHINSKAYA, L. I.,
Scientific Research Institute of Chemistry Affiliated With Gor'kiy State
University imeni N. I. Lobachevskiy

"The Reaction of Dicyclopentadienyldibenzyltitanium With Organolithium Com-
pounds"

Leningard, Zhurnal Obshchey Khimii, Vol 42(104), No 6, Jun '72, pp 1306-1310

Abstract: The authors studied the reaction of dicyclopentadienyl dibenzyl-
titanium $(C_6H_5)_2Ti(CH_2C_6H_5)_2$ (I) with methyl- and benzyl lithium in ratios of
1:1 and 1:3 in an attempt to synthesize new organotitanium compounds. Com-
pound (I) reacted with 1 mole of methyl lithium to form cyclopentadienyllithium,
toluene and methane. The excess methyl lithium caused further reduction of
Ti^{III} to Ti^{II}. Compound (I) reacted with 3 g-mol of methyl lithium as follows:

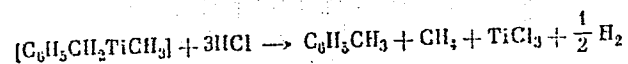


Hydrochloric acid hydrolysis of the asymmetric titanium compound gave toluene,
methane and a salt of Ti^{III}.

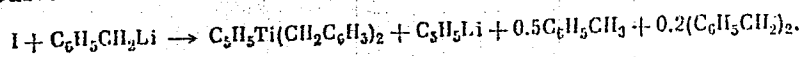
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- USSR

RAZUVAYEV, G. A., et al., Zhurnal Obshchey Khimii, Vol 42(104), No 6, Jun 72,
pp 1306-1310



Attempts to synthesize dibenzyltitanium by thermal dissociation of tetrabenzyltitanium (II) were unsuccessful. Dibenzyltitanium and cyclopentadienyl dibenzyltitanium (III) were synthesized by reacting compound (I) with benzyl-lithium in various ratios.



Product (III) is stable when stored at room temperature for long periods. The reaction of compound (I) with 2 moles of methyl-lithium produced cyclopentadienyl-lithium, toluene and dibenzyl. Metallic lithium was also found.

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1/3 009

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--HEMOPROTEINS. SYNTHESIS OF TWO PEPTIDE FRAGMENTS OF CYTOCHROME C

-U-

AUTHOR--(05)-YEVSTIGNEYEVA, R.P., MIRONOV, A.F., VASILYEVA, G.A., SKIBENKO, L.V., NIKITINA, T.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(3), 661-6

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--BIOLOGIC PIGMENT, IRON COMPOUND, PEPTIDE, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS.

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAHE--1998/0398

STEP NO--UR/0079/70/040/003/0661/0666

CIRC ACCESSION NO--AP0121079

UNCLASSIFIED

2/3 009

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121079

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BOC EQUALS TERT, BUO SUB2 C,Z
 EQUALS PHCH SUB2 O SUB2 C THROUGHOUT. BOC,L,ALA AND N,HYDROXY,
 SUCCINIMIDE (HGSU) TREATED IN DIOXANE WITH DICYCLOHEXYLCARBODIIMIDE 12
 HR GAVE 74PERCENT BOC,L,ALA,OSU, M. 158.3-59DEGREES; SIMILARLY WAS
 PREPD. 80PERCENT BOC,O,BENZYL,L,SER,OSU (I) M. 104-5DEGREES. N,Z,L,GLN
 IN DMF WAS TREATED WITH PYRIDINE AND ET SUB2 N, FOLLOWED BY PIVALOYL
 CHLORIDE AT MINUS 15DEGREES, FOLLOWED IN 15 MIN BY S BENZYL,L, CYSTEINE
 ME ESTER,HCL AND ET SUB3 N, AND THE MIXT, HELD 12 HR, FINALLY AT
 0DEGREES, TO YIELD 86PERCENT N,Z,L,GLN,S,BENZYL,L,CYS,OME (II), M.
 199-200DEGREES. SIMILARLY WAS PREPD. 82PERCENT BENZYL,ESTER ANALOG, M.
 187-9DEGREES. N,Z,L,ALA,OSU AND II.HBR WITH N,METHYLMORPHOLINE IN DMF
 GAVE IN 5 HR 85PERCENT N,Z,L,ALA,L,GLN,S,BENZYL,L, CYS,OME (III), M.
 192.5-4.5DEGREES. SIMILARLY WAS PREPD. 8.5PERCENT
 N,BOC,L,ALA,L,GLN,S,BENZYL,L,CYS,OCH SUB2 PH, M. 152-3DEGREES.
 TREATING III WITH 36PERCENT HBR IN ACOH 0.5 HR, FOLLOWED BY THE
 P,NITROPHENYL ESTER OF N,Z,X,BENZYL,L,CYS IN DMF IN THE PRESENCE OF
 N,METHYLMORPHOLINE, GAVE IN 12 HR, 82.5PERCENT
 N,Z,S,BENZYL,L,CYS,L,ALA,L,GLN,S,BENZYL,L,CYS, OME, M. 218-19.5DEGREES.
 SIMILARLY WAS PREPD. 94PERCENT BENZYL,ESTER ANALOG, M. 205-6.5DEGREES,
 WHICH WITH N SUB2 H SUB4 IN ETOH,DIOXANE GAVE THE HYDRAZIDE, M.
 234-6DEGREES, WHICH TREATED WITH HCL, FOLLOWED BY NANO SUB2, THEN IN 5
 MIN BY BENZYL,ESTER OF N PRIMEIM,BENZYL,L,HISTIDINE AND ET SUB3 N, GAVE
 IN 2 DAYS 80PERCENT N,Z,S,BENZYL,L,CYS,L,ALA,L,GLN,S,BENZYL,L,CYS,N
 PRIMEIM, BENZYL,L,HIS,OCH SUB2 PH, M. 188-9.5DEGREES.

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UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121079

ABSTRACT/EXTRACT--I AND L, GLN, S, BENZYL, L, CYS, OME. HBR WITH
N, METHYLMORPHOLINE IN DMF 12 HR 80PERCENT
N, BOC, O, BENZYL, L, SER, L, GLN, S, BENZYL, L, CYS, OME, M. 131.5-3.5DEGREES,
WHOSE HCL SALT TREATED WITH THE NITROPHENYL ESTER OF CYSTEINE IN DMF
WITH N, METHYLMORPHOLINE, GAVE IN 12 HR 88PERCENT
N, Z, S, BENZYL, L, CYS, O, BENZYL, L, SER, L, GLN, S, BENZYL, L, CYS, OME, M.
192.5-4.5DEGREES. THIS SUSPENDED IN DIOXANE, ETOH AND TREATED WITH N
SUB2 H SUB4 1 DAY GAVE THE HYDRAZIDE, M. 200-2DEGREES, WHICH WITH HCL
AND NANO SUB2 GAVE THE AZIDE, WHICH TREATED IN SITU WITH N PRIMEIM,
BENZYLHISTIDINE BENZYL ESTER AND ET SUB3 N IN ETOAC 2 DAYS GAVE
N, Z, S, BENZYL, L, CYS, O, BENZYL, L, SER, L, GLN, S, BENZYL, L, CYS, N PRIMEIM,
BENZYL, HIS, OCH SUB2 PH, M. 184-6DEGREES. FACILITY: MOSK. INST.
TONKOI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 616.24-003.662-092.9-07:616.24-008.939.6

PAVLOVA, I. V., VASIL'YEVA, G. N., GEL'FON, I. A., and VERETINSKAYA, A. G.,
Institute of Labor Hygiene and Occupational Diseases, Academy of Medical Sciences
USSR, Moscow

"Lung Tissue Proteins in Experimental Silicosis"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 8, Aug 70, pp 25-29

Abstract: The chemical composition of lung tissue protein was studied in normal rats and in rats in which experimental silicosis had been produced. The insoluble hydroxyproline-rich collagen that formed in silicosis differed in composition from the collagen of the skin or other tissue only in that the hexose content was higher, although the hexose content was 15% lower for silicotic as compared to normal lungs. The content of hydroxyproline-containing insoluble proteins did not increase over period of up to 6 mo during the development of silicosis; the increase in weight of the lungs within that time was due to a uniform increase in the amount of all tissue constituents, including soluble proteins. As the content of insoluble collagens started to increase, the concentration of hydroxyproline-containing soluble proteins also increased. Insoluble collagen is identical to the collagen of other tissues in amino acid

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USSR

PAVLOVA, I. V., et al, *Gigiyena Truda i Professional'nyye Zabolevaniya*, No 8,
Aug 70, pp 25-29

composition (including the content of proline, hydroxyproline, and tyrosine) and also did not differ in this respect from the insoluble collagen of normal lungs. The content of mucopolysaccharides increased in silicotic lungs, particularly after 6.5 mo. The changes in collagen stability during silicosis which were detected by morphological and histochemical methods are evidently due primarily to changes in the collagen fiber structure and only secondarily to changes in the protein structure.

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- 71 -

1/2 023

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--SOME PECULIARITIES IN INSOLUBLE COLLAGEN CONTENT OF RAT LUNGS IN
NORMAL ANIMAL AND AT EXPERIMENTAL SILICOSIS -U-

AUTHOR--(02)-VASILYEVA, G.N., MYAGKAYA, G.L.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY MEDITSINSKOY KHIMII, 1970, VOL 16, NR 3, PP 286-289

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--COLLAGEN, LUNG, PULMONARY DISEASE, SILICA, CHEMICAL ANALYSIS,
AMINO ACID, CARBOHYDRATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0148

STEP NO--UR/C301/70/016/003/0286/0289

CIRC ACCESSION NO--AP0120848

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

2/2 023

CIRC ACCESSION NO--AP0120849

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

ABSTRACT. THE DATA ARE PRESENTED ON STUDY OF INSOLUBLE COLLAGEN OBTAINED FROM LUNG TISSUE OF HEALTHY RATS AND FROM THOSE WITH EXPERIMENTAL SILICOSIS. THE CONTENT OF SOME AMINO ACID (HYDROXYPROLINE, PROLINE, TYROSINE) AND CARBOHYDRATES (URONIC ACID AND HEXOSES) IN INSOLUBLE COLLAGEN WAS DETERMINED. IT WAS ESTABLISHED THAT LUNG COLLAGEN OF HEALTHY RATS AS WELL AS THOSE WITH EXPERIMENTAL SILICOSIS DOES NOT DIFFER FROM COLLAGEN IN OTHER TISSUES, BUT HAS THE LESS PROLINE CONTENT AS COMPARED TO THE COLLAGEN IN OTHER TISSUES OF DIFFERENT ANIMALS. THE CHARACTERISTIC FEATURE OF INSOLUBLE LUNG COLLAGEN OF RATS IS THE HIGH HEXOSES CONTENT (AT AVERAGE 2,5PERCENT). HEXOSES CONTENT IN INSOLUBLE LUNG COLLAGEN AT LATER PERIODS OF SILICOSIS DEVELOPMENT WAS DIMINISHED.

FACILITY: INSTITUTE OF LABOUR HYGIENE AND PROFESSIONAL DISEASES USSR ACADEMY OF MEDICAL SCIENCES, INSTITUTE OF RHEUMATISM USSR ACADEMY OF MEDICAL SCIENCES, MOSCOW.

UNCLASSIFIED

USSR

UDC 616.24-003.66-092.9-008.939.629

VASIL'YEVA, G. N., and MYAGKAYA, G. L., Institute of Industrial Hygiene and Occupational Diseases, Academy of Sciences USSR

"Some Characteristics of Insoluble Collagen in the Lungs of Healthy and Silicotic Rats"

Moscow, Voprosy Meditsinskoy Khimii, No 3, 1970, pp 286-289

Abstract: Experiments on rats showed that the dry weight of the lungs in the early stages (1 month) of silicosis was higher than in healthy animals, and that it was three times higher after 13 months. However, the insoluble residue of lung tissue obtained by exhaustive extraction of soluble proteins from lung homogenates was normal. The amount of hydroxyproline, tyrosine, and proline in insoluble lung collagen was the same in both control and experimental animals. A distinguishing feature of insoluble collagen in rat lung is the high hexose content, but it decreased somewhat in the later stages of silicosis (6-1/2 months) to 2.2% (from an original 2.5%).

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1/2 010

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--IMPROVED METHOD FOR PREPARING A CATALYST FOR THE VAPOR PHASE
SYNTHESIS OF VINYL CHLORIDE -U-
AUTHOR--(05)--PANFILOV, A.A., VASILYEVA, I.B., KAMENKO, B.L., GAVRILCHUK,
N.M., KVARTALNOV, V.V.
COUNTRY OF INFO--USSR

✓

SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(3), 177-9

DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CATALYTIC ORGANIC SYNTHESIS, VINYL CHLORIDE, MERCURY COMPOUND,
ACTIVATED CARBON, CHLORINATION, ACETYLENE, CATALYST ACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1662

STEP NO--UR/0064/70/046/003/0177/0179

CIRC ACCESSION NO--AP0125284

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125284

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADSORPTION ISOTHERM OF HGCL
 SUB2 FROM AQ. SOLNS. ON ACTIVATED C IS PRACTICALLY LINEAR AND THE HGCL
 SUB2 CONC. ON THE C INCREASES FROM 0 TO 17PERCENT WHEN THE INITIAL HGCL
 SUB2 IN THE SOLN. IS INCREASED FROM 0 TO 5PERCENT (AT 20DEGREES); THE
 ADSORPTION IS FAIRLY RAPID AND A STEADY STATE IS ESTABLISHED AFTER
 SIMILAR TO 1 HR. A CATALYST CUNTG. 10PERCENT HGCL SUB2 WAS PREPD. BY
 PASSING A 3PERCENT AQ. SOLN. OF HGCL SUB2 THROUGH A COLUMN PACKED WITH
 ACTIVATED C, AND DRYING THE PRODUCT IN CONTACT WITH AIR HEATED TO
 120DEGREES. IN THE HYDROCHLORINATION OF C SUB2 H SUB2 AT A C SUB2 H
 SUB2:HCL VOL. RATIO OF 1:1.3 AND 180DEGREES THE ACTIVITY OF THE CATALYST
 INCREASED GRADUALLY WITH TIME AND THE MAX. ACTIVITY WAS REACHED AFTER
 120 DAYS (AT A FLOW RATE OF 1100 VOL. -HR); THE MAX. ACTIVITY WAS THEN
 SUSTAINED FOR UP TO 8 MONTHS, AND THE DEGREE OF CONVERSION OF C SUB2 H
 SUB2 UNDER THOSE CONDITIONS WAS NEARLY 80PERCENT.

UNCLASSIFIED

USSR

Immunology

UDC 615.371.078

VASIL'YEVA, I. G., SEMENOV, V. F., GRACHEV, V. P., and POPOVA, V. D., Central Institute for the Advanced Training of Physicians, Institute of Poliomyelitis and Viral Encephalitides, Academy of Medicine USSR

"Potential Evaluation of Vaccines on the Basis of Autoantibody Formation"
Moscow, Laboratornoye Delo, No 6, 1972, pp 368-369

Abstract: Investigations were conducted with nine commercial vaccines to determine whether autoantibodies are a possible complication in vaccine reactions. Experimentally, smallpox was introduced into scarified skins of rabbits, while 200-300 g guinea pigs received subcutaneously 1 ml of Vi antigen, measles vaccine, live polio virus, typhoid vaccine, NIISI vaccine, Fermi's (rabies) vaccine, monovalent pertussis vaccine, or AKDS vaccine. When tested with autologous erythrocytes, the results showed that the smallpox vaccine caused the appearance of autoantibody in all 15 rabbits immunized. Measles, polio, typhoid, and NIISI elicited the appearance of antierythrocyte antibody in 21%, 33%, 50%, and 58% of the guinea pigs immunized, respectively. Only the Vi antigen vaccine did not induce the formation of autoantibodies. In the case of the polio and measles vaccines autoantibodies appeared in 2-3 weeks and persisted until the 30th postimmunization day. Autoantibodies to erythrocytes disappeared in 1.5 months in animals immunized with Fermi's or smallpox vaccines,
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USSR

VASIL'YEVA, I. G., et al., *Laboratornoye Delo*, No 6, 1972, pp 368-369

while persisting for over 8 weeks in NIISI immunized animals. In addition, all animals formed antiliver antibodies; furthermore, Fermi's vaccine, monovalent pertussis, and AKDS elicited antibodies against splenic tissue. Autoantibodies against the kidney were induced by Fermi's, NIISI, and AKDS vaccines, anti-bodies against the heart were formed by animals immunized with Fermi's vaccine and AKDS, antibodies against lung tissue were formed by animals immunized with AKDS and monovalent pertussis vaccine, and antibodies against the brain were formed by guinea pigs immunized with Fermi vaccine. The data indicate that the formation of autoantibodies following vaccination is a real phenomenon and constitutes an important parameter in the evaluation of vaccine reaction.

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USSR

UDC 669.715'721+569.715'3]:621.785

VASIL'YEVA, I. N., and GUDCHENKO, A. P.

"Effect of Heat Treatment of Aluminum Alloys on Their Porosity"

Tekhnol. legkikh splavov. Nauch.-tekhn. byul. VILSa (Technology of Light Alloys. Scientific and Technical Bulletin of All-Union Institute of Light Alloys), 1971, No 4, pp 41-17 (from RZh-Metallurgiya, No 1, Jan 72, Abstract No 11716 by I. Yeroshenkova)

Translation of Abstract: The authors studied Al-Mg alloys with 3, 5, 8, 10% Mg and Al-5% Cu. The porosity of alloys that have undergone heat treatment increases in comparison with the as-cast state, and the size of individual pores and the degree of porosity development increase. In Al-10% Mg alloy the average pore size was 0.03-0.05 mm before heat treatment and 0.12-0.2 mm afterwards. Porosity depends on alloy composition. In Al-10% Mg alloy porosity increases four to sevenfold in comparison with Al-3-5% Mg alloys. The higher the initial gas content of the melt, the more porosity increases on heat treatment; and the higher the magnesium content, the higher the gas content. Porosity increases during heat treatment with an increase in the cooling rate of the casting during crystallization. One illustration.

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USSR

GUDCHENKO, A. P., VASIL'YEVA, I. N.

UDC 669.71.042.6

"Effect of the Mold Moisture and Primary Gas Content of AL2 and AL9 Alloys on the Porosity and Tightness of the Castings"

Usadochn. protessy v splavakh i otlivkakh -- V sb. (Shrinkage Processes in Alloys and Castings -- collection of works), Kiev, Naukova Dumka Press, 1970, pp 285-288 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G187)

Translation: An analysis of the results of studying the dependence of the tightness and mechanical properties of the alloys on the gas saturation of the melt, the mold moisture, and the thickness of the casting cross section is presented. A test procedure is given.

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PROCESSING DATE--30OCT70

UNCLASSIFIED

172 016

TITLE--COMPOSITION FOR HERMETIZATION -U-

AUTHOR--(05)-ERLIKH, I.M., GITINA, I.G., PETROV, G.N., RAPPOPORT, L.YA.,
VASILYEVA, I.N.

COUNTRY OF INFO--USSR

SOURCE--USSR 265,344

REFERENCE--UTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970;

DATE PUBLISHED--09MAR70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--HERMETIC SEAL, POLYGLYCOL, PLASTICIZER, ORGANIC ISOCYANATE,
PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3002/1459

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128858

UNCLASSIFIED.

2/2 016

CIRC ACCESSION NO--AA0128858

UNCLASSIFIED

PROCESSING DATE--30OCT70

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

ABSTRACT. THE TITLE COMPN., WITH ENHANCED MECH. STABILITY, ELASTICITY, AND ADHESION, IS BASED ON UNSATD. POLYGLYCOLS OF REGULAR STRUCTURE AND CONTAINS A PLASTICIZER, POLYISOCYANATES, AND AN ACTIVATING SYSTEM.

I., POLYTECHNIC INSTITUTE, LENINGRAD.

FACILITY: KALININ, M.

UNCLASSIFIED

USSR

UDC 576.851.71.095.38:576.895.42(575.3)

PCHELKINA, A. A. and VASIL'YEVA, T. S., Institute of Epidemiology and Microbiology imeni N. F. Gamaleya, Academy of Medical Sciences SSSR, and Institute of Medical Parasitology and Tropical Medicine imeni Ye. I. Martzinovskiy, Ministry of Health USSR

"Isolation of the Agent of Q Fever from the Tick *Alectorobius tartakovskiy* in Tadzhikistan"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, No 5, 1971, pp 620-621

Abstract: In 1967-1969, three strains of *Rickettsia burnetii* were isolated from *Alectorobius tartakovskiy* ticks for the first time in Tadzhikistan. Study of the biological and antigenic properties of the strains showed them to be alike and similar to *R. burnetii* isolated from man and wild animals in Turkmenistan. The incubation period of the strains in guinea pigs was 10 to 12 days, while the febrile period lasted 7 or 8 days. Regardless of the mode of inoculation, the animals developed the generalized form of the infection. Autopsies performed during the febrile period revealed the pathological-anatomical picture characteristic of Q fever. Smears and impressions from the membranes of the ovaries, liver, and spleen contained masses of *Rickettsia*. Intraperitoneal infection of white mice resulted in an acute fatal rickettsiosis of the peritoneal type.

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UDC 595.421-155.78

USSR

VASIL'YEVA, I. S., Institute of Medical Parasitology and Tropical Medicine
Imeni Ye. I. Martsinovskiy, Ministry of Health USSR, Moscow

"Hosts of the Tick *Alectorobius tartakovskiy* Ol. (Ixoidae, Argasidae). 3.
Factors That Affect the Role of Individual Animal Species as Tick Hosts"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, No 5, 1971,
pp 577-581

Abstract: The tick *Alectorobius tartakovskiy* is the most widespread vector of tickborne spirochetosis in Central Asia. A study of a natural focus of this disease in South Tadzhikistan showed that the role of various animal species in sustaining *A. tartakovskiy* populations can be assessed from five factors: (a) food value of an animal for the tick; (b) attractiveness of an animal for the tick (warm-blooded are preferred); (c) possibility of the tick's attaching itself to an animal (the thicker the skin, the fewer ticks attach themselves to it); (d) the degree of contact of an animal with the tick (the likelihood of the tick and animal meeting when their ranges coincide); (e) abundance of an animal. Analysis of these factors makes it possible to determine which of the many hosts of *A. tartakovskiy* are accidental and which are potential. Among the accidental hosts are the legless

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USSR

VASIL'YEVA, I. S., Meditsinskaya Parazitologiya i Parazitarnyye Bolezni,
No 5, 1971, pp 577-581

lizard, roller, common sparrow, Turkestan agama (species of lizard), and
bee-eater. Potential hosts in the region studied include the red-tailed
gerbil, house mouse, hedgehog, turtle, gekko, steppe agama, and toad. The
proposed method is considered superior to the precipitation test as a means
of detecting tick hosts.

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- 17 -

5

USSR

UDC 911.3.616.9.576.895.42(42+57)

BABENKO, L. V., NAUMOV, R. L., USPENSKIY, I. V., MERINOV, V. A., RUBINA, M. A., VASIL'YEVA, I. S., IOFFE, I. D., OBLESOVA, L. N., and RAZUMOVA, I. V.

"A Biological Study of Ixodes Ticks -- Disease Vectors -- and a Scientific Study of Countermeasures in Natural Foci"

V sb. Materialy Nauchn. konferentsii, posvyashch. 50-letiyu In-ta med. parazit. i tropich. med., 1970 (Proceedings on the Conference Commemorating the 50th Anniversary of the Institute of Medical Parasitology and Tropical Medicine 1970 -- collection of works), Moscow, 1970, pp 52-53 (from RZh-36. Meditsinskaya Geografiya, No 1, Jan 71, Abstract No. 1.36.67)

Translation: This study has four objectives: a) study of the ecology and population biology of the prevalent Ixodes and Dermacentor tick species; b) complex study of biological laws in natural foci of tickborne encephalitis and in one focus of Asian tickborne rickettsiosis (in Krasnoyarskiy Kray); c) study and practice of countermeasures against tickborne encephalitis for residents of large, newly-constructed housing developments in the hill rayons of Krasnoyarskiy Kray; and d) study of the effect of pesticides on ticks (*I. persulcatus*, for example). A proposal is advanced for research on the

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USSR

BABENKO, L. V., et al, V sb. Materialy Nauchn. konferentsii, posvyashch. 50-letiyu In-ta med. parazitol. i tropich, med., 1970 (Proceedings on the Conference Commemorating the 50th Anniversary of the Institute of Medical Parasitology and Tropical Medicine 1970 -- collection of works), Moscow, 1970, pp 52-53 (from RZh-36. Meditsinskaya Geografiya, No 1, Jan 71, Abstract No 1.36.67)

characteristics of the population biology, morphology, and physiology of ticks within various geographic conditions.

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1/2 020 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--ON FOOD PROVIDERS FOR ALECTOROBIOUS TARTAKOVSKIYI OL. TICK
(IXODOIDEA, ARGASIDAE). EXPERIMENTAL DATA. -U-
AUTHOR--VASILYEVA, I.S. ✓
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL
39, NR 1, PP 34-39
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--TICK, BIOLOGIC REPRODUCTION

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/0088 STEP NO--UR/0358/70/039/001/0034/0039
CIRC ACCESSION NO--AP0103768
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0103768

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTAL COMPARISON OF DIFFERENT SPECIES OF WARM BLOODED AND COLD BLOODED ANIMALS AS HOSTS FOR ALECTOROBIOUS TARTAKOVSKYI TICK REVEALED FULL VALUE OF FEEDING ON COLD BLOODED ANIMALS. IN FEEDING ON WARM BLOODED AND COLD BLOODED ANIMALS NO DIFFERENCES WERE OBSERVED IN THE TIME OF ATTACHMENT OF TICKS, TIME AND DEGREES OF THEIR ENGORGEMENT, TIME OF EGG LAYING AND NUMBER OF EGGS LAYED. THE ONLY DIFFERENCE BETWEEN WARM BLOODED AND COLD BLOODED ANIMALS WAS FOUND IN THE RATIO OF TICKS PUT ON ANIMALS AND ENGORGED TICKS. HOWEVER, ON COLD BLOODED ANIMALS WITH THIN SOFT SKIN (GECKO) THE PER CENT OF ENGORGED TICKS DID NOT DIFFER FROM THAT ON WARM BLOODED. WARM BLOODED ANIMALS ARE MORE ATTRACTIVE FOR AL. TARTAKOVSKYI THAN COLD BLOODED, HOWEVER, THE LATTER APPEAR TO PLAY A CONSIDERABLE ROLE IN FEEDING THE TICKS OWING TO THEIR ACCESSIBILITY AND FULL VALUE AS FOOD PROVIDERS. WITH LOW POPULATION DENSITY OF THE WARM-BLOODED, COLD BLOODED, IN PARTICULAR, TORTOISE, MAY BE THE MAIN HOST OF THE TICKS.

UNCLASSIFIED

USSR

UDC 911.3.616.831-002.576.895.42(474.2)

VASIL'YEVA, K. A., and CHERNYSHEVA, M. G.

"Some Results of a Study on the Southeast Natural Focus of Tickborne Encephalitis in Estonian SSR"

Esti Pollumaj, Akad. tead. tööde kogumik, Sb. nauchn. tr. Est. s.-kh. akad. (Collection of Scientific Works, Estonian Agricultural Academy), 1970, No 70, pp 122-124 (from RZh-36. Meditsinskaya geografiya, No 1, Jan 71, Abstract No 1.36.88 by V. Maslovskaya)

Translation: In the 1950-1969 period, the incidence of tickborne encephalitis was insignificant -- from one to ten cases a year. This incidence, however, was always in the southeast rayons, and in the last years was registered only in Tartyskiy rayon. Five species of Ixodes ticks were found, with Ixodes persulcatus the chief vector. During the 1968-1969 investigation of blood serum in five rayons of SE Estonian SSR, the hemagglutination inhibition test showed antihemagglutins in titres from 1:10 to 1:40 in 33.3±5% of cases. The population of Kokhtla-Yrva had a great number of positive reactions -- 61.5±14% of all tests. This indicates the possible spread of tickborne encephalitis virus in Estonia.

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USSR

UDC 669.3'5':621.78

GOREV, K. V., TOPPENETS, R. L., and VASIL'YEVA, L. A., Physico
Technical Institute, Academy of Sciences Belorussian SSR

"Study of Recrystallization Annealing of 3.2% Titanium Alloy of
Copper"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh
Nauk, No 4, 1971, pp 33-37

Abstract: A study was made of transformations occurring in
Cu + 3.2% Ti alloy during annealing at 350, 450, and 600°C. By
varying the specific electrical resistance and the width of the
interference lines, the nature of the processes occurring during
annealing of aged and deformed alloy was determined (the aging
times were 1 and 5 hours at 400°C with a degree of deformation
of 0, 20, 30, and 50%, and the annealing, prior deformation
of the aged alloy by 20 and 30% retards decomposition of the solid
solution, and deformation by 50% intensifies it. It was proposed
that the variation of the indicated characteristics takes place
mainly as a result of completion of aging of the alloy and not
1/2

- 71 -

USSR

GOREV, K. V., et al., Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 4, 1971, pp 33-37

as a result of the deformation recovery process. It was pointed out that simultaneously with the variation of the specific electrical resistance, the width of the interference lines of the alloy matrix characterizing both the level of microstresses in the matrix and the degree of inhomogeneity of it with respect to content of alloying element varies. The curves for variation of the line width as a function of annealing time are analogous to the curves for variation of the specific electrical resistance. The variation of the line width is greater the higher the annealing temperature of the alloy. The nature of the curves for an annealing temperature of 600°C indicates the beginning of the recrystallization process.

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VASIL'YEVA, L.F.

SPRS 59208
6-73

2

K-14. ALLOWING THE GALLIUM ARSENIDE LAYERS WITH TIN IN THE GAS TRANSPORT METHOD

[Article by Yu. G. Sidorov, L. F. Vasil'yeva, Nomyalitski; Novosibirsk, III Sibirskiy nauchnyy tsentr, Sibirskiy Poluprovodnikoviy Kristalloy Fizicheskii Institut, Novosibirsk, 12-17 June 1972, p 163]

When alloying gallium arsenide layers with tin, the electron concentration was obtained from 10¹⁹ cm⁻³ to 10¹⁸ cm⁻³. The results are compared with the equilibrium level of alloying calculated from thermodynamic data. A study was made of the possibility of using tin to grow multilayered structures.

VASIL'YEVA, L.F.

SPRS 59308
6-73

3

VII-4a. POSSIBLE SOURCE OF UNCONTROLLED ALDOTTING OF EPITAXIAL LAYERS OF
CALCIUM ARSENIDE IN THE GAS TRANSPORT METHOD

Article by Yu. G. Sidory, S. A. Prokhorik, L. F. Vasil'yeva, Novosibirsk;
Novosibirsk, III Sbornik no. Protsessy Rosta i Shtetn Poluprovodnikov
Krishtallov i Plazm, Russian, 12-17 June, 1972, p 90

This paper was devoted to determining causes as a result of which non-
reproducibility of the properties of the gallium arsenide layers and the growth
conditions of high-quality layers in the gas transport method take place. A
study was made of the effect of different parameters (the deposition temperature,
the gas phase composition) on the electrophysical properties of the layers.
The possibility of alloying the epitaxial layers of gallium arsenide with
oxygen is discussed.

VASIL'YEVA, L.G.

UDC 621.396.628:523.164
DETERMINATION OF THE POLARIZATION CHARACTERISTICS OF THE LARGE
PULSAR RADIOTELESCOPE

Article by N.A. Yezhikina, N.S. Bakhvalov, L.G. Vasil'yeva,
N.A. Solovieva, and A.V. Tomilova of the Leningrad Branch of
the Special Astrophysical Observatory of the USSR Academy of
Sciences: Moscow, Izvestiya Vsesoyuznogo nauchno-issledovatskogo
radiotekhnicheskogo tsentra, No. 3, 1973, submitted 11 October
1972, pp. 669-675]

SO: IPRS 59985
7 SEP 73

(12)

CA/20L

Investigations of radio-frequency radiation sources try
to determine the distribution of the radiance intensity in all
Stokes' parameters I , Q , U , and V . However, both the medium in
which the radio-frequency radiation is propagated and the an-
tenna and receiver affect the true parameters of the source I_0 ,
 Q_0 , U_0 and V_0 . Therefore, the Stokes' parameters at the
receiver equipment output differ from the sources' param-
eters and are linked with the following relationship [1]:

$$S_{rec} = M_1 M_2 S_{src} \quad (1)$$

Here $S_{src} = \begin{pmatrix} I_{src} \\ Q_{src} \\ U_{src} \\ V_{src} \end{pmatrix}$ is the vector parameter of Stokes' output
radiation;

$S_{rec} = \begin{pmatrix} I_{rec} \\ Q_{rec} \\ U_{rec} \\ V_{rec} \end{pmatrix}$ is the Stokes' vector parameter of the input or
radiation being studied, and

M_1 , M_2 , and M_3 are the matrix operators, with matrix M_1
describing the effect of the receiver-amplifying equipment and
of the input circuit on the radiation being studied, M_2 the effect
of the antenna system, and M_3 the effect of the medium between
the source and the observer.

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--SOLID PHASE REACTIONS IN HOLMIUM OXIDE FERRIC OXIDE AND
PRASEODYMIUM OXIDE FERRIC OXIDE SYSTEMS -U-
AUTHOR--(03)-KNIGA, M.V., VASILYEVA, L.I., SKOMOROKHOVA, A.I.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(5), 1394-7 ✓
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--SOLID STATE, CHEMICAL REACTION, FERRIC OXIDE, METAL OXIDE,
HOLMIUM COMPOUND, PRASEODYMIUM COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3006/1403 STEP NO--UR/0078/70/015/005/1394/1397
CIRC ACCESSION NO--AP0135077
UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0135077
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PRFED SUB3 AND HOFED SUB3 (I),
HAVING PEROVSKITE STRUCTURE, FORM IN THE TITL SYSTEMS AT 1:1 MOLE RATIO
OF THEIR COMPONENTS AND AT 800-1200DEGREES. THE HO SUB2 O SUB3 SYSTEM
FORMS GARNET, HO SUB3 FE SUB5 O SUB12 (II), AT THE 3:5 COMPONENT RATIO.
FORMATION OF I PRECEDES THE FORMATION OF II. FACILITY:
BELORUSS. GOS. UNIV. IM. LENINA, MINSK, USSR.

UNCLASSIFIED

1/2 .035 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--EFFECT OF MOLAR RATIOS OF COMPONENTS ON THE KINETICS OF THE
REACTION OF PRASEODYMIUM AND IRON OXIDES -U-
AUTHOR--(02)-KNIGA, M.V., VASILYEVA, L.I.
COUNTRY OF INFO--USSR
SOURCE--VESTSI AKAD. NAVUK BELARUS. SSR, SER. KHIM. NAVUK 1970, (1), 50-3
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHEMICAL REACTION KINETICS, PRASEODYMIUM COMPOUND, IRON OXIDE,
HEAT OF FORMATION, IR SPECTRUM, X RAY ANALYSIS, SPECTROSCOPIC ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0554 STEP NO--UR/0419/70/000/001/0050/0053
CIRC ACCESSION NO--AP0105539
UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105539

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UPON HEATING TO 800-1300DEGREES, MIXTS. OF PR SUB2 O SUB3 AND FE SUB2 O SUB3 IN RATIOS OF 1:1, 1:3, 3:1, AND 3:5 GAVE PRFEO SUB3. THE REACTION WAS ANALYZED BY X RAY AND IR SPECTROSCOPY AND PHASE STUDIES. REGARDLESS OF THE STOICHIOMETRY, PRFEO SUB3 WAS ALWAYS OBTAINED. FOR ALL OF THE REACTION RATIOS, THE HEAT OF FORMATION WAS 44-7 KCAL-MOLE, HOWEVER, THE RATIOS AFFECTED THE DIFFERENT REACTIONS RATES INCREASING IN THE FOLLOWING ORDER: 3:1, 1:1, 3:5, 1:3, PR SUB2 O SUB3:FE SUB2 O SUB3.

UNCLASSIFIED

1/2 035

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--ANALYSIS OF THE ISOTOPIIC COMPOSITION OF SOME COMPOUNDS USING
INFRARED ABSORPTION SPECTRA -U-

AUTHOR--(02)-VASILYEVA, L.M., DEMIDENKOVA, I.V.



COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12 (2), 290-4

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--IR ABSORPTION SPECTRUM, ISOTOPE, IR SPECTROSCOPY,
SPECTROPHOTOMETER, NITROGEN OXIDE, METHANOL, BORON COMPOUND, CHLORINE
COMPOUND, TOLUENE, PYRIDINE/(U)IKS12 SPECTROPHOTOMETER, (U)IKS14
SPECTROPHOTOMETER, (U)IKS22 SPECTROPHOTOMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1997/0318

STEP NO--UR/0368/70/012/002/0290/0294

CIRC ACCESSION NO--AP0119305

UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119305

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INFRARED SPECTROSCOPY WAS USED TO DET. IMPURITIES IN COMPOS. CONTG. D, PRIME10 B, PRIME15 N, AND PRIME18 D. SPECTRA WERE RECORDED WITH IKS-12, IKS-14, AND IKS-22 SPECTROPHOTOMETERS. FOUR DIFFERENT METHODS WERE USED. THE 1ST, BASED ON THE COMPENSATION SPECTRUM OF THE INVESTIGATED COMPD. AGAINST A REF. COMPD. WITH NATURAL CONTENT OF ISOTOPES, WAS USED TO DET. PRIME15 N SUB2 O AND PRIME14 N SUB2 O IN PRIME15 N, MEGH IN MEOD, AND PRIME11 BCL SUB3 IN PRIME10 BCL SUB3. THE 2ND METHOD BASED ON PREPN. OF CALIBRATION CURVES IN THE COORDINATES OF ABSORBANCE VS. CONCEN. FOR STD. SMPLES OF INVESTIGATED COMPOS. AND PURE REF. COMPOS. OR SAMPLES WITH KNOWN AMT. OF IMPURITY ADDED WAS USED TO DET. RHO, NITROTOLUENE AND MICRON, NITROTOLUENE, D IN RHO, NITROTOLUENE, D SUB1 AND PYRIDINE, PYRIDINE, 2, D, AND PYRIDINE, 3, D IN PYRIDINE, 4, D. THE THIRD METHOD, BASED ON ADDN. OF INTERNAL STD., WAS APPLIED TO DETN. OF SERINE IN SERINE, D SUB1. THE LAST METHOD DEALT WITH COMPOS. OBTAINED BY ION EXCHANGE METHODS AND WAS USED FOR DETN. OF H IN ND SUB3 AND H IN C SUB6 D SUB6. THE DETAILED DATA CONCERNING CONCNS., CUVETTES, SOLNS., SPECTRUM RANGE, ETC. ARE GIVEN IN A TABLE.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ANTITUMOR ACTIVITY OF NEW PREPARATIONS OF THE CHLURETHYLAMINE GROUP
NOT INFLUENCING HAEMOPOESIS -U-
AUTHOR--(05)-VASILYEVA, L.S., DYACHKOVSKAYA, R.F., SCHUPPE, N.O.,
PARKHOMENKO, I.I., SURKOVA, N.I.
CCOUNTRY OF INFO--USSR
SOURCE--IZVESITYA AKADEMII NAUK SSSR, SERIYA BIOLOGICHESKAYA, 1970, NR 3,
PP 459-463
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTITUMOR DRUG EFFECT, HEMATOPOIESIS, AMINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY KEEL/FAME--3001/1608

STEP NO--UR/0216/70/000/003/0459/0463

CIRC ACCESSION NO--AP0127099

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127099

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANTITUMOR ACTION OF
CHLORALHYDRATES N,N,DI(2,CHLORETHYL)PINOCAMFILAMINE (I),
N,N,DI(1,CHLORETHYL)PINILAMINE(II) AND 3,5,DI,TRETBUTYL,4,OXI,N, NI,DI
(BETA,DHLORETHYL BENZILAMINE) (III) WAS STUDIED BOTH IN EXPERIMENTS ON
ANIMALS AND IN TISSUE CULTURE. IT WAS FOUND THAT THE COMPOUND II
DISPLAYED MAXIMAL ACTIVITY. THE INFLUENCE OF THE COMPOUND II ON THE
PROCESS OF PROTEIN BIOSYNTHESIS IN TUMOR CELLS WAS REGISTERED. IT WAS
FOUND THAT THE SUBSTANCES STUDIED DO NOT INFLUENCE NORMAL HAEMOPOESIS.
FACILITY: INSTITUTE OF CHEMICAL PHYSICS, ACADEMY OF SCIENCES,
USSR.

UNCLASSIFIED

USSR

UDC: 621.372.824

AVERBUK, M. E., VASIL'YEVA, L. V.

"A Coaxial Line of Elliptical Cross Section With Two-Layer Filling"

V sb. Vopr. elektron. tekhniki (Problems of Electronic Technology--collection of works), Saratov, 1971, pp 98-104 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6B152)

Translation: The dispersion equation of a two-layer line is found by means of difference functions in the general case of a laminar isotropic coaxial line of elliptical cross section. Five illustrations, bibliography of nine titles. Resumé.

1/1

- 14 -

1/2 014 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--A STARSHAPED SOIL MICROORGANISM -U-
AUTHOR--VASILYEVA, L.V. ✓
COUNTRY OF INFO--USSR
SOURCE--IZVESTIYA AKADEMII NAUK SSSR, SERIYA BIOLOGICHESKAYA, 1970, NR 2,
PP 308-309
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SOIL MICROBIOLOGY, AEROBIC CULTURE, MORPHOLOGY

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1990/1416 STEP NO--UR/0216/70/000/002/0308/0309
CIRC ACCESSION NO--AP0109478

UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--02OCT70
CIRC ACCESSION NO--AP0109478
ABSTRACT/EXTRACT--(U) GP-0-. ABSTRACT. A NEW SOIL MICROORGANISM HAVING
THE FORM OF A SIX BRANCHED STAR WAS OBTAINED IN PURE CULTURE. A SHORT
DESCRIPTION IS GIVEN OF THE METHOD OF ISOLATION AND THE MORPHOLOGY OF
THE ORGANISM IN QUESTION. FACILITY: INSTITUTE OF MICROBIOLOGY.
ACADEMY OF SCIENCES USSR.

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UNCLASSIFIED

USSR

UDC 621.385.632

✓
AVERBUKH, M.E., VASIL'YEVA, L.V.

"To A Theory Of Circulator Lead Out Of The Energy Of A TWT To Connected Spirals"

V sb. Vopr. elektron. tekhniki (Problems Of Electronic Technology--Collection Of Works), Saratov, 1970, pp 127-131 (from RZh--Elektronika i yeye primeneniye, No 6, June 1970, Abstract No 6A139)

Translation: The paper derives the dispersion equations of axially symmetric slow waves in connected coaxial spirals adjacent from the outside and inside to longitudinally magnetized ferrite media, in the absence of losses. Evaluating computing for the dispersion are conducted. Summary.

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172 006 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--TEMPERATURE CONDITIONS OF MINERALIZATION IN ICELAND SPAR DEPOSITS
-U-
AUTHOR--VASILYEVA, M.S. ✓
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., GEOL. RAZVED. 1970, 13(2), 49-54
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--MINERAL DEPOSIT, CALCIUM CARBONATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0534 STEP NO--UR/0151/70/013/002/0049/0054
CIRC ACCESSION NO--AP0124229
UNCLASSIFIED

2/2 006

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0124229

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONTG. 2 LARGE DEPOSITS OF ICELAND SPAR, THE LENS SHAPED, GLOBULAR, MASSIVE BEDS OF BASALTIC ALVAS ARE IDENTIFIED LOCALLY AS THE YOUNGEST ("NIDYM") SERIES OF THE LOWER TRIASSIC. THEIR STRUCTURE INDICATES THAT THEIR ORIGINAL LOCATION WAS ON THE BOTTOM OF A SEA BASIN. THE LAVAS HAVE BEEN COOLING SLOWLY UNDER A WATERPROOF CRUST WITH FORMATION, ON SHRINKAGE OF THE INDIVIDUAL GLOBULAR PILLOWS, OF MANY CAVITIES AND PASSAGES. THE POSTMAGMATIC HYDROTHERMAL SOLNS. IN THEM REACTED WITH CHEM. COMPOS. OF THE LAVA. THE CYCLE CONSISTED MAINLY OF 2 STAGES: (A) SULFIDE CHALCEDONIC AND (B) QUARTZ ZEOLITE CALCITIC. IN THE LATTER STAGE, THE CRYSTN. OF THE ICELAND SPAR WAS IN 2 FORMS, RHOMBOHEDRAL AND SCALENOHEDRAL. THE ICELAND SPAR HAS BEEN FORMED IN THE CENTER OF 4 VEIN ZONES: CHALCEDONIC, SAPONITIC (FE, MG HYDROUS SILICATE PPTN), ZEOLITIC, AND CALCITIC (FROM THE VEIN WALLS TO THE CENTER, RESP.). THE BEST CRYSTD. SPECIMENS ARE FOUND IN THE CENTRAL PARTS OF THE LARGEST CAVITIES AND IN THE WIDENED SECTIONS OF VEINS. THE GAS INCLUSIONS IN THE ICELAND SPAR ARE SHOWN BY THE AV. RATIO FOR CO SUB2-(N SUB2 AND RARE GASES) AS 3:1. THE CHEM. COMPN. OF THE ZONE FORMING SOLNS. AS THEY CHANGE FROM VEIN BORDERS TO THE CENTRAL ZONE WAS DETD. BY THE PRESENCE OF THE MINERALS QUARTZ (SI), APOPHYLLITE (K, CA, SI, F), ANALCIME (NA, AL, SI), AND CALCITE (CA, CL).
 FACILITY: MOSK. GEOLOGORAZVED. INST. IM. URDZHONIKIDZE, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 534-14

RADETSKIY, K. K., VASIL'YEVA, M. V.

"Model Unit for Study of the Correlation Characteristics of Echo-Signals"

Tr. Akust.in-ta (Works of the Institute of Acoustics), 1971, No 16, pp 37-43 (from RZh:Elektronika i yeye primeneniye, No 1, Jan 72, Abstract No 1A644)

Translation: A unit for measurement of the cross-correlation function of direct and reflected signals under model conditions is described. A pseudo-random signal of long duration is used as a probing signal in the unit. The device for generation of the pseudo-random sequences consists of a digital shift register and a modulo two summator. The formed and pseudo-random sequence is subjected to filtration and subsequent heterodyning in the proper frequency region. The unit contains a master oscillator, a transmitting channel, a receiving channel, and a measuring device. It is shown that the autocorrelation function of the probing signal has a damped oscillatory character. A block diagram of the pseudo-random sequences and the functional circuit of the unit are given.

4 ill. 4 ref. L.K.

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USSR

UDC 669.293'294:54:165

ZAKHAROVA, M. I., and VASIL'YEVA, N. A., Moscow State University

"Study of the Decomposition of the Solid Solution of Tantalum in Nickel"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 1, 1971, pp 135-136

Abstract: A study was made of the decomposition of a supersaturated α -solid solution in the alloy Ni-8% (at) Ta. The study made use of X-ray diffraction analysis of single crystals, electron microscopy of thin foils for transmission, and optical microscopy of both single and polycrystals, and was performed after austempering at 650 and 800°C. The experimental data indicated that at these temperatures the decomposition of the solid solution in the Ni-8% (at) Ta alloy takes place by direct separation of three-dimensional crystallites of the equilibrium phase Ni_3Ta . Upon separation of the Ni_3Ta phase, the decomposition of the solid solution follows in two phases, a process investigated here on single crystals for the first time. It was found that the crystallite dimensions vary from $300 \times 600 \text{ \AA}$ to $1 \times 7.5 \mu$ with an increase in tempering time at 650°C from 28 to 200 hours and from 200 \AA to 2μ with an increase in tempering time at 800°C from 20 minutes to 48 hours.

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- 17 -

USSR

UDC 669.882.4(088.8)

VASIL'YEVA, N. F., VEL'TISHCHEV, N. A.

"Potassium Purification Procedure"

USSR Author's Certificate No 283580, filed 21 Dec 68, published 18 Dec 70 (from RZh-Metallurgiya, No 7, Jul 1971, Abstract No 7G221P)

Translation: A procedure for removing metal and gaseous admixtures from potassium by sorption on the surface of a metal sorbent is introduced. To increase the degree of purification of the potassium, its vapors are passed over a metallic Zr surface with a residual pressure of $\leq 10^{-7}$ mm Hg at a temperature of 500-600°. It is also possible to use Hf and Y as the sorbents. The procedure makes it possible to obtain K with a purity of 99.9997%.

1/1

USSR

UDC 620.196

ZHADAN, T. A., BABAKOV, A. A., SHARONOVA, T. N., and VASIL'YEVA, N. H.,
Central Scientific Research Institute of Ferrous Metallurgy imeni I. P.
Bardin, State Scientific Research Institute of the Nitric Industry

"Investigation of the Inclination of 000Kh20N20S5 (ZI-52) Steel to Inter-
crystalline Corrosion"

Moscow, Zashchita Metallov, Vol 9, No 1, Jan-Feb 73, pp42-44

Abstract: 000Kh20N20S5 (ZI-52) steel, in spite of its carbon content, shows a tendency to intercrystalline corrosion (ICC) in strong nitric acid in zones of welded joints or after tempering at 700-800°, but the steel retains high resistance to ICC in tests by the AM (GOST 6032-52) method after analogous processing. The tendency of ZI-52 steel to embrittlement and to ICC (after tests in 23 n. HNO₃ on the temperature and duration of tempering are discussed by reference to diagrams. On the basis of experimental data, 000Kh20N20S5 (ZI-52) steel which has been subjected to a 23 n. HNO₃ reaction at 85-100° can be recommended only in the hardened state for unwelded constructions or with obligatory hardening after welding. Three figures, four bibliographic references.

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1/2 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--DETECTION OF ANTIBODY TO ONCOGENIC VIRUSES AND CERTAIN ADENOVIRUSES
IN GREEN MONKEY SERA -U-

AUTHOR--(05)-DODONOVA, N.N., ONELCHENKO, T.N., VASILYEVA, N.N., TSETLIN,
YE.M., ALTSHEYN, A.D.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 3, PP 308-312

DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ADINOVIRUS, MONKEY, ANTIBODY, ANTIGEN, HEMAGGLUTININ

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--2000/1844

STEP NO--UR/0402/70/000/003/0308/0312

CIRC ACCESSION NO--AP0125455

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125455

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SERA OF HEALTHY GREEN MONKEYS FROM ANIMAL HOUSES OF THE MOSCOW INSTITUTES WERE TESTED FOR ANTIBODY TO SOME ONCOGENIC AND NON ONCOGENIC ADENOVIRUSES OF MONKEYS IN NEUTRALIZATION TEST, HI TEST AND CFT. NEUTRALIZING ANTIBODY TO HIGHLY ONCOGENIC ADENOVIRUSES SV20 AND SA7(C8) WAS FOUND IN 16PERCENT OF THE MONKEYS, AND FOR ADENOVIRUSES SA7(C626) AND SA7(B105) IN 2-4PERCENT OF THE MONKEYS. ANTIHEMAGGLUTININS FOR SV23(M2) AND SV32(M3) ADENOVIRUSES WERE FOUND IN 20-28PERCENT, AND FOR SV15(M4), SV37 AND SA7(B105) ADENOVIRUSES IN 10, 15 AND 6PERCENT OF MONKEYS, RESPECTIVELY. ONE MONKEY CAN POSSESS ANTIBODIES IN TWO, THREE, LESS FREQUENTLY FOUR ADENOVIRUSES. COMPLEMENT FIXING ANTIBODY FOR ADENU GROUP SPECIFIC ANTIGEN WAS FOUND IN 16PERCENT OF THE MONKEYS. THESE DATA INDICATE WIDESPREAD DISTRIBUTION OF ONCOGENIC AND NONONCOGENIC VIRUSES IN GREEN MONKEYS. FACILITY: GOSUDARSTVENNYY KONTROL'NYY INSTITUT MEDITSINSKIKH BIOLOGICHESKIKH PREPA4ATOV IMENI L. A. TARASEVICH, MOSKVA.

UNCLASSIFIED

USSR

VASIL'YEVA, N. P. and MALYUTIN, V. I.

UDC: 62-50

"Principle of Constructing Universal Uniform Structures of Fine Magnetic Film"

Moscow, Avtomatika i telemekhanika, No 4, 1972, pp 149-155

Abstract: The authors expect that, with further technical development, it will be advantageous to design complex automation, remote control, and computer devices through the use of uniform logic controlled structures. The purpose of this article is to develop the basis for constructing these uniform structures with fine magnetic film using the motion of domains in low coercivity channels. A distinction is made between uniform structures of the nodal and the joint types: the nodal elements in the first type carry the full logic load while the joints have only a connective function; in the second type, the basic logic functions are carried out by elements placed in the joints of the structure while the nodes perform connective and some auxiliary logic operations. Both are discussed together with one of the possible variants for constructing four-directional uniform structures. The technique for preparing the magnetic film is explained, and the computed parameters for the system are given in a short appendix.

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USSR

UDC 77.021.11

KIRILLOV, N. I., VASILYEVA, N. V., ZELIKMAN, V. L., All-Union
State Scientific Research and Planning Institute of the Chemico-
photographic Industry

"Obtaining Concentrated Photographic Emulsions by Means of Their
Successive Freezing and Melting"

Moscow, Zhurnal Nauchnoy i Prikladnoy Fotografii i Kinemato-
grafii, No 6, Nov-Dec 70, pp 441-443

Abstract: A method patented by the authors makes it possible,
by freezing an emulsion at low temperatures (minus 10-20°C and
lower), to remove more than 90% of the moisture from the emulsion
(i.e., to concentrate it by a factor of 10 and more), and to
obtain the required concentrated emulsion with a low gelatin con-
tent. This method has proved very effective in its use for ob-
taining especially fine-grain "transparent" photographic emul-
sions for precision photography, holography, etc. 2 tables,
6 bibliographic entries.

1/1

REEL # 34
TSIPEROVICH, O.S.
to
VASIL' YEVA. N.I.