

Mil

Техника и Нормативы, М. 1971, № 3
3990

Specialized Working Positions

17

Maj. Gen. N. Sazonov, Technical Services and Eng. Z. Rapoport, Zaitseva

The problem of resolving basic trends in the improvement of equipment in working positions can be resolved on the basis of thorough technical working analysis of the organization of work processes and of the working conditions. On the basis of this analysis, specialized positions are created and positions. On the basis of this analysis, specialized positions are created and positions. On the basis of this analysis, specialized positions are created and positions.

For example, in the working position where firing weapons are repaired and assembled, the work is performed in a special workshop. In addition, in the workshop, the work is performed in a special workshop. In addition, in the workshop, the work is performed in a special workshop.

Special brackets are used for the assembly of heavy units. They consist of the elements of the work piece in the workshop. In addition, in the workshop, the work is performed in a special workshop.

Part completely equipped in the specialized work space equipped for the assembly of portable work benches, a number of instruments and tools on which are placed extra panels, a number of instruments and tools on which are placed extra panels, a number of instruments and tools on which are placed extra panels.

The extra panels are made in the form of wooden boxes with handles. The extra panels are made in the form of wooden boxes with handles. The extra panels are made in the form of wooden boxes with handles.

The work area for the repair of optical instruments (Fig. 4) is equipped with a rotating stand on which are placed optical benches and instruments. The work area for the repair of optical instruments (Fig. 4) is equipped with a rotating stand on which are placed optical benches and instruments.

VAGONOV, N.

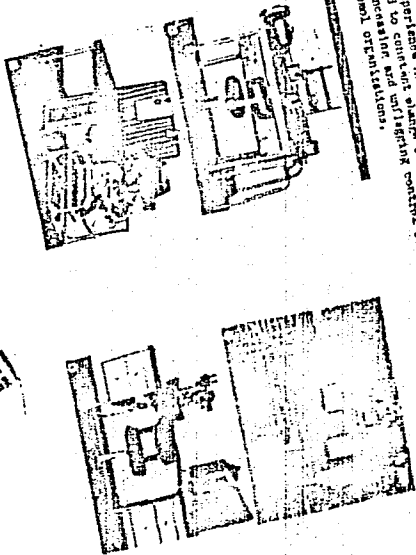
1-998b

A work area has also been equipped for the equipment tuner and adjusting specialist (fig. 5). All devices and the electric specialist can work in the work area. The electric specialist is able to make the repair with a sufficiently high degree of accuracy.

In perfecting the work area we get advice from the inventors and efficiency of mechanical equipment, and help in the repair of the equipment and implementation of special apparatus for the work area for the repair of splices and instruments.

According to past experience, the coils for setting out three various systems should be made with the equipment. The average error in the effect of the FTO in only a few instruments was accounted to tens of thousandths of millie.

Experiments have shown that work system in maintenance units should be selected to contain sufficient control of the command element and fairly and known organizations.



Acc. No: **A70045310** Abstracting Service **5/70** Ref. Code: **UR0020**
CHEMICAL ABST.

92255z Electrical conductivity of serpentinites. Vagshal, D. S. (Ural Territ. Geol. Upr., Sverdlovsk, USSR) *Trudy Akad. Nauk SSSR* 1970, 190(3), 651-3 [Geol.] (Russ). The vertical zoning in distribution of resistivity (ρ) was obsd. during vertical elec. probing, elec. logging, and study of phys. properties in holes drilled in chrysotile-antigorites serpentites of the Blagodat'sk and Pervomaisk massifs. Serpentinites had a low resistivity (20-100 ohm) at >30-150 m. Above this level, the resistivity increased ~20 times and then decreased again to initial value directly below the surface. An abrupt increase in ρ at depths of 30-150 m was accompanied by a decreased of magnetic susceptibility reflecting the changes in content of magnetite. The horizon of high resistivity is considered as an independent zone of serpentinite weathering situated at the base of weathering profile below the disintegration zone. It differed from unaltered serpentinites mostly in a partial decompn. of magnetite. The sepn. of the zone of partial decompn. of magnetite at the base of weathering profile provides for better understanding of initial stages of development of weathering profiles on serpentinites. BLJR.

g

12

REEL/FRAME
19780234

1/2 028 UNCLASSIFIED PROCESSING DATE--04DEC70
 TITLE--EFFECT OF COMPLEX SATURATION WITH BORON AND COPPER ON THE STRENGTH
 CHARACTERISTICS AND WEAR RESISTANCE OF CARBON STEEL -U-
 AUTHOR--(05)--POKHMURSKY, V.I., VAGULA, R.G., GRIBOVSKY, YA.S., ZAMIKHOVSKY,
 V.S., TABINSKY, K.P.
 COUNTRY OF INFO--USSR
 SOURCE--FIZ.-KHIM. MEKHAN. MAT., 1970, 6,(2), 18-21
 DATE PUBLISHED-----70
 SUBJECT AREAS--MATERIALS
 TOPIC TAGS--WEAR RESISTANCE, COPPER ALLOY, BORIDE, CARBON STEEL, IMPACT
 STRENGTH, FATIGUE STRENGTH
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAME--3003/0213
 CIRC ACCESSION NO--AP0129469
 UNCLASSIFIED
 STEP NO--UR/0369/70/006/002/0018/0021

PROCESSING DATE--04DEC70

UNCLASSIFIED

2/2 028

CIRC ACCESSION NO--A0129469

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

ABSTRACT. THE EFFECT OF COMPLEX SURFACE SATURATION WITH B AND CU ON THE UTS, YS, IMPACT STRENGTH, FATIGUE RESISTANCE, DUCTILITY, AND WEAR RESISTANCE OF C STEELS WAS STUDIED. AFTER SATURATION WITH B AND CU THE DUCTILITY OF THE STEEL ROSE, THE FATIGUE STRENGTH REMAINED AT THE SAME LEVEL AS THAT OF UNTREATED SAMPLES, WHILE THE WEAR RESISTANCE EQUALLED THAT OF B SATURATED MATERIAL. THE EFFECT ON THE OTHER CHARACTERISTICS WAS LESS SPECIFIC.

UNCLASSIFIED

CIA-RDP86-00513R002203420016

PROCESSING DATE THE STRENGTH

2/2 023
CIRC ACCESSION NO--AP0140272
ABSTRACT/EXTRACT--(U) GP-0-
UNCLASSIFIED
PROCESSING DATE--04DEC70
ABSTRACT. IR ABSORPTION SPECTRA OF FE(III),
CU, CA, LI AND NA OLEATES HAVE BEEN MEASURED AT 200-700 CM NEGATIVE
PRIMEI. FE(III) OLEATES EXHIBIT OCTAHEDRAL RATHER THAN TETRAHEDRAL
COORDINATION.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

1/2 015

TITLE--SPECTROSCOPIC STUDY OF THE ADSORPTION OF SODIUM OLEATE ON MINERALS

-U-

AUTHOR--(02)-VAINSHENKER, I.A., KRIVELEVA, E.D.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 790-2

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SPECTROSCOPY, SODIUM COMPOUND, CALCIUM FLUORIDE, ADSORPTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1996/1895

STEP NO--UR/0076/70/044/003/0790/0792

CIRC ACCESSION NO--AP0118857

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 015

CIRC ACCESSION NO--AP0118857

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

ABSTRACT. THE IR SPECTRUM OF NA OLEATE ADSORBED FROM AQ. SOLN. ON CAF SUB2 DIFFERS FROM THAT OF THE SALT IN SOLN., IN THE REGION 1500-1800 CM PRIME NEGATIVE1.

UNCLASSIFIED

UDC 547.759.3

USSR

YAKHONTOV, L. N., KRASHNUTSAYA, D. M., AKHAYEV, A. M., PALANT, I. M. and
VAINSHTEIN, YU. I., All Union Scientific Chemical-Pharmaceutical Research
Institute Ineni S. Ordzhonikidze, Moscow

"Azaindole Derivatives. XXXIX. Reactions of 6-Chloro-7-Azaindolines with
Amines"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jan 71, pp 733-734

Abstract: During the reactions of various primary and secondary amines with 6-chloro-7-azaindolines the normal nucleophilic substitution is accompanied by oxidation-reduction processes yielding concurrently halogenated products of 7-azaindolines and oxidation compounds -- 6-amino-7-azaindole derivatives. The ratio of the nucleophilic substitution products to the compounds obtained from the oxidation-reduction reaction depends principally on the nucleophilicity of the attacking amine. By selecting properly the amine component the reaction may be directed toward nucleophilic substitution, or toward the oxidation-reduction route. For example, when 1-phenyl-4-methyl-6-chloro-7-azaindoline reacts with basic amines such as pyrrolidine, piperidine, the normal products -- the derivatives of 6-amino-7-azaindoline -- are formed in 90% yield. When morpholine is used instead, the normal product drops to a 60% yield, and with

1/2

- 21 -

USSR

YAKHONTOV, L. N., et al., Khimiya Geterotsiklicheskikh Soyedineniy, No 6,
Jun 71, pp 789-794

N-methylpiperazine it drops to 56%. In the meantime the dehalogenated products
go from 1% to 7-8% to 28% respectively.

2/2

UNCLASSIFIED

PROCESSING DATE--13NOV70

1/2 018

TITLE--EFFECT OF THE SUPERCONDUCTING TRANSITION ON THE CREEP IN LEAD -U-

AUTHOR--(03)--SOLDATOV, V.P., STARTSEV, V.I., VAINBLAT, T.I.

COUNTRY OF INFO--USSR

SOURCE--PHYSICA STATUS SOLIDI, 1970, VOL 37, NR 1, PP 47-51

DATE PUBLISHED--70

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

TOPIC TAGS--LEAD, METAL CREEP, CREEP MECHANISM, SUPER CONDUCTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0634

STEP NO--GE/0030/70/037/001/0047/0051

CIRC ACCESSION NO--AP0107231

UNCLASSIFIED

PROCESSING DATE--13NOV70

UNCLASSIFIED

2/2 018

CIRC ACCESSION NO--AP0107231

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

ABSTRACT. THE EFFECT OF THE SUPERCONDUCTING
TRANSITION ON THE VELOCITY OF CREEP IN LEAD HAS BEEN INVESTIGATED AND
FOUND TO INCREASE SHARPLY AT THE TRANSITION TO THE SUPERCONDUCTING
STATE. THE VALUE OF THE JUMP OF CREEP VELOCITY DEPENDS ON THE SAMPLE
PURITY. THE MAGNETIC FIELD DOES NOT AFFECT THE CREEP VELOCITY. THE
POSSIBLE CAUSES (CHANGE OF INTERACTION BETWEEN ELECTRONS AND
DISLOCATIONS, CHANGE OF BARRIERS DETERMINING THE MOBILITY OF
DISLOCATIONS AT THE SUPERCONDUCTING TRANSITION) OF THE EFFECT OBSERVED
ARE DISCUSSED.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--02OCT70
 TITLE--EFFECTS OF BOIL DURATION PRIOR TO CAPPING AND OF 75PERCENT
 FERROSILICON PARTICLE SIZE ON THE SILICON ENRICHMENT OF THE TOP OF THE
 AUTHOR--(05)-KONDRASHOV, M.M., SABYEV, M.P., VAINTRAUB, S.S., LASHCHEV,
 V.YA., TERZIYAN, P.G.
 COUNTRY OF INFO--USSR

SOURCE--METALLURG (MOSCOW), 1970, 15(1), 21-3

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--INGOT CASTING, FERROSILICON, PARTICLE SIZE, DISTRIBUTION
 COEFFICIENT, SILICON, STEEL PRODUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAME--1989/1933

STEP NO--UR/0130/70/015/001/0021/0023

CIRC ACCESSION NO--AP010R262
 UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0108262

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. USE OF 75PERCENT 10-29 MM PARTICLE SIZE FERROSILICON AIDS IN THE UNIFORM DISTRIBUTION OF THE SI. THE BOIL TIME OF THE METAL IN THE INGOT BEFORE CHEM. CAPPING HAS A GREATER EFFECT ON THE SI DISTRIBUTION IN THE TOP OF THE INGOT THAN THE 75PERCENT FESI PARTICLE SIZE FRACTION. THE OPTIMUM BOIL TIME FOR THE STEEL IN THE MOLD DEPENDING ON THE INTENSITY OF THE PROCESS SHOULD BE CONSIDERED AS 1.5-3 MIN. THE OPTIMUM 75PERCENT FESI PARTICLE SIZE FRACTION IS 10-30 MM. DATA OBTAINED CAN BE USED FOR OTHER PLANTS WORKING IN SIMILAR CONDITIONS AS THE KOMMUMARSK PLANT WHERE THE WORK WAS DONE.

89

UNCLASSIFIED

USSR

SKIRKEVIČIUS, A., and VAITKEVIČIENĖ, G., Institute of Zoology and Parasitology, Lithuanian SSR Academy of Sciences

"Behavioral Mechanism of Honeybees Under the Influence of Pheromones"

Vilnius, Trudy Akademii Nauk Litovskoy SSR, Seriya V, Vol 2(62), 1973, pp 181-184

Abstract: Studies were conducted on worker bees (*Apis mellifica mellifica*) to establish a correlation between the histograms representing the nature of their stay in the vicinity of filter paper impregnated with a pheromone (geraniol), and the electrophysiological activity of sensory cells in the antenna and the deutocerebrum. On the assumption that neuronal activity determines subjective assimilation of the chemical stimulus by the bee and, hence, its behavior with respect to the stimulus, it would appear that decreased neuronal activity would have a negative effect on the bee's attraction to the chemical stimulus and could therefore be correlated with the bee's departure from the filter paper.

1/1

UNCLASSIFIED

PROCESSING DATE--30OCT70

1/2 015

TITLE--EFFICIENCY OF TREATMENT OF PATIENTS WITH CHRONIC GASTRIC DISEASES

-U-

AUTHOR--(02)--VAKALYUK, P.M., SEREDYUK, M.N.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 5, PP 56-58

DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DIGESTIVE SYSTEM DISEASE, MEDICAL DIAGNOSIS, MINERAL, WATER, MUD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/1945

STEP NO--UR/0475/70/000/005/0056/0058

CIRC ACCESSION NO--AP0127346

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127346

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS SUGGESTED THAT A STUDY OF THE DYNAMICS OF PARTIAL SECRETION IN CHRONIC DISEASES OF THE STOMACH ARE OF SIGNIFICANCE IN THE DIAGNOSIS AND EVALUATION OF THE EFFICIENCY OF TREATMENT. DETAILS ARE PRESENTED OF USING EXAMINATION OF THE DYNAMICS OF PARTIAL SECRETION IN 94 PATIENTS RECEIVING TREATMENT IN CONDITIONS OF THE MORSHIN HEALTH RESORT. MORSHIN MINERAL WATER, MINERAL BATHS AND MUD APPLICATIONS RESULTED IN A SIGNIFICANT IMPROVEMENT OF THE PATIENTS' CONDITION. FACILITY: KAFEDRA FAKUL'TETSKOY TERAPII, IVANO-FRANKOYSKOGO MEDITSINSKOGO INSTITUTA.

UNCLASSIFIED

USSR

UDC: 681.3

KORSHUNOV, Yu. M., STEPASHKIN, A. I., VAKARIN, I. A., IOFA, A. L.,
MOLCHADSKIY, L. I., STEPANENKO, V. N., EMIKH, L. A.

"A Digital Spectral Analyzer"

Tr. Ryazan. radiotekhn. in-ta (Works of the Ryazan Radio Engineering
Institute), 1970, vyp. 29, pp 158-168 (from RZh-Kibernetika, No 9,
Sep 71, Abstract No 9V554)

Translation: The paper describes a model of a specialized digital com-
puter device designed for studying the frequency make-up of random
signals. Expressions are presented for estimating the basic parameters
of the device under various operating conditions. Authors' abstract.

1/1

- 53 -

USSR

UDC: 51:155.001.57:681.3.06

VAKARIN, I. A.

"Discrete Smoothing Filters With Automatically Variable Order of Astaticism"

Tr. Ryazan. radiotekhn. in-ta (Works of the Ryazan Radio Engineering Institute), 1970, vyp. 29, pp 85-95 (from RZh-Kibernetika, No 9, Sep 71, Abstract No 9V632)

Translation: The paper deals with a method for automatically changing the order of astaticism of a discrete smoothing filter. The useful component of the input signal of this filter consists of alternating segments of polynomials of different degrees. The method is based on determining the probability of appearance of positive values of the difference between the input and output signals of the filter. Author's abstract.

1/1

67

1/2 009 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ISOLATION OF AGAROSE AND GRANULATION OF AGAR AND AGAROSE GEL -U-
AUTHOR--(03)-EGOROV, A.M., VAKHABOV, A.KH., CHERNYAK, V.YA.
COUNTRY OF INFO--USSR
SOURCE--J. CHROMATOGR. 1970, 46(2), 143-8
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--AGAR, GEL, MECHANICAL SEPARATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0495 STEP NO--NE/0000/70/046/002/0143/0148
CIRC ACCESSION NO--AP0117729
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0117729

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AGAROSE WAS ISOLATED FROM DIFCO BACTAGAR BY FRACTIONATION WITH (NH SUB4)SUB2 SO SUB4 AND ME SUB2 CO. A MODIFICATION OF THE METHOD OF L. PHILIPSON AND S. BENGTSSON (1964) WAS USED FOR GRANULATION OF AGAR AND AGAROSE. A SPRAYER HAVING REMOVABLE DISKS WAS DESCRIBED WHICH PERMITTED PREPN. OF BEAD SHAPED GRANULES OF ANY SIZE AT GEL CONCNS. OF 2-7PERCENT. SINCE THE SPRAYING OF 11. OF AGAR REQUIRED IS LESS THAN OR EQUAL TO 2 MIN., NO COOLING OF THE WATER ETHER MIXT. WAS NECESSARY AND THE GEL DID NOT CONGEAL IN THE SPRAYER. ALSO, THE N. PRESSURE USED FOR SPKAYING HAD LESS EFFECT ON THE GRANULE SIZE THAN SQUEEZING THE SOLN. THROUGH A NEEDLE. FACILITY: LAB. BIOORG. CHEM., MOSCOW STATE UNIV., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 519.21

VAKHANIYA, N. N.

"On Gaussian Random Sequences"

Tr. Tbilis. un-ta (Works of Tbilisi University), 1971, A1(137), pp 103-109
(from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V145)

Translation: It is proved for a Gaussian sequence of random quantities $\zeta = \{\zeta_i, i=1, 2, \dots\}$ with average $a = \{a_i\}$ and covariation matrix $s = \{s_{ij}\}$ that with probability 1: 1) $\lim_{i \rightarrow \infty} \zeta_i = 0$, if $\lim_{i \rightarrow \infty} a_i = 0$, and $\rho(\epsilon) = \sum_i \sqrt{s_{ii}} \exp(-\epsilon/s_{ii}) < \infty$ for any $\epsilon > 0$; 2) $\sup_i \zeta_i < \infty$, if $\sup_i a_i < \infty$ and $\rho(\epsilon_s) < \infty$ for some $\epsilon_s > 0$. Reverse statements hold for the diagonal matrix s . G. Molchan.

1/1

USSR

UDC: 519.21

VAKHANIYA, N. N.

"Probability Distributions in Linear Spaces"

Tr. Vychisl. tsentra AN GruzSSR (Works of the Computing Center of the Academy of Sciences of the Georgian SSR), 1971, 10, No 3, 155 pp (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V11)

Translation: The author investigates probability distributions in linear topological spaces, chiefly in Banach spaces of sequences l_p ($1 < p < \infty$) and c_0 . The exposition begins with consideration of distributions in the space of numerical sequences with Tikhonov topology R^N . The Bochner and Levi theorems are proved for distributions in R^N and for their characteristic functionals. Analogs of these theorems are then established for distributions in spaces l_p ($1 < p < \infty$), c_0 by embedding these spaces in R^N . The method of embedding of spaces l_p ($1 < p < \infty$), c_0 is then used for studying Gaussian distributions in these spaces. For instance, the general form of the characteristic functional $\chi(f)$ of the Gaussian distribution in l_p

1/3

USSR

VAKHANIYA, N. N., Tr. Vychisl. tsentra AN Cruz SSR, 1971, 10, No 3, 155 pp

($1 < p < \infty$) is established: $\chi(n) = \exp\left(i \sum_{k=1}^{\infty} |a_k| a_k - \frac{1}{2} \sum_{k,j=1}^{\infty} s_{kj} |k| |j|\right)$, where $\{a_k\} \in l_p$, $\{s_{kj}\} \in l_{p/2}$.

Among the other results of Gaussian distributions in l_p ($1 < p < \infty$) let us mention proof of the integrability of arbitrary degree of the norm with respect to any Gaussian distribution, and a central limit theorem for random quantities with values in l_p . Particular attention is given to investigation of distributions in Hilbert separable space (i. e. in l_2). In particular, an estimate is defined for the rate of convergence in the central limit theorem for random quantities with values in l_2 . This estimate gives the upper bound of deviations on ellipsoids, and with respect to n has order $(\log n)^{-1}$. Also given are the definition and derivation of basic properties of an integral with respect to a random measure with values in l_2 of a function whose values are linear operators $H \rightarrow H$ (in particular, the covariational operator of the integral is found as a random element in l_2 in the form of a nonrandom integral in Bochner's sense). Finally, problems are considered which involve the covariational operators of distributions in Banach space X . For instance, consideration is given

2/3

- 1 -

USSR

VAKHANIYA, N. N., Tr. Vychisl. tsentra AN CruzSSR, 1971, 10, No 3, 155 pp

to the problem of when any linear bounded symmetric nonnegative operator $X^* \rightarrow X^{**}$ is a covariational operator of some distribution in X , as well as to the problem of characterization of the covariational operators of all Gaussian distributions in X . V. Sazonov.

3/3

Radiobiology

USSR

UDC 577.391:616.001.28

KANARIK, U., SIEBUL', I., and VAKHER, Yu.

"The Endocrine Stress Syndrome in Chicks Following Gamma-Ray Irradiation"

Tallin, Izvestiya Akademii Nauk Estonskoy SSR, Biologiya, No 3, 1970, pp 277-280

Abstract: A total of 800 white leghorn chicks 10- to 35-days old were irradiated once with 700 to 1,100 r of Co^{60} rays. During the first day and 20 to 35 days after exposure, the relative weight of the adrenals and thyroid markedly increased, while that of the thymus and spleen decreased. But two years later the weight of the adrenals and thyroid was normal, but the weight of the thymus and spleen remained depressed. Apparently a decrease in weight of the thymus and spleen is a more regular phenomenon associated with development of the radiation endocrine stress syndrome in chicks than hypertrophy of the adrenals and thyroid.

USSR

UDC 621.357.7.035.2:669.245'
779

AVEREUKH, M. YE., VAKHIDOV, R. S., and SHVYDKAYA, L. I.

"Change in the Acidity of the Outer Cathode Layer in the Process of Electrodeposition of a Nickel-Phosphorus Alloy"

Alma-Ata, Khimiya i Khim. tekhnol. (Chemistry and Chemical Technology) No 2, 1971, pp 155-159 (from Referativnyy Zhurnal -- Khimiya, No 7, 1973, Abstract No 7L391)

Translation: Using an antimony microelectrode, the change in the acidity of the outer cathode layer during the process of the electrodeposition of a Ni-P alloy from the following electrolyte was examined (concentrations in moles/l): NiSO_4 , 0.64; NaH_2PO_2 , 0.24; H_3BO_3 , 0.32; NaCl , 0.34; and different amounts of H_3PO_4 or H_2SO_4 at a pH of 1.0 to 3.2. Conditions of the electrolysis were: D_k , 0.05-0.5 a/cm^2 and temperature, 30-90°C. It was established that in all of the conditions studied the outer cathode layer of the electrolyte became more alkaline.

1/1

- 5 -

1/2 027 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--RADIATION OPTICAL PHENOMENA IN CALCIUM FLUORIDE, RARE, EARTH
FLUORIDE CRYSTALS -U-
AUTHOR--(03)-VAKHIDOV, SH.A., KAIPOV, B., TAVSHUNSKIY, G.A.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK UZB. SSR, SER. FIZ., MAT. NAUK 1970, 14(2), 73-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--RARE EARTH COMPOUND, FLUORIDE, CRYSTAL, GAMMA LUMINESCENCE,
EUROPIUM COMPOUND, HOLMIUM COMPOUND, CALCIUM COMPOUND, OPTIC PROPERTY,
VISIBLE LIGHT RADIATION, COBALT ISOTOPE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1614 STEP NO--UR/0166/70/014/002/0073/0077
CIRC ACCESSION NO--AP0125236
UNCLASSIFIED

2/2 027

CIRC ACCESSION NO--A0125236

UNCLASSIFIED

PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE GAMMA,LUMINESCENCE OF CAF SUB2
 ERF SUB3 AND CAF SUB2, HOF SUB3, EXCITED BY PRIME60 CO, WAS INVESTIGATED
 AT 77-480DEGREESK. AT LOW TEMPS., THE LUMINESCENCE INCREASES WITH
 INCREASING ACTIVATOR CONC., DECREASING WITH HIGHER CONCNS. AT HIGH
 TEMPS. THE GAMMA,LUMINESCENCE IS ASCRIBED BASICALLY TO ER
 PRIME3 POSITIVE AND HO PRIME3 POSITIVE IONS, WHICH HAVE NO LOCAL CHARGE
 COMPENSATORS. THE MECHANISM IS CONFIRMED BY EXPTL. DATA ON THE
 GAMMA,LUMINESCENCE OF CAF SUB2 NEGATIVE ERF SUB3. FACILITY:
 INST. YAD. FIZ., TASHKENT, USSR.

UNCLASSIFIED

USSR

UDC 537.533.8

ARIFOV, U. A., VAKHIDOV, U. A. and KASYMOV, A. KH.

"Secondary Electron Emission of Tungsten and Molybdenum Single Crystals"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, No. 3, Mar 71, pp 560-561

Abstract: Secondary electron emission of metals was studied in tungsten and molybdenum single crystals, since all previous studies except for one were made with polycrystalline samples and it was of interest to study this phenomenon in single crystals samples to examine the effect of secondary emission properties from the aspect of structure. The secondary electron emission of tungsten and molybdenum single crystals in the primary electron range $E_p = 100-1500$ ev was studied for the faces (111) and (110) of a tungsten single crystal and the faces (100) and (110) of a molybdenum single crystal using the double modulation method. Curves are given showing the total coefficient of secondary electron emission σ , the truly secondary electrons δ , and the elastically and inelastically reflected electrons η as a function of the energy of the primary electrons E_p for these faces

1/2

USSR

in both single crystals. It was found that there are differences in the fine structure in the curves $\sigma = f(E_p)$, $\delta = f(E_p)$, and $\eta = f(E_p)$ for different faces of tungsten and molybdenum and that these differences depend on the packing density of the target studied. For denser faces the maxima are observed at greater energies than for less densely packed faces. The values of σ , δ , and η corresponding to $E_{p \text{ max}}$ have smaller values for the densely packed faces.

2/2

- 34 -

USSR

UDC 537.533.8

ARIFOV, YU. A., KASYMOV, A. KH., YAKHIDOV, N. V.

"Investigation Of The Secondary Electron Emission Of Tungsten Single Crystals"

[Nauchn. tr.] Tashkent politekhn. in-t ([Scientific Works] Tashkent Polytechnical Institute), 1970, No 65, pp 329-334 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12A17)

Translation: The secondary electron emission of the [111] and [110] facets of single crystals of tungsten in the area of primary electron energies $E_p = 100 \div 2000$ e.v. was investigated in a vacuum of $\sim 10^{-7}$ mm mercury by the method of double modulation with automatic recording of the results. The dependence of the secondary emission coefficient (σ) on the energy of the primary electrons for single crystal W obtained agrees satisfactorily with data from the literature, which confirms the precision of the method of measurement used. The results for single crystal targets were: for $W[111]$ $\sigma_{max} = 1.21$, with $E_{pm} = 900$ e.v.; for $W[110]$ $\sigma_{max} = 1.11$, with $E_{pm} = 1000$ e.v.; (for polycrystalline W $\sigma_{max} = 1.44$, with $E_{pm} = 700$ e.v.). N.S.

1/1

- 105 -

Acc. Nr:

AP0044404

Ref. Code: UR 0239

PRIMARY SOURCE: Fiziologicheskii Zhurnal, 1970, Vol 56,
Nr 1, pp 38-47

BEHAVIORAL AND VISCERAL REACTIONS ELICITED BY CHEMICAL
STIMULATION OF THE HYPOTHALAMUS AND SEPTUM IN CATS

Vakhing, V. A.; Allikmets, L. Kh.

Department of Psychiatry and Central Medical Research Laboratory of Tartu University...
Tartu, Estonian SSR

In experiments on 46 cats in free behavior situation the effects of microinjection of acetylcholine, noradrenaline and serotonin into the hypothalamic, preoptic and septal regions were investigated. Emotional-affective reactions of negative characteristics were elicited only by acetylcholine into the hypothalamus. After microinjection of acetylcholine into the lateral septal and dorsal preoptic regions behavioral inhibition and sleep occurred. Visceral (autonomic) reactions were elicited both by acetylcholine and serotonin microinjections into all brain structures investigated. Behavioral and visceral effects of noradrenaline were significantly weaker than those of acetylcholine and serotonin. Preliminary intramuscular or intracerebral injection of benactyzine (amizyl), imipramine and amitriptyline weakened or blocked the effects of acetylcholine. Imipramine and amitriptyline intensified visceral effects of serotonin.

1/1

REEL/FRA
19771022

MIT

USSR

UDC 539.3

VAKHITOV, M. B. and SAFARIYEV, M. S.

"On the Use of a Method for Plates Considered Straight for the Purpose of Calculation"

Kazan', Tr. Kazan. aviats. in-ta (Transactions of the Kazan' Aviation Institute), Vyp 143, 1972, pp 59-67 (from Referativnyy Zhurnal -- Mekhanika, No 4, 1973, Abstract No 4V283)

Translation: Improved equations for the bending of plates with small sag are obtained by the variation method. To do this the finite-difference expressions were used only for writing the first and second derivatives along one of the coordinates. The order of the differential equations obtained is lowered by means of integration. By means of an integrating matrix the equations are written in matrix form. The results of calculating a cantilever plate are presented. The calculated stresses are comparable to the experimental. (6 bibliographic entires, authors' abstract)

1/1

- 101 -

USSR

UDC 539.3

VAKHITOV, M. B. and PAYMUSHIN, V. N."On the Calculation of Sandwich Plates with a Light Filler"

Kazan', Tr. Kazan. aviats. in-ta (Transactions of the Kazan' Aviation Institute), Vyp 145, 1972, pp 3-13 (from Referativnyy Zhurnal -- Mekhanika, No 4, 1973, Abstract No 4V244 by F. A. Kogan)

Translation: Rectangular isotropic sandwich plates of symmetrical structure with membranous outer layers and a light, noncompressible filler are considered in a linear formulation. The total bending was in the form of a sum of two components, including bending w_{1z} and shear w_{cdv} . It is assumed that upon deformation of the plate due to the shear the tangential displacements of the mean surfaces of the bearing layers equal zero. Under these conditions a system of two equilibrium equations for the sandwich plates was obtained, which is divided into two independent equations for the case of transverse bending. It is shown that the equations obtained are only another form of the Reissner equations (see Reissner, E., J. Aeronaut. Sci., Vol 15, No 7, 1948, pp 435-440; Vol 17, No 2, 1950, p 125). Several variants of the boundary conditions are formulated. On the basis of the equations obtained the stability of plates with a cylindrical form of stability loss is considered for three variants of the boundary conditions.

1/1

VAKHITOV, M. Kh.

MEDICINE

SOJPAR 54740
28 DECTI

UUC: 416, 13-008, 213, 1-0921614

THE EFFECT OF SOME SOCIOHYGIENIC FACTORS ON ONSET OF ESSENTIAL HYPERTENSION

Article by A.B. Gallymova, Chief of Social Hygiene and Public Health Organiza-
tion (headed by Professor M.Kh. Vakhitov), Kazan' Medical Institute Instn.
S.V. Kurashovskiy basov, Sverdlovskaya ulitsa, Kazan', Russia, No. 11, 1971,
abstracted 18 May 1971, pp. 8-101

We took two occupational groups, workers from three plants engaged
mainly in physical labor, and secondary school teachers from one of the regions
of Kazan' as the objects of our investigation.

Preliminary data were obtained from ambulatory polyclinic institutions
caring for this group of patients about their age, sex and occupation, data
when dispensary care began, and some other information. Workers who were not
suffering from essential hypertension were interviewed on a sample basis
(every 5th one). The teachers interviewed constituted 95 percent.

Concurrently, 821 questionnaires were gathered, including 191 sick
people. Among the workers, and 765 from teachers, 113 of whom were sick
(33.2 and 14.7 percent sick workers and teachers, respectively). Thereafter
the data were transferred to histogram. Before histogramming, the question-
naire consisted of 83 tags (items) on the workers and 79 for the teachers.
After histogramming there were 76 and 77 tags, respectively. This enabled us
to determine the composition of tags that could affect onset of essential
hypertension. When the share of a given factor had the same numerical value
among the healthy and the sick, this sign was ruled out from subsequent pro-
cessing since it did not influence onset of hypertension.

We were concerned with the factors whose share was greater in the
patient group than in the healthy group. In the following we discuss a factor
which, in our opinion, has important sociohygienic significance and which has
not been discussed in the literature available to us. We refer to the
influence of change of residence, of moving from rural regions to a city,
with the consequent change in life style and work, on onset of essential
hypertension.

Among others (age, sex, housing and living conditions, race, athletics,
preliminary data.

USSR

UDC 621.378.325

BYKOV, V. P., VAKHITOV, N. G., NOVOKRESHCHENOV, V. K., SHKUNOV, N. V.

"Effect of Resonator Matching on the Power of Solid-State Lasers"

Moscow, Kvantovaya Elektronika, No 2, 1971, pp 53-56

Abstract: Conditions are determined for matching of the various sections of the optical cavity of a solid-state laser in which the active element is a nonhomogeneous dielectric, and an experimental study is made of the effect which such matching has on emission power. It is shown that greater power is generated in the matched than in the unmatched mode, other things being equal. The authors thank V. G. Dmitriyev for assistance with the work.

1/1

1/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70
 TITLE--EXPERIMENTAL AND THEORETICAL STUDY OF ABSOLUTE INTENSITIES AND
 DEPOLARIZATIONS IN THE RAMAN SPECTRAL LINES OF POLYATOMIC MOLECULES. IX.
 AUTHOR--(03)-KATS, S.M., VAKHLYAYEVA, V.I., SVERDLOV, L.M.
 COUNTRY OF INFO--USSR
 SOURCE--IZV. VYSSH. UCHEB. ZAVED., FIZ. 1970, 13(4), 56-61
 DATE PUBLISHED-----70
 SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY
 TOPIC TAGS--RAMAN SPECTRUM, DEUTERIUM COMPOUND, BROMINATED ORGANIC
 COMPOUND, CALCULATION, ANISOTROPY, CHEMICAL LABORATORY
 EQUIPMENT/(U)DFS12 INSTRUMENT
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--3008/0842 STEP NO--UR/0139/70/013/004/0056/0061
 CIRC ACCESSION NO--AT0137870 UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0137870

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

ABSTRACT. THE ABS. INTENSITIES OF THE RAMAN SPECTRA LINES OF MECOBR (I) AND CD SUB3 COBR WERE MEASURED AND THEORETICALLY CALCD. AND SYSTEM OF ELECTROOPTICAL PARAMETERS CONCERNING C=O, C,C, AND C,H BONDS CALCD. THE SPECTRA WERE RECORDED WITH DFS, 12 INSTRUMENT WITH DIFFRACTION LATTICE OF 600 LINES-MM. AT 300DEGREE SK. THE MATH. METHOD OF CALCN. AND EXPTL. DATA FOR ABS. INTENSITIES AND DEPOLARIZATION DEGREE SHOWED GOOD COINCIDENCE. THE DATA SHOWED THAT ANISOTROPY OF C=O BOND OF I IS LOWER THAN THE SAME IN MECOCL (II), AND THAT IN THE SERIES ACH, II AND I, THE INCREASE OF TRACE TENSOR OF DERIV POLARITY OF C,C BOND (2.97, 3.9, AND 4.7 ANGSTROM, RESP.) WAS OBSO.

FACILITY: SARATOV. POLITEKH. INST., SARATOV, USSR.

UNCLASSIFIED

172 028 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--POLAR PROPERTIES OF BONDS AND ABSOLUTE INTENSITIES OF INFRARED
BANDS OF ACROLEIN -U-
AUTHOR-(04)-VAKHLYUYEVA, V.I., FINKEL, A.G., SYERDLOV, L.M., ANDREYEVA,
A.I.
COUNTRY OF INFO--USSR
SOURCE--TEOR. EKSP. KHIM. 1970, 6(1), 97-102
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ELECTROOPTIC EFFECT, CHEMICAL BONDING, IR SPECTRUM, DIPOLE
MOMENT, ACROLEIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3004/1987 STEP NO--UR/0379/70/006/001/0097/0102
CIRC ACCESSION NO--AP0132248
UNCLASSIFIED

2/2 028

CIRC ACCESSION NO--AP0132248
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--27NOV70

ABSTRACT. A SYSTEM OF ELECTROOPTICAL PARAMETERS CHARACTERIZING THE POLAR PROPERTIES OF THE BONDS OF ACROLEIN (I) IN THE GASEOUS PHASE, WAS CALCD. BY USING THE EXPTL. VALUES OF THE ABS. INTENSITIES OF THE IR SPECTRAL BANDS OF I, AND THE VALUE OF ITS DIPOLE MOMENT. THE EXPTL. VALUES OF THE INTENSITIES AGREED WELL FOR ALL THE BANDS WITH THE CALCD. ONES. THE VECTOR SUM OF THE ESTD. BOND MOMENTS (3.19 D) IS CONSISTENT WITH THE EXPTL. VALUE OF THE DIPOLE MOMENT OF I (3.11 D). THE EFFECT OF CONJUGATION OF THE ALDEHYDE AND VINYL GROUP IN I THE ELECTROOPTICAL PARAMETERS WAS STUDIED.
FACILITY: SARATOV. POLITEKH. INST., SARATOV, USSR.

UNCLASSIFIED

1/2 025 UNCLASSIFIED
TITLE--CEREBRAL CIRCULATORY DISORDERS IN YOUNG AGED PERSONS -U- PROCESSING DATE--18SEP70
AUTHOR--(02) VAKHMAN, I.S., ANISHCHENKO, G.YA. ✓
COUNTRY OF INFO--USSR
SOURCE--VRACHEBNOYE DELO, 1970, NR 2, PP 86-88
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BLOOD CIRCULATION, BRAIN, CIRCULATORY SYSTEM DISEASE,
HYPERTENSION, ATHEROSCLEROSIS, RHEUMATIC DISEASE, HEMORRHAGE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1982/0799 STEP NO--UR/0475/70/000/002/0086/0088
CIRC ACCESSION NO--AP0052236 UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0052236

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONSIDERING YOUNG AGE UP TO 44 YEARS (CRITERIA OF WHO EUROPEAN REGIONAL BUREAU, 1963) THE AUTHORS ANALYSED 1485 CASES OF CEREBRAL CIRCULATORY DISORDERS AND REVEALED AMONG THEM 83 (5.5 ONE THIRD) YOUNG AGED PERSONS. THE STATISTICAL DATA INCLUDE ONLY PARENCHYMATOUS CEREBRAL DISORDERS. MALES DEVELOP CEREBRAL CIRCULATORY DISORDERS MOST FREQUENTLY IN HYPERTENSIVE DISEASE, ATHEROSCLEROSIS AND THROMBANGITIS OBLITERANS, FEMALES IN HYPERTENSIVE DISEASE AND RHEUMATISM. HEMORRHAGIC STROKE WAS OBSERVED ONLY IN YOUNG MEN (MALIGNANT HYPERTENSION), WHEREAS WOMEN SUFFERING EVEN OF MALIGNANT HYPERTENSION NEVER DEVELOPED CEREBRAL HEMORRHAGES. ONLY MALES DEVELOPED CEREBRAL VASCULAR DISORDERS IN THROMBANGITIS OBLITERANS. EXCEPT THE ABOVE MENTIONED ETIOLOGICAL FACTORS THE AUTHORS DISCUSS THE ROLE PLAYED BY VASCULAR MALFORMATIONS AS CAUSES OF CEREBRAL CIRCULATORY DISTURBANCES IN YOUNG AGED PERSONS.

UNCLASSIFIED

Oncology

USSR

VANIN, A. F., VAKHINA, L. V., and CHETVERIKOV, A. G., Institute of Chemical Physics, Academy of Sciences USSR

"The Problem of a New Type of Electron Paramagnetic Resonance Signal Detected in Cancerous Tissues"

Moscow, Biofizika, Vol 15, No 6, Nov/Dec 70, pp 1044-1051

Abstract: Kidney, liver, intestinal, muscle, and other tissues of mice, rats, rabbits, frogs, and cats, as well as yeast cells were exposed to a variety of physical factors (heat, cold) and chemical agents (potassium ethyl- or heptylxanthogenate, sodium dodecylsulfate or potassium oleate in physiological saline). The parameters of the electron paramagnetic resonance signals (one with $g = 2.03$ and another with a triplet structure and $g = 2.007$) coincided completely with the EPR signals detected in cancerous tissues. As the tissues became necrotic, the 2.03 signal appeared and then gradually gave way to the signal with the triplet structure. This pattern is also characteristic of carcinogenesis, where the 2.03 signal arises in the early stage but diminishes as the tumor develops and the 2.007 signal intensifies. Some hypotheses are advanced on the physico-chemical nature of the centers responsible for the two signals.

1/1

USSR

VAKHNOV, R. S., GORELOV, V. P. and TITKOV, V. I.

"Problems of Decomposition of Functional Systems to Logic Systems"

Avtomatiz. Proyektir. RZA [Automation of the Planning of RZA (Expansion unknown -- tr)], Moscow, 1973, pp 77-79 (Translated from Referativnyy Zhurnal Kibernetika, No 9, 1973, Abstract No 9V704).

Translation: A method is presented for automatic production of descriptions of circuits in base elements (BE) from descriptions of circuits containing functional elements (FE). It is based on the use of a catalogue, where each type of FE performing a certain function is compared to a system of BE performing the same function. The possibility of creation of such a method is based on the following assumptions: 1. There is a single language for description of FE in functional plans (FP) and BE in schematic plans (SE). 2. The descriptions of the FP, SP and catalogue are constructed according to a modular principle. 3. An unambiguous relationship is established between the input and output contact identifiers describing the FE and the corresponding description in BE. A single input language allows mixed systems consisting of

1/2

- 66 -

USSR

Vakhnov, R. S., Gorelov, V. P. and Titkov, V. I., Avtomatiz. Proyektir. RZA, Moscow, 1973, pp 77-79.

FE and BE simultaneously to be described, simplifies the description process and the process of construction of working programs. The modular principle allows gradual incrementing of descriptions of modules and their accumulation and simplifies the process of making changes. The unambiguous correspondence between contact identifiers allows their order to be unlimited.

V. Mikheyev

1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--EXPERIENCE WITH HEXONUM ELECTROPHORESIS IN HEALTH RESORT TREATMENT
OF PATIENTS WITH HYPERTENSIVE DISEASE -U-
AUTHOR-(05)-NEDOSTUPOV, S.P., ALEKSANDROVA, K.M., MERKULOVA, YE.YU.,
YAKHNOVSKAYA, O.I., ZYKIN, N.N.
COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 4, PP 73-75

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ELECTROPHORESIS, HYPERTENSION, BLOOD PRESSURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--3002/1686

STEP NO--UR/0475/70/000/004/0073/0075

CIRC ACCESSION NO--AP0129056

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0129056

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPLEX HEALTH RESORT TREATMENT INCLUDING HEXONIUM ELECTROPHORESIS RESULTED IN MOST CASES IN REDUCTION OF THE ARTERIAL PRESSURE. AN IMPROVEMENT OF THE PATIENTS CONDITION WAS OBSERVED IN 98.8PERCENT. THE EXPEDIENCY IS CONCLUDED OF INCLUSION OF HEXONIUM ELECTROPHORESIS IN THE COMPLEX OF HEALTH RESORT TREATMENT OF PATIENTS WITH HYPERTENSIVE DISEASE (STAGES I AND II). FACILITY: YALTINSKOGO TERRITORIAL'NOGO SOVETA PO UPRAVLENIYU KURORTAMI PROF SOZUZOV.

UNCLASSIFIED

1/2 033 UNCLASSIFIED PROCESSING DATE--30OCT70
 TITLE--TRANSMISSION OF DEFORMATION THROUGH INTERCRYSTALLITE BOUNDARIES -U-
 AUTHOR--(02)-FINKEL, V.M., VAKHONIN, V.V. ✓
 COUNTRY OF INFO--USSR
 SOURCE--IZVEST. V.U.Z., CHERNAVA MET., 1970, (2), 108-112
 DATE PUBLISHED--70
 SUBJECT AREAS--MATERIALS, PHYSICS
 TOPIC TAGS--PLASTIC DEFORMATION, SILICON STEEL, IRON ALLOY, BIBLIOGRAPHY,
 DEFORMATION RESISTANCE, GRAIN SIZE, METAL CRYSTAL, PHOTOELASTICITY
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAME--2000/1531 STEP NO--UR/0148/70/000/002/0108/0112
 CIRC ACCESSION NO--AP0125159
 UNCLASSIFIED

2/2 033

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125159

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TRANSMISSION OF PLASTIC DEFORMATION THROUGH THE INTERCRYSTALLITE BOUNDARIES OF METAL SPECIMENTS (FE-3PERCENT SI) WAS STUDIED WITH THE HELP OF PHOTO ELASTIC COATINGS AND RELATED TO THE GRAIN SIZE AND DEGREE OF CRYSTALLITE DISORIENTATION. BOUNDARIES PROCESSING CONCENTRATIONS OF VACANCIES SUFFICIENT TO INTERFERE WITH THE NORMAL MOTION OF DISLOCATIONS WERE PARTICULARLY DEFORMATION RESISTANT. FOR DISORIENTATIONS OF LARGER THAN 15DEGREES, IN PARTICULAR, THE TRANSFER STRESSES DEPENDED GREATLY ON GRAIN SIZE AND DISORIENTATION ANGLE. THE THEORETICAL REASONS FOR THESE EFFECTS ARE CONSIDERED.

UNCLASSIFIED

174 Q08
UNCLASSIFIED
PROCESSING DATE--23OCT70
TITLE--FISCHER CYCLIZATION OF 5 SUBSTITUTED 2,2-PYRIDYL, HYDRAZONES OF
CYCLOHEXANONE -U-
AUTHOR--(03)-VAKHONTOV, L.N., PRONINA, YE.V., RUBTSOV, M.V.
COUNTRY OF INFO--USSR
SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (2), 186-90
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--HYDRAZONE, CYCLOHEXANONE, CHEMICAL SYNTHESIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0380
STEP NO--UR/0409/70/000/002/0186/0190
CIRC ACCESSION NO--AP0121068
UNCLASSIFIED

2/4 008

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121068

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INFLUENCE OF ME, CL, AND NO SUB2 GROUPS IN POSITION 5 OF 2,(2,PYRIDYL)HYDRAZONES OF CYCLOHEXANONES ON FISCHER CYCLIZATION UNDER CYTALYSIS BY LEWIS ACIDS, ARENESULFONIC ACIDS AND STRONG INORG. ACIDS WAS INVESTIGATED. FOR THE PREPN. OF (5,METHYL,2,PYRIDYL) HYDRAZONE (I) OF CYCLOHEXANONE, M. 56-7DEGREES (PETROLEUM ETHER), B SUB2 150DEGREES, (5,METHYLPYRID,2,YL) HYDRAZINE, M. 67-8DEGREES, WAS OBTAINED BY REFLUXING 2,BROMO,5,METHYLPYRIDINE WITH N SUB2 H SUB4.H SUB2 O 6 HR. (5,CHLOROPYRID,2,YL) HYDRAZINE, M. 123-5DEGREES (BENZENE), FOR THE PREPN. OF (5,CHLOROPYRID,2,YL) HYDRAZINE (II) OF CYCLOHEXANONE, M. 54-5DEGREES, B SUB3 160DEGREES (IN QUANT. YIELD) WAS OBTAINED FROM 2,5,DICHLOROPYRIDINE AND N SUB2 H SUB4. H SUB2 O. IN CONTRAST TO I AND II, WHICH WERE PREPD. WITHOUT SOLVENT, THE PREPN. OF (5,NITROPYRID,2,YL) HYDRAZONE (III) OF CYCLOHEXANONE, M. 127DEGREES (HEXANE), WAS CARRIED OUT IN ETOH IN QUANT. YIELD. I GAVE WITH P,MEC SUB6 H SUB4 SO SUB3 H A NORMAL FISCHER CYCLIZATION PRODUCT: (ETOAC) IN 98PERCENT YIELD; HCL SALT M. 259DEGREES (ETOH-ME SUB2 CO). WITH POLYPHOSPHORIC ACID, THE YIELD OF IV WAS 67.3; CATALYSIS BY CU SUB2 CL SUB2 30 MIN AT 230DEGREES GAVE 43.5PERCENT IV; SULFOSALICYLIC ACID AT 170DEGREES YIELDED 60.1PERCENT IV; AND ZNCL SUB2 IN 30 MIN AT 230DEGREES GAVE 42.2PERCENT IV. BY DEHYDROGENATION WITH PD AT 270DEGREES IV GAVE 5,METHYL,ALPHA,CARBOLINE, M. 269-70DEGREES (ETOAC); HCL SALT M. 258-60DEGREES.

UNCLASSIFIED

3/4 008

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121068

ABSTRACT/EXTRACT--I AND BF SUB3. ET SUB2 O HEATED 6 HR AT 200DEGREES GAVE 63PERCENT 3,5,DIMETHYL,S,TRIAZOLO (4,3,A) PYRIDINE (V), M. 141DEGREES (C SUB6 H SUB6), AND 21.8PERCENT IV. V WAS ALSO PREPD. FROM (5,METHYL,2,PYRIDYL) HYDRAZINE AND HOAC BY REFLUXING 9 HR. I REFLUXED WITH HCL FOR 4 HR GAVE 26.6PERCENT 1,CYCLOHEXYL,12,METHYL, 7,8,9,10,TETRAHYDRO,1H,BENZ (E)PYRIDO (2,1,C), AS,TRIAZINE, M. 98-9DEGREES (HEPTANE). HEATING A MIXT. OF II AND P, MEC SUB6 H SUB4 SO SUB3 H AT 180-210DEGREES GAVE 81PERCENT 5,CHLORO,9,10,11,12,TETRAHYDRO,ALPHA,CARBOLINE (VI), M. 215-16DEGREES (ETOAC). BY USE OF POLYPHOSPHORIC ACID AT 210DEGREES THE YIELD OF VI WAS 81.7PERCENT; WITH SULFOSALICYLIC ACID THE YIELD WAS 69PERCENT; WITH P, MEC SUB6 H SUB4 SO SUB3 H THE YIELD WAS 81PERCENT; WITH ZNCL SUB2 29PERCENT. THE REACTION OF II WITH CU SUB2 CL SUB2 20 MIN AT 250DEGREES GAVE ONLY 2,AMINO,5,CHLOROPYRIDINE, M. 133-50DEGREES (37PERCENT). ONLY 5PERCENT 2,AMINO, 5,NITROPYRIDINE WAS ISOLATED FROM REACTION OF III WITH P, MEC SUB6 H SUB4, SO SUB2 CL AT 180DEGREES. ALSO, AN IRREGULAR COURSE WAS OBSERVED WHEN THE REACTION OF II WAS CARRIED OUT IN HCL IN REFLUX 5 HR; 1,CYCLOHEXYL, 12,CHLORO,7,8,9,10,TETRAHYDRO,1H,BENZO(E) PYRIDO (2,1,C),AS, TRIAZINE (45.5PERCENT, M. 112,5-13.5DEGREES) AND 29PERCENT VI WERE OBTAINED. FROM II, AND BF SUB3. ET SUB2 O, AND HOAC IN A SEALED TUBE 6 HR AT 200DEGREES. 57.3PERCENT 3,METHYL,5,CHLORO,S,TRIAZOLO (4,3,A) PYRIDINE (VII), M. 131-2DEGFEEES (C SUB6 H SUB6) AND 18.9PERCENT VI WERE OBTAINED. VII WAS IDENTICAL WITH THE PRODUCT OF REFLUXING (5,CHLOROPYRID,2,YL) HYDRAZINE WITH HOAC 9 HR.

FACILITY: VES. NAUCH.-ISSLED. KHIM. FARM. INST. IM.

UNCLASSIFIED

4/4. 008

CIRC ACCESSION NO--AP0121068
ABSTRACT/EXTRACT--ORDZHONIKIDZE, MOSCOW, USSR.

UNCLASSIFIED

PROCESSING DATE--23OCT70

UNCLASSIFIED

USSR

VAKHRAMEYEV, A. L.

UDC: 621.3.083.7/.8(083.75)

"Telemetering Requirements"

Moscow, Izmeritel'naya tekhnika, No 3, 1972, pp 47-48

Abstract: A discussion of operation standards demanded of telemetering equipment. The basic requirements of the equipment are reliability, noise immunity, and maintenance of accuracy standards during operation. While there are many causes of telemetering equipment breakdown, they can be divided into three classes: sudden, irreversible faults; gradual decay due to equipment aging and the consequent increase in error beyond the limit set by the technical demands; breakdown caused by the appearance of destabilizing operation conditions. The first class predominates in the initial period of the equipment installation; the frequency of breakdown is up to ten times annually, on the average. However, the reliability of telemetering equipment in the Soviet Union has steadily risen; according to the data of the All-Union Scientific Research Institute of Electric Power (VNIIE) the utility factor of the equipment has been maintained at a 0.98 level for the last 10 years. The article concludes with a note from the journal editor that telemetering specialists should speak up on this problem of reliability.

VAKHRA MEYEV, S.S.

Gallium
ARSENIDE

VAKHRA MEYEV, S.S.

A-6

JPRS 54675
10 December 1971

EFFECT OF TEMPERATURE AND INTERNAL STRESS FIELDS ON THE FORMATION OF THE DISLOCATION STRUCTURE IN SINGLE CRYSTALS OF GALLIUM ARSENIDE GROWN BY THE CZOCHRALSKI METHOD

Article by R. A. Avdeyev, S. S. Vakhrayev, N. G. Mit'kova, V. B. Orlov, Corresponding Member of the USSR Academy of Sciences, M. A. Sidorov, V. M. Sakhov, Yu. P. Shevkin, State Scientific Research and Planning and Design Institute of the Kuznetz Industry, Moscow, U.S.S.R. *Dokl. Akad. Nauk SSSR*, Vol. 206, No. 2, 1971, abstracted 30 April 1971, pp. 319-319.

Dislocations in single crystals grown from a melt are formed basically under the effect of thermal stresses arising during cooling of the ingot during the process of its growth. If these stresses exceed the critical shear of the material, at the corresponding temperature, they cause plastic flow which partially or completely removes the thermal stresses. Consequently, the daily distribution of the dislocations in the crystal must be determined by the thermal stress field in the temperature range of the plastic material.

However, up to now analysis of the conditions of formation of the dislocation structure of single crystals grown from a melt has reduced essentially to establishment of the empirical relation of the dislocation density to the magnitude of the temperature gradients in the vicinity of the crystallization front. Here, the defining role was attributed either to the radial [11] or the axial [2-4] components of the temperature gradient. The problem of the volumetric stressed state in the crystal was not considered in these works as a result of the great mathematical difficulties of solving it.

In this paper, a new approach to solving the problem has been used the schematic of which consists in the fact that the temperature field is calculated on a computer considering the boundary conditions obtained experimentally after which the thermoelastic stress field is calculated. The volume of the crystal with the corresponding values of the yield stresses for gallium arsenide determined from independent experiments. This approach permits analysis of the conditions of formation of dislocations in the crystal growth process.

Single crystals of gallium arsenide were grown from under a layer of molten boron hydride in the [111] direction. The temperature distribution in the crystal was fixed by temperature-resistant thermocouples 0.2 mm in diameter

USSR

UDC: 621.315.3

FARMAKOVSKIY, B. V., AFONINA, L. G., VAKHRAMEYEV, V. I., LEYANOVA, S. V.,
KRASIK, N. Ya., FIRSOV, A. M.

"Thermoresistive Cast Microwires in Glass Insulation"

Elektron. tekhnika. Nauchno-tekhn. sb. Radiokomponenty (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 1, pp 77-82
(from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V416)

Translation: The authors present the technological properties of thermoresistive alloys and the results of an investigation of the properties of microwires made from resistive alloy based on nickel with a temperature coefficient of resistance of $(5-6) \cdot 10^{-3}\%$ /deg. Resumé.

1/2 031

TITLE--TEMPERATURE COMPENSATING ALLOY -U-

UNCLASSIFIED
PROCESSING DATE--02OCT70

AUTHOR--(05)-AFONINA, L.G., FIRSOV, A.M., DEYANDVA, S.V., VAKHRAMEYEV,
V.I., FARMAKOVSKIY, B.V.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 260, 892
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--06JAN70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--METALLURGIC PATENT, TIN ALLOY, NICKEL, SILICON, BORON, ALLOY
COMPOSITION, THERMAL EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1490/1791

STEP NO--UR/G482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0109752

UNCLASSIFIED

272 031

CIRC ACCESSION NO--AA0109752

UNCLASSIFIED

PROCESSING DATE--02OCT70

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

ABSTRACT. THERMOCOMPENSATION ALLOY CONSISTS

OF NI 0.5-3, SI 0.5-3, B 0.01-0.1PERCENT, AND SN THE REMAINDER.

UNCLASSIFIED

89

Acc. Nr: AP0044401

Ref. Code: UR 0239

PRIMARY SOURCE: Fiziologicheskiy Zhurnal, 1970, Vol. 56,
Nr 1, pp 70-76

ON THE RELATION BETWEEN PARAMETERS OF ELECTROMYOGRAM AND
VALUE OF MUSCLE EFFORT IN NEWBORN INFANT

Vakhrameyeva, I. A.

From the Laboratory for Development of Higher Nervous Activity Institute of
Evolutionary Physiology and Biochemistry, USSR Ac. Sci., Leningrad

A comparison has been made between the electrographically recorded activity (EMG) of m. biceps brachii in newborn infant during active and passive movements, and the corresponding mechanical activity of the same muscle, i. e. the value of muscle effort. The rate of movement was used as the measure of muscle effort. An integrated electrical activity of the muscle was shown to follow a linear relationship to the rate of muscle contraction. The discharge frequency of EMG was reduced with the increase in muscular tension both during active contraction and passive stretching.

The rarefaction of EMG and augmentation of periodic signal during the increase in muscular tension are supposed to be associated with facilitation of synchronisation, which presumably plays a significant role in the regulation of muscular force in newborns.

1/1

TNT 2

REEL/FRA
19771019

1/2 027

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--CONFERENCE ON THE SCIENTIFIC ORGANIZATION OF LABOR IN THE MEDICAL
ESTABLISHMENTS OF ROSTOV OBLAST -U-

AUTHOR--(02)--VAKHRA MEYEVA, N.I., PAVLOVA, T.A.

COUNTRY OF INFO--USSR



SOURCE--MOSCOW, ZDRAVOCHRANENIYE ROSSIYSKOY FEDERATSII, NO 1, 1970, PP
39-41

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, BEHAVIORAL AND SOCIAL
SCIENCES

TOPIC TAGS--MEDICAL CONFERENCE, MORALE, MEDICAL PERSONNEL, HOSPITAL
EQUIPMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA ME--1990/0064

STEP NO--UR/0653/70/000/001/0039/0041

CIRC ACCESSION NO--AP0108432

UNCLASSIFIED

2/2 027

CIRC ACCESSION NO--AP0108432

UNCLASSIFIED

PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONFERENCE, THE FIRST OF ITS KIND, WAS HELD IN ROSTOV ON DON ON 19 JUNE 1969. MOST OF THE PAPERS WERE PRESENTED BY THE DIRECTORS OF HOSPITALS AND CLINICS, WHO DESCRIBED IN CONSIDERABLE DETAIL THE VARIOUS INNOVATIONS AND PROCEDURES THAT THEY INSTITUTED IN ORDER TO INCREASE EFFICIENCY AND IMPROVE THE QUALITY OF MEDICAL CARE. ALTHOUGH THE EMPHASIS WAS ON TECHNICAL DEVICES (TAPE RECORDERS, TELEPHONE AND RADIO COMMUNICATIONS, FILING SYSTEMS, ETC.), SOME ATTENTION WAS DEVOTED TO PROPER ASSIGNMENT OF PERSONNEL AND THE PSYCHOLOGICAL FACTORS INVOLVED IN BUILDING MORALE.

UNCLASSIFIED

USSR

UDC 61:658.387

VAKHRAMEYEVA, N. I. and PAVLOVA, T. A.

"Conference on the Scientific Organization of Labor in the Medical Establishments of Rostov Oblast"

Moscow, Zdravookhraneniye Rossiyskoy Federatsii, No 1, 1970, pp 39-41

Abstract: The conference, the first of its kind, was held in Rostov-on-Don on 19 June 1969. Most of the papers were presented by the directors of hospitals and clinics, who described in considerable detail the various innovations and procedures that they instituted in order to increase efficiency and improve the quality of medical care. Although the emphasis was on technical devices (tape recorders, telephone and radio communications, filing systems, etc.), some attention was devoted to proper assignment of personnel and the psychological factors involved in building morale.

1/1

Luminescence

(8)

USSR

UDC 661.143:546.431'821'185(088.8)

GUGEL', B. M., LODYGIN, N. A., GOLUBEV, I. F., KHIZHA, V. S., BLYAKHMAN, E. A., KUTSENKO, N. A., SIDOROV, M. D., ZVYAGIN, V. B., VAKHRAMOV, V. P., AGAPOV, V. I., GARKUSHA, V. A., KHUSAINOVA, R. S.

"Phosphor for Low-Pressure Luminescent Tubes"

USSR Author's Certificate No 336342, filed 19 May 70, published 22 May 72 (from RZh-Khimiya, No 2(II), Feb 73, Abstract No 2L148P)

Translation: In order to increase the light yield of the tubes, the proposed phosphor includes the following: barium-titanium phosphate, calcium halophosphate, strontium and magnesium orthophosphate and magnesium fluorogermanate. The barium-titanium phosphate, the calcium halophosphate, the strontium orthophosphate, magnesium orthophosphate and magnesium fluorogermanate are introduced in the following proportions by weight: 4-6:2.5-4:0.4-0.8:0.13-0.25 respectively. As an example, let us take weighed samples of 4.36 kg of barium-titanium phosphate, 3.84 kg of calcium halophosphate, 0.40 kg of magnesium-strontium orthophosphate and 0.24 kg of magnesium fluorogermanate. Put them in a porcelain cylinder and mix for 1 hour. A suspension is prepared from the mixture obtained and it is applied to the tubes.

1/1

1/2 010 UNCLASSIFIED PROCESSING DATE--13NGV70
TITLE--PHOTOCOLORIMETRIC METHOD FOR DETERMINING SILICON DIOXIDE IN
BULGARIAN BARITE -U-
AUTHOR--(02)-VAKHRANEYEVA, I.V., LITS, L.B.
COUNTRY OF INFO--USSR
SOURCE--KHIM. PROM. UKR. 1970, (1), 43-4
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--SILICON-DIOXIDE, COLORIMETRIC ANALYSIS, MINERAL, BARIUM
SULFATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0424 STEP NO--UR/0436/70/000/001/0043/0044
CIRC ACCESSION NO--AP0124175
UNCLASSIFIED

2/2 010
 CIRC ACCESSION NO--AP0124175 UNCLASSIFIED PROCESSING DATE--13NOV70
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FUSE 1 G BARITE WITH 10 G NAKCO
 SUB3 IN A PT CRUCIBLE, LEACH THE MELT WITH HOT H SUB2 O, FILTER THE PPT.
 OFF AND WASH IT WITH 1PERCENT NA SUB2 CO SUB3. DIL. THE FILTRATE TO 500
 ML WITH H SUB2 O; TO A 10 ML ALIQUOT, ADD 70 ML 2N HCL, 5 ML 5PERCENT
 (NH SUB4) SUB2 MOO SUB4 AND H SUB2 O TO 500 ML. AFTER 10-15 MIN MEASURE
 THE ABSORBANCE. USING HOT H SUB2 O TRANSFER THE PPT. INTO A 500 ML
 VOLUMETRIC FLASK, WAS THE FILTER WITH 1:1 HCL AND DIL. TO VOL. WITH H
 SUB2 O. TO A 10 ML ALIQUOT, ADD 35 ML 2N HCL AND FURTHER TREAT IN THE
 SAME WAY AS THE FILTRATE. ADD THE AMT. OF SI DETD. IN ALK. SOLN. TO
 THAT IN ACID SOLN. THE METHOD WAS USED FOR ANAL. OF BARITE CONCN.
 CNTG. 3.89-5.05PERCENT SID SUB2; THE ABS. ERRORS WERE 0.04-0.25PERCENT.

UNCLASSIFIED

USSR

UDC 615.281:547.734

VAKHREYEVA, K. I., LIPKIN, A. Ye., RYSKINA, T. B., and SKACHKOVA, N. I.,
Kuybyshev Polytechnical Institute imeni V.V. Kuybyshev

"Synthesis of Azomethine Bases of the 2,2'-Bithiophene Series with Potential
Biological Activity. Communication II."

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, No 3, 1973, pp 24-28

Abstract: Azomethine bases with nitro groups in the bithiophene portion of the molecule were synthesized to study the effects of the nitro groups on the antimicrobial activity of the more complex 2,2'-bithiophene derivatives. Nitration of 5-formyl-2,2'-bithiophene with cupric nitrate in acetic anhydride resulted in the formation of a mixture of 5-formyl-5'-nitro- and 5-formyl-3'-nitro-2,2'-bithiophene diacetates, hydrolysis of which gave 5-formyl-5'-nitro-2,2'-bithiophene (I) and 5-formyl-3'-nitro-2,2'-bithiophene (II). Reaction of I and II with aromatic amines, aminophenols, and aromatic acids resulted in the formation of azomethine bases, the structures of which were confirmed by chemical analyses and IR spectra. The most potent antibacterial activity was exhibited by the 3-carboxyphenyl (3'-NO₂) derivative which, at a concentration of 250 µg/ml of solid medium was bacteriocidal for pathogenic pneumococci and *Shigella sonnei* and *Sh. flexneri*.
1/1

UDC 550.42

USSR

VAKHRUSHEV, V. A., and TSIMBALIST, V. G., Institute of Geochemistry, Siberian Branch of the Academy of Sciences USSR, Irkutsk, and Institute of Geology and Geophysics, Siberian Branch of the Academy of Sciences USSR, Novosibirsk

"Gold in Ultrabasic Rocks of the Earth"

Moscow, Geokhimiya, No 9, Sep 72, pp 1128-1130

Abstract: Notwithstanding the increased interest in the distribution of Au in rocks, including those of the basic and ultrabasic types, the content of this element in ultrabasic rocks has been determined only in 10 instances hitherto. In the work reported at present, 20 samples of ultrabasic rocks from the kimberlite pipe Obnazhennaya in Yakutia (10 samples), explosion /extrusion/ pipes of the Northern Minusinsk depression (5 samples), lava channels of the Avachinsk volcano on Kamchatka (2 samples), and lava channels from the Hawaiian Islands (3 samples) were analyzed for their Au content. The average Au content was 0.0100, 0.0021, 0.0025, and 0.0230 g/ton in samples from the Obnazhennaya pipe, the Northern Minusinsk depression, the Avachinsk volcano, and the Hawaiian Islands, respectively. The distribution of Au was fairly uniform except in the samples from the Obnazhennaya pipe, in which a variation of the Au content in the range from 0.0028 to 0.0420 g/ton was found.

1/2

- 23 -

USSR

VAKHRUSHEV, V. A., and TSIMBALIST, V. G., *Geokhimiya*, No 9, Sep 72, pp 1128-1130

The variation was due either to postmagmatic contamination or redistribution of Au in the rock. The authors thank N. V. Sobolev, V. A. Kutolin, and N. G. Prokoptsev for supplying samples of ultrabasic rocks.

2/2

1/2 016 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--MUTUAL SOLUBILITY IN A UREA POTASSIUM NITRATE WATER SYSTEM -U-
AUTHOR--(03)-BABENKO, A.M., KAGANSKIY, I.M., VAKHRUSHEV, YU.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(4), 749-53
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES, AGRICULTURE
TOPIC TAGS--SOLUBILITY, UREA, POTASSIUM NITRATE, FERTILIZER, LOW
TEMPERATURE EFFECT, CRYSTALLIZATION

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/1499 STEP NO--UR/0080/70/043/004/0749/0753
CIRC ACCESSION NO--AP0138500
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0138500

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PURPOSE OF THIS INVESTIGATION WAS TO ESTABLISH COMPS. WHICH WOULD YIELD THE MAX. PLANT NUTRIENTS. USING SOLNS. IN WHICH THE N DOUBLE BOND K SUB2 O WAS APPROX. 0.42:1, A LIQ. FERTILIZER WAS OBTAINED WITH A CRYSTN. TEMP. OF MINUS 10DEGREES CONTG. 49PERCENT OF N PLUS K SUB2 O AND A MIXT. WITH A CRYSTN. POINT OF MINUS 20DEGREES CONTG. 40PERCENT OF N PLUS K SUB2 O. A MIXT. WITH A CRYSTN. POINT OF 0DEGREES CONTG. N PLUS K SUB2 O 52.3PERCENT WAS ALSO OBTAINED BY STARTING WITH A N DOUBLE BOND K SUB2 O RATIO OF 0.42:1. SOLNS. CONTG. A N DOUBLE BOND K SUB2 O RATIO OF 1:1 WERE ALSO OBTAINED BUT THEIR TOTAL CONTENT OF NUTRIENTS WAS LOWER. THUS, SOLNS. WITH A CRYSTN. TEMP. OF 0DEGREES CONTAINED N PLUS K SUB2 O 33.8PERCENT, AND WITH A CRYSTN. POINT OF MINUS 10DEGREES THE N PLUS K SUB2 O WAS 29.2PERCENT.

FACILITY: SEVERODNETSK. FILIAL, GIAP, SEVERODNETSK, USSR.

UNCLASSIFIED

Acc. Nr: AP0044690

Ref. Code: UR 0463

PRIMARY SOURCE: Molekulyarnaya Biologiya, 1970, Vol 4, Nr 1,
pp 30-36

THE INTERACTION OF TRANSFER RNA WITH ACETALS
OF 4-(N-2-CHLOROETHYL-N-METHYLAMINO)-BENZALDEHYDES—
DERIVATIVES OF URIDINE AND URIDINE-5'-METHYLPHOSPHATE

Belikova, A. M.; Vakhrusheva, T. Ye.; Vlasov, V. V.;
Grineva, N. I.; Zarytova, V. F.; Knorre, D. G.; Teplova, N. M.

Institute of Organic Chemistry, Siberian Branch of the Academy of Sciences, USSR,
Novosibirsk

It has been shown that the acetals of 4-(N-2-chloroethyl-N-methylamino)-benzaldehyde (RCI) — derivatives of uridine (URCI) and uridine-5'-methylphosphate (mepURCI) do alkylate tRNA. The efficiencies of the reagents are determined as a ratio of the velocity of tRNA modification to the velocity of all by-processes. The efficiencies of URCI and

1/2

REEL/FRA
19771423

02

AP0044690

RCI are of the same order of magnitude and two orders greater, respectively, as compared with that of mepURCI. In the presence of *tris* the efficiency of URCl decreases significantly and that of mepURCl is altered only slightly. The efficiency of URCl decreases in the presence of mepU due to the interaction of an intermediate cation with primary phosphates of mepU. It suggests that the efficiency of mepURCl is low due to the presence of primary phosphate in its molecule. The quantitative analysis of the data obtained makes it possible to conclude that the interaction of mepUR⁺ with phosphate is an intramolecular process.

19771424

2/2

B

1/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--PRODUCTION TECHNOLOGY FOR METAL POLYMER FILM MATERIAL -U-
AUTHOR--(02)-SOROCHISHIN, A.G., VAKHRUSHINA, L.A.
COUNTRY OF INFO--USSR
SOURCE--PLAST. MASSY 1970, (3), 21-3
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--METAL CONTAINING POLYMER, PLASTIC FILM, POLYETHYLENE
TEREPHTHALATE, ALUMINUM FOIL, PLASTIC FABRICATING MACHINERY,
POLYETHYLENE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0667 STEP NO--UR/0191/70/000/003/0021/0023
CIRC ACCESSION NO--AP0119575
UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119575

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

ABSTRACT. THE PRODUCTION OF 3 LAYER METAL POLYMER FILMS (COMPOSED OF POLY(ETHYLENE TEREPHTHALATE) (I) 12 PLUS OR MINUS 2 MU THICK, AL FOIL 1-5 30 PLUS OR MINUS 6 MU THICK, AND LOW-D. POLYETHYLENE P 2070P (II) AS AN INTERLAYER) IS DESCRIBED. THE 3 LAYER I-II-AL FILMS ARE MANUFD. IN A BARAND EXTRUSION APP. A DIAGRAM OF THE APP. AND ITS MODE OF OPERATION ARE PRESENTED.

UNCLASSIFIED

Composite Materials

USSR

UDC 678-416.027

V
SOROCHISHIN, A. G., VAKHRUSHINA, L. A.

"Technology of Metallopolymeric Film Production"

Moscow, Plasticheskiye Massy, No 3, 1970, pp 21-23

Abstract: The authors discuss the production of a three-layered film, consisting of soft aluminum foil 30 ± 6 microns in thickness, polyethyleneterephthalate film 12 ± 2 microns thick, and polyethylene used for adhesion, the thickness of which should be more than 20 microns. Essential to good binding are preheating and slow cooling which allow the adhesive to penetrate into microdefects of the substrates and enlarge the contact surface. The polyethylene is heated as it is fed between the other layers on squeeze rollers. The new polymeric material can find wide use as a soft hermetic packaging.

1/1

1/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--PECULIARITIES OF TECHNOLOGY OF THE BUTT WELDING OF BIMETALLIC PIPES
-U-
AUTHOR--(02)-VAKHTEROV, YU.G., ISACHENKO, V.I.
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, SVAROCHNOYE PROIZVODSTVO, NO 1, 70, PP 19-21
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--BIMETAL, METAL PIPE, DISSIMILAR METAL JOINING, DISSIMILAR
METAL WELDING, ALLOY DESIGNATION, BRONZE, BUTT WELDING, COPPER ALLOY,
BRONZE, LOW CARBON STEEL/(U)M3S COPPER ALLOY, (U)ST10 LOW CARBON STEEL,
(U)BROTS3 BRONZE, (U)BROTS4 BRONZE, (U)BRMNZHKT510202 BRONZE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1996/2029 STEP NO--UR/0135/70/000/001/0019/0021
CIRC ACCESSION NO--AP0118983
UNCLASSIFIED

2/2 019

CIRC ACCESSION NO--AP0118983
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT. THE PROCEDURE IS EXPLAINED OF THE BUTT WELDING OF BIMETALLIC PIPES FABRICATED FROM STEEL 10 PLUS COPPER MZS WITH A NONFERROUS ADDITION OF BRONZE BR.OTS 4-3 OR BR.MNZHKT 5-1-0.2-0.2 WHICH ENSURES SATISFACTORY MECHANICAL AND CORROSION PROPERTIES OF THE WELDED JOINT. FACILITY: FAR EASTERN POLYTECHNIC INSTITUTE IMENI V. V. KUYBYSHEV.

UNCLASSIFIED

ВАХИТИН,

~~XXXXXXXXXX~~ A. G.

MC RADIATION STEEL

6

JPRS 60973
14 January 1974

UDC: 621.013.531:669.012.8
RADIATION SWELLING OF STEEL OMI18N9T

Article by V.N. Bykov, A.G. Vakhitin, V.D. Dmitriyev, L.S. Kostromin, A. Ya. Lohitskiy, V.I. Nizhnikovich, Homosov, Атомная Энергия, Moscow, Vol 35, No 4, 1973, submitted 8 January 1973, pp 235-237

Many works pertaining to the investigation of the radiation strength of austenitic steels after irradiation in fast reactors and ion bombardment in accelerators [1, 2] have been published in recent times. The swelling investigation. Information on the swelling of OMI18N9T steel is limited to data for individual temperatures and integral doses [3]. The results of electron-microscopic analysis of the radiation porosity of OMI18N9T steel are presented in this article.

Experimental Material and Technique

The specimens for electron-microscopic analysis were discs 1.5 mm in diameter and 0.4 mm thick, cut from various fuel element jackets made of OMI18N9T steel and irradiated with integral fluxes of up to $1.4 \cdot 10^{22}$ neutrons/cm² in the 430-590°C temperature range. The method of thinning of the specimens in a stream of electrolyte (60% H₂O₂ + 40% H₂SO₄) is described in [4].

Processing of the results was accomplished directly from the negatives with the aid of an instrumental microscope. The measurement error of cavity diameters was 20 Å. The concentration of the pores in the specimen was determined by measuring at least 400 cavities in a specimen with a thickness of 1.500 Å. The summary error of determination of the swelling of the material was 50%, but the scattering of the values from the arithmetic mean value for several measurements of the same specimen did not exceed 20%.

Investigation of the Swelling of OMI18N9T Steel

Electron-microscopic analysis of the specimens revealed pores, homogeneously distributed through the body of the grain, the concentration

USSR

UDC:621.039.54

BYKOV, V. N., VAKHTIN, A. G., DMITRIYEV, V. D., KOSTROMIN, L. G.,
LADYGIN, A. YA. and SHCHERBAK, V. I.

"Radiation Swelling of OKh16N15M3B Steel"

Moscow, Atomnaya Energiya, Vol 36, No 1, Jan 74, pp 24-26

Abstract: Results are presented from electron-microscope studies of radiation porosity in OKh16N15M3B steel bombarded by neutrons in the BR-5 reactor. The specimens used were discs 3.5 mm in diameter and 0.4 mm thick, cut from various sections of fuel element shells following bombardment in the BR-5 reactor to integral fluxes of $4.3 \cdot 10^{22}$ neutrons per square centimeter in the 430-580° C interval. After manufacture, the fuel element shells were annealed at 950° C for 10 minutes in a vacuum. The dependence of swelling on integral dose and temperature of bombardment is constructed. The dependence is exponential in nature, with an exponent of 1.5, which is slightly less than that determined for type 316 steel. The maximum calculated swelling of the steel with a flux of 10^{23} neutrons per square centimeter is 6-7%.

1/1

1/2 020

UNCLASSIFIED

PROCESSING DATE--18SEP70

TITLE--POSSIBLE FIELD OF APPLICATION OF NEUTRON NEUTRON METHOD IN
GEOPHYSICS -U-

AUTHOR--(02)-VAKHTIN, B.S., FILIPPOV, YE.M.

COUNTRY OF INFO--USSR

SOURCE--GEOLOGIYA I GEOfIZIKA, 1970, NR 2, PP 72-81

DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, PHYSICS

TOPIC TAGS--NEUTRON DETECTOR, GEOPHYSICS, SILVER, INDIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAme--1986/1227

STEP NO--UR/0210/70/000/002/0072/0081

CIRC ACCESSION NO--AP0103115

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0103115

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESULTS OF INVESTIGATIONS ON FURTHER DEVELOPMENT OF NEUTRON NEUTRON METHOD, BASED ON REGISTRATION OF RESONANCE NEUTRONS (NNM,R) ARE LISTED IN THE PAPER. THE SILVER AND INDIUM DETERMINATIONS IN THE SAMPLES WERE CARRIED OUT USING NNM,R METHOD. THE FOILS OF DETERMINED JELEMENTS WERE USED AS NEUTRON DETECTORS. NNM,R WAS ALSO USED FOR DETERMINATION OF ELEMENTS WHICH FORM THE STABLE ISOTOPES BY NEUTRON CAPTURE, AS GOLD AND DISPROSIUM. THE EFFECT OF OVERLAPING OF THESE ELEMENTS RESONANCE WITH SILVER RESONANCE WAS USED. INDIUM WAS DETERMINED USING RODIUM FOIL BY THE SAME WAY. THE RESULTS OF HIGH BORON CONCENTRATIONS DETERMINATION IN THE SAMPLES USING SILVER, RODIUM AND INDIUM FOILS AS NEUTRON DETECTORS ARE LISTED. THE FLATTENING OF CALIBRATING CURVES, BEING CHARACTERISTIC FOR NEUTRON NEUTRON METHOD ON HEAT NEUTRONS IS DIVERTED.

UNCLASSIFIED

VAKHTINA, L.P.

MEDICINE

29 Jan 71

12

PROLOSOTIC SCIENCE

V. AWARDS, CONFERES, APPOINTMENTS, AND PERSONALITIES

19. USSR

"Y. M. Kuznetsov"

Moscow, Izvestiya, 28 Oct 70, p 4

Yuzef Borisovich Kuznetsov, head of the Chair of the Ministry of Wood and Cellulose of the Leningrad Forestry Engineering Academy, has become the first Soviet scientist elected a member of the International Academy of Forestry Sciences (IAFOS). The International Academy of Wood was created in 1966, and its main purpose is the coordination and encouragement of scientific research devoted to the problems of forest primary and the production and use of wood. There are 100 representatives of science from many countries in IAFOS.

1/2

20. USSR

"Temporary title"

Moscow, Podvoshnikov, Gazette, 1 Sep 70, p 1

Temporary title: By decree of the Presidium of the Supreme Soviet USSR, the title Honored Physician Kuznetsov has been awarded to the following medical workers of Komsomol Medical Institute for services in national health: doctors I. P. Belogorov, Ye. Y. Kuznetsov, and A. I. Yakovlev, and assistant L. P. Vakhtina.

By decree of the Presidium of the Supreme Soviet USSR, the title Honored Physician Kuznetsov has been awarded to K. P. Samoylov for long and productive service in medical institutions of the USSR Ministry of Internal Affairs.

By decree of the Presidium of the Supreme Soviet USSR, the title Honored Doctor V. A. Belov has been awarded to the following for services in public health: G. N. Shalagin, head of the Infection Division of Army Primary Army Hospital, Chukotka Territory; N. M. Yakovlev, Physician of Sakhkovo Hospital, Sovetskoye Nazvanie, Gorno-Altay Territory; K. D. Dobronov, chief physician of the Antituberculous Dispensary Medical-Sanitary Station of the Medicine Building Plant, Izdat' Voroshilov, Uralinsk.

1/3

USSR

UDC: 512.25/.26+519.3:330.115

VAKHUTINSKIY, I. Ya., RUDNEV, Yu. A.

"Use of a Priori Information on the Optimum Basis in Solving Problems of Linear Programming"

Tr. 3-y Zimney shkoly po mat. programir. i smezhnym vopr., 1970. Vyd. 1
(Works of the Third Winter School on Mathematical Programming and Related Problems, 1970, No 1), Moscow, 1970 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V602)

[No abstract]

1/1

USSR

UDC 512.25/.26+519.5:330.115

GRISHKO, N. V., VAKHUTINSKIY, I. Ya., BUYANOVSKIY, L. A.

"The Kundt-Takker Theorem with Supplementary Limitations and the Decomposition Principle"

Tr. Spets. Konstrukt. Byuro po Avtomatike v Neftepererabotke i Neftekhimii [Works of the Special Design Bureau for Automation in Oil Processing and Petrochemistry], No 3, 1971, pp 138-141, (Translated from Referativnyy Zhurnal, Kibernetika, No 10, 1971, Abstract No 10 V686 by D. Epshteyn).

Translation: The problem of determination of $\max f(x)$ is studied under conditions $\phi_i(x) \leq 0$ with the additional limitation $x \in G$, where G is a compact subset of an n -dimensional linear space. Under certain conditions, the problem is reduced to minimization of the nondifferentiable function

$F(\lambda) = \max_{x \in G} [f(x) - \sum_i \lambda_i \phi_i(x)]$ under the condition $\lambda_i \geq 0$. The minimum is sought using a method assuming calculation of the pseudogradient of function $F(\lambda)$. In general, the method suggested is a variety of the dual analog of the Danzig-Wulf expansion method.

1/1

USSR

UDC 512.25/.26+519.3:330.115

VAKHUTINSKIY, I. Ya., RUDNEV, Yu. A.

"One Method of Solving Problems in Linear Programming Using Preliminary Information on the Basis"

Tr. Spets. Konstrukt. Byuro po Avtomatike v Neftepererabotke i Neftekhimii [Works of the Special Design Bureau for Automation in Oil Processing and Petrochemistry], No 3, 1971, pp 169-173, (Translated from Referativnyy Zhurnal, Kibernetika, No 10, 1971, Abstract No 10 V580, unsigned).

Translation: A reproduction of a work by the author's (RZhMat, 1971, 7V602).

1/1

- 28 -

USSR

UDC 577.3

MEYSEL', M. N., MOKHNACH, V. O., VAKINA, I. P., SELIVVERSTOVA, L. A., BORODINA, V. M., and ROMANOVA, L. L., Institute of Microbiology, Academy of Sciences USSR, and Botanical Institute imeni V. L. Komarov, Academy of Sciences USSR

"The Mechanism of the Antimicrobial Action of Biologically Active Iodine Compounds"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Biologicheskaya, No 6, Nov/Dec 71, pp 819-829

Abstract: Bacteriological, phase-contrast, fluorescence, and electron microscope investigations revealed that the antimicrobial activity of iodine compounds is due to the positive monovalent iodide ion (I^+) and not to molecular iodine (I_2). The most active substances, such as iodine-potassium iodide and its compound with polyvinyl alcohol (iodinol), as well as oxidized hydroiodic acid and its compound with polyvinyl alcohol, readily penetrate yeast and bacterial cells and by combining with oxidizing the mitochondria, intracellular polysaccharides, and membrane lipoproteins, suppress and eventually completely inhibit the respiration of the cells.

1/1

- 43 -

USSR

VAKMAN, D.YE.

UDC 621.391.2

"On Determination Of The Concepts Of The Amplitude, Phase And Instantaneous Frequency Of A Signal"

Radiotekhnika i elektronika, Vol XVII, No 5, May 1972, pp 972-978

Abstract: It is shown that only the determination of amplitude, phase and frequency, based on the Hilbert transform and the analytical signal, satisfy certain sufficiently obvious physical conditions. In the process the paper considers a complex signal, the physical conditions for the selection of the operator L , and the proof of uniqueness. The aspect of the problem concerned with measuring techniques is discussed. The author thanks V.I. Tumarkin for substantial aid in completing one of the demonstrations. 16 ref. Received by editors, 6 April 1971.

1/1

1/2 022
UNCLASSIFIED
TITLE--PERCEPTION OF NONSTATIONARY RANDOM PROCESSES IN WHITE NOISE -U-
AUTHOR--VAKMAN, D.YE.
COUNTRY OF INFO--USSR
SOURCE--KIEV, IZVESTIYA VUZOV SSSR RADIOELEKTRONIKA, VOL 13, NO 2, 1970,
PP 131-143
DATE PUBLISHED--70
SUBJECT AREAS--NAVIGATION
TOPIC TAGS--RANDOM PROCESS, WHITE NOISE, PERCEPTION, SIGNAL NOISE
SEPARATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1991/1448
STEP NO--UR/0452/70/013/002/0131/0143
CIRC ACCESSION NO--APO110942
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NU--AP0110942

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS STATED THAT ONE OF THE DIFFICULTIES ARISING IN THE TECHNICAL APPLICATIONS OF THE PROBLEM OF NONSTATIONARY RANDOM PROCESS PERCEPTION IS CONNECTED WITH A RATIONAL CHOICE OF RESOLVING POWER GUARANTEEING MAXIMUM PERCEPTION PROBABILITY. THIS PAPER INVESTIGATES THE OPTIMUM RESOLVING POWER AT WHICH THE HIGHEST PROBABILITY OF CORRECT PERCEPTION OF NONSTATIONARY RANDOM PROCESSES OF A PARTICULAR FORM IS REACHED. IN HIS DISCUSSION, THE AUTHOR ASSUMES THE PERCEIVING EQUIPMENT TO CONSIST OF TWO BLOCKS: THE FIRST IS A LINEAR FILTER; THE SECOND IS THE RESOLVING BLOCK. THE SIGNAL AT THE INPUT OF THE FIRST HAS TWO COMPONENTS: THE INVESTIGATED PROCESS AFTER THE PRELIMINARY FILTER, AND THE NOISE. THE STRUCTURE OF THE SIGNAL AT THE OUTPUT OF THE FIRST BLOCK IS INVESTIGATED, AND THE PROBABILITY OF THE PERCEPTION COMPUTED. THE AUTHOR PRESENTS SEVERAL EXAMPLES OF THE TREATMENT OF THE PROBLEM HE PROPOSES HERE. THE FIRST IS A PROBLEM SIMILAR TO DETECTION OF A NOISELIKE SIGNAL OF CONSTANT INTENSITY AGAINST A BACKGROUND OF WHITE NOISE. THE SECOND CONSIDERS THE CASE OF THREE PERCEPTION OF SOURCES DIFFERING IN INTENSITY. THE THIRD IS SIMILAR TO THE PROBLEM OF ESTIMATING THE TIME OF ARRIVAL OF A SIGNAL. IN HIS CONCLUSIONS, THE AUTHOR CLAIMS FOR HIS METHOD A MORE ACCURATE OPTIMAL RESOLVING POWER IN THE MORE COMPLEX CASES.

UNCLASSIFIED

USSR

VAKMAN, D. Ye.

UDC 621.391

"Perception of Nonstationary Random Processes in White Noise"

Kiev, Izvestiya VUZov SSSR-Radioelektronika, Vol 13, No 2, 1970, pp 131-143

Abstract: It is stated that one of the difficulties arising in the technical applications of the problem of nonstationary random process perception is connected with a rational choice of resolving power guaranteeing maximum perception probability. This paper investigates the optimum resolving power at which the highest probability of correct perception of nonstationary random processes of a particular form is reached. In his discussion, the author assumes the perceiving equipment to consist of two blocks: the first is a linear filter; the second is the resolving block. The signal at the input of the first has two components: the investigated process after the preliminary filter, and the noise. The structure of the signal at the output of the first block is investigated, and the probability of the perception computed. The author presents several examples of the treatment of the problem he proposes here. The first is a problem similar to detection of a noise-like signal of constant intensity against a background of white noise. The

1/2

USSR

VAKMAN, D. Ye., Izvestiya VUZov SSSR-Radioelektronika, Vol 13, No 2, 1970,
pp 131-143

second considers the case of the perception of sources differing in intensity. The third is similar to the problem of estimating the time of arrival of a signal. In his conclusions, the author claims for his method a more accurate optimal resolving power in the more complex cases.

2/2

1/2 018
UNCLASSIFIED
PROCESSING DATE--30OCT70
TITLE--INTERACTION OF POLYFLUOROAROMATIC COMPOUNDS WITH ELECTROPHILIC
AGENTS -U-
AUTHOR-(02)-SHTEINGARTS, V.D., VAKOBSON, G.G.
COUNTRY OF INFO--USSR
SOURCE--ZH. VSES. KHIM. OBSHCHEST. 1970, 15(1), 72-80
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--FLUORINATED ORGANIC COMPOUND, NITRATION, CHEMICAL REACTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/1238
STEP NO--UR/0063/70/015/001/0072/0080
CIRC ACCESSION NO--AP0116700
UNCLASSIFIED

2/2 018

CIRC ACCESSION NO--AP0116700
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT. A REVIEW THROUGH PART OF 1959 ON
REPLACEMENT OF H ATOMS IN PARTLY FLUORINATED COMPS., ELECTROPHILIC
ADDN. TO FLUOROAROM. COMPS., REACTION OF PARTLY FLUORINATED AROM.
COMPS. WITH NITRATING AGENTS, AND GENERAL REACTIONS OF POLYFLUROAROM.
COMPS. WITH 43 REFS.

UNCLASSIFIED

USSR

VAKRINENE, S. P.

"Areas of the Solution of a Dynamic Non-Antagonistic Game of Two Persons"

Teoriya Igr [Games Theory -- Collection of Works], Yerevan, 1973,
pp 85-87 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973,
Abstract No 10V477)

Translation: The following game is studied. At the initial moment, the
players are located at point (p_0, r_0) . At the k th moment, they shift,
selecting $i_k \in \{1, \dots, m\}$ and $j_k \in \{1, \dots, n\}$, to point $p_{k+1} = p_k +$
 $a_{i_k j_k}^k$, $r_{k+1} = r_k + b_{i_k j_k}^k$, matrices A and B are fixed. The game ends
when the position of the game leaves a certain circle with its center
at the origin of the coordinates. The win functions of the players
are piecewise-constant.

1/1

1/2 033

UNCLASSIFIED

PROCESSING DATE--18SEP70

TITLE--DAMPING OF CRITICAL VIBRATIONS AND DIELECTRIC LOSSES IN
DISPLACEMENT TYPE FERROELECTRICS -U-

AUTHOR--(03)-BALAGUROV, B.YA., VAKS, V.G., SHKOVSKIY, B.I.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(1), 89-99

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--DIELECTRIC LOSS, ACOUSTIC DAMPING, PHONON INTERACTION, IDEAL
CRYSTAL, FERROELECTRIC CRYSTAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1980/0097

STEP NO--UR/0181/70/012/001/0089/0099

CIRC ACCESSION NO--AP0048389

UNCLASSIFIED

2/2 033

CIRC ACCESSION NO--AP0048389

UNCLASSIFIED

PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FOR DISPLACEMENT TYPE FERROELECTS., ANHARMONIC DAMPING WAS CONSIDERED OF CRIT. VIBRATIONS WITH YIELDS K EQUALS 0 AND DIELEC. LOSSES AT TEMPS. ABOVE THE TRANSITION POINT. THE MAIN CONTRIBUTION TO LOW FREQUENCY DAMPING IS MADE BY INTERACTIONS OF CRIT. PHONONS WITH EACH OTHER AND WITH ACOUSTICAL PHONONS. EXPLICIT EXPRESSIONS ARE GIVEN FOR THE MOST IMPORTANT CONTRIBUTIONS TO DAMPING IN TERMS OF THE COEFFS. OF DIELEC. NONLINEARITY, ELECTROSTRICTION, AND THE PARAMETERS OF THE LOW FREQUENCY SPECTRA. IN THE IDEAL CRYSTALS CONSIDERED, THE CRIT. VIBRATIONS ARE ONLY WEAKLY DAMPED, AND LOSSES ARE SMALL. COMPARISON WITH EXPT. GIVES AGREEMENT WITH SRTIO SUB3 AND DOES NOT CONTRADICT THE DATA ON KTAO SUB3. IN BAYIO SUB3, THE CALCD. DAMPING IS LESS THAN THE OBSD.

Acc. Nr: APC 038050

Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1970, Vol 58, Nr 1, pp 296-308

CORRELATION EFFECTS IN PHASE TRANSITIONS IN DISPLACIVE FERROELECTRICS

V. G. Vaks

It is shown that correlation effects in the region of ferroelectric transitions of the displacement type are apparently not small and can significantly affect the thermodynamics of the transition. The first correlation correction to the free energy and the temperature dependent corrections to the Devonshire expansion coefficients above the transition are found. The thermodynamics near the transition and in the ferroelectric phase is investigated qualitatively. It is shown that the correlation effects can explain some of the properties of the transitions and in particular proximity of transitions of the first kind to the second and the temperature dependence of the Devonshire coefficients. The results are compared with experiments with BaTiO₃ and numerical estimates of the temperature anomalies of various quantities near the transition are presented.

//

REEL/FRAME
19731094

21

08

1/2 017

TITLE--A METHOD FOR REDUCING THE BLIND ZONE OF WEATHER RADAR -U- UNCLASSIFIED PROCESSING DATE--020CT70

AUTHOR--(04)-VAKSENBURG, S.I., GORNOSTAYEV, N.V., GUREVICH, V.I., SHEVELA, G.F. V

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, TRUDY TRET'YEGO VSESOYUZNOGO SOVESHCHANIYA PJ
RADIOLOKATSIONNOY METEOROLOGII, YEAR NOT STATED, PP 230-237
DATE PUBLISHED-----70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, NAVIGATION

TOPIC TAGS--METEOROLOGIC RADAR, ATMOSPHERIC CLOUD/(U)MRLI METEOROLOGIC
RADAR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1991/1021

STEP NO--UR/0000/70/000/000/0230/0237

CIRC ACCESSION NO--AT0110716

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AT0110716

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOME OF THE PROBLEMS INVOLVED IN DETERMINING THE LOWER CLOUD BOUNDARY WITH THE MRL-1 TWO RANGE METEOROLOGICAL RADAR DURING ITS OPERATION IN A VERTICAL SOUNDING REGIME ARE EXAMINED. LIMITATIONS ARISE WHICH ARE ASSOCIATED WITH THE MINIMUM EFFECTIVE RANGE OF THIS RADAR WHICH IS DETERMINED NOT ONLY BY THE DURATION OF THE SOUNDING PULSE, BUT TO A CONSIDERABLE DEGREE BY THE EFFECT OF THE FAR SIDE LOBES OF THE ANTENNA. IN DETERMINING THE LOWER CLOUD BOUNDARY IT IS DESIRABLE TO ELIMINATE THE EFFECT OF THE SIDE LOBES WHILE RETAINING NORMAL RESPONSE IN THE DIRECTION OF THE MAIN LOBE IN THE ANTENNA DIRECTIONAL DIAGRAM. THE MRL SIDE LOBES APPARENTLY CAN BE SUPPRESSED USING AN APPARATUS WHOSE BLOCK DIAGRAM IS SHOWN AND DISCUSSED IN THIS ARTICLE. SUPPRESSION WILL OCCUR IF THE SIGNAL RECEIVED IN THE SUPPRESSION CHANNEL EXCEEDS THE SIGNAL RECEIVED IN THE MAIN CHANNEL IN THE DIRECTION OF THE SIDE LOBES. THE RECEIVER, CONSISTING OF A MAIN CHANNEL AND A SUPPRESSION CHANNEL, MAKES IT POSSIBLE TO SUPPRESS THE SIDE LOBES BY SUBTRACTING FROM THE VIDEOFREQUENCY THE SIGNALS RECEIVED BY THE SUPPRESSION ANTENNA AND THE MAIN ANTENNA FROM THE SIDE LOBES. INITIAL TESTS HAVE SHOWN THAT IT IS POSSIBLE TO COMPENSATE REFLECTIONS FROM LOCAL OBJECTS AND TO REDUCE THE BLIND ZONE, BUT FURTHER TESTS WILL BE MADE IN THE SUMMER OF 1967.

UNCLASSIFIED