

USSR

KONEV, Yu. I., Elektronnaya Tekhnika v Avtomatike, 1972, pp.183-184

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KONEV, Yu. I., Elektronnaya Tekhnika v Avtomatike, 1972, pp 183-184

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USSR

UDC 621.375.145:621.382.8

GOLOVATSKIY, V.A., KONEV, YU.I., MASHUKOV, YE.V.

"Power Semiconductor Integrated Circuits"

V sb. Elektronnaya tekhnika v avtomatika (Electronics Techniques In Automation--
Collection Of Works), Moscow, Izd-vo "Sovetskoye Radio," No 2, 1971, pp 131-132

Abstract: Brief data are presented concerned with the development of power semiconductor integrated circuits with an output power up to 2000 watt. An exterior view is shown of the integrated construction of a bridge transistorized switching device which contains 8 KT905A and 12KT803A n-p-n transistors mounted on a 60 x 70 x 8 mm metal plate. 1 fig. 4 ref.

1/1

USSR

VOL'F, L. A., YEMETS, L. V., KONEV, Yu. Ye., KOTETSKIY, V. V., MEOS, A. I.,
and KHOKHLOVA, B. A., Leningrad Institute of Textile and Light Industry imeni
S. M. Kirov; Leningrad Scientific Research Institute of Antibiotics

"Preparation of Physiologically Active Fibers With Ion-Fixed Preparations"

Riga, Fiziologicheski i Opticheski Aktivnyye Polimernyye Veshchestva,
"Zinatne," 1971, pp 159-165

Abstract: Sorption of colimycin, novocainamide, and brilliant green by modified polyvinyl alcohol (PVA) fibers containing sulfo and carboxyl functional groups was studied, with the aim of preparing physiologically active materials with antimicrobial, anti-inflammatory, and anesthetic properties. The best sorption of brilliant green and novocainamide took place on fibers with -COOH group in the salt (Na) form. The carboxyl group in H-form dissociated very little in acid solutions, but the same group in the salt (Na) form was ionized in a wide pH range. Similar results were obtained with colimycin. The sulfo group dissociated equally well in all media. Therefore, there were no significant differences in sorption of the above preparations on sulfoexchangers either in acid or salt form. Excess of preparations (1-1.5 fold) in solution and larger absorbing surface of fibers were of importance. A difference in 1/2

USSR

VOL'F, L. A., et al., Fiziologicheski i Opticheski Aktivnyye Polimernyye Veshchestva, "Zinatne," 1971, pp 159-163

the sorption rate of the above preparations by fibers with carboxyl groups in H- or salt (Na) form is attributed to a greater swelling of the salt exchanger (Na especially) in comparison with H-form. In experiments with animals it was shown that presence of an ionic bond between fibers and medicinal preparations makes the textile material more stable toward bacteria, as opposed to ordinary impregnation of fibers with antibiotics. Catgut and natural silk treated with colimycin preserved their antimicrobial properties 8 days after their presence in soft tissues of rabbits. This is attributed to the formation of electrovalent and hydrogen bonds between antibiotics and peptides.

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- 91 -

Acc. Nr.: AP0029431

Ref. Code: UR 0297

PRIMARY SOURCE: Antibiotiki, 1970, ~~Vol 15~~, Nr 1, pp 9-14

PRODUCTION OF A NEW HEPTAENIC NONAROMATIC ANTIBIOTIC TBILIMYCIN
BY ACT. CHARTREUSIS VAR. TBILISUS

Yu. D. Shenin, E. N. Sokolova, Yu. Ye. Kagan

Leningrad Institute for Antibiotics

A new variant designated as Act. chartreusis var. tibilisus, producing along with shartresin a new antifungal heptaenic antibiotic of the nonaromatic group is described. The new antibiotic is named as tibilimycin.

gm

REEL/FRAME

19681027

Acc. Nr: 190101134

Ref. Code: UR0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 3, pp208-212

PRODUCTION OF ANTIBIOTICS OF AZALOMYCIN F TYPE BY ACTINOMYCES
IMBRICATUS N. SP.

V. A. Tsuganov, Yu. Ye. Konev, N. P. Barashkova, L. Ya. Petrova, S. N. Salotsev

Leningrad Institute for Antibiotics

Three actinomycetes belonging to non-chromogenic actinomycetes were isolated from soils of arid zones of the South regions of the USSR. The aerial mycelium of the cultures was slightly developed of whitish color. The sporophores were spiral, the spores oval with smooth membrane. When grown on soybean media with glucose, the cultures produced antifungal antibiotics close to azalomycin F. Comparison of the isolates with the organism producing azalomycin F described in the literature and close species of actinomycetes allowed to classify it as a new species designated as Actinomyces imbricatus (Konev, Tsuganov, Barashkova) n. sp.

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REEL/FRAME
19850759

22h

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USSR

UDC 669.24:548.4

POPOV, L. YE., TERESHKO, I. V., GORENKO, L. K., KONEVA, H. A., KOZLOV, E. V.,
and KOVALEVSKAYA, T. A., Siberian Physicotechnical Institute imeni V. D.
Kuznetsov and Tomsk Engineering Construction Institute

"Dislocation Structure of Ni₃Al at Different Stages of Deformation"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 35, No 2, Feb 73, pp 409-418

Abstract: This study was conducted to study the change in the nature of dislocation structure in intermetallide Ni₃Al with increasing degree of deformation. Alloys with nickel and 22.9 and 24.0 at.% Al were investigated to which deformations of 1-12% were applied. At small degrees of deformation (1-2%) interlaces of dislocations were extended along slip traces and the average distance between slip traces was 8300 A. The number of interlaces and dislocation density increased with increased deformation. Plastic deformation of Ni₃Al results in the generation of three types of dislocations two of which are inherently located in octahedral planes and one -- cubic planes. In the deformed alloy numerous wide stacking faults are observed when alloy composition is close to stoichiometric and the energy of the stacking faults amounts to 29 erg/cm² for the alloy with 24.0 at.% Al. At high degrees 1/2

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POPOV, L. YE., et al., Fizika Metallov i Metallovedeniye, Vol 35, No 2, Feb 73, pp 409-418

of deformation, dislocation interlacings are noted which form a cellular structure. 9 figures, 22 bibliographic references.

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1/2 018
UNCLASSIFIED
PROCESSING DATE--30OCT70
TITLE--MICRIBIOLOGICAL QUANTITATIVE DETERMINATION OF INOSITOL IN YEASTS
-U-
AUTHOR--(03)--KOROTCHENKO, N.I., BENDOSENKO, V.A., KONEVA, N.K.
CCOUNTRY OF INFO--USSR
SOURCE--PRIKL. BIOKHM. MIKROBIOL. 1970, 6(2), 243-7
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--YEAST, MICROBIOLOGY, QUANTITATIVE ANALYSIS, ALCOHOL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3001/1806
STEP NO--UR/0411/70/006/002/0243/0247
CIRC ACCESSION NO--AP0127220
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127220

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO DET. INOSITOL (I) IN YEASTS, A 1 G ALIQUOT OF THE DRIED MATERIAL IS AUTOCLAVED WITH 20 ML OF 20PERCENT HCL FOR 1 HR UNDER 1 ATM TO LIBERATE I, THE HYDROLYZATE NEUTRALIZED TO PH 5.2-5.7 AND DILD. TO A CONC. OF 1-2 MU G-ML I. TO DET. I MICROBIOL., A 48 HR CULTURE OF SCHIZOSACCHAROMYCES PUMBE IS ADDED TO THE HYDROLYZATE, THE MIXT. INCUBATED 48 HR AT 35DEGREES; THE INTENSITY OF GROWTH MEASURED PHOTOCOLORIMETRICALLY, AND THE RESULT COMPARED TO A STD. CURVE MADE WITH KNOWN CONCNS. OF I. THE CONTENT OF I IN DRY YEASTS AS DETD. BY THIS METHOD IS, FOR DIFFERENT CANDIDA SPECIES, 1266-4792 MU G-G, THE LEVEL OF I DEPENDING PRIMARILY ON THE NATURE OF THE NUTRIENTS SUPPLIED. FACILITY: ALL UNION RES. INST. PROTEIN BIOSYN., USSR.

UNCLASSIFIED

USSR

UDC 539.3:534.1

GUSEV, V. B., KONEVALOV, V. S., NIKIFOROV, A. S.

"On the Dissipative Properties of a Plate Partially Faced With Vibration Absorbing Material"

V sb. Rasseyaniye energii pri kolebaniyakh mekh. sistem (Energy Scattering in the Vibrations of Mechanical Systems -- Collection of Works), Kiev, "Nauk. dumka", 1972, pp 248-250 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V233)

Translation: The dissipative properties of a plate upon the deposition of a vibration absorbing material on a portion of its surface are investigated. The dissipative properties of a rod of finite length, a certain part of which is coated with the vibration absorbing material, are initially considered to make a qualitative evaluation of these properties. Two cases are considered, in one of which the material is applied to the middle portion of the rod symmetric with its center, and in the other the material is applied at the ends of the rod. The experimental portion was conducted on circular plates of diameter 100 cm. Rubber was used as a vibration absorbing coating.

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USSR

GUSEV, V. B., et al, Rasseyaniye energii pri kolebaniyakh mekh. sistem, Kiev, "Nauk. dumka", 1972, pp 248-250

The coefficient of losses in the plate was measured under constant removal of the rubber from the surface of the plate. Measurements of the coefficient of loss were conducted by a reverberation method up to a 10-fold decrease in the amplitude of the free bending oscillations of the plate. It is pointed out that the dissipative properties of the plate at high frequencies are practically independent of the placement on it of one or another quantity (with respect to area) of vibration absorbing material. It is more reasonable to place the vibration absorbing material closer to the center of the plate to ensure the best dissipative properties of the plate at low frequencies. Yu. A. Belyayev.

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USSR

UDC 538.3:538.4:621.362

KOVALEV, L. K., and KONEYEV, S. M.-A.

"Effect of the Asymmetry of an External Magnetic Field on Viscous Fluid Flow in an Annular MHD Channel"

Riga, Magnitnaya Gidrodinamika, No 3, Jul-Sep 72, pp 46-50

Abstract: The article considers the laminar, single-component flow $v(0, 0, v)$ of an incompressible viscous fluid with constant conductivity σ in an annular channel which has the potential difference U_e applied to its cylindrical, ideally conducting walls. The asymmetric, external, tangential magnetic field $B(B_r, B_\theta, 0)$ is created by current in the central electrode, which is a certain small distance δ from the geometric axis of the channel. It is assumed that there is no Hall effect and the magnetic Reynolds number is small. The analytic solution of the two-dimensional problem follows the method of expansion in a power series of the small parameter $\delta \ll 1$. The resultant expressions for the velocity and potential in the channel in the zeroth and first approximations are used as the basis for calculating flow

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USSR

KOVALEV, L. K., and KONEYEV, S. M.-A., Magnitnaya Gidrodinamika, No 3, Jul-Sep 72, pp 46-50

parameters for different Hartmann number values. The latter indicate the possibility of periodic velocity and potential variations along the radius of the channel with an asymmetric magnetic field at Ha numbers \approx 1000.

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1/2 022

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--CALCULATION OF TEMPERATURE ON THE SURFACE AND IN THE CENTER OF
EXTRUDED RUBBER GOODS DURING FLUIDIZED BED VULCANIZATION -U-

AUTHOR--(03)-GALLE, A.R., KONGAROV, G.S., ROZHDESTVENDKIY, O.I.

COUNTRY OF INFO--USSR

K

SOURCE--KAUCH. REZINA 1970, 29(2), 23-5

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--FLUIDIZED BED, CRYSTALLIZATION, CALCULATION, TEMPERATURE,
RUBBER, VULCANIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0458

STEP NO--UR/0138/70/029/002/0023/0025

CIRC ACCESSION NO--AP0119394

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119394

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A METHOD WAS PROPOSED FOR CALCG. THE TEMP. CHANGES (DELTA T) ON THE SURFACE AND IN THE CENTER OF AN EXTRUDED RUBBER CORD (DURING THERMAL VULCANIZATION IN A FLUIDIZED BED) AS A FUNCTION OF THE VULCANIZATION TIME. THE CALCD. DELTA T AGREED WITH THE LITERATURE DATA. FACILITY: NAUCH.-ISSLED. INST. REZ. PROM., USSR.

UNCLASSIFIED

KONGRO, Anatoliy

Emotion Detector Experiments

Article by Anatoliy Kongro, Moscow, Zhaniva Sila, Russian, No 7, 1972, pp 25-31

EMOTION DETECTOR EXPERIMENTS

JPRS 57407

2 November 1972

The first thing I did was to unscrew the electric fuses in the apartment. The lights went out. Not quite, as the faint glimmer of the street lights penetrated into the room. The room would not do for the experiment. The bathroom, on the other hand, was in total darkness. With its door shut, I could even load my camera during the day. But this time, as extra insurance, I hung a blanket over the door. In the pitch-black darkness, I unpacked a fresh film, measured off 30 centimeters by feel, and cut off the end. Then I draped it securely on my head. The ends reached my temples, the middle was on the back of my head.

Next I sat on the edge of the bathtub and tried painfully to recollect my feelings just before my first parachute jump.

The hatch of the airplane was already open, the wind was whistling, and now this very second I had to step into the world... and I went! So, sitting on the edge of the bathtub, I scared myself three times. How long did it take? Well, 5 minutes at the utmost.

I had prepared the pans with the developer. As soon as I removed the piece of film from my head, I immersed it in the developer.

I have 7 minutes, the time required for developing, so I can start the story of how I embarked on this life.

USSR

UDC 666.764.23:543.062

KOROBKA, L. A., TRET'YAK, Z. A., and KONIK, L. P., Ukrainian
Scientific Research Institute of Refractories

"Photometric Determination of Aluminum in Zirconium-Containing
Refractories"

Moscow, Ogneupory, No 8, 70, pp 49-51

Abstract: A photometric method of alkaline separation of aluminum from zirconium-containing materials using chromasural S is described. Use was made of salt solutions and artificial mixtures of refractory oxides to study the techniques of preparing solutions of the real materials to be analyzed, as well as of methods of quantitative separation of aluminum and zirconium and specifications for photometric determination. The study indicates the possibility of determining aluminum in zirconium-containing refractories without having to remove the fusing agent used for the alkaline separation of aluminum from zirconium, hafnium, titanium, and iron. The statistical method of processing the analytical data on Al_2O_3 in zirconium refractories by photometry using chromasural S is presented in a table in the original article. The photometric method provides high accuracy and reproducibility of results.

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USSR

UDC 533.6.07+536.24+536.33

KONIKOV, A. A., NIKOLAYEV, G. N., and POLYAKOV, Yu. A. (Moscow)

"Heat Exchange Behind a Reflected Shock Wave in a Two-Phase Gas-Dynamic Stream"

Moscow, Izvestiya Akademii Nauk SSSR, Mekhanika Zhidkosti i Gaza, No 2, 1973, pp 127-136

Abstract: Measurements were made of the heat fluxes into a wall that reflected a shock wave that propagated in air containing a suspension of aluminum oxide particles having a size on the order of 1 micron. A shock tube was used, provided with a special pneumatic system for creating a gas-dust medium. The equipment used for measuring the heat fluxes was based upon the employment of thin-film resistance thermometers, and satisfied the requirements that were dictated by the short duration of the working process.

The range of shock-wave velocities in the two-phase medium embraced values of V_s from 3 to 6 km/sec. Radiant and conductive heat fluxes to the reflecting wall were measured. The measurement results were compared with the data of control experiments with pure air and with calculated values of heat fluxes from nondusty air at equal shock-wave velocities. It was

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USSR

KONIKOV, A. A., et al., Izvestiya Akademii Nauk SSSR, Mekhanika Zhidkosti i Gaza, No 2, 1973, pp 127-136

established that the radiation of shock-heated gas is intensified by an order of magnitude as a consequence of the ionization of aluminum atoms that appear as a result of thermal decay of the aluminum oxide vapors. 5 figures. 9 references.

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USSR

KONIKOV, A. I., TARASOV, V. P.

"Effect of Fluctuation Noise on ADC for Position-by-Position Coding"

[Tr.] Mosk. Aviats. In-ta [(Works) of Moscow Aviation Institute], 1972, No 249, pp 89-95 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V460, by E. Gabidulin).

Translation: A trivial calculation of the probability of error in a certain position of an analog-digital converter is performed, if additive noise is added to the voltage converted.

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USSR

UDC: 681.325.3

TARASOV, V. P., KONIKOV, A. I.

"Analysis of the Effect of Pulse Noise on a Precision Analog Voltage-to-Digital Converter"

Tr. Mosk. aviats. in-ta (Works of Moscow Aviation Institute), 1970, vyp. 200, pp 204-215 (from RZh-Avtomatika, Telemekhanika i vychislitel'naya tekhnika, No 9, Sep 70, Abstract No 9B555)

Translation: The purpose of this paper is to analyze the effect of pulse noise on an integrating analog-to-digital converter. As a result of the study, expressions are obtained which determine the error probabilities of the converters under the effect of pulse noise with the most widespread amplitude distribution laws, and it is shown that for high values of the generalized parameter the converter errors are larger under the effect of noise with a logarithmic-normal distribution. Expressions are obtained which define the worst conversion times as a function of the noise parameters and the converter and which permit correct selection of the aperture time of the integrating converter under the effect of pulse noise with various amplitude distribution laws. There are five illustrations and a three-entry bibliography.

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USSR

KONIKOVA, A. S., Director, Biochemistry Laboratory, Institute of Surgery imeni A. V. Vishnevskiy, Academy of Medical Sciences USSR, POGOSOVA, A. V., Doctor of Biological Sciences, and NIKULIN, V. I., Surgeon

"Delayed Death"

Moscow, Znaniye-Sila, No 7, 1972, pp 6-7

Abstract: The purpose of the research described is to determine the mechanism of death. The authors are concentrating on the biosynthesis of protein from amino acids, upon which function the life of the organism depends. Protein exists in two states simultaneously: assimilation and dissimilation. Since circulation stops at death, no amino acids are furnished to cells for biosynthesis; does biosynthesis stop because it lacks material or because it is the mechanism of death? With an isotopic tracer, radioactive amino acids, and an artificial circulation-respirator, it is possible to determine which body organs continue biosynthesis and to what degree compared with a normal living being. It is known from animal experiments that protein biosynthesis stops in the brain and spleen first, in the pancreas last. Animals have been fully reanimated up to 15 minutes after death, but after more than 15 minutes biosynthesis of some tissue cannot be reanimated. When the body temperature of animals was lowered to 15-16°, biosynthesis ceased, and complete anabiosis was possible. In both death and hypothermia, assimilation ceases, but in

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USSR

KONIKOVA, A. S., et al., Znaniye-Sila, No 7, 1972, pp 6-7

death dissimilation continues. Rabbits with induced hypothermia for 2 hours, and rabbits which have been dead for ten minutes and then undergone hypothermia for 1 hour, have been completely reanimated. Chemical and electrical methods for stopping dissimilation are being sought. Electrical shock has been used to help stimulate more complete biosynthesis in the reanimation of rabbits. Biosynthesis of protein in tissue removed from organisms up to 4 hours after death has resumed when the tissue was placed in a solution containing amino acids.

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USSR

UDC 616.61-002.151-02

6

AGAFONOV, V. I., Maj Gen Med Serv, Docent; LEV, M. I., Col Med Serv; NOSKOV, F. S., Lt Col Med Serv, Candidate of Medical Sciences; KONIKOVA, R. Ye., Candidate of Biological Sciences; YELIGULASHVILI, R. K., Candidate of Medical Sciences; GAVRILYUK, B. K., Doctor of Medical Sciences; KULIKOV, I. A., Lt Col Med Serv; YEFIMOV, L. S., Lt Col Med Serv; SERGEYCHIK, I. I., Capt Med Serv; BELYAYEVA, H. S.

"Etiological Decoding of an Outbreak of Hemorrhagic Fever With a Renal Syndrome"

Moscow, Voyenno-Meditsinskiy Zhurnal, No 9, Sep 71, pp 46-49

Abstract: In June and July 1970, in the southern area of Khabarovskiy Kray, an outbreak of hemorrhagic fever with a renal syndrome (HFRS) occurred among workers employed on construction work and housed in a tent camp located on a hill surrounded by swampy meadows. Despite repeated rodent extermination, the camp area was infested with rodents and ticks. Relocation of the workers to a nearby village halted the outbreak. Only one of the 34 hospitalized workers died. The onset of the

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AGAFONOV, V. I., et al, Voyenno-Meditsinskiy Zhurnal, No 9, Sep 71, pp 46-49

disease was acute, and fever of 39-41°C lasted 3-15 days. Renal and cardiovascular insufficiency developed in five patients. The clinical picture was atypical, suggesting both HFRS and leptospirosis. After test for *Leptospira* proved negative in all patients, two types of tests for hemorrhagic fever antigens were performed: indirect hemagglutination inhibition and agglutination with fluorescent antibodies. In the indirect hemagglutination tests, sheep erythrocytes sensitized with antibodies against the 10-10 strain of hemorrhagic nephrosonephritis (HNN) were used. All tests were positive. The fluorescence tests yielded green granular fluorescence in spleen smears. It is concluded that the green granular fluorescence is specific for HNN, and that the granules represent areas of replication of the HNN virus.

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1/2 012

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--EXCITED NUCLEAR STATES DURING CAPTURE OF NEGATIVE MUONS BY CARBON AND OXYGEN -U-

AUTHOR--(05)-BUDYASHOV, YU.G., ZINOV, V.G., KONIN, A.D., MEDVED, S.V., MUKHIN, A.I.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 4, PP 1211-1218

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--NUCLEAR ENERGY LEVEL, EXCITED NUCLEUS, MESON INTERACTION, MUON, CARBON ISOTOPE, OXYGEN ISOTOPE, NUCLEAR SPIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1892

STEP NO--UR/0056/70/058/004/1211/1218

CIRC ACCESSION NO--AP0108222

UNCLASSIFIED

2/2 012

CIPC ACCESSION NO--A0108222
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT. THE PROBABILITIES FOR FORMATION OF
 EXCITED LEVELS OF THE DAUGHTER NUCLEI PRODUCED BY CAPTURE OF NEGATIVE
 MUONS BY CARBON OR OXYGEN NUCLEI ARE STUDIED. THE TOTAL TRANSITION RATE
 TO ALL EXCITED BOUND STATES OF THE B PRIME12 SEXTILE NUCLEUS IS
 DETERMINED FOR THE C PRIME12 PLUS MUNEAGATIVE YIELDS B PRIME12 SEXTILE
 PLUS V REACTION; IT IS EQUAL TO (0.76 PLUS OR MINUS 0.14) TIMES 10
 PRIME3 SEC NEGATIVE1. FOR THE D PRIME16 PLUS MUNEAGATIVE YIELDS MINUS N
 PRIME15 SEXTILE PLUS N PLUS V REACTION THE TOTAL TRANSITION RATE TO N
 PRIME15 SEXTILE EXCITED BOUND STATES WITH POSITIVE PARITY IS FOUND TO BE
 (14 PLUS OR MINUS 5) TIMES 10 PRIME3 SEC NEGATIVE I AND THE TRANSITION
 RATE TO THE N PRIME15 SEXTILE SPIN THREE HALVES LEVEL IS (20 PLUS OR
 MINUS 5) TIMES 10 PRIME3 SEC NEGATIVE1. PART OF THE RESULTS STRONGLY
 DIFFER FROM THE THEORETICAL PREDICTIONS. FACILITY:
 OB"YEDINENNYI INSTITUT YADERNYKH ISSLEDOVANIY.

UNCLASSIFIED

USSR

KONIN, A. M., POZHELA, Yu. K., and YANAVICHENE, N. Yu. (Institute of the Physics of Semiconductors, Lithuanian Academy of Sciences)

"Galvanomagnetic Recombination Effect in an Inhomogeneous Magnetic Field"

Vilnius, Litovskiy Fizicheskii Sbornik, No 3, 1973, pp 393-399

Abstract: An intrinsic semiconductor in a homogeneous magnetic field changes its resistance as a consequence of the redistribution of the current carriers along the cross section of a sample having different surface recombination rates on opposite sides, one of them being low. Carrier redistribution takes place at a distance λ_0 of the diffusion length.

In an inhomogeneous magnetic field a change in resistance takes place when the surface recombination rates on both sides are high.

In this paper the authors solve the problem for the case of weak fields and a linear variation of the magnetic field. It is shown that the change in concentration in this case occurs not only at a distance from the sides of the sample but also along its entire cross section. The change in resistance takes place also when the surface recombination rates on both sides are high.

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USSR

KONIN, A. M., et al., Litovskiy Fizicheskiy Sbornik, No 3, 1973, pp 393-399

The experimental qualitatively confirms the calculations: 1) the change in resistance takes place only in the presence of grad H; 2) it increases with an increase in the thickness of the sample.

USSR

UDC: 621.791:620.186.4:669.15-194

KONISHCHEV, B. P., Engineer, Gor'kiy Polytechnic Institute Imeni A. A. Zhdanov
"Preventing the Formation of Microcracks in the Fusion Zone during Welding
of Medium-Carbon Grades of Steel"

Moscow, Svarochnoye proizvodstvo, No 5, 1971, pp 40-41

Abstract: The author studies the conditions associated with the formation of microcracks and strains in the zone of fusion during automatic, submerged-arc welding of corner joints made from medium-carbon grades of steel. It is shown that it is possible to prevent the formation of such defects by ensuring the production of a favorable seam shape by limiting arc voltage and by the precise direction of the electrode in the corner of the joint. Original article: four figures and nine bibliographic entries.

1/1

Titanium

USSR

UDC: 621.791.753.045:669.14:669.295.004.67

KONISHCHEV, B. P. (Engineer), Gor'kiy Polytechnic Institute imeni A. A. Zhdanov

"Titanium Reduction From Slag in Submerged-Arc Welding of Steel"

Moscow, Svarochnoye proizvodstvo, No 12, Dec 71, pp 21-23

Abstract: Discussed is the theoretical possibility of titanium reduction in submerged-arc welding of steel. Proposed is a procedure for the thermodynamic calculation of the interaction by the metal of the weld pool with slags containing titanium dioxide (taking into account Ti activities in the weld bath metal as well as TiO_2 and FeO in the slag) as well as equations to facilitate calculation of the Ti content. The feasibility of microalloying the weld metal with 0.02 to 0.10% Ti from fused silicon-free fluxes containing 10 to 30% TiO_2 under certain temperature conditions has been demonstrated both theoretically and experimentally. The expected content of Ti in the weld metal is shown to be a function of TiO_2 and FeO activities in the slag. The Ti determined by the proposed method of

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USSR

KONISHCHEV, B. P. (Engineer), Svarochnoye proizvodstvo, No 12, Dec 71,
pp 21-23

analysis is that reduced from the slag and present in the form of a solid solution but not titanium from the nonmetallic inclusions in the weld. A table cites Ti contents in the weld pool at various temperatures. (1 illustration, 2 tables, 11 bibliographic references).

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- 64 -

USSR

UDC 669.017:539.4+669.27/29

SAVITSKIY, YE. M., TYLKINA, M. A., KONIYEVA, L. Z.,
LOGUNOV, A. V., and PETRUSHIN, N. V., Institute of Metallurgy
imeni A. A. Baykov

"Investigation of Carbon Solubility in Mo+45%Re Alloy"

Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy,
Tsvetnaya Metallurgiya, No 6, 1973, pp 125-129

Abstract: The solubility of C in the Mo+45%Re alloy was investigated by measuring the electric resistance. The derived experimental data show that the solubility of C in the Mo+45%Re alloy comprises 0.035% at 1550° and that it comes up to 0.05% at 1800°. In the presence of 45%Re, the solubility of C in Mo rises 25% at 1800° and 75% at 1550°. The presence of 0.035%C in the solid solution increases the electric resistance ρ of the alloy by $7.5 \mu\Omega \cdot \text{cm}$; the presence of carbides in the alloy at a C content up to 0.265% has no noticeable influence on the level of its ρ . The temperature coefficient of ρ of Mo+45%Re alloy can be considered nearly constant and equal to $2.9 \cdot 10^{-3} \mu\Omega \cdot \text{cm} \cdot \text{deg}^{-1}$; it decreases at transition into the 0.035%C solid solution. The ρ -curve of the Mo+45%Re+0.4%C alloy shows a break at 1250-1260°. Three figures, one table, 11 bibliographic references.

1/1

1/2 028 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--THE ENERGY BALANCE IN A DENSE FUSION PLASMA CONTAINED BY WALLS -U-
AUTHOR-(03)-ALIKHANOV, S.G., ~~KONKASHBAEV, I.K.~~, CHEBOTAEV, P.Z.
COUNTRY OF INFO--USSR
SOURCE--NUCLEAR FUSION, VOL. 10, MAR. 1970, P. 13-18
DATE PUBLISHED----MAR 70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--DENSE PLASMA, PLASMA CONTAINMENT, THERMONUCLEAR REACTION,
HOMOGENEOUS MAGNETIC FIELD, HEAT BALANCE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1985/1750 STEP NO--AU/0000/70/010/000/0013/0018
CIRC ACCESSION NO--AP0101803
UNCLASSIFIED

2/2 028

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0101803

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS CONSIDER THE POSSIBILITY OF A SELF SUSTAINING THERMONUCLEAR REACTION IN A DENSE PLASMA IN GREATER THAN OR EQUAL TO 10 TO THE 16TH CU CM). THE PRESSURE OF THE PLASMA IS CONTAINED BY WALLS AND THE MAGNETIC FIEDL ONLY SERVES TO REDUCE THERMAL CONDUCTIVITY IN A TRANSVERSE DIRECTION. A SOLUTION IS OBTAINED FOR THE PLASMA BALANCE EQUATION THAT MAKES ALLOWANCE FOR RADIATION LOSSES ALONG THE MAGNETIC FIELD, AND IT IS SHOWN THAT THERE IS NO SATISFACTORY SOLUTION ACROSS A UNIFORM MAGNETIC FIELD. THE AUTHORS DISCUSS THE POSSIBILITY OF A STEADY STATE THERMONUCLEAR REACTION WITH A NONUNIFORM MAGNETIC FIELD. FACILITY: AKADEMIIA NAUK SSSR, INSTITUT LADERNOI FIZIKI, NOVOSIBIRSK, USSR.

UNCLASSIFIED

Acc. Nr:

AP0052435

Abstracting Service:
CHEMICAL ABST. 5-70

Ref. Code:

4R 0342

K

101749t Antimicrobial fabrics. Kozinda, Z. Yu.; Gorbacheva, I. N.; Konkin, A. A.; Shcherbova, G. V. (MTL, Moscow, USSR). *Tekst. Prom. (Moscow)* 1970, 30(1), 55-6 (Russ). Wool fabrics modified by grafting with 2-methyl-5-vinylpyridine were treated with 1% aq. soln. of Cu(OAc)₂ or AgNO₃. Similarly, wool grafted with methacrylic acid was treated with 1% pentachlorophenol or hexachlorophene solns. in MeOH. The grafting increased the tensile strength of the fabric by 18-20%. The bactericidal additives inhibited the propagation of *Staphylococcus aureus* and intestinal bacteria when 1-1.5% Cu or Ag or 7.32% chlorinated phenols were present. CPJR

JD

REEL/FRAME
19821069

1/2 012 UNCLASSIFIED PROCESSING DATE--11SEP70,
 TITLE--NONSPINNERET FORMATION OF FIBERS FROM POLYMER MELTS -U-
 AUTHOR--PEREPEL'KIN, K.YE., PODOSENOV, V.V., KONKIN, A.A.
 COUNTRY OF INFO--USSR
 SOURCE--KHIM. VOLOKNA 1970, (1), 11-13
 DATE PUBLISHED-----70
 SUBJECT AREAS--MATERIALS
 TOPIC TAGS--POLYPROPYLENE FIBER, POLYSTYRENE RESIN, MOLECULAR WEIGHT,
 TEXTILE INDUSTRY MACHINERY/(U)NOPLFN F8001 POLYPROPYLENE FIBER
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--1984/1817
 CIRC ACCESSION NO--AP0100391
 UNCLASSIFIED

K

2/2 012

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0100391

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FORMATION OF POLYPROPYLENE (I) (MOPLN FB-001 OF MOL. WT. 110,000) AND ATACTIC POLYSTYRENE (II) (OF MOL. WT. 80,000) FIBERS MEANS OF A DIAPHRAGM PLACED ON I AND II MELTS WAS STUDIED AT VARIOUS TEMPS. MAX. FORMATION RATES AT 200, 230, AND 250 DEGREES WERE 650, 1000, AND 3,000 M-MIN, RESP. THE DIAM. OF I AND II FIBERS WAS INVERSELY PROPORTIONAL TO THE FORMATION RATE. BINARY FIBERS, HAVING A II CASING AND A I, SILICONE OIL, WOOD'S METAL, OR N NUCLEUS WERE PREPD. BY A SPECIALLY DESIGNED APP. A CROSS SECTIONAL DIAGRAM OF THE APP. AND ITS MODE OF OPERATION WERE PRESENTED. THE FORMATION RATES, CONSUMPTION OF THE INJECTED COMPONENT, AND THE INNER AND OUTER DIAMS. OF THE BINARY FIBERS WERE TABULATED FOR EACH FIBER SYSTEM.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--RHEOLOGICAL PROPERTIES OF CONCENTRATED SOLUTIONS OF POLYMER
MIXTURES -U-
AUTHOR-(03)-KISELEVA, G.F., PENKOVA, M.P., KONKIN, A.A.
COUNTRY OF INFO--USSR
SOURCE--KHIM. VOLOKNA 1970, (1), 13-16
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--POLYMER RHEOLOGY, CELLULOSE RESIN, ACETATE, POLYACRYLATE
RESIN, COPOLYMER, VISCOMETER, FLUID VISCOSITY, SHEAR
STRESS/(U)AKV2 VISCOMETER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1984/1818 STEP NO--UR/0183/70/000/001/0013/0016
CIRC ACCESSION NO--AP0100392
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0100392

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RHEOL. PROPERTIES OF CONCD. (12 TO 22PERCENT) SECONDARY CELLULOSE ACETATE (I), POLY(ME ACRYLATE) (II), I PLUS II MECH. MIXT., AND 80:20 I-II GRAFT COPOLYMER SOLNS. IN HCONME SUB2 OR ME SUB2 CO WERE STUDIED AS A FUNCTION OF TEMP., POLYMER CONC. IN SOLN., AND THE CHEM. COMPN. OF THE SOLVENT AT 20-60DEGREES BY MEANS OF A CAPILLARY VISCOMETER AKV-2 AT A SHEAR STRESS RANGE OF 3 TIMES 10 PRIME4 MINUS 8 TIMES 10 PRIMES DYNE-CM PRIME2. GRAFTING OF FLEXIBLE II MACROMOLS. ON I LED TO INCREASED SOLN. VISCOSITY, WHEREAS THE PRESENCE OF I AS A COMPONENT OF THE MECH. MIXT. HAD A PLASTICIZING EFFECT ON THIS SOLN. AND DECREASED SOLN. VISCOSITY.

UNCLASSIFIED

Acc. Nr: **AP0049840** Abstracting Service:
CHEMICAL ABST. 576

Ref. Code:
UR0368

101360) Graft copolymers of polyacrylonitrile with methyl acrylate studied by an infrared spectroscopic method. Mak-arevich, N. I.; Pen'kova, M. P.; Konkin, A. A. (USSR). Zh. Prikl. Spektrosk. 1970, 12(1), 85-90 (Russ). The grafting of acrylonitrile-2-amino-4-(vinylsulfonyl)anisole copolymer (I) with Me methacrylate (II) was studied by ir spectroscopy. Comparison of the spectra of I and I-II graft copolymers contg. 15 and 30% II indicated that the increase in incorporation of II in the initial stage of grafting occurs mainly via an increase in the no. of grafting centers. Chain growth and branching occur mainly in subsequent stages. DBJR JOK

REEL/FRA
19801765

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1/2 029 UNCLASSIFIED PROCESSING DATE--3000

TITLE--SYNTHESIS OF ARSENIC CONTAINING CELLULOSE ESTERS -U-

AUTHOR--(03)--PREDVODITELV, D.A., BUYANOVA, V.K., KONKIN, A.A.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(1), 74-7

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ORGANIC ARSENIC COMPOUND, CELLULOSE RESIN, NATURAL FIBER, FABRIC, BENZENE, ESTERIFICATION, CHEMICAL SYNTHESIS, FIRE RESISTANT MATERIAL, BACTERICIDE ADDITIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1192

STEP NO--UR/0460/70/012/001/0074/0077

CTRC ACCESSION NO--AP0116657

UNCLASSIFIED

PROCESSING DATE--30OCT70

UNCLASSIFIED

2/2 029

CIRC ACCESSION NO--AP0116657

ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. COTTON DOWN ACTIVATED WITH ACOH OR DRESSED VISCOSE STAPLE FABRIC (I) CONTG. C SUB6 H SUB6 INCLUSIONS WAS REFLUXED WITH 10PERCENT PHASO IN SOLN. IN C SUB6 H SUB6 (IN THE PRESENCE OF H SUB2 SO SUB4) AT 80DEGREES FOR 4 HR TO GIVE MODIFIED CELLULOSE (II) CONTG. 8.6PERCENT AS. II ESTERS OF PENTAVALENT AS WERE OBTAINED BY TRANSESTERIFICATION OF I CONTG. C SUB6 H SUB6 INCLUSIONS IN ETOH-C SUB6 H SUB6. THE REACTION INVOLVED ESTERIFICATION OF RAS (O) (OH) SUB2 WITH ETOH FOLLOWED BY TRANSESTERIFICATION TO GIVE CELL (AS(O)(OET) EQUALS R (O)OH, P,HOC SUB6 H SUB4 AS (O)(OH) SUB2, OR PHAS(O)-(OH) SUB2 AT 60DEGREES FOR 4-7 HR TO GIVE ESTERS CONTG. 1.2-5.3PERCENT AS. ARSENIC-CONTG. II ESTERS WERE FIRE RESISTANT AND EXHIBITED BACTERICIDAL AND PHYSIOL. ACTIVITY.

FACILITY: VSES. NAUCH.-ISSLED. INST. ISKUSSTV. VOLOKNA, MYTISHCHI, USSR.

UNCLASSIFIED

USSR

K JBC 621.396.69:621.371.54(086.8)

YANYCHEV, P. K., KON'KOV, A. A., YANYCHEVA, K. B.

"A Method of Controlling the Temperature Coefficient of Frequency of Metallic Radio Engineering Articles"

USSR Author's Certificate No 253255, Filed 28 Dec 67, Published 24 Feb 70 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10V386 P)

Translation: This Author's Certificate introduces a method of controlling the temperature coefficient of frequency of metallic electronic parts such as the resonators in electromechanical filters. The procedure is based on controlling the physical parameters of the parts. As a distinguishing feature of the patent, the range of variation in the temperature coefficient of frequency is extended by case hardening the given part to shift the temperature coefficient of frequency toward more positive values. Roller treatment may be used for case hardening. On the other hand, the temperature coefficient of frequency is shifted toward more negative values by softening the surface layer, for instance by electropolishing.

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1/2 023 UNCLASSIFIED PROCESSING DATE--20NOV70
 TITLE--INCREASE IN THE PHYSICOMECHANICAL PROPERTIES OF CONCRETE HARDENING
 AT SUBZERO TEMPERATURES -U-
 AUTHOR--(05)-GORBONOS, YE.P., GOGIN, V.F., KONKIN, A.P., GORBONOS, A.D.,
 RATINOV, V.B.
 COUNTRY OF INFO--USSR

K

SOURCE--U.S.S.R. 267,425
 REFERENCE--OTKRYTIYA, IZJBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
 DATE PUBLISHED--01APR70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CONCRETE, COLD HARDENING, LOW TEMPERATURE EFFECT, CALCIUM
 COMPOUND, PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAME--3002/1415

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

CIRC ACCESSION NO--AA0128814

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AA0128814

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHYSICOMECH. PROPERTIES OF COLD CONCRETE WERE INCREASED BY INTRODUCING COMPLEX ADDITIVES INTO THE CONCRETE MIXT. TO SPEED UP THE HARDENING OF CONCRETE AT MINUS 25DEGREES AND COMBINED WITH THE THERMOS METHOD AT MINUS 50DEGREES, A MIXT. OF $CaCl_2$ $Ca(NO_2)_2$ AND $Ca(NO_3)_2$ 7-25PERCENT ON THE WT. OF THE MIXING WATER WAS USED FOR THE ADDITIVE.

UNCLASSIFIED

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USSR

UDC 611.8.534.612.1

ALEKSANDROV, L. N., DYSKIN, YE. A., ZLATISKAYA, N. N., KONKIN, I. F., DEV, I. D., TIKHONOVA, L. P., FILATOV, A. I., and SHADRINA, N. S., Department of Normal Anatomy, Military-Medical Academy imeni S. M. Kirov

"Condition of Some Nerve Structures After Exposure to Powerful Shock Waves"

Leningrad, Arkhiv Anatomii, Gistologii i Imbriologii, No 10, 1971, pp 12-20

Abstract: Cats were exposed to a powerful shock wave with an excess pressure of 0.1 to 10 kg/cm² lasting about 0.1 sec. The effect was not lethal and after the experiment the animals were externally indistinguishable from normal cats. They were sacrificed at various times during the 30 days following exposure to the shock wave and the nerves in the walls of the vena cava, digestive organs, dura and pia mater of the brain and spinal cord, pancreas, and thyroid were histologically examined. The modullated fibers and preterminal portions of the receptors underwent the most distinct changes. The axial cylinders were swollen and the contours uneven. Along the course of the fibers were solitary or multiple varicosities. These reactive changes were largely reversible. However, some of the nerve elements proved to be quite resistant to the shock wave, notably the nonmedullated fibers, some afferent structures (e.g., diffuse receptors), and encapsulated cell bodies.

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KONKIN, I. F.

TPRS 55287
12 Apr 72

CHANGES IN BLOOD COAGULATION UNDER THE INFLUENCE OF GRAVITATIONAL LOADS
DETERMINED FROM THROMBOELASTOGRAPHY DATA

UDC 610.131.5.092.9-02:612.014.477-003

Article by A. Z. Serikova, I. F. Konkina and T. P. Gilyashko; Moscow, Kosmicheskaya Biologiya i Meditsina, Vol 6, No 1, pp 10-16, 1972, submitted for publication 17 November 1970

Abstract: Acceleration-induced changes in blood coagulation in cats were examined by thromboelastographic and coagulographic techniques. Exposure of the animals to accelerations applied as a repeated (first group) or single (second group) stress effect increased the anticoagulation properties (activation of fibrinolysis, increase in heparin content, decrease in the quantity of procoagulants). Hemocoagulation disturbances in the first group of animals were greater, suggesting an effect from the gradient factor. Hemocoagulation parameters tended to return to the normal level on the sixth day after exposure.

The state of the blood coagulation system under the influence of different external factors has been studied by many authors. V. G. Petrakhin (1963), Ye. H. Chazov and V. G. Ananchenko (1963), A. V. Yereain and V. I. Stepanov (1970), and A. V. Drozdova (1970) observed an increase in permeability of the vascular wall and hemorrhaging in different organs after gravitational stress on the living organism. O. D. Anashkin (1968) noted changes in the content of procoagulants and activation of the fibrinolytic system in animals after flight on an artificial earth satellite. R. A. Bardina, et al. (1970) demonstrated changes transpiring in the vascular and nervous systems under the influence of gravitational loads.

In this investigation the experiments were made on cats which were subjected to a single series of accelerations of 10 g (first group, eight cats) and single exposure to an acceleration of 10 g (second group, six cats) using schedules formulated by Ye. A. Dyakin and B. M. Savin (1970). The difference in the gravitational stress for animals in the first and second groups was that the animals in the first group experienced acceleration including exposure to a gradient of increase in acceleration, its intensity and duration, whereas animals in the second group were exposed to operation of only the latter two factors.

USSR

KONKIN, V. D. and KVICHKO, L. A., Ukrainian Scientific Research Institute of Metals

"Determination of Soluble and Bonded Aluminum in Steels Containing Titanium"

Moscow, Zavodskaya laboratoriya, No 5, 1971, pp 538-539

Abstract: A method for determining aluminum and aluminum oxides in steels containing titanium is said to be superior to that recommended by GOST 11658-65. The GOST method cannot be used for determining thousandths of a percent of aluminum content, whereas, the method described can. For determining aluminum in steels containing up to 0.2% Ti, S chromazurol reagent is used. This procedure is described as are procedures for determining the aluminum content of solid solutions. A table presents the results in determining the aluminum content of standard or synthetic specimens, such as the 126G and 155v types.

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- 5 -

USSR

UDC: 536.24:532.54

BARULIN, Yu. D., VIKHREV, Yu. V., DYADYAKIN, B. V., KOBYLAKOV, A. N.,
KON'KOV, A., LOKSHIN, V. A., SINITSYN, I. T., Editorial Staff of Inzh.
fiz. zh., Academy of Sciences of the Belorussian SSR

"Heat Exchange During Turbulent Flow of Water With Supercritical Parameters
of State in Vertical and Horizontal Pipes"

Teplotodacha pri turbulentnom techenii v vertikal'nykh i horizontal'nykh
trubakh vody sverkhkriticheskikh parametrov sostoyeniya (cf. English above),
Minsk, 1970, 16 pp, ill. (No 2315-70 Dep.) (from RZh-Mekhanika, No 4, Apr
71, Abstract No 4B739 DEP)

Translation: The paper presents the results of an experimental study of
heat transfer during rising, descending and horizontal flow of water with
supercritical parameters of state in circular tubes. The experimental
values of the coefficients of heat transfer were found in the following
ranges of working parameters: pressure 225-265 bars; mass flowrates 400-
5000 kg/cm²·s; Reynolds number (12.5-450)·10³; specific thermal load 0.2-
6.5 MW/m²; flow temperature +50-500°C; wall temperature +60-750°C; inside

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BARULIN, Yu. D. et al., Teplotdacha pri turbulentnom techenii v vertikal'nykh i gorizonta'nykh trubakh vody sverkhkriticheskikh parametrov sostoyaniya, Minsk, 1970 (No 2315-70 Dep.)

diameter of the tubes $(3, 8, 20) \cdot 10^{-3}$ m; relative length up to 300. Experimental data are obtained on the effect which the direction of motion of the liquid flow has on heat exchange in the supercritical region. A study is made of the nature of the change in the coefficient of heat exchange on the initial section and around the perimeter of horizontal tubes. Bibliography of twelve titles. Authors' abstract.

USSR

UDC 535.33

KON'KOV, A. A. and VORONTsOV, A. V.

"Integral Radiation of the Main MO Band at High Temperatures"

Leningrad, Optika i Spektroskopiya, Vol 34, No 5, May 73, pp 1026 - 1027

Abstract: Numerous measurements have been made of the integral coefficient of absorption of the main band of the MO molecule, most of them at room temperature. Although some earlier results deviate, most of the later studies yield a value of 125 ± 14 centimeters⁻² atmospheres⁻¹. Three studies have been made at higher temperatures, two at 2500°K (Breeze and Ferriso, Journal of Chemical Physics, Vol 41, page 342, and Fukuda, Journal of Chemical Physics, Vol 42, page 521) and one at 5000°K (Feinberg and Camac, J.Q.S.R.T., Vol 7, page 581). The authors of the last study believe that the centers of the line were reabsorbed in the first two (at 2500°). Feinberg and Camac obtained a value of 124 centimeters⁻² atmospheres⁻¹, in agreement with the studies at room temperature. The results seem to confirm the assumption of a harmonic oscillator for the main MO band.

In the present study the authors extended these tests to 7500°K by heating the MO in a shock tube, both in air and in an air-water mixture. Eliminating various sources of noise and interference, the authors obtained a value of 120 centimeter⁻² atmospheres⁻¹, and found that the measurements did not depend
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USSR

KON'KOV, A. A. et al, Leningrad, Optika i Spektroskopiya, Vol 34, No 5, May 73,
pp 1056 - 1027

on temperature within the limits of error. This confirms the utility of the
harmonic oscillator approximation.

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- 75 -

KONKOV, A.A.

RN/1 R.760/5.4.1.173 68
Dec 72

Konkov, A. A. and A. V. Vorontsov,
Experimental investigation of infrared
radiation from nitrogen. OIS, v. 32, no.
4, 1972, 655-660.

Infrared radiation from the free-free transitions of electrons in fields of nitrogen atoms is discussed. The aim was to eliminate some contradictions in the data on the infrared radiation from nitrogen, and to expand the range of conditions for infrared radiation investigations.

Nitrogen absorption coefficients were measured in the temperature range of 7000-8500° K, at pressures of 30-75 atm, and wavelengths of 2-6 μ. The nitrogen was heated by a shock tube, and the nitrogen gas parameters were determined on the basis of the shock-wave velocity. It is shown that the absorption from the free-free transition of electrons in nitrogen atom fields can be described by the relationship obtained by Firsov and Chibisov [ZhETF, v. 39, 1960, 1770] if $\sigma'_N = 1.6 \times 10^{-15} \text{ cm}^2$, and $\sigma'_N = 2.7 \times 10^{-15} \text{ cm}^2$, where σ is the electron elastic scattering cross section.

Andreyev, Yu. P., Ye. V. Gusev, and
I. A. Semlokhin. Equilibrium in nitrogen-
oxygen mixtures at high temperatures.
ZhFKh, v. 46, no. 6, 1930-1432.

Equilibrium in nitrogen-oxygen mixtures within the temperature range 298 to 20,000° K is considered to evaluate the processes occurring in these mixtures in a pulse-discharge plasma. The investigation deals with two mixture ratios: $\text{N}_2:\text{O}_2 = 1:1$ (equimolecular mixture), and $\text{N}_2:\text{O}_2 = 4:1$ (air). The equilibrium was calculated for pressures which permit the operation of xenon flashlamps in an admixture of nitrogen and oxygen (760 torr) or in pure mixtures of nitrogen and oxygen (50 torr).

USSR

UDC 535.33/.34-15] :546.217

KONIKOV, A. A., VORONTSOV, A. V.

"Experimental Investigation of Atmospheric Infrared Radiation"

Leningrad, Optika i Spektroskopiya, No 1, 1972, pp 47-51

Abstract: This article is in the nature of a review of the experimental work which has thus far been done on infrared radiation of the air upon reentry of space vehicles, although it does include an account of experimental work done by the authors in this field. In their experiments, the authors used air heated by a reflected shock wave in a shock tube whose construction was described by an earlier paper of the authors named above, published in the same journal (vol 32, 1972). The experiments were performed in a chamber containing air at a pressure starting from 25 mm Hg and going up to a pressure range of 40-94 atmospheres, and at temperatures of 6000-8500^o K. The temperature and pressure of the air for the shock wave reflection were computed from the velocity of the incident wave with the aid of conservation laws. Portions of the infrared spectrum studied were 2.2, 3.2, 3.3, 4.5, 5.0, and 6.0 μ . Curves are plotted for the absorption factor of the air as a function of temperature and wavelength. Eighteen titles are offered by the article's bibliography.

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AA0046272- KONKOV L.S UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General,
Derwent, 2-10

237345 BLOOD ASPIRATOR/HEATER consists of a sealed chamber connected to a vacuum pump and a blood heating device. The blood heating device consists of a second sealed chamber (3) mounted under the by-pass valve of the first chamber (2). It has a connecting pipe for draining the blood and another (14) for feeding compressed oxygen which passes deep into the chamber. On one side of the by-pass valve (5) there is a spring-loaded rod (11) operated by a lever (10). The bottom of the rod (16) is shaped to close the opening in the connecting pipe (14). When the top chamber is full the lever (10) is depressed, releasing the valve (5) thus passing

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blood into the lower chamber while the protuberance under the valve (5) stops the inflow of oxygen; when the lever is released the blood drains out through another connecting piece. This reduces haemolysis during heating by eliminating the intermediate pump.

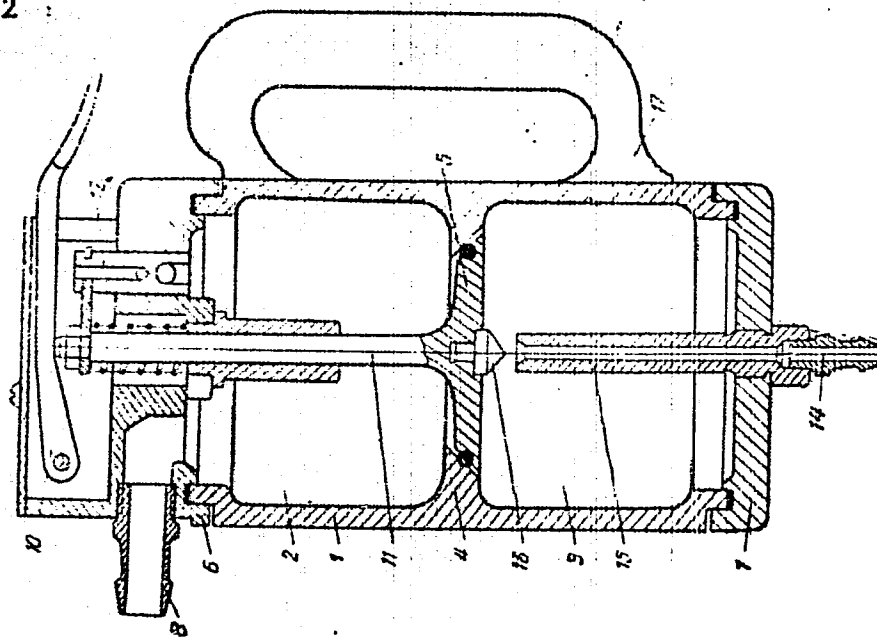
21.3.68. as 1225646/31-16, KONKOV, L.S. (2.7.69)
Bul. 8/12.2.69. Class 30k. Int. Cl. A 61m.

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AA0046272



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19781404

USSR

KONOKOV, V. B.

"Some Gayek-Ren'i Type Inequalities"

Teoriya Veroyatnostey i yeye Primeneniya [The Theory of Probabilities and Its Applications], 1973, Vol 18, No 2, pp 413-415 (Translated from Referativny Zhurnal Kibernetika, No 10, 1973, Abstract No 10V54)

Translation: Suppose H is a separable Hilbert space, Z_1, \dots, Z_n are random elements forming a martingale relative to the σ -algebra $B_k = B(Z_1, \dots, Z_k)$, $EZ_i = 0$, $E\|Z_i\|^2 < \infty$, A_1, \dots, A_n are self-adjoint, positively defined operators, and the inequalities $A_1^{-1} \leq A_2^{-1} \leq \dots \leq A_n^{-1}$ obtain for the inverse operators. Let us introduce $\zeta_k = E(A_k^{-1}Z_k, Z_k)$, $\zeta_k^* = E(A_k^{-1}(Z_k - Z_{k-1}), Z_k - Z_{k-1})$. In this article, the author proves

Theorem 1. For a nonincreasing set of positive number $\{c_i\}$, for and $\epsilon > 0$ and $1 \leq m < n$

$$P\{\max_{m < k < n} c_k \left\{ \sup_{\lambda \neq 0} (A_k \lambda, \lambda)^{-1/2} |(Z_k, Z_k)| \right\} > \epsilon\} <$$

$$< \epsilon^{-2} \left\{ c_m^2 \zeta_m + \sum_{k=m+1}^n c_k^2 \zeta_k^* \right\}.$$

Author's view

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USSR

UDC: 537.31

KON'KOV, V. L., KUKUY, A. S., POLYAKOV, N. N., Gor'kiy Physicotechnical
Research Institute

"Measuring Conductivity and the Hall Coefficient of Semiconductor Single
Crystals by the Four-Probe Method"

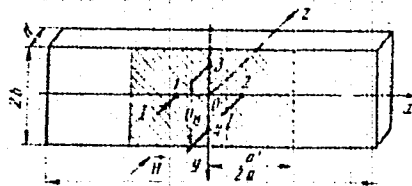
Moscow, Izv. AN SSSR: Ser. Fizicheskaya, Vol 36, No 3, Mar 72, pp 603-606

Abstract: The paper discusses a method of direct measurement of the Hall coefficient and conductivity of semiconductors in the form of long single crystal strips. The geometry of the measurement set-up is shown in the figure. Current I is sent through probes 1 and 2, and EMF U_H (Hall voltage) is taken off from probes 3 and 4. The constant magnetic field H is directed orthogonally to the plane of the specimen. Measurements are made in the steady state on direct current. A formula is derived for determining the Hall EMF in terms of the applied current and the dimensions of the specimen. The theoretical results were confirmed experimentally by measurements on germanium and silicon single crystals.

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USSR

KON'KOV, V. L. et al., IAN SSSR: Ser. Fiz., V 36, 1972, pp 603-606



2/2

USSR

UDC 538.632

KON'KOV, V. L., PAVLOV, N. I., and POLYAKOV, H. N.

"Measuring the Conductivity of Nonuniform Semiconductor Layers by the Probe Method"

Tomsk, Izvestiya VUZ--Fizika, No. 10, 1971, pp 33-38

Abstract: The nonuniform semiconductor layers discussed in this article are those which have undergone diffusion, epitaxy, or ion bombardment for investigation of their physical characteristics, and in which the conductivity varies with depth. The authors theoretically examine the possibility of using the four-probe method of measuring the conductivity of such layers and develop a simple formula for the conductivity which can be used for determining its average value under the conditions of that method. They also consider some of the relationships for the change in conductivity that are most often encountered in measurement practice and derive a formula for the error in their theoretical computation. They are associated with the Gor'kiy Physical-Technical Research Institute.

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USSR

UDC 538.63:621.315.5

POLYAKOV, N. N., KONKOV, V. L.

"Measurement of the Hall Mobility of Current Carriers of High-Resistance Semiconductor Epitaxial Layers by the Probe Method"

Izvestiya Vysshykh Uchebnykh Zavedeniy Fizika, No 6, 1970, pp 35-98

Abstract: A multiprobe method is proposed for measuring the Hall mobility of the current carriers of high-resistance semiconductor epitaxial layers. By means of the solution of the appropriate boundary value problem a formula is obtained for computing the Hall mobility of the current carriers on the basis of the results of probe measurements. Tables of values have been compiled for the multiplier contained in the formula, which depends upon the configuration of the specimen and the position of the probes.

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1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--MEASURING THE HALL COEFFICIENT OF LONG CYLINDRICAL SEMICONDUCTING
SAMPLES -U-
AUTHOR--(03)--RUBTSOVA, R.A., PAVLOV, N.I., KONKOV, V.L.
COUNTRY OF INFO--USSR
SOURCE--ZAVOD. LAB., 1970, 36, (2), 201-203
DATE PUBLISHED-----70
SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., PHYSICS
TOPIC TAGS--HALL CONSTANT, ELECTROMOTIVE FORCE, SEMICONDUCTOR PROPERTY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/0198 STEP NO--UR/0032/70/036/002/0201/0203
CIRC ACCESSION NO--AP0129454
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0129454

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A FORMULA FOR CALCULATING THE HALL COEFF. OF LONG CYLINDRICAL SEMICONDUCTING SAMPLES ON THE BASIS OF HALL E.M.F. MEASUREMENTS IS DERIVED. IN THESE MEASUREMENTS A STEADY CURRENT IS PASSED INTO THE SAMPLE THROUGH LOW RESISTANCE CURRENT CONTACTS DEPOSITED ON THE ENDS. A UNIFORM MAGNETIC FIELD IS DIRECTED AT RIGHT ANGLES TO THE SAMPLE AXIS. VARIATIONS IN THE MAGNETIC FIELD AT A DISTANCE OF MORE THAN TWO SAMPLE DIA. FROM THE HALL CONTACTS PRODUCE ONLY A NEGLIGIBLE ERROR IN THE RESULTS.

UNCLASSIFIED

USSR

UDC 621.325.6

GINOVKER, A.S., GUZEV, A.A., KON'KOV, V.P., KURYSHEV, G.L., MISHIN, A.I.,
SIMITSA, S.P., TEPHAN, B.G.

"Integrated Circuit With Programmed Structure Using MIS Memory Transistors"

Radiotekhnika i elektronika, Vol XVII, No 7, July 1972, pp 1551-1552

Abstract: The integrated circuit is described of an all-purpose element filled with conventional MIS [metal-insulator-semiconductor] transistors and MIS transistors with a memory (memory transistors). The integrated circuit realizes the following logical function:

$$z(t + \delta) = \bar{v}a_i x_i \quad (i = 1, 2, 3, 4),$$

where x_i is the input logical variables; a_i is the state characterizing the i -th memory transistor; z is the output variable; and δ is the delay. The circuit can be used for construction of a specialized array for fulfillment of logical, switching, and memory functions and also for construction of all-purpose structurally-uniform logical nets, which makes it possible for each problem to organize a specialized computing device by a programmed adjustment of its elements. 1 fig. 5 ref. Received by editors, 16 June 1971.

1/1

USSR

UDC: 681.325:65.525

YEGOROV, L. R., ZORIN, V. M., KON'KOV, Yu. A.

"A Pneumatic Element"

USSR Author's Certificate No 309354, filed 2 Jun 69, published 2 Dec 71
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 7,
Jul 72, Abstract No 7A61 P)

Translation: A pneumatic element is proposed which contains a moving gate with a recess and an open central aperture, and a housing with an annular input channel. To increase the operational reliability of the element, the recess in the gate is coaxial with the central aperture and is made in the form of an annular groove with middle diameter equal to the middle diameter of the groove of the annular input channel and with a width equal to the width of the groove for this channel, or twice the width of this groove. One illustration.

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- R -

USSR

UDC: 621-529-525

YEGOROV, L. R., ZORIN, V. M., KON'KOV, Yu. A., YAKOVLEV, A. B.

"A Pneumatic Analog Signal Converter"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratsy, Tovarnyye Znaki, No 9, Mar 72, Author's Certificate No 331396, Division G, F, filed 21 Apr 69, published 7 Mar 72, p 155

Translation: This Author's Certificate introduces a pneumatic analog signal converter which contains a "nozzle-baffle" unit with free baffle in a stable suspended state above the nozzle, which is connected to the input channel. As a distinguishing feature of the patent, the functional possibilities of the device are extended by equipping it with additional nozzles which are connected to a signal source and by locating the openings of the additional nozzles between the input nozzle and the edge of the throttling surface of the "nozzle-baffle" unit.

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1/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--QUANTITATIVE DETERMINATION OF PRIMARY AND SECONDARY ALCOHOLS BY
ISOPROPENYL ACETATE ACETYLATION -U-
AUTHOR--(021)-VOLODINA, M.A., KONKOVA, I.V. *K*
COUNTRY OF INFO--USSR
SOURCE--VESTN. MOSK. UNIV., KHIM. 1970, 11(1), 119-21
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ACETATE, TOLUENE, SULFONIC ACID, ESTER, GAS CHROMATOGRAPHY,
QUANTITATIVE ANALYSIS, ALCOHOL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1758 STEP NO--UR/0189/70/011/001/0119/0121
CIRC ACCESSION NO--AP0123559
UNCLASSIFIED

2/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0123559
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ISOPROPENYL ACETATE (I) REACTED
QUANT. WITH PRIMARY ALCS. IN 1.5 HR, SECONDARY ALCS. IN LARGER THAN OR
EQUAL TO 3 HR, IN THE PRESENCE OF P-TOLUENE SULFONIC ACID (II) AT
80DEGREES. THE RESULTING ESTERS WERE DETD. BY GAS CHROMATOGRAPHY.
HEAT A MIXT. OF 50-100 MG OF THE ALC., 100-200 MG OF I, AND 1-2 MG OF II
ON A WATER BATH AT 80DEGREES. INSERT 5 MU L. OF THE REACTION MIXT. ON A
COLUMN (2 M LONG, 0.6 CM DIAM.) FILLED WITH 1:9 POLYETHYLENE GLYCOL 3000
ON CHEMOSORB (60-80 MESH) AT 80-150DEGREES WITH HE CARRIER GAS AT 60-70
ML-MIN. WHEN APPLIED TO 16 ALCS., THE ERROR WAS 0 TO PLUS OR MINUS
1PERCENT.

UNCLASSIFIED

USSR

UDC 543.70

DZIONKO, V. M., OSTROVSKAYA, V. M., and KONKOVA, O. V., All-Union Scientific Research Institute of Chemical Reagents and Ultra-pure Chemical Substances, Moscow, State Committee for Chemistry USSR —

"The Extraction-Photometric Determination of Scandium with Use of 1,5-Di-(2'-hydroxy-3', 5', 6'-trichlorophenyl)-3-acetylformazan"

Moscow, Zhurnal Analiticheskoy Khimii, Vol XXV, No 2, Feb 70, pp 267-271

Abstract: A number of high-sensitivity reagents proposed for use in the spectrophotometric determination of scandium (xylenol orange, etc.) are not very effective in practice if thorium, zirconium or any of a number of other substances are present. In view of the high selectivity of DHTRICHAZ (expansion shown in article title) for scandium ions, the authors developed a new extraction-photometric method based on this compound.

Scandium was determined in both wolframite and tungsten samples, using DHTRICHAZ as a reagent. The scandium-reagent stoichiometric ratio was found to be 1:2; the molar extinction of the complex, $(2.70 \pm 0.67) \cdot 10^4$ for 675 nm. The authors also suggest a quantitative method for determining scandium in tungsten, wolframite, slag and salts, based upon tests which they ran.

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1/2 013 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--EXTRACTION AND PHOTOMETRIC DETERMINATION OF SCANDIUM WITH
1,5,BIS(2, HYDROXY, 3, 5, 6, TRICHLOROPHENYL), 3, ACETYLFORMAZAN -U-
AUTHOR--(03)--DZIOMKO, V.M., OSTROVSKAYA, V.M., KONKOVA, O.V.

R

COUNTRY OF INFO--USSR

SOURCE--ZH. ANAL. KHIM. 1970, 25(2), 267-71

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL ANALYSIS, SOLVENT EXTRACTION, SCANDIUM, PHOTOMETRIC ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1994/1918

STEP NO--UR/0075/70/025/002/0267/0271

CIRC ACCESSION NO--APO115732

UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0115732

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

1,5-BIS(2-HYDROXY-3,5,6-TRICHLOROPHENYL)-3-ACETYLFORMAZAN (I) WAS SYNTHETIZED AND STUDIED AS A REAGENT FOR SC DETN. I IS A CINNAMON COLORED POWDER, M.P. 202.3 DEGREES AFTER RECRYSTN. FROM BOILING C SUB6 H SUB6. I REACTS WITH SC IN A 2:1 MOLAR RATIO; MAX. ABSORBANCE OF THE COMPLEX IS AT 675 NM AND THE MOLAR ABSORPTIVITY IS (2.70 PLUS OR MINUS 0.67) TIMES 10 PRIME4. MAX. ABSORBANCE OCCURS IN THE PH RANGE 4.7-6.5. A QUANT. METHOD IS DESCRIBED FOR THE DETN. OF SC IN WOLFRAMITE IN WHICH THE SC IS EXTD. WITH A SOLN. OF I IN ETOAC, AND A QUAL. METHOD FOR SC DETECTION IN SALTS AND SLAGS. TH(IV), ZR(IV), V(III), LA(III), ND(III), PR(III), SM(III), ER(III), AND MN(II), 1000 FOLD AMTS., AND AL(III), BI(III), AND IN(III), 25 FOLD AMTS., DO NOT INTERFERE; CU(II), CO(III), FE(III), GA, ZN, PB(II), HG(II), HG(II), V(IV), F PRIME NEGATIVE, SO SUB4 PRIME2 NEGATIVE, AND PD SUB4 PRIME3 NEGATIVE DO.

FACILITY: ALL UNION SCI. RES. INST. CHEM. REAGENTS SPEC. PURE CHEM., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 621.382.3

ALFEROV, Zh. I., AMOSOV, V. I., GARBUZOV, D. Z., ZHILYAYEV, Yu. V.,
KONNIKOV, S. G., KOP'YEV, P. S., and TROPIM, V. G.

"Investigating the Dependence of the Luminescent Characteristics
of n and p Type $\text{GaP}_x\text{As}_{1-x}$ and $\text{Al}_x\text{Ga}_{1-x}\text{As}$ Solid Solutions"

Leningrad, Fizika i tekhnika poluprovodnikov, No 10, 1972, pp 1879-
1887

Abstract: The present article is the latest of a series published by the first-named author in collaboration with these or other researchers regarding the nature of photoluminescence spectra in solid solutions of $\text{GaP}_x\text{As}_{1-x}$ and $\text{Al}_x\text{Ga}_{1-x}\text{As}$. In the present paper, results are given of experimental investigations into the position of the fringe band maximum radiation and the relative radiation intensity in the band as they depend on the composition of the solid solutions of both n and p types. The experimental specimens were in the form of epitaxial layers obtained by the liquid and gas transport method, their compositions being determined by the microcentgen spectral method with the JXA-5A analyzer. The luminescence was excited by a DRSh-250 lamp with a filter system removing the yellow and green mercury lines, and the radiation spectra were recorded by the MDR-2 monochromator with a grating of
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USSR

UDC: 621.382.3

3

ALFEROV, Zh. I., *Fizika i tekhnika poluprovodnikov*, No 10, 1972, pp 1879-1887

600 lines/mm. The radiation receivers were germanium photodiodes or the FEU-22. The authors express their gratitude to N. V. Klepikova and V. P. Kuz'min for their assistance with the experiments, and V. M. Tuchkevich for his interest in the work.

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- 99 -

1/3 018 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--MILITARY SCHOOL ADMISSION PROCESS EXPLAINED, FOR THOSE WHO DREAM OF
BECOMING OFFICERS -U-
AUTHOR--KONNOPLYANIK, V.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, STARSHINA SERZHANT, RUSSIAN, NO 1, JANUARY 1970, PP 34-35

DATE PUBLISHED----JAN70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--MILITARY SCHOOL, ENTRANCE REQUIREMENT, MILITARY TECHNICAL
TRAINING, MILITARY ENGINEER TRAINING, MILITARY MEDICAL FACILITY,
TRAINING PROCEDURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/0563

STEP NO--UR/0614/70/000/001/0034/0035

CIRC ACCESSION NO--AP0116173

UNCLASSIFIED

2/3 018

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0116173

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SECONDARY MILITARY EDUCATIONAL INSTITUTIONS TRAIN SPECIALIST OFFICERS. AFTER THREE YEARS OF STUDY THE GRADUATES OF SECONDARY MILITARY EDUCATIONAL INSTITUTIONS RECEIVE THE RANK OF OFFICER AND, AT THE SAME, TIME, ARE AWARDED A DIPLOMA OF A SINGLE ALL UNION TYPE. HIGHLY SKILLED MILITARY SPECIALISTS ARE TRAINED IN MILITARY ACADEMIES, AT HIGHER MILITARY AND NAVAL SCHOOLS, THE MILITARY INSTITUTE, AND IN THE MILITARY DEPARTMENTS OF CERTAIN CIVILIAN INSTITUTIONS OF HIGHER EDUCATION. THE PERIOD OF STUDY IN HIGHER MILITARY TRAINING INSTITUTIONS IS FOUR OR FIVE YEARS, AND IN THE ACADEMY OF MILITARY MEDICINE IT IS SIX YEARS. UPON SUCCESSFUL COMPLETION OF A HIGHER MILITARY EDUCATIONAL INSTITUTION, THE GRADUATE IS AWARDED THE RANK OF OFFICER AND A DIPLOMA OF A SINGLE ALL UNION TYPE FOR HIGHER EDUCATION AND THE SPECIAL FIELD MASTERED. MILITARY MEN OF REGULAR OR EXTENDED SERVICE, MEMBERS OF THE MILITARY RESERVE (SOLDIERS, SAILORS, SERGEANTS, AND MASTER SERGEANTS), THE GRADUATES OF THE SOVOROV AND NAKHIMOV SCHOOLS AND DRAFT AGE YOUTH ARE ACCEPTED: AT ALL SECONDARY MILITARY EDUCATIONAL INSTITUTIONS. AT HIGHER MILITARY POLITICAL SCHOOLS, AND AT THE MILITARY POLITICAL DEPARTMENT OF THE ROSTOV HIGHER ENGINEERING COMMAND SCHOOL (MEN: CHIEF MARSHAL OF ARTILLERY M. I. NEDELIN. AT HIGHER COMMAND SCHOOLS (GENERAL MILITARY, TANK, ARTILLERY, COMMUNICATIONS, ENGINEERING, CHEMICAL, TRANSPORT, AND SO FORTH). AT HIGHER TANK TECHNOLOGY MILITARY TECHNICAL SCHOOLS. AT HIGHER MILITARY AVIATION SCHOOLS FOR PILOTS AND NAVIGATORS. AT HIGHER ENGINEERING COMMAND AND NAVAL ENGINEERING SCHOOLS. AT THE MILITARY INSTITUTE FOR FOREIGN LANGUAGES.

UNCLASSIFIED

3/3 018

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0116173

ABSTRACT/EXTRACT--AT THE MILITARY DEPARTMENTS IN CERTAIN CIVILIAN EDUCATIONAL INSTITUTIONS (EXCEPT FOR THE MILITARY DEPARTMENT AT THE MOSCOW INSTITUTE OF FINANCE). AT THE ENGINEERING DEPARTMENTS OF THE MILITARY ENGINEERING ACADEMIES IMENI F. E. DZERZHINSKIY AND IMENI A. F. MOZHAYSKIY. AT THE ACADEMY OF MILITARY MEDICINE IMENI S. M. KIROV. WHICH DOCUMENTS ARE NEEDED AND WHERE TO SEND THEM. PREPARATION FOR EXAMINATIONS. ENTRANCE EXAMS. ENROLLING FOR STUDIES.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--DOSIMETRIC REQUIREMENTS TO THE ACCURACY OF ROENTGENOMETRIC
INVESTIGATIONS IN RADIUM THERAPY -U-
AUTHOR--(04)-KUZETSOV, E.A., SINITSYN, R.V., MALEVICH, M.A., KONNOV, B.A.
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 4, PP 67-70
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--RADIUM, RADIOTHERAPY, DOSIMETRY, CHARGED PARTICLE,
ELECTROMAGNETIC RADIATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1990/0959 STEP NO--UR/0241/70/015/004/0067/0070
CIRC ACCESSION NO--AP0109116
UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0109116

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AS A CRITERION OF ACCURACY OF
ROENTGENOMETRIC MEASUREMENTS THE AUTHORS PUT AN ERROR IN DETERMINING THE
DOSE IN THE FOCUS IN DISPLACEMENT OF THE TARGET TO A DEFINITE VALUE.
THE CALCULATION WAS MADE FOR ELECTROMAGNETIC RADIATION AND HEAVY CHARGED
PARTICLES IN THE INSTANCE OF SHIFT OF THE TARGET IN THE DIRECTION OF THE
BEAM AXIS AND IN PERPENDICULAR DIRECTION. FACILITY:
TSENTRAL'NYY N-I KENTGENO-RADIOLOGICHESKIY INSTITUT MINISTERSTVA
ZURAVOOKHRANENIYA SSSR.

UNCLASSIFIED

USSR

UDC 621.78:539.219.3

NOVIKOV, B. A., KONNOVA, I. Yu., SHCHERBEDINSKIY, G. V., GOLOVANENKO, S. A.,
and MASLENKOV, S. B., Moscow

"Carbon Redistribution and Diffusion in Bimetals"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 72, pp 83-87

Abstract: Using C^{14} and methods of autoradiography and radiometric layer analysis the redistribution of carbon in St. 3+OKh13 bimetal was studied for two variants: without an intermediate layer and with an intermediate nickel layer. It was shown that carbon passes from the carbon steel into the stainless steel both in the process of manufacture and during all subsequent annealings. The presence of a nickel intermediate layer inhibits the passage of carbon from steel St. 3 to OKh13 and strongly varies the nature of carbon redistribution in the contact zone.

For the purpose of selecting the best bimetal cladding layers for long-time service at elevated temperatures the temperature relationships of diffusion coefficients were determined for carbon in OKh13 ferrite steel and EI943 (OKh23N28M3D3T), EI628(OKh23N28M2T), and EI432 (OKh17N13M3T) austenitic steels. Comparison of the data on these steels showed that up to 700°C

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USSR

NOVIKOV, B. A., et al., Fizika i Khimiya Obrabotki Materialov, No 5,
Sep-Oct 72, pp 83-87

carbon penetrates EI432 steel to the greatest extent and EI943 steel to the
least extent, while about 700°C carbon penetrates OKh13 steel the greatest
and EI943 steel the least. 3 figures, 1 table, 2 bibliographic references.

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USSR

UDC 669-419.4

KONNOVA, I. Yu., and GOLOVANENKO, S. A., [Central Scientific Research
Institute of Ferrous Metallurgy imeni I. P. Bardin]

"Nickel Interlayers for Corrosion-Resistant Bimetals"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 10, 1972,
pp 32-37

Abstract: The effect of different interlays (nickel, nickel-copper) on the carburization kinetics of the cladding layer on different steels was studied. Items made of these steels (Kh18N10 and OKh13) were made to perform at 425-550°C for up to 1000 hr. Experimental results without interlayers showed that the depth of the carbon diffusion into the cladding layer increases with temperature and exposure time. Nickel-copper interlayers considerably inhibit the penetration of carbon into the cladding layer. However, this depends on the concentration of Cu in the interlayer. Interlayers made of pure nickel or nickel + 30% Cu can not present a reliable barrier for the C diffusion. The best results in this respect were obtained with Ni-Cu interlayers containing 40-45% Cu. A further increase of the concentration of Cu increases the quality of barriers against carbon penetration, but the deformation temperature and oxidation of interlayers

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USSR

KONNOVA, I. Yu., and GOLOVANENKO, S. A., *Metallovedeniye i Termicheskaya Obrabotka Metallov*, No 10, 1972, pp 32-37

deteriorate. Microstructural studies of the interlayers showed the presence of film carbides on interlayers which are usually formed after long service at high temperature. The morphology of these carbides depends on the composition of the interlayer, the steel, and the cladding layer.

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USSR

K
YELKINA, V. G., KONNOVA, N. A., and TONIYANTS, YE. G., Tashkent
Oblast Sanitary Epidemiological Laboratory

"A Six-Year Virological Study of Influenza in Tashkent Oblast"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 1, 1970, pp 31-54

Abstract: A study of 1,222 throat smears taken from patients with acute respiratory diseases between 1962 and 1967, and from autopsy material (66 cadavers) was performed on chicken embryos. Twenty influenza virus strains were isolated, representing 1.7 percent of all flu viruses. Six strains of the A2 type were isolated during the 1962 flu epidemic, one strain of the B type was isolated in 1964; 11 strains of the A2 type in 1965; and two strains of the 2A type in 1967. In the 1963-1964 interepidemic period, the A2 types was recorded in 3.5-3.7% of all cases; the B type in 1.5-1.8; and the parainfluenza D type in 0.2-0.3% of cases. The flu epidemic of February, 1965, was caused by the A 2 type, which was diagnosed in 40.4% of patients, with acute respiratory diseases. In December, 1966, and in early January, 1967, the disease was caused mainly by type B virus (55-56.2%). In January through March, the A2 type

USSR

YELKINA, V. G., et al., Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 1, 1970, pp 31-34

predominated (70.3%). Between 1963 and 1967, 4, 244 sera of healthy donors were tested for immunity level. High immunity levels were recorded against viruses of type A2 (52.2%), B (76.8%), and D (73.0%) as a result of the A2 and B flu outbreak in 1962. In 1964, the concentration of antibodies against all viruses (but especially the A2 types), was markedly reduced, indicating a new outbreak, which took place in February, 1965. After that, the titer of antibodies against the A2 type virus rose threefold and fell again a year later. The last flu wave in December, 1966, and January-February, 1967 again increased people's immunity to the A2 and B type viruses up to the level observed in 1963. Virological studies are gaining importance in medical practice and in the influenza diagnosis.

2/2

USSR

UDC 669.245:536.777:669.787

GOLOVARENKO, S. A., TOMILIN, I. A., and KONNOVA, I. YU., Moscow

"Activity of Carbon in Nickel-Base Alloys"

Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 2, Mar-Apr 73, pp 72-75

Abstract: The activity of carbon in Ni-Cu alloys containing up to 30 wt% Cu was investigated in the 1000-1200°C temperature interval. The results are discussed by reference to diagrams showing the carbon distribution in ternary Ni-alloy-Ni samples, the effect of Cu on the activity coefficient of C in Ni, the solubility of C in Ni-Cu alloys, and the temperature dependences of the activity coefficient of C in systems Ni+4% at. wt. of Cr, V, W, Ti and Nb in the 800-1200°C temperature interval. Cu is shown to increase the activity of C in Ni; Nb and Ti decrease it; V, Cr, and W increase it. These effects are discussed in comparison with the tendency of alloying elements to the formation of carbides and intermetallides. Four figures, three tables, seven formulas, five bibliographic references.

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UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--DAVYDOV SPLITTING IN MIXED MOLECULAR CRYSTALS -U-

AUTHOR--(02)-DUBOVSKIY, O.A., KONOBAYEV, YU.V.

R

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(2), 405-14

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--CRYSTAL, NAPHTHALENE, ISOTOPE, LIGHT POLARIZATION, EXCITON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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STEP NO--UR/0181/70/012/002/0405/0414

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PROCESSING DATE--16OCT70

CIRC ACCESSION NO--4P0107059

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

ABSTRACT. THE THEORY OF FRENKEL EXCITON STATES DEVELOPED RECENTLY IN TERMS OF THE FORMALISM OF GREEN FUNCTIONS FOR BINARY ISOTOPIC SOLID SOLNS. OF SUBSTITUTION WITH 1 MOL. IN THE UNIT CELL IS GENERALIZED FOR THE CASE OF 2 EXCITON BANDS IN A PURE CRYSTAL TO INVESTIGATE THE EVOLUTION OF DAVIDOV MULTIPLETS AND THE POLARIZATION RATIO OF LIGHT ABSORPTION BANDS IN MIXED MOL. SOLNS. OF THE TYPE NAPHTHALENE NAPHTHALENE D SUBS WHEN THE COMPN. OF THE SOLN. CHANGES. AN INTERPOLATION EXPRESSION WAS FOUND WHICH DESCRIBES THE POSITION AND THE SHAPE OF ABSORPTION PEAKS IN THE SOLID SOLN. FOR AN ARBITRARY COMPN. OF THE MIXT. THE THEORY IS COMPARED WITH EXPT.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--DIPOLE DIPOLE INTERACTION OF SUBSTITUTIONAL IMPURITY MOLECULES IN
CRYSTALS -U-
AUTHOR-(02)-KAMENJGRADSKIY, N.E., KONOBEEV, YU.V.
COUNTRY OF INFO--USSR
SOURCE--PHYSICA STATUS SOLIDI, 1970, VOL 37, NR 1, PP 29-37
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--CRYSTAL IMPURITY, DIPOLE INTERACTION, MOLECULAR INTERACTION,
DIELECTRIC CONSTANT, CALCULATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
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CIRC ACCESSION NO--AP0107590
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UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0107590

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A THEORY IS GIVEN OF EFFECTIVE DIPOLE DIPOLE INTERACTIONS BETWEEN TWO IDENTICAL SUBSTITUTIONAL GUEST MOLECULES AT LARGE INTERMOLECULAR DISTANCE. AN INTERACTION THEORY FOR INTERSTITIAL IMPURITY MOLECULES WAS DEVELOPED IN (3). A TWO LEVEL SCHEME FOR THE GUEST AND HOST MOLECULES IS ASSUMED. LOCAL FIELD CORRECTIONS ARE DISCUSSED. IT IS SHOWN THAT THE DIPOLE DIPOLE INTERACTION OF THE GUEST MOLECULES IN A CRYSTAL IS THE INTERACTION OF THE EFFECTIVE DIPOLE MOMENTS. THE VALUES OF SUCH EFFECTIVE DIPOLE MOMENTS DIFFER FROM THEIR VALUES IN VACUUM BY A FACTOR WHICH IS EXPRESSED BOTH BY THE DIELECTRIC CONSTANT AT THE IMPURITY TRANSITION FREQUENCY AND THE MICROSCOPIC CHARACTERISTICS OF THE MEDIUM.
FACILITY: INSTITUTE OF PHYSICS AND ENERGETICS, OBNINSK.

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UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--RADIATION GROWTH OF URANIUM DURING LOW BURN UPS -U-

AUTHOR--(04)--KONOBEEVSKIY, S.T., PANTELEYEV, L.D., LEVITSKIY, B.M.,
NASKIDASHVILI, I.A.

COUNTRY OF INFO--USSR

K

SOURCE--AT. ENERG. 1970. 28(4), 326-32

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--URANIUM, IRRADIATION, CRYSTAL LATTICE DEFORMATION, LATTICE
DEFECT

CONTROL MARKING--NO RESTRICTIONS

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PROXY REEL/FRAE--3008/0558

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PROCESSING DATE--27NOV70

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CIRC ACCESSION NO--AP0137644

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

ABSTRACT. RADIATION GROWTH OF U AT MINUS 150DEGREES AND 160DEGREES WAS STUDIED IN THE 1ST STAGES OF IRRADN., US BEING THERMALLY PRETREATED AT VARIOUS TEMPS. 20-620DEGREES. THE INITIAL STAGE OF GROWTH WAS THE RESULT OF THE FORMATION OF INDIVIDUAL DEFECTS CAUSING THE ANISOTROPIC DEFORMATION OF THE ALPHA U LATTICE IN THE TOTAL VOL. OF THE METAL, NOT ONLY IN THE NEIGHBORHOOD OF THE THERMAL PEAKS. OWING TO VACANCIES FORMED DURING THE KNOCK OUT OF ATOMS BY FISSION FRAGMENTS, THE CONTRACTION INSIDE THE ZIGZAG LIKE LAYERS OF ALPHA U LATTICE TOOK PLACE AND THE DISPLACED ATOMS WERE SITUATED IN POSITIONS WITH THE COORDINATION NO. OF 5, PYRAMIDAL DEFECTS, OR 4 OR 6, OCTAHEDRAL DEFECTS; VOL. AND AXIAL DEFORMATIONS CAUSED BY THE FORMER DEFECTS EXCEEDED MANY TIMES THOSE ARISING WHEN OCTAHEDRAL DEFECTS WERE FORMED. IN THE PRESENCE OF LATTICE IMPERFECTIONS, THE PYRAMIDAL DEFECTS WERE FORMED PREDOMINANTLY. IN THE 1ST STAGE OF GROWTH, PARTIAL RECOMBINATION OF DEFECTS TOOK PLACE WHICH REDUCED THEIR AMT. IN U DEFORMED AT LOW TEMPS., DISPLACED ATOMS WERE PREVENTED FROM RECOMBINING OWING TO THEIR ADSORPTION ON VARIOUS LATTICE IMPERFECTIONS, WHICH EXPLAINED THE HIGH RATE OF GROWTH IN THESE SPECIMENS. WHEN THE LOCAL CONC. OF DEFECTS REACHED A SUFFICIENTLY HIGH VALUE, THE FORMATION OF THEIR COMPLEXES STARTED OWING TO THE FIELD OF TENSION. THE STAGE WHEN AN EQUIL. BETWEEN THE NO. OF FORMED INDIVIDUAL DEFECTS AND THE NO. OF DEFECTS FORMING THEIR COMPLEXES WAS REACHED CORRESPONDED TO THE LINEAR COURSE OF THE RADIATION GROWTH CURVE.

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USSR

UDC: 621.375.82

GORBAN', I. S., KONONCHUK, G. L., and KONONCHUK, L. P.

"Interference Effects in a Complex Resonator"

Kiev, V sb. Kvant. elektronika (Quantum Electronics--collection of works)
"Nauk. dumka," No 6, 1972, pp 127-131 (from RZh--Fizika, No 4, 1973, Abstract
No 4D1196)

Translation: The authors examine the possibility of different cavities in a complex ruby laser resonator to lend stability to the interference pattern during free oscillation. It is shown that during the oscillation the light passing through a standard ruby rod markedly spoils its space coherence as a result of dispersion by nonuniformities; hence the light beams reflected by the rod termini do not interfere with one another. In an air cavity, terminus-reflector interference is possible with careful adjustment of the proper reflecting planes. The coherent light in the laser as a function of the amount of dispersion is obtained. Bibliography of 10. Authors' abstract

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USSR

UDC: 621.375.82

GORBAN', I. S., KONONCHUK, G. L., and KONONCHUK, L. P.

"Interference Effects in a Complex Resonator"

Kiev, V sb. Kvant. elektronika (Quantum Electronics--collection of works)
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- 36 -

USSR

UDC: 620.171.2

SKLYAROV, N. M., KONONCHUK, N. I., ISHCENKO, I. I., POGREBANYAK, A. D.,
LOZITSKIY, L. P., SHIPIL', V. Ya., LAPITSKIY, Yu. A., SINAYSKIY, B. N.,
KUFAYEV, V. N., Kiev

"Determination of Durability of Heat-Resistant Alloys in Unstable Operating Modes Considering Brief Overloads"

Kiev, Problemy Prochnosti, No 3, Mar 73, pp 100-104.

Abstract: The specific features of application of the linear hypothesis of addition of damage during calculation and accelerated experimental determination of the guaranteed durability of parts operating with brief overloads during individual stages in the program of unstable loading with static and variable loads are studied, as well as problems of adjustment of the corresponding calculation characteristics for heat-resistant alloys. The concept developed by the authors is in that the share of durability expended at any moment is determined by successive addition of its parts for stages of the program under the combined influence of loads and temperatures in a quasi-stable mode for each stage; the sets of long-term static strength and endurance characteristics are utilized, considering the influence of the loading prehistory and the corresponding limiting curves for various

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USSR

SKLYAROV, N. M., et al, Kiev, Problemy Prochnosti, No 3, Mar 73, pp 100-104
temperatures and durabilities. The spectrum of loads is studied in combination with the sequence of their application, i.e., in time.

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USSR

UDC 519.24

KONONCHUK, L. P.

"Estimating the Spectrum of a Homogeneous Random Field"

Teoriya Veroyatnostey i Mat. Statist. Mezhd. Nauch. Sb., [Theory of Probabilities and Mathematical Statistics. Interdepartmental Scientific Collection], 1970, No 3, pp 69-79, (Translated from Referativnyy Zhurnal Kibernetika, No 5, 1971, Abstract No. 5V198 by the author).

Translation: Certain consistent estimates of a correlation function and the spectral density of a homogeneous random field satisfying certain limitations placed on the central fourth order moments are studied.

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