

USSR

VROB'YEV, YE. A., Radioelektronika, Vol XIV, No 7, 1971, pp 839-840

highly sensitive interferometric devices described in [8-10] on reproduction of the maximum energy of the temperature $T_{surf.max.\Omega_i}^0$ on the surface of the sample.

For the heat-resistant superhigh frequency dielectrics used at this time, the noise temperature $T_{n.d.}^0$ is a complex function of the properties of the material and the maximum temperature on the surface, $T_{surf.max.}^0$. The criterion of estimating the noise characteristics of a specific material on the surface $T_{surf.max.}^0$ can be the thermal noise coefficient of the dielectric

$$T.K.N_d | T_{surf.max.}^0 | = T_{n.d.}^0 / T_{surf.max.}^0 \quad (2)$$

determined experimentally.

BIBLIOGRAPHY

1. L. T. Tuchkov, Yestestvennyye shumovyye izlucheniya v radiokanalakh (Natural Noise Emission in Radio Channels), Soviet Radio Press, 1968.

3/5

USSR

VROB'YEV, YE. A., Radioelektronika, Vol XIV, No 7, 1971, pp 839-840

2. Sistema svyazi cherez iskusstvennyy sputnik Zemli Telestar (Communications System Operating via the Telestar Satellite), Mir Press, 1965.
3. Ye. A. Vopob'yev, "Estimating the Effect of External Noise on the Angular Resolution of Pencil-Beam Antennas," Izv. vuzov SSSR -- Radioelektronika (News of the USSR Institutions of Higher Learning -- Radioelectronics), Vol 10, No 5, 473, 1967.
4. S. Landesman, "Progres des antennes radar," L'ande Electrique, 45, No 458, 568, 1965.
5. V. F. Mikhaylov, "Effect of a Radome Experiencing Thermal Shock on the Radar Range," Izv. vuzov, SSSR -- Radioelektronika, Vol 6, 607, 1967.
6. Roger Manasse, "Maximum Angular Accuracy of Tracking a Radio Star by Labe Comparison," IRE Trans. on Antennas and Propagation, AP-8, No 1, 50, January 1960.
7. A. A. Bashirinov, L. T. Tuchkov, V. M. Polyakov, N. I. Ananov, Izmereniye 4/5

USSR

VROB'YEV, YE. A., Radioelektronika, Vol XIV, No 7, 1971, pp 839-840

radioteplofizicheskikh i plazmennyykh izlucheni (Measuring Radio Thermo-physical and Plasma Emissions), Soviet Radio Press, 1968.

8. Ye. A. Vorob'yev, "Interferometer for Measuring the Dielectric Constant of Dielectrics in the Millimeter Radio Wave Range," Izv. vysov SSSR- Radio-tekhnika, 9, No 1, 130, 1966.
9. Ye. A. Vorob'yev, "Problems and Prospects of Predicting the Perimeters of Superhigh Frequency Dielectrics in the Presence of Thermal Shock and Very High Temperatures," Tr. LIAP (Works of the Leningrad Institute of Aviation Instruments), Leningrad, No 70, 127, 1970.
10. W. K. Setaruk, T. J. O'Connor, "Simulating Reentry for Antenna Windows," Space/Aeronaut., 50, No 1, 85, 1968.

5/5

USSR

UFG: 621 306 187

USSR

UDC 615.849(47)(091)

VOROB'YEV, Ye. I., and POBEDINSKIY, M. N.

Ocherki Razvitiya Otechestvennoy Radiatsionnoy Meditsiny (Essays on the Development of Domestic Radiation Medicine), Moscow, Meditsina, 1972, 228 pp

Translation: Annotation: The present book attempts to analyze the history of the development of radiation medicine in our country.

In order to give the reader a more complete idea of the development of medical radiology, the book includes sections on the history of the organization of radiation medicine, the training of radiology specialists, and the development of scientific research institutions

Special attention in the monograph is devoted to questions of the medical use of various sources of ionizing emission for radiation therapy, radioisotope diagnosis, and radon therapy.

More sketchy information is given on the history of the development of radiation hygiene, occupational radiation pathology, and radiotoxicology.

The monograph is illustrated with 33 photographs. The bibliography includes 103 sources of literature.

Table of Contents:

Preface

Page
3

1/5 Part 1. The development of Medical Radiology Until the Great
October Socialist Revolution

USSR

VOROB'YEV, Ye. I and POBEDINSKIY, M. N., Meditsina, 1972, 228 pp

Introduction

Chapter 1. The First Steps of Radiation Medicine

Chapter 2. Primary Directions of Research in Radiobiology

Chapter 3. The State of Radiation Therapy Before the Great October Socialist Revolution

Chapter 4. Radiotherapy in Russia

Conclusion

Part 2. The development of Domestic Radiation Medicine After the Great October Socialist Revolution

Introduction

Chapter 1. The Achievements of Soviet Radiobiology

Reaction of the Nervous System to Exposure

Toxemia with Radiation Afflictions

Mechanisms of the Initial Action of Radiation

Metabolism with Radiation Injury

The Action of Radiation on Hemopoietic Organs

Reactions of the Cardiovascular System and Lungs

The Action of Radiation on the Gastrointestinal Tract and Liver

Radiation Damage to the Organ of Sight

The Action of Radiation on the Endocrine Glands

5

6

21

32

52

57

63

69

70

75

75

77

80

83

83

89

91

- 111 -

USSR

VOROB'YEV, Ye. I. and POBEDINSKIY, M. N., Meditsina, 1972, 228 pp.

Reaction of the Skin to Radiation	93
Radiation Injuries to Bone Tissue	97
Radiation Damage to Sex Organs and the Effect of Exposure on Offspring	99
Radiosensitivity and Quantitative Rules	103
Toxicology, Immunity, and Remote Consequences	106
Prophylaxis and Therapy of Radiation Sickness	107
The Use of Radioactive Isotopes	111
Chapter 2. Successes of Radiation Therapy	115
Technical Equipment	120
Radioactive Isotopes and Their Use in Medicine	122
Radioisotope Diagnosis	136
The Use of Radioactive Isotopes in Biological Research	141
Chapter 3. Radon Therapy in the USSR	144
The Mechanism of Action of Radon Waters	147
Development of the Method of Using Radon Waters	151
Chapter 4. Radiation Hygiene, Protection Against Exposure, and Safety Technique in Working With Radioactive Substances	153

3/5

USSR

VOROB'YEV, Ye. I and POBEDINSKIY, M. N., Meditsina, 1972, 228 pp

Chapter 5. Scientific Research Institutions Which Are Developing the Problems of Radiation Medicine	163
The Central Scientific Research Roentgenoradiological Institute, Ministry of Health USSR	163
The Moscow Scientific Research Roentgenoradiological Institute, Ministry of Health RSFSR	173
The Institute of Medical Radiology, Academy of Medical Sciences USSR	181
The Khar'kov Scientific Research Institute of Medical Radiology, Ministry of Health Ukrainian SSR	182
The Kiev Scientific Research Roentgenoradiological and Oncological Institute, Ministry of Health Ukrainian SSR	186
The Scientific Research Institute of Roentgenology, Radiology, and Oncology, Ministry of Health Azerbaydzhan SSR	188
The Scientific Research Institute of Roentgenology and Oncology, Ministry of Health Armenian SSR	190
The Scientific Research Institute of Roentgenology and Medical Radiology, Ministry of Health Georgian SSR	190
The Kirgiz Scientific Research Institute of Oncology and Radiology	192

4/5

USSR

VOROB'YEV, Ye. I. and POBEDINSKIY, M. N., Meditsina, 1972, 228 pp.

The Uzbek Scientific Research Institute of Oncology and Radiology	192
The Kazakh Scientific Research Institute of Oncology and Radiology	195
The Scientific Research Institute of Oncology and Medical Radiology, Ministry of Health Belorussian SSR	196
The Scientific Research Institute of Oncology imeni Professor N. N. Petrov, Ministry of Health USSR	196
The Moscow Scientific Research Oncological Institute imeni P. A. Gertsen	198
Chapter 6. Training of Cadres in Radiation Medicine	199
Chapter 7. The Organization of Roentgen-Radiological Care in the USSR	205
Conclusion	214
Bibliography	217

1/2 025
UNCLASSIFIED
TITLE--MULTICHARGED CA AND ZN ION SOURCE -U- PROCESSING DATE--23OCT70
AUTHOR--(05)-PASYUK, A.S., VOROB'YEV, YE.D., IVANNIKOV, R.I., KUZNETSOV,
V.I., KUTNER, V.B.
COUNTRY OF INFO--USSR
SOURCE--AT. ENERG. USSR, 28: 75-8, JAN 1970
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--ION SOURCE, ION BEAM, CALCIUM, ZINC, METAL VAPOR,
CYCLOTRON/IUJ0300 CYCLOTRON
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1988/0213 STEP NO--UR/0089/70/028/000/0075/0078
CIRC ACCESSION NO--AP0105289
UNCLASSIFIED

2/2 025

CIRC ACCESSION NO--AP0105289
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--23OCT70

DESIGN AND PERFORMANCE OF MULTICHARGED ION SOURCE. THE SOURCE WAS USED WITH CALCIUM AND ZINC METAL WITH THE VAPOR ELASTICITY REACHED AT ABOUT 800 TO 900DEGREESC. THE MULTICHARGED CALCIUM AND ZINC IONS WERE OBTAINED WITH A SOURCE DEVELOPED FOR THE U-300 CYCLOTRON. TABULATED DATA INDICATE PULSED CURRENT VALUES FOR NINE CHARGED CALCIUM IONS AND TEN CHARGED ZINC IONS. IN SUCH A CASE THE MEAN ZINC CONSUMPTION IS SIMILAR TO 50 MG,HR AND CALCIUM CONSUMPTION IS SIMILAR TO 100 MG,HR. EXPERIMENTS ON ACCELERATION OF HEPTA CHARGED CALCIUM IONS AND DECA CHARGED ZINC ION SHOWED A MEAN CURRENT FOR CA PRIME7 POSITIVE SUB40 IONS ON THE 100 CM RADIUS REACHED 3 MU A AND AN EXTRACTED DECO CHARGED ZINC BEAM UP TO CONGRUENT TO 10 NEGATIVE PRIME4 MU A.

UNCLASSIFIED

Reaction Kinetics

USSR

UDC 533.66.063

BOKSHTEYN, B. S., VOROB'YEV, Ye. M., KLINGER, L. M., FRIDMAN, Ye. M., and
SHVINDLERMAN, L. S., Academy of Sciences USSR, Institute of the Solid Body
Physics, Moscow, Institute of Steel and Alloys

"Osmotic Effect at the Border Diffusion"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 47, No 1, Jan 73, pp 145-149"

Abstract: A model of boundary diffusion was developed with consideration of the formation of an effect analogous to the osmotic one. As a result, formation of dislocations takes place in the boundary zones which accelerates the diffusion inside the grain and with its motion carrying the atoms of the admixture. A self-adjusted system of equations was derived which describes the process under analysis.

1/2 023
UNCLASSIFIED
TITLE--PROPERTIES OF PRIME6 LIL,EU CRYSTALS AT LOW TEMPERATURES -U-
PROCESSING DATE--27NOV70
AUTHOR--(03)-VOROBYEV, YU.A., PAVLOVSKAYA, T.F., LYALIN, YE.O.
COUNTRY OF INFO--USSR
SOURCE--PRIB. TEKH. EKSP. 1970, 1, 90-1
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--LOW TEMPERATURE EFFECT, PHYSICAL CHEMISTRY PROPERTY, LITHIUM
COMPOUND, EUROPIUM COMPOUND, CESIUM ISOTOPE, CRYSTAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/1710
CIRC ACCESSION NO--AP0115539
STEP NO--UR/0120/70/001/000/0090/0091
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0115539

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

ABSTRACT. IN COOLING OF PRIME6 LII(EU) CRYSTALS FROM 25DEGREES TO MINUS 150DEGREES THE SCINTILLATION PULSE AMPLITUDE INCREASES 2.8 TIMES WITH EXCITATION OF THE CRYSTALS BY THERMAL N AND 2.2 TIMES WITH THE EXCITATION BY GAMMA QUANTA OF PRIME137 CS. THE AMPLITUDE RESOLN. IMPROVES FROM 8 TO 5.5PERCENT AND FROM 16 TO 10PERCENT, RESP. AT MINUS 150DEGREES THE PULSE AMPLITUDE IS A LINEAR FUNCTION OF ENERGY OF THE REGISTERED RADIATION FOR GAMMA QUANTA TO 1.85 MEV AND FOR N IN THE ENERGY RANGE FROM THERMAL TO 14 MEV. THE DEEXCITATION TIME CONST. OF THE CRYSTALS AT ROOM TEMP. EQUALS SIMILAR TO 1.0 MU SEC AND AT MINUS 150DEGREES IT INCREASES TO 1.8 MU SEC.

UNCLASSIFIED

Marine and Shipbuilding

USSR

BEKSHAYEV, Ya. A., VOROB'YEV, Yu. L.

"Determination of Forces and Moments Acting on Vessels Sailing Parallel Courses"

Sudostr. i Sudoremont. Nauch.-tekhn. sb. [Shipbuilding and Repair, Scientific and Technical Collection], No 4, 1970, pp 20-29, (Translated from Referativnyy Zhurnal, Mekhanika, No 4, 1972, Abstract No 4 B411 by A. K. Nikitin).

Translation: The linear problem of the stable motion of two ships in parallel courses at speed v_0 in deep water is studied. The velocity potential in inverted motion is represented as

$$\Phi(x, y, z) = -v_0 z + \phi_1 + \phi_2 + \phi_0$$

where ϕ_1 is the velocity potential resulting from the motion of ship 1 without ship 2; ϕ_2 is the velocity potential resulting from the motion of ship 2 without ship 1; ϕ_0 is the velocity potential resulting from the interaction of the ships. Potentials ϕ_1 and ϕ_2 are known; ϕ_0 is determined from the Laplace equation and boundary conditions on the free surface, on the surface of the ships

1/3

USSR

BEKSHAYEV, Ya. A., VOROB'YEV, Yu. L., Sudostr. i Sudoremont. Nauch.-tekhn. sb., No 4, 1970, pp 20-29.

and at infinity. Transverse forces and moments acting on the ships are determined by the method of a acceleration potential on the basis of the change in acceleration potential

$$0_- - 0_+ = \frac{p_- - p_+}{\rho} = -\gamma(\xi, \zeta) v,$$

Integral equations are produced for determination of intensities γ_1 and γ_2 . The authors study the limiting case, when parameter $v = g/v_0^2 \rightarrow \infty$ (low speeds of motion of ships). The integral equations in this case are simplified and reduced to a system of two linear singular equations, which is solved by successive approximations by inversion of a Cauchy-type integral for functions not limited at the ends of the interval. Then, the forces and moments are found for each approximation. The process of successive approximations is considered completed if

2/3

USSR

BEKSHAYEV, Ya. A., VOROB'YEV, Yu. L., Sudostr. i Sudoremont. Nauch.-tekhn. sb., No 4, 1970, pp 20-29.

$$|P_y^{(n)} - P_y^{(n-1)}| \leq \epsilon_1, |M_y^{(n)} - M_y^{(n-1)}| \leq \epsilon_2$$

where $P_y^{(n)}$, $M_y^{(n)}$ are the transverse force and yaw moment in the n-th approximation on the ship in question, while ϵ_1 and ϵ_2 are the accuracies of calculation of the forces and moment used. It is demonstrated that a solution can produce similarly for the case of high speeds of motion of the ships ($v \rightarrow 0$).

Acc. Nr. **0036534**

Ref. Code: UR 0069

PRIMARY SOURCE: Kolloidnyy Zhurnal, 1970, Vol 32, Nr 1,
pp 87-90

STUDY OF THE VARIATION WITH TIME OF THE VIBROVISCOSITY
OF STIFF CONCRETE MIXES

Radvinskiy, B. M.; Mikhaylov, N. V.; Vorob'yev, Yu. L.

Summary

The variation with time of stiff concrete mixes has been studied. The curves obtained show a maximum coinciding with the end of the period of the development in the mix of the coagulation structure of cement paste.

D.n.

REEL/FRAME
19721382

1/2 014 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--PHASE DIAGRAM OF AN IRON, VANADIUM AND OXYGEN SYSTEM -U-
AUTHOR--(02)-VOROBYEV, YU.P., CHUFAROV, G.I.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR. NEORG. MATER. 1970, 6(2), 319-22
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--PHASE, IRON, VANADIUM, OXYGEN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1988/0565 STEP NO--UR/0363/70/005/002/0319/0322
CIRC ACCESSION NO--AP0105550
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105550

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHASE DIAGRAM OF THE FE MINUS
V MINUS O SYSTEM WAS CONSTRUCTED IN THE COORDINATES LOG PO SUB2 MINUS
V (FE PLUS V) AT 1000DEGREES. SIGNIFICANT CORRECTIONS WERE MADE IN THE
ISOTHERMAL SECTION OF THIS SYSTEM. THE SOLY. OF WUSTITE IN FEV SUB2 O
SUB4 UNDER EQUIL. CONDITIONS AND AT SMALLER THAN OR EQUAL TO 1100DEGREES
IS NOT VERY LARGE.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--THEORY OF PHASES OF VARIABLE COMPOSITION AND DEFECT CONTENT -U-
AUTHOR-(04)-MEN, A.N., BOGDANOVICH, M.P., VOROBYEV, YU.P., CHUFAROV, G.I.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, METAL. 1970, (2), 135-43
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--PHASE COMPOSITION, CRYSTAL DEFECT, METAL PROPERTY, MATHEMATIC
MODEL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/1233 STEP NO--UR/0370/70/000/002/0135/0143
CIRC ACCESSION NO--AP0124837
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0124887

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A MATHEMATICAL TREATMENT OF PHENOMENOL. THEORY OF PHASES OF VARIABLE COMPN. AND VARIABLE DEFECT CONTENT WAS CARRIED OUT IN ORDER TO INTERPRET THE PROPERTIES OF THE PHASES. THE TREATMENT IS BASED ON THE REPRESENTATION OF A REAL SYSTEM CONSISTING OF NONINTERACTING SUBSYSTEMS (CLUSTER COMPONENTS), EACH OF WHICH FORMS A DEFINITE PART OF THE PROPERTY OF THE SYSTEM IN QUESTION.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--COMPLEX STRUCTURE AND SURFACE ENERGY OF BINARY METALLIC MELTS -U-
AUTHOR-(04)-VOROBYEV, YU.P., BOGDANOVICH, M.P., MEN, A.N., CHUFAROV, G.I.
COUNTRY OF INFO--USSR
SOURCE--FIZ. METAL METALLOVED. 1970, 29(2), 445-8
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--LIQUID BINARY ALLOY, SURFACE TENSION, FLUID STRUCTURE, SURFACE
ENERGY, ALLOY COMPOSITION, MODEL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3003/0355 STEP NO--UR/0126/70/029/002/0445/0448
CIRC ACCESSION NO--A20129587
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0129587

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN INTERPRETATION WAS PERFORMED OF CONCN. DEPENDENCE OF SURFACE TENSION OF BINARY METALLIC MELTS IN A COMPLEX MODEL. THE NONPARTICIPATION OF INTRACOMPLEX BINDING ENERGIES IN THE TOTAL SURFACE TENSION OF THE MELT AND THE DEVELOPMENT IN THE SURFACE TENSION OF ONLY WEAKER INTERACTIONS BETWEEN THE COMPLEXES AND THE ATOMS OF THE REDISUAL COMPONENT WERE ASSUMED IN THIS INTERPRETATION. THE PARAMETERS FOUND FOR SEVERAL SYSTEMS ARE TABULATED. IN THE OPINION OF THE AUTHORS, THE PROPOSED MODEL FOR THE STRUCTURE OF BINARY METALLIC MELTS IS RATHER GENERAL, AT LEAST AT 1ST GLANCE. THE FOLLOWING SYSTEMS WERE CONSIDERED: PD,NI, PD,CO, PD,CU, SN,CI, AND SN,PB. FOR THE SN,BI SYSTEM, THE COEFF. OF THE WEAKENING OF THE BI,BI BOND WAS EQUAL TO ZERO. FACILITY: INST. MET., SYVERDOLOVSK, USSR.

UNCLASSIFIED

USSR

UDC: 539.3:534.1

VOROB'YEV, Yu. S., MEDVEDEV, N. G., Khar'kov

"Design of Turbine Machine Blades for Forced Oscillations with Various Types of Excitation"

Kiev, Problemy Prochnosti, No 11, Nov 72, pp 15-19.

Abstract: The problem of forced oscillations of the working blades of turbine machines is solved by a variation method based on the refined theory of oscillations of twisted rods considering the influence of internal inelastic resistance and aerodynamic damping. Forms of oscillations are determined, as well as the distribution of internal forces, moments and stresses over the length of the blade under the influence of loads with arbitrary rule of change with time and over the length of the blade.

USSR

UDC: 621.372.412

VOROB'YEV, Yu. V., ZAKHARCHENKO, V. N., TRETYAK, O. V.

"Investigation of Birefringence at Piezoresonance in GaAs Crystals"

Moscow, Radiotekhnika i Elektronika, Vol 17, No 11, Nov 72, pp 2349-2353

Abstract: An alternating electric field was used to excite piezoresonance in gallium arsenide crystals placed between two polaroids. The light flux passing through the crystal and polaroids was found to be modulated by a frequency equal to that of the mechanical oscillations, or else double or quadruple this vibration frequency, depending on the amplitude of the oscillations and the mutual orientation of the polaroids. The results are analyzed on the basis of present concepts concerning the linear electro-optical effect and photoelasticity. The distribution of elastic stresses in the crystal is found for various excitation frequencies. The ratio between primary and secondary electro-optical effects in gallium arsenide is determined. The Q of the piezoelectric resonator is measured with respect to the percentage modulation of the oscillations excited by the resonance frequency field modulated by a low frequency signal. It is shown that modulation of the light beam passing through the crystal is due to nonhomogeneity of the specimen.

1/1

USSR

UDC 528.35.021.6-187.4

VOROB'YEV, Yu. V.

"On the Application of the Ranging Radar 'Luch "

Moscow, Geodeziya i Kartografiya, No. 9, 1971, pp 24-31

Abstract : The experience is described in the use of the ranging radar "Luch" by laying out of polygonometric traverses of 1st and 2nd classes and trilaterization of the 2nd class in the tundra beyond the polar circle at the average summer temperature of $+9^{\circ}$, in the year 1970. Measurement results are presented in tables and are discussed by reference to diagrams. Recommendations are given for increasing the efficiency of the ranging radar. It is concluded that with the radar Luch geodetic works can be performed reliably and easily with the accuracy required for 1st class works. The measuring accuracy of the ranging radar Luch excels that of other domestic ranging radars in the inter-

1/2

USSR

VOROB'YEV, YU. V., *Geodeziya i Kartografiya*, No 9, 1971, pp 24-31

changeability of stations, working in the three-cm-band of carrier frequencies, and the compensating method of phase comparison of two low-frequency signals. The separation of the ultra-high frequency block from the indicator block and the high operational properties of the ranging radar Luch make possible to use linear and linearly-angular methods of creation geodetic networks. Two illustr., six formulas, five tables.

2/2

USSR

UDC: 612.751.1.015.1-06: [613.27:577.17.049

✓
KOLOMEYTSOVA, M.G., VOROB'YENKO, A.M., and RADOVSKIY, V., Chair of Hygiene,
Leningrad Pediatric Medical Institute

"The Effect of Trace Element Composition of the Diet on the Activity of Some
Bone Tissue Enzymes in Experimental Animals"

Moscow, Voprosy Pitaniya, No 2, 1970, pp 57-61

Abstract: In a chronic experiment involving 63 white rats, the addition of copper (0.018 mg/100 g of body weight/24 hours) to the diet inhibited alkaline phosphatase activity while stimulating cytochrome oxidase activity. Manganese (0.06 mg/100 g) activated both alkaline phosphatase and cytochromoxidase. Zinc (0.0108 mg/100 g) stimulated alkaline phosphatase activity while inhibiting cytochromeoxidase activity. Exclusion from the diet of one of the trace elements, and especially all three, made the animals sluggish, caused skin disorders, and affected the weight. Weight gains resulted from the exclusion of either copper, manganese, or zinc, but losses (6.8 g on the average) resulted when all three elements were eliminated. It was concluded that the activity of bone tissue enzymes is dependent not only on the absolute content of trace elements, but on their relationships in the diet.

1/1

1/2 025

UNCLASSIFIED

PROCESSING DATE--18SEP70

TITLE--THE EFFECT OF THE TRACE ELEMENTS COMPOSITION IN RATIONS ON THE
ACTIVITY OF SOME BONE TISSUE ENZYMES IN EXPERIMENTAL ANIMALS -U-

AUTHOR--(03)-KOLOMIYTSEVA, M.G.; ~~VOROBYEVA, A.M.~~, RADOVSKIY, V.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY PITANIYA, 1970, NR 2, PP 57-62

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DIET, BONE, ENZYME ACTIVITY, PHOSPHOTASE, INHIBITION, COPPER,
MANGANESE, ZINC, TRACE ELEMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1985/1641

STEP NO--UR/0244/70/000/002/0057/0062

CIRC ACCESSION NO--AP0101696

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0101696

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STATISTICALLY PROCESSED RESULTS OF OBSERVATIONS HELPED ASCERTAIN THE INHIBITING EFFECT OF COPPER AND THE ACTIVATING INFLUENCE OF MANGANESE AND ZINC IONS ON THE ACTIVITY OF THE OSTEOTISSULAR ALKALINE PHOSPHATASE. WITH REGARD TO CYTOCHROMOXIDASE IN THE BONE TISSUE COPPER AND MANGANESE APPEAR AS ACTIVATORS, WHEREAS ZKNC IONS ARE LIKELY TO EXERCISE INHIBITING INFLUENCE ON THE ACTIVITY OF THIS ENZYME. DISRUPTED CORRELATION OF TRACE ELEMENTS IN THE FOOD IS OF ESSENTIAL IMPORTANCE FOR THE ACTIVITY OF TISSULAR ENZYMES.

UNCLASSIFIED

USSR

UDC 539.434+539.376

MIGACHEV, B. A., and VOROB'YEVA, E. L., Urals Scientific Research Institute of Ferrous Metals

"Temperature-Velocity Relationship of Metal Resistance to Plastic Deformation"
Moscow, Stal', No 12, Dec 73, pp 1108-1109

Abstract: The advantage of using orthogonal rotation planes of an experiment for the mathematical description (and study) of the temperature-velocity relationship of metal resistance to plastic deformation is shown. The deformation relationship itself is a function of three independent variables: temperature-(t), magnitude (ϵ) and velocity ($\dot{\epsilon}$), and has the form $\ln \sigma = \varphi(\ln \dot{\epsilon}, \ln \epsilon, t)$. An empirical formula was derived from this relationship for determining the deformation resistance and has the general form:

$\sigma = A \dot{\epsilon}^a \epsilon^b / -ct$. Values of A, a, b, and c are given for 21 steels, 3 heat-resistant alloys, and white cast iron. Three tables, six bibliographic references.

1/1

- 75 -

USSR

UDC: 621.397.61

SHAPIRO, Ya. A., GALAKHOVA, N. G., VOVSI, L. M., BERLIN, B. A., KHARCHIK-
YAN, R. S., VOROB'YEVA, E. Kh.

"Technical Facilities of Television Services of the Soviet-Wide Television
Center"

V sb. Televizion. tekhnika (Television Technology--collection of works),
Moscow, "Svyaz", 1971, pp 127-163 (from RZh-Radiotekhnika, No 6, Jun 71,
Abstract No 6G190)

Translation: Basic data are given on studio and announcer TV cameras,
motion picture cameras with TV view finder, cameras for transmitting motion
picture films in TV and motion picture projection rooms, and epidiaseopic
projectors for transmitting transparencies, photos, drawings, etc. The
individual elements of the instrument and program unit, central instrument
room and video recording unit are described. N. S.

1/1

USSR

UDC 620.178

BARANOV, S. M., VOROB'YEVA, G. A., KARATUSHIN, S. I., Leningrad

"Tendency of Type 40Kh Steel from Various Melts to Brittle Rupture"

Problemy Prochnosti, No 11, 1971, pp 101-105.

ABSTRACT: The influence of the method of deoxidation of Type 40Kh fine-grained steel on its brittle rupture tendency is studied. Tests are performed using impact specimens with a fatigue crack. The value of a_3 [the work expended in the growth of an existing crack to critical size] and a_p [remaining component of impact toughness] are determined. Throughout the entire interval of below-freezing temperatures, the value of a_p is significantly (3-4 times) higher for heat-treated steel produced by siliconless deoxidation.

1/1

USSR

UDC 58.036

BREZHNEV, D. D., Academician, KISLYUK, M. M. (deceased), VOROB'YEV, G. A., All Union Scientific Research Institute of Horticulture imeni N. I. Vavilov

"The Effect of Super Low Temperature (-195°C) on the Pollen of Various Plants"

Moscow, Doklady Vsesoyuznoy Ordena Lenina Akademii Sel'skokhozyaystvennykh Nauk imeni V. I. Lenin, No 5, 1970, pp 2-6

Abstract: Experiments were conducted with pollen of various ages carefully gathered from tomatoes, potatoes, cucumbers, onions, beets, sorrel, peas, cabbage, radishes and birches, and subjected to cryogenic temperatures (-195°C) with liquid nitrogen, for periods from one minute to a month. It was found that all specimens of pollen were more viable than controls. The fertilization rate was higher than in controls, the setting of fruit was good, the fruit was of good quality and seeds were better. In addition, cross pollination was effective. Old, inactive or dead pollen was stimulated by instantaneous freezing at cryogenic temperatures; it became active, and fertilized plants with resulting high-quality fruit. The stimulating effect of the temperature of liquid nitrogen (-195°C) was evident to a remarkable degree in all the specimens of pollen under investigation.

1/1

USSR

UDC 681.11.032:621.317

KURITSKIY, A. M., VOROB'YEVA, G. N.

"Experimental Study of the Efficiency of Escapement Mechanisms"

Tr. NII Chas. Prom-sti. [Works of Scientific Research Institute of the Clock Industry], 1971, No 8, pp 89-96, (Translated from Referativnyy Zhurnal, Metrologiya i Izmeritel'naya Tekhnika, 1972, No 5, Abstract No 5.32.584).

Translation: A method and results are described from a study of the efficiency of 42 millimeter (stopwatch) and 26 millimeter (wristwatch) escapement mechanisms. The nature and influence of efficiency are studied with changes in such factors as moment of inertia of the balance wheel, rigidity of the hairspring, oscillating period, as well as the influence of a change in the oscillating amplitude resulting from a change in the drive torque and design factors (number of teeth of the escapement wheel, type of escapement) on escapement efficiency. A brief analysis is presented of the nature of the dependence of escapement efficiency on various types of energy losses in the escapement mechanism.

1/1

- 89 -

USSR

UDC 615.385.1

VINOGRAD-FINKEL', F. R., Prof, TERENT'YEVA, E. I., Prof, SUKHOVA, A. G.,
VOROB'YEVA, G. S., TAL'SKAYA, I. N., LIPLYANDSKIY, D. B., DOROFYEVA,
T. N., and SAMSONOVA, N. N., Central Institute of Hematology and Blood
Transfusion (Prof A. Ye. Kiselev, Director), Ministry of Health USSR
and Institute of Cardiovascular Surgery (Prof V. I. Butakovskiy, Director),
Academy of Medical Sciences USSR (Moscow)

"Morphological and Biochemical Characteristics and Viability of Washed
Erythrocytes Intended for Surgical Procedures With Extracorporeal Circu-
lation"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 16, No 8, 1971,
pp 3-7

Abstract: Erythrocytes were obtained after separation of plasma from donor
blood which had been kept in storage for 24 hours, washed with physiological
solution, and examined by the electron microscope method; unwashed erythro-
cytes from the same blood served as controls. After two washings the
submicroscopic organization of cells in the washed erythrocytes did not
differ essentially from that in the unwashed erythrocytes. The conclusion
1/2

USSR

VINOGRAD-FINKEL', F. R., et al., Problemy Gematologii i Perelivaniya Krovi, Vol 16, No 8, 1971, pp 3-7

was that washing the erythrocytes from blood prepared with a glucose-citrate preservative and stored for one day has no significant effect on the ultrastructure of almost the entire mass. Investigation of phosphorus fractions demonstrated the metabolic integrity of the washed erythrocytes through one or two washings. Thus, washing with physiological saline solution does not alter the structural completeness, metabolic activity, or biological value of erythrocytes. None of their indexes differ from those of erythrocytes of whole blood stored for 1 day and used for extracorporeal circulation in cardiac surgery; they should therefore be recommended as the basic component in perfusates for extracorporeal circulation.

2/2

1/2 028 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--THE EFFECT OF ADRENALINE ON SODIUM REABSORPTION IN THE KIDNEYS OF
FROGS AND HENS -U-
AUTHOR-(03)-BARANOVBARANOVSKIY, S.P., VASILYEVA, V.F., VUROBYEVA, K.P.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL EVOLYUTSIONNOY BIOKHIMII I FIZIOLOGII, 1970, VOL 6, NR 1,
PP 42-49
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ADRENALINE, SODIUM, KIDNEY, FROG, BIRD, CATECHOLAMINE,
NORADRENALIN, METABOLISM, HEMODYNAMICS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3005/0348 STEP NO--UR/0385/70/006/001/0042/0049
CIRC ACCESSION NO--AP0132583
UNCLASSIFIED

2/2 028

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0132583

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF CATECHOLAMINES ON SODIUM REABSORPTION HAS BEEN STUDIED IN HENS AND FROGS (ANA TEMPORARIA). THEIR RENAL TUBULI ARE SUPPLIED BY BLOOD VIA TWO SYSTEMS OF CIRCULATION: THE ARTERIAL AND RENAL PORTAL ONES. THIS FACT ENABLES TO CREATE HIGHER CONCENTRATION OF AGENTS IN PERITUBULAR CAPILLARIES AT THE SIDE OF INJECTION AS COMPARED TO RENAL GLOMERULI. INJECTIONS OF THE ADRENALINE (0.1-5 MUG PER KG) IN HENS INTO RENAL PORTAL VEIN (VIA FEMORAL VEIN) DECREASED THE EXCRETED FRACTION OF SODIUM IN ABSENCE OF A SIGNIFICANT EFFECT UPON THE GLOMERULAR FILTRATION RATE. THIS EFFECT WAS BILATERAL AND ATTAINED ITS MAXIMUM EFFICIENCY 20-40 MIN. AFTER INJECTION. TREATMENT BY TOLAZOLIN (AN ADRENOLYTIC BLOCKING VASCULAR REACTION TO ADRENALINE) DOES NOT PREVENT STIMULATION OF SODIUM REABSORPTION. IN FROGS, BOTH THE ADRENALINE AND NORADRENALINE (1 MUG PER KG BODY WEIGHT) SIGNIFICANTLY DECREASED THE DIURESIS AND FILTRATION, BUT DID NOT SIGNIFICANTLY AFFECT SODIUM REABSORPTION. THE DATA OBTAINED SUGGEST THAT STIMULATORY EFFECT OF THE ADRENALINE ON SODIUM REABSORPTION IS NOT ASSOCIATED WITH CHANGES IN HAEMODYNAMICS, BUT RESULTS FROM THE INFLUENCE OF THE ADRENALINE ON THE METABOLISM OF TUBULAR CELLS. FACILITY: INSTITUTE OF EVOLUTIONARY PHYSIOLOGY AND BIOCHEMISTRY, USSR ACADEMY OF SCIENCES, LENINGRAD.

UNCLASSIFIED

USSR

UDC 541.127.547.242

CHERNOKAL'SKIY, B. D., and VOROB'YEVA, L. A., Kazan' Chemical-Technological
Institute Imeni S. M. Kirov

"Basicity of Tertiary Arsine Oxides and the Kinetics of Their Reactions With
Alkyl Halides"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 9, Sep 73, pp 1939-1943

Abstract: Thermodynamic basicity constants of five tri-n-alkylarsine oxides in water were determined. It was shown that in this case the size of the hydrocarbon radical has no effect on pK^T . It was found that the reaction of tri-n-alkylarsine oxides with butyl iodide is of a general second degree order, but first degree order in respect to the trialkylarsine oxide. The relationship of the reaction rates of trialkylarsine oxides and the structures of alkyl halide is analogous to that of the S_N2 reactions.

1/1

Organometallic Compounds

USSR

UDC 541.6:543.422.4:547.1:119:547.22

SHACIDULLIN, R. R., IZOSIMOVA, S. V., CHERNOKAL'SKIY, V. D., and VOROS'YEVA, L. A., Kazan' State University imeni V. I. Ul'yanov-Lenin; Institute for Organic and Physical Chemistry imeni A. Ye. Arbusov, Academy of Sciences USSR; and Kazan' Chemical Technology Institute imeni S. M. Kirov

"The I.R. Study of the Structure of Products Resulting From the Reaction Between Tertiary Arsine Oxides and Alkyl Halides"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 3, 1972, pp 695-697

Abstract: The IR spectra of $\left[R_3AsO \right]_2HX$ do not distinguish between the forms $R_3 - \underset{\substack{| \\ OH}}{As} - O - \underset{\substack{| \\ X}}{As}^+ R_3$ (form A) and $\left[R_3As \rightarrow O \dots H^+ \dots O \leftarrow AsR_3 \right]$

(form B). We attempted to elucidate the correlation between the structure of these compounds and their IR spectra, using the systems $\left[(CH_3)_3AsO \right]_2HI$ (compound I); $\left[(C_2H_5)_3AsO \right]_2HX$, for $X = I$ (compound IIa), $X = Br$ (compound IIb), and $X = Cl$ (compound IIc); $\left[(C_3H_7)_3AsO \right]_2HI$ (compound III); and

1/2

USSR

SHAGIDULLIN, R. R., et al., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 3, 1972, pp 695-697

$[\text{Ph}_3\text{AsO}]_2\text{HX}$, for $\text{X} = \text{Br}$ (compound IVa) and $\text{X} = \text{ClO}$ (compound IVb). Wide intense diffuse absorption bands between 550 and 1800 cm^{-1} are characteristic of these systems. The difference between forms A and B is that in A, proton interaction is possible between the oxygen and the halogen but in B, it is between two oxygen atoms. In spectra made using chloroform and acetophenone the $\nu_{\text{As=O}}$ (880 cm^{-1}) was observed, indicating the following dissociation

$$2(\text{C}_2\text{H}_5)_3\text{AsO} \cdot \text{HX} \rightleftharpoons (\text{C}_2\text{H}_5)_3\text{AsO} \cdot \text{HX} + (\text{C}_2\text{H}_5)_3\text{AsO}.$$

It was concluded that the wide adsorption in the area 750 - 1800 cm^{-1} approximately divided into three bands, may be attributed to absorption by the OH group, participating in a strong symmetrical bond.

2/2

- 17 -

USSR

ROYTBURD, L. N., IVANOV, I. N., BOBYLEV, V. G. and VOROB'YEVA, L. F.,
Moscow Institute of Engineering and Economics imeni S. Ordzhonikidze

"Technical and Economic Indicators of Plasma Arc Remelting"

Dnepropetrovsk, Metallurgicheskaya i Gornorudnaya Promyshlennost', No
6, Nov-Dec 73, pp 62-64

Abstract: This article presents the results of studies of the technical and economic indicators of plasma arc remelting. The studies were performed at the Moscow Institute of Engineering and Economics on the basis of plant report data. The studies showed that the present level of these indicators does not correspond to the actual capabilities of the process. Where production facilities are fully mastered and normal operation of the equipment is achieved, the level of utilization of calendar time reaches 89.5%. The normal level of cost of the process is 108.8 rubles per ton, the specific capital investment required per unit of capacity is 220 rubles per ton. The indicators show that plasma arc remelting is equal in these respects to vacuum arc and cathode ray remelting.

1/1

- 96 -

USSR

SOKOLOVA, L. I., VOROB'YEVA, L. I. and NOVIKOVA, G. B.

"Library of Standard Routines for Processing of Files of Economic Information"

Tr. NIU Upravl. Mashin i Sistem [Works of Scientific Research Institute of Control Machines and Systems], 1973, No 7, pp 141-145 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V664)

Translation: One important element in the software system of an ACS is the set of standard procedures for machine processing of information in all stages of performance of the task. This article describes a library of procedures for processing of files of economic information. This library is written for the ASVT computer and has been tested in a number of typical control-system problems. The experience in application of similar sets of programs shows the sufficient completeness of the set of standard procedures for solution of common ACS problems, as well as the effectiveness of automation of programming using standard program libraries.

Author's view

1/1

- 63 -

1/2 012 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--POSSIBLE PREDICTION OF THE AMINO ACID CONTENT IN BACTERIAL PROTEIN
USING THE NUCLEOTIDE COMPOSITION OF DNA -U-
AUTHOR-(05)-SAMOILOV, P.M., KOKURINA, N.A., UAROVA, V.N., VOROBYEVA, L.I.,
GRISHCHENKO, V.M.
COUNTRY OF INFO--USSR
SOURCE--PRIKL. BIOKHM. MIKROBIOL. 1970, 6(1), 44-7
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BACTERIA, MYCOBACTERIUM, CHEMICAL COMPOSITION, AMINO ACID,
NUCLEOTIDE, DNA
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/0571 STEP NO--UR/0411/70/006/001/0044/0047
CIRC ACCESSION NO--AP0117801
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0117801

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEPENDENCE BETWEEN COMPN. OF DNA AND AMINO ACID CONTENT IN BACTERIAL PROTEIN WAS USED FOR PROVING THE POSSIBILITY OF USING PUBLISHED DATA ON DNA COMPN. FOR PREDICTING AMINO ACIDS CONTENT OF THE BACTERIAL PROTEIN. THE NUCLEOTIDE COMPN. OF DNA AND AMINO ACIDS IN PROTEIN OF LACTOBACTERIUM PLANTARUM AND MYCOBACTERIUM LUTEUM WERE STUDIED. SUBSTANTIAL DIFFERENCES IN THE COMPN. OF PROTEINS IN THESE BACTERIA WERE FOUND, ESP. IN THE CASE OF ASPARTIC ACID, PROLINE, ALANINE, VALINE, METHIONINE, TYROSINE, HISTIDINE, AND ARGinine. THE ANALYSES SHOWED THAT THE RELATION BETWEEN THE NUCLEOTIDE COMPN. OF DNA AND AMINO ACIDS CONTENT OF TOTAL BACTERIAL PROTEIN WAS TRUE AND RESPECT TO 9 AMINO ACIDS OUT OF 16 STUDIED (ASPARTIC ACID, SERINE, GLUTAMIC ACID, PROLINE, GLYCINE, METHIONINE, ISOLEUCINE, TYROSINE, AND ARGinine). IN THE CASE OF ASPARTIC ACID, PROLINE, AND METHIONINE THE EXPTL. FOUND DEVIATIONS IN THE CONTENT OF AMINO ACIDS IN PROTEINS OF L. PLANTARUM IN COMPARISON WITH PROTEINS OF M. LUTEUM WERE HIGHER THAN THEORETICAL DEVIATIONS. THE NUCLEOTIDE COMPN. OF DNA IN L. PLANTARUM AND M. LUTEUM PROVE THAT DNA OF L. PLANTARUM AND M. LUTEUM IS OF AT AND GC TYPE, RESP. THE CONTENT OF METHIONINE IN THE PROTEIN OF L. PLANTARUM WAS 2.7PERCENT AND THIS WAS HIGHER THAN FOR THE PROTEIN OF M. LUTEUM.

FACILITY: INST. BIOCHEM, PHYSIOL MICROORG., MOSCOW, USSR.

UNCLASSIFIED

Phytology

USSR

UDC 577.45

LANG, F., VOROB'YEVA, L. M., and KRASNOVSKIY, A. A., Institute of Biochemistry
imeni A. N. Bakht, USSR Academy of Sciences, Moscow

"Chlorophyll Synthesis and Formation of Chloroplasts in Greening Normal and
Mutant Maize Leaves"

Moscow, Molekulyarnaya Biologiya, Vol 5, No 3, May/Jun 71, pp 366-374

Abstract: The correlation between fluorescence spectra, quantity of chlorophyll pigments, and development of chloroplasts was studied in normal and carotenoid mutant maize leaves during the greening process at low intensity light (25 lux). In the fluorescence spectra of normal and mutant leaves recorded at low temperature (77°K), a maximum at 635 millimicrons corresponds to protochlorophyll; at 655 -- to protochlorophyllide; at 672 -- to chlorophyll; and at 686 -- to chlorophyllide. Exposure to light results in a fast photoconversion of protochlorophyllide and protochlorophyll in etiolated leaves, while no such conversion takes place in normal leaves. In the mutants, photolysis of chlorophyllide begins in earlier stages of greening and proceeds at a faster rate than in normal maize plants. Investigation of the chloroplast structure in different stages of the greening process revealed the presence of prolamellar

1/2

USSR

LANG, F., et al, Molekulyarnaya Biologiya, Vol 5, No 3, May/Jun 71, pp 366-374

bodies in the proplastids of both the etiolated normal and mutant leaves. After 3-6 hours of illumination, circular lamellar systems are formed in normal and mutant plastids. After a 24-hour exposure to light, granules are formed in normal but not in mutant chloroplasts. After prolonged illumination, mutant chloroplasts also form granules, though of a different structure. Mutant chloroplasts are highly heterogenic. No correlation was found between chlorophyll synthesis and formation of chloroplast structures in greening leaves exposed to low intensity light even though, according to other investigators, such correlation exists during exposure to high intensity light.

2/2

- 20 -

USSR

UDC 620.793.27

MIGAY, L. L., MAL'CHEVSKIY, Ye. G., ARONS, V. I., DZHEZHENTSEV, I. P., and
VOROB'YEV, I. P., State Scientific Research and Planning Institute of Rare
Metals Industry

"Corrosion Resistance of Vanadium and Its Titanium Alloys in a 3% NaCl
Solution"

Moscow, Zashchita Metallov, Vol 7, No 6, Nov-Dec 71, pp 699-700

Abstract: The corrosion resistance and mechanical properties of Va alloyed
with 5-20% Ti were investigated. Ingots weighing 10-12 kg, smelted in an elec-
tric furnace, were forged and rolled to 2 mm- and 0.3-mm-thick sheets.
An increased Ti-content increased the corrosion resistance in a
naturally aerated solution. The corrosion rate of the alloy with
5 % Ti is considerably lower than 0.001 mm/year, which is the
standard limit of ideal corrosion resistance of metals. Electro-
chemical investigations carried out in a naturally aerated 3 %
HCl-solution revealed that Va and its alloys with Ti are not pas-
sivated at potentials of 0.05-0.7 v relative to a normal hydro-
gen electrode, but with increasing Ti-content a decrease of the
anodic current takes place. According to measurements of statio-
nary electrode potentials, a refining of potentials of Va and
its alloys takes place in time. One illustr., one table.

1/1

USSR

UDC 669.292.5.017.12.620.193.41

VCROB'YEVA, L. P., DRUZHININA, I. P., GULYAYEV, A. P.

"Corrosion Resistance of 2-and 3-Component Vanadium Alloys in Boiling Solutions of Inorganic Acids"

Nauchn. Tr. N-i. i Proyechn. In-t Redkomet. Prom-sti [Scientific Works of Scientific Research and Planning Institute for the Rare Metals Industry], 1971, Vol.32, pp. 168-174. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 I705 by the authors).

Translation: The rate of corrosion of V and V alloys with Ti, Ta, Mo, and W in boiling solutions of hydrochloric, sulfuric, phosphoric, and nitric acids at various concentrations is determined. 5 figs; 1 table, 7 biblio refs.

i/1

USSR

UDC 531.01

VOROB'YEVA, L.S.

"The Motion of a Point of Variable Mass Thrown at an Angle to the Horizon in a Medium With Resistance Proportional to the Point's Velocity"

Alma-Ata, Izvestiya Akademii Nauk, KazSSR, Seriya Fiziko-Matematicheskaya, No 3, May-Jun 72, pp 81-82

Abstract: Differential equations of motion were solved for a point of variable mass thrown at an angle to the horizon in case of the change of the resistance force of the medium in proportion to the point's velocity. The cases of linear and exponential changes of the point's mass are analyzed. The solutions of the equations of motion were found in form of elementary functions for the linear case and in quadratures for the exponential case of mass changes. Seven formulas, two biblio. refs.

1/1

- 26 -

1/2 022
UNCLASSIFIED
TITLE--USE OF DIFFERENTIAL THERMAL ANALYSIS TO STUDY THE DISTURBANCE OF A
QUARTZ CRYSTAL LATTICE DURING PULVERIZATION -U-
AUTHOR-(03)-BUTT, YU.M., VOROBYEVA, M.A., MAMONTOV, V.N.
COUNTRY OF INFO--USSR
SOURCE--ZH. VSES. KHIM. OBSHCHEST. 1970, 15(2), 228-30
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY, PHYSICS
TOPIC TAGS--CRYSTAL LATTICE, MATERIAL CRUSHING, COMMINUTION, QUARTZ
CRYSTAL, METAL BALL, GRINDING MACHINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/1048
STEP NO--UR/0063/70/015/002/0228/0230
CIRC ACCESSION NO--AP0138070
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0138070

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERMOGRAMS ARE REPORTED FOR POWD. QUARTZ WITH ADMIXTS. OF POWD. FE AFTER VARIOUS MODES OF PULVERIZATION IN VARIOUS MILLS. THE THERMOGRAPHIC METHOD WAS ABLE TO DETECT THE DISTURBANCES IN CRYSTAL LATTICE OF QUARTZ IN SUCH SYSTEMS CAUSED BY MECH. DEFORMATION IN MILLING. THE LARGEST DEFORMATIONS WERE FOUND AFTER TREATMENT IN A VIBRATORY OR BALL MILL, THE MATERIAL ATTAINING A SP. SURFACE OF SIMILAR TO 3000 CM PRIMEZ -G. FACILITY: MOSK. KHIM. TEKHNOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

UNCLASSIFIED

VOROB'YEVA, N. I.

TECHNICAL TRANSLATION

FSTC-HT-23-823-71

ENGLISH TITLE: Simultaneous Combustion of High-Current and High-Frequency Arcs in a Plasmatron

FOREIGN TITLE: Sovmestnoye Goreniye Sil'notochnoy i Vysokochastotnoy Dug v Plazmatrone

AUTHOR: V. A. Bogatyrova, N. I. Vorob'yeva, H. F. Zhukov, Yu. I. Sukhinin

SOURCE: Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki No. 3, 1968, pp. 86-89

GRAPHICS NOT REPRODUCIBLE

Translated for FSTC by Leo Kanner Associates

NOTICE

The contents of this publication have been translated as presented in the original text. No attempt has been made to verify the accuracy of any statement contained herein. This translation is published with a minimum of copy editing and graphics preparation in order to expedite the dissemination of information. Requests for additional copies of this document should be addressed to Department A, National Technical Information Service, Springfield, Virginia 22151. Approved for public release; distribution unlimited.

This translation was accomplished from a xerox manuscript. The graphics were not reproducible. An attempt to obtain the original graphics yielded negative results. Thus, this document was published as is, in order to make it available on a timely basis.

Thermomechanical Treatment

USSR

UDC: 539.4.011

SHAKHNAZAROV, Yu. V., TIKHOMIROV, V. V., ORLOV, Ye. D., and VOROB'YEVA,
N. I., Leningrad

"Combined Effect of Alloying and High-Temperature Thermomechanical
Treatment on the Resistance of Low-Tempered Martensite to Brittle Failure"
Moscow, Izvestiya Akademii Nauk SSSR, Metally, no 6, Nov-Dec 70, pp 124-127

Abstract: This study involved arc furnace-melted steels 40, 40Kh, 40KhS,
40KhSN, and 40KhSNMF. The steels were quenched from 870°C (heating in a
salt bath for 6 minutes, oil). The high-temperature thermomechanical treat-
ment (HTMT) was effected by rolling in shaped rolls at 900°C with deforma-
tion of about 50%. The tempering temperature was such as to insure a
tensile strength of 190-215 kg/mm². HTMT is shown to increase the
resistance of low-tempered steels (varying in degree of alloying) to
brittle failure; it was also found to level off the differences in notch
and crack sensitivity. HTMT increases the crack-propagation resistance

1/2

USSR

SHAKHNAZAROV, Yu. V., et al, Izvestiya Akademii Nauk SSSR, Metally, no 6,
Nov-Dec 70, pp 124-127

of low-tempered martensite through changes in the macrostructure of the fracture. The tangible differences in the values of the pair coefficients of correlation between the notch sensitivity characteristics demonstrate that the latter are not interchangeable in evaluating the resistance of low-tempered martensite to brittle failure.

2/2

- 60 -

1/2 025 UNCLASSIFIED PROCESSING DATE--20NDV70
TITLE--GENERALIZED CHARACTERISTICS OF AN ELECTRIC ARC DC HYDROGEN HEATER
-U-
AUTHDR--(051)-ZHUKOV, M.F., SUKHININ, YU.I., MALKOV, YUMP., VOROBYEVA, N.I.,
HUKHC, G.S.
COUNTRY OF INFO--USSR
SOURCE--AKADEMIYA NAUK SSSR, SIBIRSKOE OTDELENIE, IZVESTIYA, SERIYA
TEKHNIЧЕСКИХ НАУК, FEB. 1970, P. 30-34
DATE PUBLISHED--70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--ELECTRIC ARC, DIRECT CURRENT, AIR HEATER, HYDROGEN, COPPER,
TUNGSTEN, CATHODE, ANODE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/1272 STEP NO--UR/0288/70/000/000/0030/0034
CIRC ACCESSION NO--AP0124923
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0124923

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SURVEY OF THE RESULTS OF INVESTIGATIONS OF THE ELECTRIC, THERMAL, AND EROSION CHARACTERISTICS OF A SINGLE CHAMBER ELECTRIC ARC HYDROGEN HEATER. IT IS SHOWN EXPERIMENTALLY THAT A LAMINAR COPPER TUNGSTEN OUTPUT ANODE HAS HIGH EROSION STABILITY DURING OPERATION IN A HYDROGEN MEDIUM AND A LONG SERVICE LIFE. IT IS CONCLUDED THAT THE USE OF A COPPER TUNGSTEN CATHODE AND ANODE CAN ENSURE LONG LASTING SINGLE CHAMBER HYDROGEN PLASMATRONS WITH GAS VORTEX STABILIZATION OF HIGH POWER ELECTRIC ARCS. FACILITY: AKADEMIIA NAUK SSSR, INSTITUT TEORETICHESKOI I PRIKLADNOI MEKhanIKI, NOVOSIBIRSK, USSR.

UNCLASSIFIED

1/2 009
TITLE--MODIFIED CELLULOSE -U- UNCLASSIFIED PROCESSING DATE--30OCT70
AUTHOR--(03)-YERMOLENKO, I.N., SKORYNINA, I.S., VOROB'YEVA, N.K.
COUNTRY OF INFO--USSR
SOURCE--USSR, 261,376
REFERENCE--UTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--13JAN70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--CELLULOSE RESIN, CHEMICAL PATENT, PHOSPHATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3002/1447
CIRC ACCESSION NO--AA0128846
STEP NO--UR/0482/70/000/000/0000/0000
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE—30OCT70

CIRC ACCESSION NO--AA0128846

ABSTRACT/EXTRACT—(U) GP-0- ABSTRACT. CELLULOSIC MATERIALS ARE MODIFIED BY TREATMENT WITH P CONTG. REAGENTS, E. G. CONDENSED ACID PHOSPHATES, COMPLEX PHOSPHATES, OR METAL POLYPHOSPHATES, IN THE PRESENCE OF N CONTG. COMPS. AT 140DEGREES. THE PRODUCT OBTAINED IS HEAT TREATED AT 140DEGREES AND A RESIDUAL PRESSURE OF 0.1 MM HG. FACILITY: INSTITUTE OF GENERAL AND INORGANIC CHEMISTRY, ACADEMY OF SCIENCES, BELORUSSIAN SSR.

UNCLASSIFIED

USSR

UDC 615.285.7.099

VOROB'YEVA, N. M., and LAPCHENKO, V. S., Laboratory of Toxicology, Kiev Scientific Research Institute of the Hygiene of Nutrition, Kiev

"The Toxicological Characteristics of the New Pesticide Antio"

Moscow, Farmakologiya i Toksikologiya, Vol 36, No 1, Jan-Feb 73, pp 104-107

Abstract: Antio[0,0-dimethyl S-(N-methyl,N-formylcarbamoylmethyl) dithio-phosphate] is an effective insecticide and acaricide for the treatment of fruit, vegetable, citrus, and other crops. Its toxicity to warm-blooded animals was investigated. LD₁₀₀ was 125, 500, and 400; LD₅₀ 83.3 ± 10.3, 218 ± 75.4, and 310 ± 41; and the threshold dose producing inhibition of the cholinesterase activity in the blood 5, 10, and 15 mg/kg for mice, male rats, and cats, respectively. The toxicity of Antio varied with the sex of the animals: LD₅₀ was 635 ± 38 mg/kg for female rats vs. 218 ± 75.4 for male rats. The compound exerted a slight cumulative action. On repeated peroral administration, Antio produced, in addition to an inhibition of cholinesterase activity, disturbances in the functioning of the liver and morphological changes in this and other organs. Its threshold daily dose on peroral administration to rats was 0.38 mg/kg.

1/1

- 53 -

Acc. Nr.: **AP0031634**

Ref. Code: UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i
Meditsiny, 1970, Vol 69, Nr 1, pp/3-15

TRANSMISSION PATHWAYS FOR DUODENAL RECEPTORS ON THE MOTRICITY
OF THE LARGE BOWEL
Vorob'yeva, N.M.

Institute of Nutrition Hygiene, Institute of Physiology of the State University of Kiev

In chronic experiments on 4 dogs with duodenal fistulae and fistula of the large bowel the author studied the pathways of transmission from the receptors of the duodenum onto the motricity of the large bowel. Vagus, splanchnic and pelvic nerves were sectioned, as well as the bowel at the level of the ileocecal sphincter. Data suggest that the influences from the mechanoreceptors and chemoreceptors of the duodenum on the motricity of the large bowel is realized through the external nerves of the gastro-intestinal tract (splanchnic, vagus and pelvic nerves) and through the intramural mechanism in the intestinal walls.

REEL/FAME

19691761

1 mk

USSR

UDC 621.375.82

BAKEYEV, A. A., VAS'KOVSKIY, Yu. M., VOROB'YEVA, N. N., ORLOV, V. K., and ROVINSKIY, R. Ye.

"The Role of a Plasma Torch in the Energy Balance of the Process of the Action of Laser Emission on Materials"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No 2(14), Moscow, "Sov. Radio," 1973, pp 77-80 (English summary) (from RZh-Fizika, No 10, Oct 73, Abstract No 10D899 from authors' abstract)

Translation: The authors measured the energy reemitted by a plasma torch in a wide spectral interval (0.2-4 microns) during the action of laser emission on opaque obstructions. The power density of the incident beam was $\sim 10^6$ and $\sim 10^7$ w/sq cm with retention of the size of the spot on the target. The targets used were duralumin, ebonite, and graphite. It is shown that the energy reemitted by the plasma torch is from 20 to 50 percent of the energy of the laser beam, depending on the material and exposure conditions. The resultant experimental data are used as the basis for evaluating the role of other factors in the energy balance of the action of laser emission on materials. Bibliography with six titles.

1/1

- 51 -

Vector Studies

USSR

UDC 576.858:619.616

RAD'KOVA, O. A. and VOROB'YEVA, N. N., Institute of Biology, Siberian Department, Academy of Sciences USSR, Novosibirsk

"Isolation of Omsk Hemorrhagic Fever Virus From Cold-Blooded Animals in a Natural Focus"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Biologicheskikh Nauk, No 10 (190), 1971, pp 180-182

Abstract: Five strains of Omsk hemorrhagic fever (OHF) virus (1317, 1247, 1150, 1243, 1242) were isolated from the brains, hearts, and livers of frogs and lizards dwelling in a natural focus of the disease (Karasuk Rayon, Novosibirsk Oblast, Western Siberia), an indication that these animals can be spontaneous virus carriers. All the strains were identified by serological tests and the fluorescent antibody method. The symptoms of the disease observed in mice infected with the strains isolated from the frogs and lizards were the same as those in mice infected with OHF virus isolated from other sources. Peripheral injection of frogs with the virus and its subsequent detection in various organs testified to the presence of viremia and susceptibility of the animals to OHF virus.

1/1

USSR

UDC 577.4:616.988.26(571.13)+576.858

VOZOB'YEVA, N. N., KHARITONOVA, N. N., and KHAIZHIYEVA, T. M. Biological Institute,
Siberian Branch of the Academy of Sciences USSR, Novosibirsk

"Ecological Relationships of the Virus of Omsk Hemorrhagic Fever with Animals in
a Natural Focus"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Biolo-
gicheskikh Nauk, Vol 1, No 5, Apr 70, pp 98-102

Abstract: Circulation of hemorrhagic fever virus among various types of animals
-- inhabitants of a natural focus -- the emergence of ecological links between
virus and animals, and elucidation of a possible nontransmitting mechanism for
transfer of the infection in the natural focus were the aim of this study. A
total of 890 small mammals of 13 species from seven regions in the Novosibirsk
area were examined. The blood of 705 small mammals of 13 species and the serum
of 1199 domestic animals were tested in the hemagglutination inhibition test with
antigen from regional strains of Omsk hemorrhagic fever virus. Brain, blood,
urine, and internal organs of the animals were examined. The virus was isolated
on chick embryo fibroblasts, with subsequent intracerebral infection of white
mice.

1/2

USSR

VOROB'YEVA, N. N., et al, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Biologicheskikh Nauk, Vol 1, No 5, Apr 70, pp 98-102

To elucidate the possibilities of a nontransmitting mechanism for transfer of the infection, 56 muskrats were infected with the virus in different ways. Sixteen virus strains were isolated from muskrat brains, which indicates that the disease is of viral etiology also in the Novosibirsk region. Serological evidence established the presence of specific antibodies against hemorrhagic fever virus in the blood of domestic animals and in 10 species of small mammals. Ecological relationships exist between the virus and both wild and domestic animals in natural foci. Tests involving infection of muskrats and water rats with different doses of the virus, administered by the alimentary and inhalation routes, showed that the muskrat is very sensitive to the virus, and that water rats have a low sensitivity. Muskrats may contaminate their environment with the virus by excretion.

2/2

USSR

UDC 620.193.43

CHUKREYEV, N. YA., VOROB'YEVA, N. P., ZIL'BERBERG, V. G., and KARFINOS, D. M.,
Academy of Sciences UkrSSR, Institute of General and Inorganic Chemistry,
Institute of Problems of Material Science

"On the Resistance of Al_2O_3 Coatings on Nickel, Molybdenum, and Titanium in
Melted LiCl-KCl Eutectic"

Moscow, Zashchita Metallov, Vol 19, No 2, Mar-Apr 73, pp 195-196

Abstract: The corrosion resistance in melted LiCl-KCl eutectic of Al_2O_3 coatings (200 μ m thick, 12-15% porosity), applied in argon on wire specimens of Ni, Mo, and Ti, was investigated. In comparison with unprotected Ni-, Mo-, and Ti-specimens, the coating decreased the corrosion by 2.3-2.4 times at 400° and by more than 3-6 times at 500°; at the same time, aluminum oxide dissolved at rates of $8.0 \cdot 10^{-5}$ and $1.3 \cdot 10^{-4}$ g/cm² hr, respectively. The unprotected Ni-specimens corroded at 400° at the rate of $3.6 \cdot 10^{-3}$ g/cm² hr and at 500° at the rate of $3.6 \cdot 10^{-3}$ g/cm² hr. The corresponding values for Mo are $5.4 \cdot 10^{-4}$ and $7.7 \cdot 10^{-4}$ g/cm² hr and $4.6 \cdot 10^{-4}$ and $9.2 \cdot 10^{-4}$ g/cm² hr for Ti. The aluminum oxide coating on Ti proved to be non-resistant. Plasma oxide coatings can be applied to protect metals against corrosion under conditions of melted salts. A further increase of corrosion resistance would probably result by increasing the plasma flux temperature and by decreasing the coating porosity.

1/1

- 10 -

USSR

UDC: 537.312.62

VOROB'YEVA, N. S., KUNAKOV, Ya. N., RONAMI, G. N., KUZNETSOVA, S. M.

"Investigation of the Conditions of Formation of Superconducting Compound V_3Ga Made by the Diffusion Method"

Nauchn. tr. N.-i. i proyekt. in-t redkomet. prom-sti (Scientific Works of the Scientific Research and Design Institute of the Rare Metals Industry), 1971, 32, pp 115-123 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D531)

Translation: A heat-treatment cycle is recommended for making V_3Ga superconductor. Three illustrations, two tables, bibliography of fourteen titles.

1/1

- 143 -

USSR

UDC: 537.312.62

VOROB'YEVA, N. S., KUNAKOV, Ya. N.

"Synthesis and Superconducting Properties of Gallium Diffusion Coatings on Vanadium Multiconductor Cable"

V sb. Probl. sverkhprovodnyashch. materialov (Problems of Superconducting Materials--collection of works), Moscow, "Nauka", 1970, pp 106-111 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D561)

Translation: A vanadium multiple-conductor microcable is produced with wire diameter from 40 to 100 microns. Conditions of deposition of gallium on vanadium are studied. It is shown that the amount of gallium precipitated in hot metallization depends on the configuration of the microcable and the conditions of deposition. Conditions are selected for heat-treating gallium-plated microcable to produce superconducting compound V_3Ga . The superconducting properties are measured. Three illustrations, bibliography of four titles, two tables. Resumé.

1/1

- 152 -

USSR

UDC 669.292.018.5.537.312.62.621.785

VOROB'YEVA, N. S., KUNAKOV, Ya. N.

"Production and Superconducting Properties of Gallium Coatings on Vanadium Multiple-core Cable"

Probl. Sverkhprovodyashch. Materialov [Problems of Superconducting Materials -- Collection of Works], Moscow, Nauka Press, 1970, pp. 106-111. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 I751 by the authors).

Translation: A multiple-core microcable of V with wire diameters of 40-100 μ is produced. Modes of deposition of Ga on V are studied. It is demonstrated that the quantity of Ga deposited with hot metalization depends on the configuration of the microcable and the deposition conditions. A heat treatment mode of the microcable coated with Ga is selected for the production of the superconducting compound V3Ga. The superconducting properties are measured. 3 figs; 2 tables; 4 biblio refs.

1/1

USSR

UDC 537.312.62:669.871.7:669.292.7

VOROB'YEVA, N. S., and KUNAKOV, Ya. N.

"Production and Superconducting Properties of Diffusion Gallium Coating of Vanadium Multiple-Core Cable"

Problemy Sverkhprovodyashchikh Materialov [Problems of Superconducting Materials -- Collection of Works], Moscow, Nauka Press, 1970, pp 106-111

Translation: A multiple core microcable of vanadium is produced with conductor diameters of 40 to 100 microns. The modes of deposition of gallium on vanadium are studied. It is demonstrated that the quantity of gallium deposited by hot metallization depends on the configuration of the microcable and the deposition conditions.

A heat treatment mode is selected for the gallium-coated microcable to produce the superconducting compound V_3Ga . The superconducting properties are measured.

3 figures; 2 tables; 4 biblio. refs.

1/1

- 84 -

1/2 008
UNCLASSIFIED
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
CIRC ACCESSION NO--AP0134663
STEP NO--UR/0204/70/010/002/0165/0173
UNCLASSIFIED

2/2 008
CIRC ACCESSION NO--AP0134663 UNCLASSIFIED
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PROCESSING DATE--04DEC70

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 ACID, WHICH, AFTER HEATING WITH BAO GAVE III. III WITH METHYL GRIGNARD AND THEN DEHYDRATION GAVE IV WHICH WAS OBTAINED FROM THE CORRESPONDING DIKETONE BY MENGI, DEHYDRATION ON AL SUB2 O SUB3, AND THEN HYDROGENATION OF THE UNSATD. COMPD. MIXT. OF 2,7,DIMETHYL AND 2,8,DIETHYL COMPS. WERE SIMILARLY OBTAINED AS THE 1,2,DIMETHYL COMPS. 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.

UNCLASSIFIED

USSR

UDC 616.988.25-022.395.42.036.2(571.62)

VERETA, L. A., OBUKHOV, G. D., KOVALEVA, Ye. I., SKVORTSOVA, T. M.,
MOGILEV, V. Ye. VOROB'YEVA, R. N., NIKOLAYEVA, S. P., RUDAKOVA, T. M., and
ROSLYAKOV, G. Ye., Khabarovsk Scientific Research Institute of Epidemiology and
Microbiology, Khabarovsk

"Landscape-Epidemiological Subdivision of the Amur Territory With Respect to
Tick-Borne Encephalitis"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 42, No 1,
Jan/Feb 73, pp 28-32

Abstract: An evaluation of the danger of human infection with tick-borne
encephalitis in territorial subdivisions of the Amur region differing with
respect to natural characteristics has been carried out on the basis of a num-
ber of factors, principally the local density of Ixodid ticks. The index of
probability of infection (a product of the ratio of persons who have visited
forests by the ratio of those who observed the attachment of ticks by the
ratio of ticks infected with the virus of the disease) based on data collected
in 1969-71 was used as a criterion. Regions with a high incidence of the dis-
ease were located in the zone of coniferous-wide-leaved forests, those with a
moderate incidence in the subzone of the southern tayga and in agriculturally
developed areas in the zone of coniferous-wide-leaved forests, and those with
1/2

USSR

VERETA, L. A., et al., Meditsinskaya Parazitologiya i Parazitarnyye Bolezni,
Vol 42, No 1, Jan/Feb 73, pp 28-32

a low incidence in the subzone of the middle taya. Acute forms of the disease occurred both in regions with a high and a low incidence. The ratio of focal (meningoencephalitic) forms and the index of lethality, which corresponded to this ratio, showed some tendency of increasing from the south to the north.

2/2

- 16 -

172 013
UNCLASSIFIED
PROCESSING DATE--16OCT70
TITLE--HYDRODYNAMIC PECULIARITIES OF MICROELECTROPHORESIS AND
ELECTROOSMOSIS IN A. C. FIELD -U-
AUTHOR--(03)-VOROBYEVA, T.A., VLODAVETS, I.N., DUKNIN, S.S.
COUNTRY OF INFO--USSR
SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 2 PP 189-194
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--ELECTROPHORESIS, ELECTROOSMOSIS, ALTERNATING CURRENT, NAVIER
STOKES EQUATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1993/0395
CIRC ACCESSION NO--AP0113313
STEP NO--UR/0069/70/032/002/0189/0194
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0113313

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN MICROELECTROPHORESIS AND ELECTROOSMOSIS STUDIES IN A. C. FIELDS IT IS NECESSARY TO TAKE INTO ACCOUNT FAST DAMPING OF ELECTROSMOTIC OSCILLATIONS OF THE LIQUID AS THE DISTANCE FROM THE WALLS INCREASES. THE NATURE OF THE DISTRIBUTION CURVES OF THE VELOCITY AMPLITUDES OF ELECTROSMOTIC OSCILLATIONS HAS BEEN CONSIDERED IN A THICK LIQUID LAYER ADJACENT TO THE WALL, IN A WIDE FLAT OPEN, AND IN A FLAT CLOSED, CELLS. THE SOLUTIONS OF HAVIER STOKES EQUATIONS HAVE BEEN FOUND, WHICH SATISFY THE CORRESPONDING BOUNDARY CONDITIONS AND AGREE WELL WITH EXPERIMENT.

UNCLASSIFIED

1/2 015

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--THE SIGNIFICANCE OF RHEOVASOGRAPHY IN THE ASSESSMENT OF THE
FUNCTIONAL STATE OF THE ARTERIAL VESSELS --U--
AUTHOR--(02)--MAKSIKOVA, T.V., VOROBYEVA, T.A.

COUNTRY OF INFO--USSR

SOURCE--EKSPERIMENTAL'NAYA KHIRURGIYA I ANESTEZIOLOGIYA, 1970, NR 3, PP
44-49

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DIAGNOSTIC METHODS, ARTERY, BLOOD VESSEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/0122

STEP NO--UR/0481/70/000/003/0044/0049

CIRC ACCESSION NO--AP0129378

UNCLASSIFIED

2/2 015

CIRC ACCESSION NO--AP0129378

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-G- ABSTRACT. RHEOVASOGRAPHY WAS USED FOR ASSESSMENT OF THE FUNCTIONAL STATE OF ARTERIES. ANALYSIS OF RHECVASOGRAMS IN 300 PATIENTS WITH FUNCTIONAL CHANGES OF SRTERIAL TONUS AND IN 40 HEALTHY INDIVIDUALS (CONTROL) ENABLED TO DETECT 4 TYPES OF TONIC STATE OF ARTERIES OF THE LIMBS: NORMAL TONUS, ARTERIAL SPASM, HYPOTONIA AND ATONIA AND ARTERIAL DYSTONIA. RHEOVASOGRAM CHANGES IN FUNCTIONAL TESTS IN PATIENTS WITH DIFFERENT INITIAL STATE OF ARTERIAL TONUS ARE DESCRIBED. DEPENDANCE OF THE TYPE OF CHANGE OF ARTERIAL TONUS ON ITS INITIAL STATE IS STRESSED. POSSIBILITY OF SUSTAINED OBSERVATION OF THE FUNCTIONAL STATE OF THE COLLATERALS WITH THE AID OF RHEOVASOGRAPHY IS UNDERLINED. FACILITY: SOSUDISTOYE OTDELENIYE INSTITUTA KHIRURGII IM VISHNEVSKOGO AMN SSSR, MOSKVA.

UNCLASSIFIED

USSR

UDC 612.826

VOROB'YEVA, T. M., Laboratory of Clinical and Experimental Neurophysiology,
Kharkov Scientific Research Institute of Neurology and Psychiatry

"The Role of Morpho-Functional Connections of the Limbic System in the Self-Stimulation Reaction"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. M. Pavlova, Vol 22,
No 3, May/Jun 72, pp 557-563

Abstract: To resolve the question of whether the hypothalamus of rats has an independent "center of pleasure," various nuclei and paths connecting the hypothalamus with other structures were consecutively destroyed through electrolytic coagulation by implanted electrodes, and the frequency and pattern of dorsal hypothalamic self-stimulation were recorded. The results indicate that the "center of pleasure" functions as a relatively independent mechanism which is controlled by two systems. The reticular formation of the mesencephalon, the central gray matter around the aqueduct of Sylvius, anterior thalamic nuclei, dorsal portions of the septofornical system, and the hippocampus form the activating system, while ventral portions of the septo-fornical system, dorsomedial thalamic nuclei, amygdalae, and parts of the hippocampus form the inactivating system. The septo-hippocampal structures constitute the final common path for positive emotions.

1/1

1/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--CATALYTIC DECOMPOSITION OF HYDROGEN PEROXIDE IN THE PRESENCE OF
COPPER IONS -U-
AUTHOR--(03)-VOROBYEVA, T.P., BERDNIKOV, V.M., DURMALIS, A.
COUNTRY OF INFO--USSR
SOURCE--KINET. KATAL. 1970, 11(1), 100-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PROPULSION AND FUELS
TOPIC TAGS--TETRANITROMETHANE, HYDROGEN PEROXIDE, CHEMICAL DECOMPOSITION,
COPPER, IRON, METAL CATALYST
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/0758 STEP NO--UR/0195/70/011/001/0100/0106
CIRC ACCESSION NO--AP0107300
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107300

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CATALYTIC DECOMPN. OF H SUB2 O
SUB2 BY CU ION IS INITIATEE BY FE (III) IMPURITIES; CU IONS (ESP. CU
PRIME3 POSITIVE) PARTICIPATE IN CHAIN PROPAGATION AND CHAIN TERMINATION
STEPS OF THIS DECOMPN. C (NO SUB2) SUB4 INHIBITS H SUB2 O SUB2 DECOMPN.
IN THE PRESENCE OF CU.

UNCLASSIFIED

89

USSR

UDC 616-008.921.1.04-07:616.8-091.81-07

BOGOLEPOV, N. N., MATVEYEVA, T. S., DOVEDOVA, Ye. L., and VOROB'YEVA, T. V.,
Brain Institute, Academy of Medical Sciences USSR, Moscow

"Ultrastructural Changes in Nerve Cells Induced by Hypoxia"

Moscow, Zhurnal Nevropatologii i Psikhatrii, No 12, 1972, pp 1819-1827

Abstract: Optical microscopic examination of cortical neurons in rats exposed to hypoxia for varying periods revealed a great variety of morphological changes ranging from physiological activation to ischemia, karyocytolysis, and disappearance of whole groups of cells. Electron microscopy showed four types of ultrastructural changes, the severity varying with the duration of hypoxia: (a) presence of "dark" osmiophilic cells with increased electron density of the cytoplasm; (b) presence of cells with an increased number of lysosomes and dark osmiophilic granules; (c) various changes in the mitochondria; (d) changes typical of retrograde degeneration, i.e., shifting of the nucleus to the periphery, decrease in number of elements of granular reticulum, swollen mitochondria lacking in cristae. The associated biochemical changes were marked chiefly by the decreased activity of the oxidation enzymes. The data are analyzed from the standpoint of the mechanisms of the destructive and compensatory processes in the cerebral cortex during hypoxia.

1/1

- 49 -

1/2 026 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--THE EFFECT OF CASEIN HYDROLYSATE INTRODUCED PARENTERALLY ON THE
EXCRETORY FUNCTION OF THE PANCREAS -U-
AUTHOR-(02)-SHLYGIN, G.K., VOROBYEVA, T.V.
COUNTRY OF INFO--USSR
SOURCE--BYULLEEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69,
NR 4, PP 36-39
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--PANCREAS, DOG, SECRETION, ENZYME, PROTEIN, FIBRIN, HYDROLYSIS,
PEPTIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1593... STEP NO--UR/0219/70/069/004/0036/0039
CIRC ACCESSION NO--AP0106339
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--02OCT70

2/2 026

CIRC ACCESSION NO--AP0106339

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN EXPERIMENTS ON DOGS WITH A CHRONIC FISTULA OF THE PANCREATIC DUCT THE AUTHORS DEMONSTRATE THAT CASEIN HYDROLYSATE, OBTAINED BY ACID HYDROLYSIS, UPON ADMINISTRATION INTO THE BLOOD IS ENDOWED WITH A SHARPLY PRONOUNCED CAPACITY TO STIMULATE THE SECRETION OF THE PANCREATIC JUICE. THE SECRETED JUICE IS CHARACTERIZED BY A RELATIVELY LOW CONTENT OF ENZYMES AND TOTAL PROTEIN. A PREPARATION DERIVED BY MEANS OF ENZYMATIC HYDROLYSIS POSSESSES THIS CAPACITY TO A SIGNIFICANTLY LESSER DEGREE. FIBRIN HYDROLYSATE AND A NUMBER OF OTHER HYDROLYSATES OBTAINED FROM THE BLOOD DO NOT CAUSE AN INTENSIVE SECRETION OF THE PANCREATIC JUICE. AN OPINION IS SET FORTH THAT CASEIN HYDROLYSATE CONTAINS SOME FRAGMENTS OF ITS MOLECULE, WHICH IN THE ORGANISM ARE CONVERTED INTO PEPTIDE WITH SECRETIN LIKE ACTIVITY.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--AN ELECTRON MICROSCOPICAL STUDY OF THE SYNAPTICAL INTRADISLOCATION
IN THE OCCIPITAL BRAIN AREA --U-
AUTHOR--VUROBYEVA, T.V. ✓
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKOVA, 1970,
VOL 70, NR 4, PP 545-550
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BRAIN, ELECTRON MICROSCOPY, WHITE RAT, NEURON, MITOCHONDRION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1988/1668

STEP NO--UR/0246/70/070/004/0545/0550

CIRC ACCESSION NO--AP0106414

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--APO106414

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER DEALS WITH MORPHOLOGICAL STUDIES OF THE SYNAPSOARCHITECTONICS OF THE 17 AND 18 FIELDS OF THE OCCIPITAL ZONE. THE STUDY WAS CONVENED ON THE BRAINS OF ADULT WHITE RATS. BY MEANS OF ELECTRONMICRISCOPICAL METHODS THE AUTHOR HAS DEMONSTRATED THE DISTRIBUTION OF THE SYNAPSES IN THE BRAIN LAYERS, THE DIFFERENCES IN THEIR DENSITY AND SYNAPTICAL SETS. IT WAS ESTABLISHED THAT CONTACT INTERRELATIONSHIPS OF NEURONS AND THE MORPHOLOGY OF SYNAPSES BECOME MORE COMPLICATED AS THEY LEAD TO THE LOWER LYING BRAIN AREAS. THE SYNAPSES OF THE IV AND V LAYER, BESIDES THE QUANTITATIVE PREVALENCE, POSSESS EXPRESSED ELEMENTS OF THE SUBMICROSCOPIC STRUCTURE. THEY HAVE A MORE AMOUNT OF MITOCHONDRIA IN THE SYNAPTICAL TERMINALS AND A LONGER EXTENT OF CONTACTING MEMBRANES. THE ABUNDANCE AND DIVERSITY OF INTRANEURONAL CONTACTS IN THE IV AND V LAYER ALLOW TO ASSUME A HIGH PHYSIOLOGICAL ACTIVITY AND DIVERSITY OF PROCESSES PROCEEDING IN THIS AREA.

UNCLASSIFIED

USSR

UDO 621.385.032.329

KOFTELEV, V.T., FAYFER, S.I., SHISHKINA, I.P., VOROB'YEVA, V.D.

"Electrical Conducting Metalceramic For Cathode Heaters With Heating By Passage Of Current"

Elektron. tekhnika. Nauchno-tekhn. sb. Materialy (Electronic Technology. Scientific-Technical Collection. Materials), 1970, Issue 3, p 121 (from RZh--Elektronika i elektronika, No 1, January 1971, Abstract No 1A72)

Translation: An analysis of the temperature dependences of the electrical resistivity of cermets of various compositions showed that the difference of the character of a cermet with heating by passage of currents and with heating by an exterior source of heat is due to the microlocalized superheating of the cermet at the point of contact of the metal particles, one with another. The contact phenomena in the metalceramic leads to a reduction of the working temperature of the cermet heaters. In order to increase it, it is recommended that a cermet be used with a comparatively small electrical resistivity and refractory metal components. G.B.

1/1

USSR

UDC 621.372.852.1

VOROB'YEVA, V. G., RUBASHKINA, R. G., STRETENSKAYA, G. G., KHABI, V. S.

"A Filter for Suppressing Spurious Emissions of High-Power Amplifier Klystrons"

Elektron. tekhnika. Nauch.-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific and Technical Collection. SHF Electronics), 1971, vyp. 3, pp 136-137 (from RZh-Radiotekhnika, No 7, Jul 71, Abstract No 7B154)

Translation: The paper describes a waveguide filter for suppressing spurious emissions from high-power amplifier klystrons with a passband of two percent. Attenuation of the power of spurious emissions is 30 dB or more throughout the entire range of operation of the waveguide. Klystron power losses in the filter on the average frequency of the working band come to one percent. Four illustrations, bibliography of one title. Résumé.

1/1

- 6 -

Acc. Nr.

PP0049803

Abstracting Service:

CHEMICAL ABST: 5-70

Ref. Code:

UR 0138

V

101618z Increasing the wear resistance of tread rubbers by using new types of carbon black. Baishikhina, M. P.; Mistrvukova, G. V.; Vorobeva, V. V. (Kirov. Shin. Zavod, Kirov, USSR). Kauch. Rezina 1970, 29(1), 29-30 (Russ). Tire treads made of 40:60 SKD-BSK rubber mixt. and filled with carbon black, type PM-100, had somewhat lower abrasion resistance than tires filled with Vulcan 6. However, these tires lasted $(81.6-90.9) \times 1000$ km in service, while the tires filled with the std. carbon black, type PM-70, lasted $(59.4-81.5) \times 1000$ km. CPJR

76

1

REEL/FRA
19801725

7

USSR

UDC 615.22:547.834.4

MIKHILINA, YE. YE., ZAYTSEVA, K. A., ~~VOROB'YEVA, V. YA.~~, MASHKOVSKIY, M. D., and YAKHONTOV, L. N., All Union Scientific Chemical-Pharmaceutical Research Institute Imeni S. Ordzhonikidze, Moscow

"Synthesis and Pharmacological Study of the Derivatives of 3-Hydroxy- and 3-Aminoquinuclidines"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 7, No 8, Aug 73, pp 20-24

Abstract: A series of substituted quinuclidines was synthesized. To obtain 3-(2'-hydroxybenzoyloxy)quinuclidine and related ethers, the 3-hydroxyquinuclidine was reacted with benzoic acid chlorides in pyridine at 20° or 100°. 3-Acylaminoquinuclidines were synthesized by reacting 3-aminoquinuclidine with respective acid chlorides. Two methods were used to prepare 3-alkyl- and 3-aryl-aminoquinuclidines: reduction of the 3-acylaminoquinuclidine with LiAlH_4 , and reductive alkylation of 3-aminoquinuclidines with various carbonyl compounds, or of the respective amines with 3-ketoquinuclidine. The pharmacological studies were carried out using 3-benzoyloxyquinuclidine hydrochloride as the standard.

1/2

USSR

MIKHLINA, YE. YE., et al., Khimiko-Farmatsevticheskiy Zhurnal,
Vol 7, No 8, Aug 73, pp 20-24

Only the ethers containing OH, CH₃ or Cl in the phenyl ring
approached the activity of the standard compound. The rest of
the derivatives had a diminished pharmacological effect or lacked
it altogether.

2/2

- 86 -

USSR

UDC 576.8.077

VOROB'YEVA, V. Ya., Kazakh Scientific Research Institute of Epidemiology and Microbiology

"Comparative Evaluation of an Alcohol-Ether Toxoplasma Antigen With Sera From Various Animals"

Alma-Ata, Izvestiya Akademii Nauk Kazakhskoy SSR, No 5, 1971, pp 39-41

Abstract: A Toxoplasma diagnostic agent made by the alcohol-ether method was much more active than a preparation obtained by deep freezing followed by lyophilization. It was 7.6 times more sensitive in the complement-fixation reaction with sera from 813 persons suspected of having toxoplasmosis, and 1.8 times more sensitive with sera from 467 laboratory animals. Spontaneous carriers of Toxoplasma among clinically healthy laboratory animals were detected 2.6 times more often with the alcohol-ether antigen than with the lyophilized antigen. The differences were even sharper when used with sera from farm and small domestic animals whose blood usually contains antibodies in low titers. The alcohol-ether antigen was found to be highly specific in extensive clinical and experimental material with sera containing both homologous and heterologous antibodies.

1/1.

- 50 -

1/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--REDUCTION OF 1,7-DIAZABICYCLO[4.3.0], NON, SIGMA, ENE AND
2,3-DIHYDROIMIDAZO, 1,2,4, PYRIDINE AS AZACYCLIC COMPOUNDS WITH AMIDINE
AUTHOR--(03)-YAKHONTOV, L.N., VOROBYEVA, V.YA., MIKHILINA, E.E.
COUNTRY OF INFO--USSR
SOURCE--KHM. GETEROTSIKL. SOEDIN. 1970, (4), 495-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--CHEMICAL REDUCTION, MOLECULAR STRUCTURE, AROMATIC AMINE,
SECONDARY AMINE, PRIMARY AMINE, ORGANIC AZO COMPOUND, PYRIDINE, AROMATIC
KETONE, HYDROGENATION, HETEROCYCLIC NITROGEN COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3005/1349 STEP NO--UR/0409/70/000/004/0495/0497
CIRC ACCESSION NO--AP0133303
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133303

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REDUCTION OF 1,7-DIAZABICYCLO,
4.3.0, NON, OMEGA-ENE AND 2,3-DIHYDROIMIDAZO, 1,2,A, PYRIDINE AS
AZACYCLIC COMPOUNDS WITH AMIDINE STRUCTURE. (SHOWN ON MICROFICHE).
FACILITY: VSES. NAUCH.-ISSLED. KHIM.--FARM. INST. IN. ORDZHONIKIDZE,
MOSCOW, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--THERMODYNAMIC FUNCTIONS OF THE SORPTION PROCESS OF
CHLOROTETRACYCLINE ON SULFOCATIONITE SBS -U-
AUTHOR--(03)--SAMSONOV, G.V., VOROBYEVA, V.YA., KRAVETS, M.V.
COUNTRY OF INFO--USSR
SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 3, PP 427-429
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SORPTION, ENTROPY, ION EXCHANGE RESIN, ANTIBIOTIC,
TETRACYCLINE, CHLORINATED ORGANIC COMPOUND/(U)IONITE ION EXCHANGE RESIN,
(U)SBS SULFOCATIONITE EXCHANGE RESIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/2146 STEP NO--UR/0069/70/032/003/0427/0429
CIRC ACCESSION NO--AP0125729
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125729

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SELECTIVE ADSORPTION OF
CHLOROTETRACYCLINE BY IONITE IS DETERMINED BY INCREASE IN THE ENTROPY OF
THE SYSTEM. DURING ADSORPTION OF THE IONS OF THIS ANTIBIOTIC THE ION
EXCHANGE CONSTANT INCREASES WITH INCREASING TEMPERATURE AND THE SWELLING
COEFFICIENT OF THE SORBENT. THIS CAN BE PROBABLY ACCOUNTED FOR BY THE
LOW ENERGY OF ADDITIONAL INTERACTION OF CHLOROTETRACYCLINE WITH THE
SORBENT. FACILITY: KHIKHO-FARMATSEVTICHESKIY INSTITUT,
LENINGRAD.

UNCLASSIFIED

1/2 018
UNCLASSIFIED
TITLE--RECOVERY OF UREA FOR DEPARAFFINATION OF PETROLEUM FUELS -U-
PROCESSING DATE--27NOV70
AUTHOR--(03)-SELEZNEV, A.K., POPLAVSKAYA, A.V., VOROBYEVA, YE.I.
COUNTRY OF INFO--USSR
SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (3), 43-3
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PROPULSION AND FUELS
TOPIC TAGS--CRUDE OIL, LOW TEMPERATURE EFFECT, PETROLEUM FRACTION,
DEPARAFFINATION, UREA
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRACTION--3002/1721
STEP NO--UR/0318/70/000/003/0043/0044
CIRC ACCESSION NO--AP0129089
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0129089

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A DISTILLATE (B. 244-340DEGREES, CONGEALING AT PLUS 40DEGREES, AND 27.68PERCENT YIELD OF COMPLEX FORMERS WITH UREA) WAS OBTAINED FROM A COM. UNIT DISTG. OZEK SUATSK CRUDE OIL. IT WAS DEPARAFFINATED WITH RECRYSTO. AND SPENT UREA BY USING 4 WT. PERCENT ETOH AS ACTIVATOR. SOLVENT NAPHTHA (B. 80-120DEGREES) (100 VOL. PERCENT) WAS USED TO DIL. THE CHARGE. THE TEMP. OF TREATMENT VARIED FROM NEGATIVE 8 TO NEGATIVE 19DEGREES. AFTER MIXING FOR 30 MIN, THE COMPLEX WAS VACUUM FILTERED, WASHED FREE FROM OIL WITH NAPHTHA, DRIED, AND THEN DECOMPO. BY ETOH AT 70-50DEGREES. THE UREA DISSOLVED IN THE ETOH AND RECRYSTO. WHEN THE SOLN. WAS COOLED. THE PARAFFINS COLLECTED ON THE SURFACE WERE WASHED WITH H SUB2 O, DRIED, AND ANALYZED. THE FILTRATE CONTG. THE DEPARAFFINATED FUEL WAS WASHED WITH H SUB2 O TO REMOVE RESIDUAL UREA AND ETOH. WITH MULTIPLE USE (1-5) OF THE SAME UREA, THE YIELD OF DEPARAFFINATED FUEL INCREASED FROM 72 TO 87PERCENT, AND THE TEMP. OF TREATMENT DECREASED FROM 27 TO 8PERCENT (M. 22-50DEGREES), AND THE TEMP. OF TREATMENT WAS NEGATIVE 19 TO NEGATIVE 80DEGREES. WHEN THE UREA WAS RECRYSTO., THE YIELD OF FUEL WAS 68PERCENT, THAT OF PARAFFINS WAS 27PERCENT (M. 23DEGREES), AND THE TEMP. OF TREATMENT WAS NEGATIVE 19DEGREES. A METHOD OF DETG. THE ACTIVITY OF THE UREA FOR COMPLEX FORMATION WAS DEVELOPED, BASED ON MEASUREMENT OF THE HEAT OF COMPLEX FORMATION DURING DEPARAFFINATION UNDER STD. CONDITIONS. THE HEAT OF FORMATION INCREASED WITH INCREASED ACTIVITY OF THE UREA. FACILITY: GOZH. NEFT. INST., GORZNY, USSR.

UNCLASSIFIED

USSR

UDC: 624.07:534.1

VOROB'YEVA, E. I.

"Coefficients of Critical Axial Compressive Forces of Variable Intensity for Approximate Calculation of the Stability of Struts"

V sb. Raschety na prochnost'. Vyp. 15 (Strength Calculations--collection of works, No 15), Moscow, "Mashinostroyeniye", 1971, pp 278-290 (from RZh-Mekhanika, No 7, Jul 71, Abstract No 7V283)

Translation: The paper presents the results of a study of the stability of homogeneous struts of constant cross section compressed by axial forces of variable intensity with respect to a well developed classification of cases of end support and loading laws. The bent axis of the strut is approximated by the elastic line of a beam in the case of some variants of transverse loading. The optimum variant, the form of the approximating function which ensures maximum accuracy, is selected according to the minimum coefficient of the critical value. The numerical values of the coefficients of critical loading and the corresponding parameter are presented in tables for cases covered by the given classification. A comparison with the results of some exact solutions shows that the approximate values of the coefficients have a small error. Author's abstract.
1/1