

1/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EVALUATION OF THE CAPACITY OF SANDFLIES, PHLEBOTOMIDAE, FOR
TRANSMISSION OF LEISHMANIA TROPICA MAJOR AMONG GREAT GERBILS,
AUTHOR--(02)-YELISEYEV, L.N., STRELKOVA, M.V.
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYVE BOLEZNI, 1970, VOL
39, NR 3, PP 284-293
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--LEISHMANIA, RODENT, INSECTA
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/0277 STEP NO--UR/035B/70/039/003/0284/0293
CIRC ACCESSION NO--AP0124037
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0124037

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

ABSTRACT. A SERIES OF EXPERIMENTS ON FEEDING OF SANDFLIES ON GREAT GERBILS (RHOMBOMYS OPIMUS) UNDER CONDITIONS APPROACHING THOSE IN RODENT BURROWS WAS CARRIED OUT. AMONG SANDFLIES FED ON GREAT GERBILS, THE INFECTION RATE WITH LEISHMANIA TROPICA MAJOR WAS FOUND TO BE 59-75PERCENT IN PHLEBOTOMUS CAUCASICUS, 53PERCENT IN PH. PAPTASI, 7-21PERCENT IN SERGENTOMYIA ARPAKLENSIS, 24PERCENT IN S. GERKOVI. THE INFECTION RATE OF SANDFLIES DEPENDED ON THE INTENSITY OF MANIFESTATION OF SPECIFIC LEISHMANIAL LESIONS ON SKIN OF THE EARS OF THE GERBILS DONORS. DEPENDING ON THIS FACTOR, THE INFECTION RATE OF PH. PAPTASI VARIED FROM 7 TO 53PERCENT. TRANSMISSION OF L. T. MAJOR FROM SICK GREAT GERBILS TO HEALTHY ANIMALS HAS BEEN FIRST PROVEN FOR PH. CAUCASICUS AND CONFIRMED FOR PH. PAPTASI UNDER EXPERIMENTAL CONDITIONS. ATTEMPTS TO TRANSMIT THE INFECTION THROUGH S. ARPAKLENSIS FAILED BECAUSE THE LATTER REFUSED TO FEED AGAIN ON GERBILS. THE CLINICAL INCUBATION PERIOD IN GREAT GERBILS AFTER INFECTIVE BLOOD SUCKING BY PH. CAUCASICUS WAS 13 DAYS AND PH. PAPTASI 15 DAYS. SANDFLIES PICKED UP L. T. MAJOR IMMEDIATELY AFTER TERMINATION OF THE CLINICAL INCUBATION PERIOD IN GREAT GERBILS.

FACILITY: OTEL MEDITSINSKOY PROTOZOOLOGII I PARAZITOLOGII I TROPICHESKOY MEDITSINY IM. YE. I. MARTSINOVSKOGO MZ-SSSR, MOSKVA.

UNCLASSIFIED

USSR

UDC: 621.373.042.029.64:621.385.623

YELISEYEV, N. I.

"On Analysis of a Two-Tank Frequency Stabilization System for a Reflective Klystron"

Elektron. tekhn. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific and Technical Collection. SHF Electronics); 1970, vyp. 9, pp 66-78 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12D386)

Translation: A relationship is found for the parameters of a two-tank system under conditions of emission stability of oscillations with a required frequency over a fairly wide tuning band controlled by a stabilizing resonator. It is shown that connection of the load to the stabilizing resonator gives better experimental characteristics for the system than connection to the main (active) resonator. Six illustrations, bibliography of four titles. Resumé.

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USSR

UDC: 621.373.826

YELISEYEV, P. G., IVANOV, L. P., LOGGINOV, A. S., SENATOROV, K. Ye.

"Frequency Self-Modulation of Emission in an Injection Laser"

Kratkiye soobshch. po fiz. (Brief Reports on Physics), 1972, No 6, pp 53-55
(from RZh-Radiotekhnika, No 12, Dec 72, abstract No 12D148 by A. K.)

Translation: Spectral chronograms with a resolution of $3 \cdot 10^{-11}$ - 10^{-10} s are obtained for an isolated emission channel in a strip laser based on a double heterostructure at 300°K. It is evident from these chronograms that frequency self-modulation indicates instability of single-mode emission, and that this self-modulation accompanies buildup of pulsations and cutoff of single-mode emission with a transition to nonstationary (spike) multimode emission. Frequency self-modulation leads to considerable broadening of the individual excited modes, and to blurring of the spectrum. The influence of the frequency self-modulation on the emission spectrum increases with an increase in pumping.

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USSR

UDC 543.42:621.378.325

YELISEYEV, P.G.

"Heterojunction Injection Lasers (Review)"

Kvantovaya elektronika (Quantum Electronics), Moscow, No 6(12), 1972, pp 3-28

Abstract: In the last few years progress in the field of semiconductor lasers has been connected with the use of heterojunctions. The first suggestions concerning the use of heterojunctions in lasers were made as early as 1965, shortly after the creation of the injection laser. Realization of the advantages of heterolasers became possible because of the mastering of methods of epitaxial growth of multilayer structures based on the solid solutions (Al,Ga)As. Perfect-
ion of heterojunctions in this system is due to the fact that solid solutions of various compositions, including gallium arsenide, possess practically identical crystal lattices. This in turn is connected with the proximity of the co-
valent radii of gallium and aluminum. Thus there are a number of solid solu-
tions in which the mutual substitution of gallium and aluminum leads to neglig-
ible changes of the lattice constant, while the width of the forbidden zone
changes in a sufficiently wide range. Of their number, two systems (Al,Ga)As
and (Al,Ga)(As,P) are successfully used at present in injection lasers. A
number of heterostructures suitable for injection lasers can be formed on the
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YELISEYEV, P. G., Kvantovaya elektronika, No 6(12), 1972, pp 3-28

basis of one or more heterojunctions and p-n junctions. The lowest threshold currents at room temperature (less than 1 ka/cm^2) were obtained with the aid of two-sided heterostructures of type $n(\text{Al,Ga})\text{As--pGaAs--p}(\text{Al,Ga})\text{As}$. Because of this it was possible for the first time to obtain continuous generation in injection lasers at room temperature (up to 355°K). Recently, the differential efficiency of heterolasers which are cooled increased to values of 0.7. Data on spectral, threshold, and output power characteristics are presented for various types of heterojunction lasers. Further opportunities for application of heterostructures in injection lasers are discussed. 22 ill. 5 tab. 74 ref. Received by editors, 18 March 1972.

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USSR

UDC 621.378.35

BOGATOV, A.P., YELISEYEV, P.G., PANTELEYEV, V.I., SHEVCHENKO, YE.G.

"Comparison Of Instantaneous And Average Emission Spectrum Of An Injection Laser In A Regime Of Spontaneous Pulsations"

Kvantovaya elektronika, Moscow, No 5, May 71, pp 95-95

Abstract: A comparison is made of the spectra of the multimode generation of an injection laser, obtained with averaging during not more than 10^{-10} sec ("instantaneous" spectrum) and during 10^5 pumping pulses ("average" spectrum). A "Kontrol'-2" photoelectron recorder and a DFS-8 diffraction spectograph were used for observation of spectra with a large resolving time. A number of models of lasers based on heterostructures in the system GaAs-AlAs and operating at 300° K were studied. The data presented in the paper pertain to a diode with a typical behavior for all the models studied which has a one-way heterostructure and a Fabry-Perot resonator with a length of 347 micrometer and a width of 200 micrometer. A pulse of the pumping current had a duration of 200 nsec, a repetition frequency of 5-500 Hz, and an amplitude up to 40 amp. With the presence of deep pulsations of laser emission, the instantaneous spectrum in the separate pulses strongly differs from the average and contains an arbitrary set of modes of the number observed in the average spectrum. It is assumed that the random dis-

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BOGATOV, A. P., et al., Kvantovaya elektronika, Moscow, No 5, May 71, pp 93-95

tribution of photons with respect to the oscillation modes at the start of the pulses predetermines the instantaneous generation spectrum. It is noted that during the transition to a singlemode regime the spontaneous emission pulsations disappear. Received by editors, 28 May 71. 3 fig. 7 ref.

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YELISEYEV, P.G.

PHYSICAL + MATHEMATICAL
SCIENCE

JPRS 53212
25 MAY 71

THIRD INTERNATIONAL SYMPOSIUM ON GALLIUM ARSENIDE AND
RELATED COMPOUNDS

Article by Candidate of Physical and Mathematical Sciences
~~Yeliseyev, P.G.~~ Yeliseyev, P.G., Vedrick, Aleksandr, SSSR, Russian,
Vol 40, No 3, March 1971, pp 102-104]

The Third International Symposium on Gallium Arsenide and Related Compounds was held on 3-7 October 1970 in Aachen (West Germany) in the Rhine-Westphalian Technical College. About 200 participants in the symposium, representing 16 countries, heard and discussed 32 reports devoted to gas and liquid epitaxy, the properties of materials, and microwave, opto-electronic and other instruments. The main attention was given to technological questions in the synthesis of gallium arsenide, indium phosphide and a number of solid solutions based on them, and also the development of new instruments.

Gallium arsenide is a very important material of semiconductor and quantum electronics. It is used in uni-generators, lasers, mixers, detectors, photocathodes, optical modulators, solar batteries, etc. In the number of applications and the prospects of their further development gallium arsenide evidently occupies first place among semiconductor materials, although the volume of its worldwide production is smaller than that of silicon. As for solid solutions containing gallium arsenide and other compounds of the type AlAs_x related to it, their use permits varying within broad limits the main parameters of the substance and improving the characteristics of instruments.

In a survey report of C. Wolf and co-workers (USA) on the state of the technology for the production of pure gallium arsenide, note was made of the continuing improvement of the quality of that compound obtained by epitaxial methods. In 1969, on the basis of liquid epitaxy, at the Massachusetts Institute of Technology gallium arsenide was obtained with a total

MASSIS

USSR

UDC: 621.373:530.145.6

DOLGINOV, L. M., DRUZHININA, L. V., YELISEYEV, P. G., KHRASAVIN, I. V.,
LIBOV, L. D.

"Continuous Emission in Semiconductor Lasers at Room Temperature"

Kratkiye soobshch. po fiz. (Brief Reports on Physics), 1971, No 2, pp 57-63
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6D158)

Translation: The authors describe injection lasers based on symmetric heterostructures with strip geometry operating in the continuous mode at a temperature of 300°K. The heterostructures are produced by the method of liquid epitaxy from solutions in gallium. A layer of N-type $Al_xGa_{1-x}As$ 2-5 μ thick doped with tin (N emitter) was grown on a substrate of N-type GaAs oriented in plane (100), followed by a layer of N-type GaAs (undoped) or P-type germanium-doped GaAs (active layer) 0.4-1.2 μ thick, a layer of P-type germanium-doped $Al_xGa_{1-x}As$ 1.7-2.5 μ thick (P-emitter), and finally a fourth layer of P-type GaAs (with germanium) to make a low-resistance contact no more than 2 μ thick. A silicon dioxide film was deposited on the P-side of the heterostructure, and bands 15 μ thick were photographically etched in this film in direction [110]. The value of x was typically

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DOLGINOV, L. M. et al., Kratkiye soobshch. po fiz., 1971, No 2, pp 57-63

0.2-0.4. Measurements showed that the main pumping power is released in a band 18-20 μ wide. It is shown that the necessary conditions for obtaining continuous emission are low threshold current density, which is realizable so far only in symmetric heterostructures, a thin diode base, and low series resistance of the diode (per unit area of the active region).
A. K.

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USSR

UDC: 621.373:530.145.6

AKERMAN, D., YELISEYEV, P. G., KAYPER, A., MAN'KO, M. A., RAAB, Z.

"Methods of Mode Selection in Injection Semiconductor Masers"

V sb. Kvant. elektronika (Quantum Electronics--collection of works), No 1, Moscow, 1971, pp 85-90 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D173)

Translation: In order to improve the spectral composition of emission from an injection semiconductor maser, especially to increase the output power in one wave mode, external elements having spectral selectivity were introduced into the maser cavity. The following modifications were experimentally studied: a) a composite cavity; b) a cavity with an interference filter; c) two optically coupled cavities of the Fabry-Perot type with different lengths. The effect of the external selective element in the maser emission spectrum is observed in all cases, and emission on a single longitudinal wave mode is achieved at an appreciably higher excess over the threshold than in conventional semiconductor injection masers. The output power in the single-frequency mode is as high as 0.5 W (in the case of a composite cavity). An investigation is made of the possibilities for tuning the maser wavelength by means of external elements within the range of the amplification band of the semiconductor. Five illustrations, bibliography of fifteen titles.

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USSR

UDC 621.375.82

AKERMAN, D., YELISEYEV, P. G., KAYPER, A., MAN'KO, M. A., RAAB, Z.

"Methods for Selection of Types of Oscillations in Injection Semiconductor Lasers"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No. 1, Moscow, 1971, pp 85-90 (from RZh-Fizika, No 7, Jul 71, Abstract No 7D1115)

Translation: To improve the spectral composition of radiation of an injection semiconductor laser, particularly to raise the yield power in a mode of a single type of oscillations, external elements having spectral selectivity were introduced into the resonator of the semiconductor laser. The following versions were studied experimentally: (a) a compound resonator; (b) a resonator with an interference filter; (c) two optically connected Fabry-Perot-type resonators of different lengths. The effect of the external selective element on the radiation spectrum of the laser was observed in all cases, and generation in one longitudinal type of oscillations was achieved for an essentially greater excess of the threshold than in ordinary injection semiconductor lasers. The output power in a single-frequency mode was up to 0.5 w (in the case of a composite resonator). Possibilities of detuning the wavelength of the laser with the aid of external elements was studied within the range of the amplification band of the semiconductor. 15 ref. Authors abstract.

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USSR

UDC 621.382.2:546.19'681

KULISH, U.M., VASIL'YEV, A.P., VIATKIN, A.P., YELISEYEV, P.G., GEORMGGENOV, V.F.

"Effect Of Formation Conditions On The Electrical Properties Of Epitaxial P-N Junctions In Gallium Arsenide"

V sb. Arsenid galliya (Gallium Arsenide--Collection Of Works), Issue 3, Tomsk, Tomsk University, 1970, pp 152-162 (from RZh--Elektronika i yeye primeneniye, No 3, March 1971, Abstract No 3B384)

Translation: The electrical properties were investigated of p-n junctions in GaAs obtained by the method of liquid epitaxy. The electrical characteristics of p-n junctions obtained in a narrow temperature interval depend on the epitaxy temperature, which is explained by the corresponding dependences of the solidus curves of the corresponding quasi-binary systems. During subsequent heat treatment even short-duration annealings lead to a leveling of the electrical characteristics of "abrupt" p-n junctions and a disappearance of the dependence of their parameters on the epitaxy temperature. The crystallographic orientation of the substrate significantly influences the electrical and optical properties of laser junctions. Acceptor impurities exert various effects on the electrical and optical properties of epitaxial laser semiconductor diodes. 8 ref. Summary.

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1/2 038 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--TEMPERATURE DEPENDENCE OF THE OPTICAL GAIN IN INJECTION
SEMICONDUCTOR LASERS -U-
AUTHOR--YELISEYEV, P.G.
COUNTRY OF INFO--USSR
SOURCE--FIZIKA I TEKHNIKA POLUPROVODNIKOV, VOL. 4, JAN. 1970, P. 51-56
DATE PUBLISHED----JAN70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--SEMICONDUCTOR LASER, TEMPERATURE DEPENDENCE, OPTIC PROPERTY,
MINORITY CARRIER, ENERGY SPECTRUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/1467 STEP NO--UR/0449/70/004/000/0051/0056
CIRC ACCESSION NO--AP0112461
UNCLASSIFIED

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CIRC ACCESSION NO--AP0112461

UNCLASSIFIED

PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONSIDERATION OF THE EFFECT OF TEMPERATURE ON THE GAIN AND THRESHOLD CURRENT FOR A SIMPLE MODEL OF THE ENERGY SPECTRUM OF A SEMICONDUCTOR WITH AN EXPONENTIAL STATE DENSITY DISTRIBUTION OF THE MINORITY CARRIERS. ANALYTICAL EXPRESSIONS FOR THE GAIN FACTOR AND THE TEMPERATURE DEPENDENCE OF THE THRESHOLD CURRENT ARE OBTAINED, THUS MAKING IT POSSIBLE TO ELIMINATE CERTAIN CONTRADICTIONS IN THE LITERATURE REGARDING THE PARAMETERS OF THE ENERGY SPECTRUM. THE CONDITIONS OF APPLICABILITY OF THE MODEL AND THE CONDITIONS OF OPTIMAL DOPING ARE DISCUSSED. FACILITY: AKADEMIIA ANUK SSSR, FIZICHESKII INSTITUT, MOSCOW, USSR.

UNCLASSIFIED

USSR

YELISEYEV, P. G.

UDC 621.373:530.145.6

"Optimal Wave Guide Structure of an Injection Laser (Brief Report)"

Kratk. soobshcheniya po fiz. (Brief Reports on Physics), 1970, No 4, pp 3-7
(from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8 D184)

Translation: This article contains a presentation of the threshold current density as a function of thickness of the active layer obtained on the basis of theoretical research, and it is compared with experimental values obtained earlier. The threshold current is determined by a number of factors which depend on d.

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Heat Treatment

UDC: 669.293

USSR

YELISEYEV, S. A., SHPITSBERG, A. L., RYABYSHEVA, N. D., KALACHEV, I. B., and SAVINOV, A. T.

"Alloys with A Niobium Base for Elastic Sensing Elements"

Moscow, Tsvetnyye Metally, No 7, Jul 70, pp 61-62

Abstract: The purpose of the experiments described by this article was to develop alloys which can be used as elastic sensing elements at temperatures above 500-550°, the present-day limit. Taking up where an earlier article left off (Yeliseyev, S. A., et al, Tsvetnyye metally, No. 12, 1968) the authors processed two alloys consisting of various proportions of refractory elements Mo, Zr, Ti, Cr, C, Nb, and N+O. The proportions of the last two were the same in both cases, the proportion of Nb being standard. The alloys were given two smeltings in a vacuum electric-arc furnace with soluble electrodes, and the ingots were given hot and cold deformations for conversion into sheets 0.3 mm thick. Investigating the effect of thermal processing on these sheets, the authors found that they could get effective hardening by a vacuum procedure consisting of tempering in oil and subse-

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YELISEYEV, S. A., et al., Tsvetnyye Metally, No 7, Jul 70, pp 61-62

quent aging. From their experiments, the authors concluded that the alloys can be toughened, with niobium as the basis, through vacuum processing with tempering in the 1400-1800° C range, and aging at 950-1050° C. They found also that they can develop alloys that can work as elastic sensing elements at temperatures of 800°.

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USSR

UDC 669.293.5.018.27:669.018.2(088.8)

YELISEYEV, S. A., SHPITSBERG, A. L., and RYABYSHEVA, N. D.

"Niobium-Base Alloy"

USSR Authors' Certificate No 263160, Cl. 40 b, 27/00, (G22c), filed 16 Jan 69, published 29 May 70 (from RZh-Metallurgiya, No. 12, Dec 70, Abstract No 12 1867 by V. KISHENEVSKIY)

Translation: The Nb-base alloy with elevated resistance to relaxation up to 700° is intended to function as the elastic sensing element of instruments. The alloy contains the following (in %): Mo 2.5-10, Ti 1-4, Zr 1-4, C 0.02-0.4, Cr 0.1-5, and Y 0.01-0.1. In the hardened state (vacuum-hardening from 1500-1700° and aging at 900-1000°) the relaxation of stress on an 0.3-mm strip at 700° in 200 hours, given an initial stress of 44 kg/mm², is 6-7%. Mechanical properties in the hardened and soft state are given.

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USSR

UDC 629.78:533.1

GURYLEV, V. G., YELISEYEV, S. N.

"The Theory of the "Pseudojump" in the Input Sector of a Channel"

Uch. zap. Tsentr. Aerogidrodinam. In-ta [Scientific Writings of Central Institute of Aerodynamics and Hydrodynamics], Vol 3, No 3, 1971, pp 25-35, (Translated from Referativnyy Zhurnal, Raketostroyeniye, No 9, 1972, Abstract No 9.41.152, from the Resume).

Translation: A flow model is studied for a "pseudojump," formed in a channel with parallel walls when a supersonic flow is decelerated. It is shown with various assumptions concerning the distribution of the M number through the cross section of the channel that as the static pressure increases over the length of the "pseudojump," the velocity profiles and total pressure profiles are smoothed. With large M numbers of the flow ($M > 2$), the flow at the beginning of the "pseudojump" separates, corresponding to the experimental data produced. 8 Figures; 4 Biblio. Refs.

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USSR

UDC 546.77.791

YELISEYEV, S. S., GLUKHOV, I. A., and VOZHDAYEVA, YE. YE., Institute of Chemistry, Acad. Sc., Tadzhik SSR

"Oxychlorides of Penta- and Tetravalent Uranium UO_2Cl and $UOCl_2$ "

Moscow, Zhurnal Neorganicheskoy Khimii, Vol 17, No 5, May 72, pp 1203-1208

Abstract: A simple method is reported for the synthesis of lower uranium oxychlorides UO_2Cl and $UOCl_2$ by heating the mixtures of UO_3 and $MoOCl_3$ to $220^\circ C$. In the process the exchange and oxidation-reduction reactions take place leading to the formation of the lower pentavalent uranium oxychloride UO_2Cl , when equimolar quantities of UO_3 and $MoOCl_3$ are used. With excess $MoOCl_3$ the process continues yielding the tetravalent uranium product $UOCl_2$; reaction of UO_2Cl with $MoOCl_3$ taken in 1:1 ratio also yields the tetravalent product.

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Radiation Chemistry

USSR

UDC 546.77.791

YELISEYEV, S. S., GLUKHOV, I. A., VOZHDAYEVA, YE. YE., Institute of Chemistry, Tadzhik Academy of Sciences

"Reaction Between MoOCl_3 and UO_2Cl_2 "

Dushanbe, Doklady Akademii Nauk Tadzhikskaya SSR, Vol 2, 1971, No 2, pp 36-39

Abstract: The authors had previously discovered that heating MoCl_5 with UO_3 would produce MoO_2Cl_2 and UOCl_3 , instead of the expected MoOCl_3 and UO_2Cl_2 . To explain this, tests were run in sealed ampoules. It was concluded that (1) the first stage of the thermal reaction between UO_2Cl_2 and MoOCl_3 is one of oxidation-reduction ($\text{MoOCl}_3 + \text{UO}_2\text{Cl}_2 = \text{MoO}_2\text{Cl}_2 + \text{UOCl}_3$), in which U^{VI} is converted into U^{V} , and Mo into Mo^{VI} ; (2) action between UO_3 and MoCl_5 , leading to the formation of UOCl_3 and MoO_2Cl_2 as final products ($\text{UO}_3 + \text{MoCl}_5 = \text{UOCl}_3 + \text{MoO}_2\text{Cl}_2$), takes place in two stages--first an exchange reaction ($\text{UO}_3 + \text{MoCl}_5 = \text{UO}_2\text{Cl}_2 + \text{MoOCl}_3$), then the oxidation reaction referred to.

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1/2 008 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--REACTIONS IN THE TUNGSTEN TRIOXIDE, MOLYBDENUM TRIOXIDE, SULFUR
MONOCHLORIDE, SULFUR DICHLORIDE, SYSTEMS -U-
AUTHOR--(03)-GLUKHOV, I.A., YELISEYEV, S.S., PULATOV, M.S.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK TAOZH. SSR, OTD. FIZ.-NAT. GEOL.-KHIM. NAUK 1970,
(1), 29-32
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SULFUR CHLORIDE, MOLYBDENUM OXIDE, TUNGSTEN OXIDE, CHEMICAL
REACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/1228

STEP NO--UR/0465/70/000/001/0029/0032

CIRC ACCESSION NO--AP0136639

UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136639

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE SYSTEM MOO SUB3-SCL SUB2, MOO SUB2 CL SUB2 AND MOOCL SUB4 ARE FORMED GRADUALLY, THE FINAL PRODUCT BEING MOCL SUB5. IN THE SYSTEM MOO SUB3-S SUB2 CL SUB2, THE INTERMEDIATE COMPS. ARE MOO SUB2 CL SUB2 AND MOOCL SUB4 AND THE FINAL PRODUCT IS MOOCL SUB3. THE FINAL PRODUCT IN THE SYSTEM WO SUB3-SCL SUB2 IS WCL SUB6; THE INTERMEDIATE COMPS. ARE WO SUB2 CL SUB2 AND WOCL SUB4. WO SUB3 AND WOCL SUB4 DO NOT REACT WITH S SUB2 CL SUB2. THE EXPTS. WERE CARRIED OUT IN SEALED AMPULS AT 160-80DEGREES. FACILITY: INST. KHIM., DUSHANBE, USSR.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--REACTIONS IN THE RHENIUM TRIOXIDE RHENIUM PENTACHLORIDE SYSTEM -II-
AUTHOR--(03)-GLUKHGV, I.A., YELISEYEV, S.S., YELMANOVA, N.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEGRG. KHIM. 1970, 15(3), 814-16
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHASE TRANSITION, RHENIUM COMPOUND, RHENIUM CHLORIDE, OXIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/1943 STEP NO--UR/0078/70/015/003/0814/0816
CIRC ACCESSION NO--AP0115751
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0115751

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

ABSTRACT. RECL SUB4 AND RECL SUB3 FORMED AS

FINAL PRODUCTS WHEN A MIXT. OF RECL SUB3 AND RECL SUB5 WAS HEATED TO

185DEGREES. A SUBSEQUENT HEATING, IS SMALLER THAN OR EQUAL TO

350DEGREES, DID NOT REVEAL ANY PHASE TRANSITIONS.

FACILITY:

INST. KHIM., DUSHANBE, USSR.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--04DEC70

1/2 008
TITLE--HYDROLYSIS OF MOLYBDENUM PENTACHLORIDE -U-

AUTHOR--(03)-GLUKHOV, I.A., YELISEYEV, S.S., PULATOV, M.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(5), 1425-6

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HYDROLYSIS, MOLYBDENUM CHLORIDE, CARBON TETRACHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3006/0316

STEP NO--UR/0078/70/015/005/1425/1426

CIRC ACCESSION NO--AP0134120

UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0134120

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HYDROLYSIS OF MOCL SUB5 WAS
STUDIED IN CCL SUB4 WITH CAREFULLY CONTROLLED H SUB2 O VAPOR SUPPLY.
MOOCL SUB3, INSOL. IN CCL SUB4 PPTD. DURING THE HYDROLYSIS.

UNCLASSIFIED

1/2 028 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--PROPERTIES OF COMPOUNDS FORMED BY MOOCL SUB4 WITH BENZENE AND
TOLUENE -U-
AUTHOR-(03)-GLUKHOV, I.A., YELISEYEV, S.S., NARZIKULOVA, R.M.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK TADZH. SSR 1970, 13(1), 32-5
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--THERMAL STABILITY, MOLYBDENUM COMPOUND, BENZENE, TOLUENE,
THERMAL ANALYSIS, IR SPECTRUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/1124 STEP NO--UR/0425/70/013/001/0032/0035
CIRC ACCESSION NO--AT0119978
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

2/2 028

CIRC ACCESSION NO--AT0119978

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERMAL STABILITY AND HYDROLYSIS OF C SUB6 H SUB4 (MOOCL SUB3) SUB2 (I) AND MEC SUB6 H SUB4 MOOCL SUB3 (II) WERE INVESTIGATED BY DTA AND IR SPECTRA. TO PREP. I AND II MOOCL SUB4 WAS DISSOLVED IN BENZENE OR TOLUENE, AND EXCESS SOLVENT REMOVED BY MODERATE HEATING TO CONST. WT. AFTER HEATING AT 550DEGREES IN VACUUM, NO CHANGE WAS OBSD. IN THE APPEARANCE AND ANAL. COMPN. OF I, BUT NEW IR BANDS CORRESPONDING TO BENZENE WERE OBSD. TWO STEP DECOMP., AT 170 AND 264DEGREES, WAS FOUND BY DTA. II IS STABLE IN VACUUM UP TO 175DEGREES, DETA SHOWS AN ENDOTHERMAL EFFECT AT 162DEGREES. BOTH I AND II HYDROLYZE TO MOD SUB4 PRIME2NEGATIVE, CL PRIME NEGATIVE AND AN ORG. RESIDUE WITH IR BENZENE RING VIBRATIONS. BOTH I AND II AS WELL AS THEIR ORG. HYDROLYTIC PRODUCTS ARE AMORPHOUS TO X RAYS. IR BANDS ARE TABULATED AND COMPARED WITH THOSE OF RELATED COMPS. FACILITY: INST. KHIM- DUSHANBE, USSR.

UNCLASSIFIED

1/2 014
UNCLASSIFIED
PROCESSING DATE--30OCT70
TITLE--REACTION OF MOLYBDENUM OXYCHLORIDE WITH NATURAL TITANIUM COMPOUNDS
-U-
AUTHOR--(04)-YELISEYEV, S.S., GLUKOV, I.A., VOZHDAYEVA, YE.YE.,
NARZIKULOVA, R.M.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK. TADZH. SSR, 1970, 13,2, 33-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--MOLYBDENUM COMPOUND, CHLORIDE, TITANIUM COMPOUND, CHEMICAL
REACTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1996/0990 STEP NO--UR/0425/70/013/002/0033/0036
CIRC ACCESSION NO--AT0118155
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 014

CIRC ACCESSION NO--AT0118155

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

ABSTRACT. THE REACTION OF POWD. ILMENITE WITH MOOCL SUB4 IN A SEALED AMPULE ON HEATING IS FETIO SUB3 PLUS 3MOOCL SUB4 EQUALS TICL SUB4 PLUS 3MO SUB2 CL SUB2 PLUS FECL SUB2. IN THE UPPER PART OF THE AMPULE (COOLED WITH H SUB2 O) TICL SUB4, AND MOO SUB2 CL SUB2 CONDENSED. AT 140-220DEGREES THE AMT. OF FECL SUB4 AND TICL SUB4 INCREASED RAPIDLY WITH THE TEMP. THE UNREACTED, DRY RESIDUE DECREASED LINEARLY AS THE TEMP. INCREASED. IN THE REACTION TIO SUB2 PLUS 2WOCL SUB4 THE PRODUCT WO SUB2 CL SUB2 REMAINED IN THE RESIDUE. THIS RETARDED THE REACTION, SO THAT BELOW 220DEGREES ONLY 27-30PERCENT OF TIO SUB2 REACTED.

FACILITY: INST. KHIM., DUSHANBE, USSR.

UNCLASSIFIED

Acc. Nr.

APO053883

Abstracting Service:
CHEMICAL ABST. 6/70

Ref. Code

4R 0028

YELISEYEV S.S.

117248q Reaction of rhenium trioxide with molybdenum
oxytetrachloride and tungsten oxytetrachloride. Glukhov, I.
A.; Eliseev, S. S.; El'manova, N. A. (Inst. Khim., Dushanbe,
USSR). *Zh. Neorg. Khim.* 1970, 15(2), 305-8 (Russ). At
150-200°, ReO_3 reacts with $MOCl_4$ (M = Mo or W) to form ReO_2 -
 Cl_2 and MO_2Cl_2 . On standing, ReO_2Cl_2 disproportionates to
 $ReOCl_3$ and ReO_3 .
HMJR

REEL/FRAME
19830960

PN.

18

Acc. Nr:

AP0053884

Abstracting Service:
CHEMICAL ABST. 6-70

Ref. Code:

4R0078

S.S. YELISEYEV

~ 117299g Exchange reactions in a molybdenum trioxide-tungsten oxytetrachloride system. Glukhov, I. A.; Eliseev, S. S. (Inst. Khim., Dushanbe, USSR). *Zh. Neorg. Khim.*: 1970, 15(2), 309-12 (Russ). At 100-250°, the metathetic reactions of the MoO₃-WOCl₄ system depend on concns. of starting materials. At MoO₃:WOCl₄ ratios of 1:2 or 2:1 the products are MoOCl₄ + WO₂Cl₂ or WO₃ + MoO₂Cl₂, resp. HMJR 1

pc

1/1

REEL/FRA
19830961

18

Acc. Nr.

AP0053883

Abstracting Service:
CHEMICAL ABST. 6/70

Ref. Code

4R 0078

YELISEYEV S.S.

117248q Reaction of rhenium trioxide with molybdenum oxytetrachloride and tungsten oxytetrachloride. Glukhov, I. A.; Eliseev, S. S.; El'nanova, N. A. (Inst. Khim., Dushanbe, USSR). *Zh. Neorg. Khim.* 1970, 15(2), 305-8 (Russ). At 150-200°, ReO_3 reacts with MOCl_4 (M = Mo or W) to form ReO_2Cl_2 and MO_2Cl_2 . On standing, ReO_2Cl_2 disproportionates to ReOCl_4 and ReO_2 .
HMJR

REEL/FRAME
19830960

P.N.

18

USSR

14

UDC: 621.384.639

ABROSIMOV, N. K., ALKHAZOV, D. G., DMITRIYEV, S. P., VELISEYEV, V. A.,
 KAMINKER, D. M., KULIKOV, A. V., MIRONOV, Yu. T., MIKHEYEV, G. F.,
 RYABOV, G. A., CHERNOV, N. N., SHALMANOV, V. I., KOMAR, Ye. G., MALY-
 SHEV, I. F., MONOSZON, I. A., PEREGUD, V. I., ROZHDESTVENSKIY, B. V.,
 ROYFE, I. M., SEREDENKO, Ye. V., Physicotechnical Institute imeni A. F.
 Ioffe, Academy of Sciences of the USSR, Leningrad, Scientific Research
 Institute of Electrophysical Equipment imeni D. V. Yefremov, Leningrad

"The Leningrad Synchrocyclotron for a Proton Energy of 1 GeV"
 Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 41, No 9, Sep 71, pp 1769-1775

Abstract: The paper describes the synchrocyclotron at the Physicotechnical
 Institute imeni A. F. Ioffe of the Academy of Sciences of the USSR for a
 proton energy of 1 GeV. Proton beam parameters as well as the characteristics
 of the main systems of the accelerator are presented. The beam channels are
 described, and the layout of the accelerator building is given. The installa-
 tion has been in successful operation since 1970. Three tables, two figures,
 bibliography of twelve titles.

1/1

USSR

UDC: 621.374.322:62-752.6

YELISEYEV, V. G., PIVOVAROV, A. N., AKIMOV, V. F.

"Stabilization of the Load of a Binary-Decimal Counter"

Mekhaniz. i Avtomatiz. Upr. Nauch-Proizv. Sb. [Mechanization and Automation of Control, Scientific-Production Collection], No 5, 1971, pp47-50 (translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 3, 1972, Abstract No 3 A365 from the resume)

Translation: The distribution of load between the outputs of a counter connected to the inputs of a decoder is analyzed. Using a binary-decimal counter as an example, the authors show the influence of the sequence of code states of distribution of load and the possibility of improvement of the evenness of distribution of load by optimization of the connections between the counter and decoder, considering the code characteristics of each state (number) written in the counter. 2 figures; 2 references.

1/1

USSR

UDC 681.3

YELISEYEV, V. G., PIVOVAROV, A. N.

"Study of Tabular Method in Solution of Certain Problems of Residual Class Notation"

Probl. Tekhn. Elektrodinamiki, [Problems of Engineering Electrodynamics--Collection of Works], No. 24, Kiev, Nauk. Dumka Press, 1970, pp 178-180, (Translated from Referativnyy Zhurnal Kibernetika, No 5, 1971, Abstract No. 5V607, by the authors).

Translation: Problems are studied for decoding the states of a system for coding pulses, represented by counters with numbers of positions which are mutually simple in pairs. Due to the possibility of performing arithmetic operations digit by digit and the absence of number carrying, parallel ring counters have significantly higher speed than series binary and decimal counters. A table of mutually simple basis is presented for decoding of the states of parallel ring counters and the method of its composition is described.

USSR

UDC 621.385

YELISEYEV, V.I., and PRESNYAKOV, I.N.

"Control Device for TBPM 16/1200 Using Semiconductor Devices"

Vestn. Khar'kov. politekhn. in-ta (Herald of Khar'kov Polytechnic Institute), 1971, No 54, pp 82-85 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 1, Jan 72, Abstract No 1A446 by B. U.)

Translation: Signals generated in the TBPM 16/1200 synchro generator go to a control pulse shaping unit, in which pulses are shaped according to amplitude, shape, and duration and then go to a decoder. On the other hand, a potential level shaping unit sends to the decoder voltages fixed in value corresponding to the state of the dynamic flip-flops in the counter decade. The decoder generates a pulse coinciding in time with a certain digit on the TBPM 16/1200 digital drum, located opposite the printing hammer. This pulse triggers the current pulse shaping circuit in the printing unit. The current pulse, going to a certain electromagnet of the hammer, causes its actuation. A pulse is formed to run the paper at the moment when there is no printing. This pulse goes to the paper transport unit, where a current pulse is formed, causing actuation of the TBPM 16/1200 step mechanism. 3 illustrations. Bibliography with 3 titles.

1/1

USSR

UDC 621.374

YELISEYEV, V. K., LITVINCHUK, N. I.

"Problems of Accuracy and Reliability Arising During Technical Planning and Design of Digital Automata without Memory"

Kiev, Kibernetika i Vychislitel'naya Tekhnika, Tochnost' i Nadezhnost' Kiberneticheskikh Sistem, No 10, 1971, pp 58-64.

Abstract: Problems connected with considering the characteristics of real logical elements when planning and designing combination circuits are classified. A general approach to the solution of these problems is proposed on the basis of the theory of statistical solutions. A real combination circuit is interpreted as a digitalized analog device for this purpose. A mathematical model of a real digital automaton without memory, the problems of investigating the mathematical model of the real automaton without memory, problems of investigating the accuracy and reliability of a real digital automaton without memory from the point of view of the general theory of statistical solutions, the problem of optimization of efficiency with respect to accuracy and reliability indexes and the initial prerequisites required to solve the investigated problems of accuracy and reliability are discussed. The problems of investigating the mathematical model include 1) investigation of systematic, nonrandom distortions of physical signals in a real automaton; 2) study of the

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USSR

YELISEYEV, V. K., Kibernetika i Vychislitel'naya Tekhnika, Tochnost' i Nadezhnost' Kiberneticheskikh Sistem, No 10, 1971, pp 58-64

behavior of a real automaton with random nature of the input signals; 3) analysis of the behavior of a real automaton when the parameters of the parts of its logical elements vary randomly; 4) study of the behavior of an automaton in time in connection with the presence of random irreversible failures of the parts of the elements; 5) analysis of the functioning efficiency; 6) optimization of the efficiency of functioning of automata. The proposed procedure can be used as a basis for constructing an algorithm for machine design of combination circuits. The presented arguments were taken into account when developing the simulation algorithm for designing combination integral circuits made of MOS-transistors [N. I. Litvinchuk, Tr. seminaru Konstruirovaniye tekhnicheskikh sredstv kibernetiki, No 1, Publishing House of the Cybernetics Institute of the Ukrainian SSR Academy of Sciences, Kiev, 1971].

2/2

- 2 -

Heat, Combustion, Detonation

UDC 662.997

USSR

YELISEYEV, V. N., USMANOV, YU. U., Physicotechnical Institute,
Academy of Sciences, Uzbek SSR imeni S. V. Starodubtsev

"Some Problems Concerning Simulation of the Thermal Regime of
a Solar Reservoir"

Tashkent, Geliotekhnika, No 5, 1970, pp 42-46

Abstract: For regions with a large number of sunny days in the year, a cheap method of converting solar energy into thermal energy is the use of special reservoirs with an artificial density gradient with respect to depth. This density gradient is effected by means of several horizontal layers, in which the concentration of salt increases with depth; when the reservoir is heated by sunshine, each successively deeper layer becomes hotter than the one above it. In an experiment conducted with a reservoir with dimensions of 25 x 5 meters, a maximum temperature of 94° C was attained at a depth of 80 cm. In order to ascertain the economic justifiability of using this heat-storage method, experiments were conducted on small models of a reservoir

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USSR

YELISEYEV, V. N., et al, Geliotekhnika, No 5, 1970, pp 42-46

of this type. Simulation of the thermal regime of a reservoir permits rapid and sufficiently precise determination of the influence of numerous factors upon it in any combination. Such tests are described in the article. 2 figures, 6 bibliographic entries.

2/2

- 30 -

USSR

UDC: 532.526.2

YELISEYEV, V. I., Dnepropetrovsk

"On the Theory of a Boundary Layer With Suddenly Changing Boundary Conditions"

Moscow, Izv. AN SSSR: Mekhanika Zhidkosti i Gaza, No 4, Jul/Aug 72, pp 58-64

Abstract: A sudden change in boundary conditions leads to violation of the basic hypotheses of boundary layer theory. However, this violation shows up in a region whose characteristic dimension is commensurate with the thickness of the boundary layer, and this region influences the main flow only when quantities which vanish to the second order are taken into consideration. This makes it possible to examine problems with local singularities within the framework of boundary layer theory, but all the same requires development of other methods of solution based on splicing solutions found in adjacent regions. In this paper, the method of spliceable asymptotic expansions (Van Dyke, M., "Perturbation Methods in Fluid Mechanics", Moscow, Mir Publishers, 1967) is used to construct solutions in the boundary layer for potential flow $U=cx^m$.

1/1

1/2 040 UNCLASSIFIED PROCESSING DATE--02 OCT 70
TITLE--SYNTHESIS, STRUCTURE, AND BEHAVIOR OF POLYMERS OF THE METHYL
ISOPRENE CARBOXYLATE OBTAINED BY ANIONIC AND RADICAL POLYMERIZATION -U-
AUTHOR--(05)-ARBUZOVA, I.A., YEFREMOVA, V.N., YELISEYEVA, A.G., NIKITIN,
V.N., SIDOROVICH, A.V.
COUNTRY OF INFO--USSR

SOURCE--VYSOKUMOL. SOEDIN., SER. A 1970, 12(3), 697-704

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--ISOPRENE, CARBOXYLIC ACID ESTER, POLYMERIZATION, LOW
TEMPERATURE EFFECT, ORGANOLITHIUM COMPOUND, POLYMER STRUCTURE, PHASE
TRANSITION, IR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1992/0311

STEP NO--UR/0459/70/012/003/0697/0704

CIRC ACCESSION NO--AP0111505

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--02OCT70

2/2 040

CIRC ACCESSION NO--AP0111505

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

ABSTRACT. THE ANIONIC POLYMN. OF H SUB2
C:CHCME:CHCU SUB2 ME (I), CARRIED OUT AT NEGATIVE 60 DEGREES TO
NEGATIVE 70 DEGREES IN PHME SOLN. CONTG. 0.02 MOLE-L. BULI GAVE 80 PERCENT
I POLYMER (II) IN LESS THAN OR EQUAL TO 60 MIN. THE FREE RADICAL BULK
POLYMN. OF I IN THE PRESENCE OF 0.2 WT. PERCENT (ON I) BZ SUB2 O SUB2
REQUIRED 90 HR AT 60-80 DEGREES TO GIVE 75-8 PERCENT I POLYMER (IIA).
HEATING THE AMORPHOUS IIA CONVERTS IT TO A CRYST. FORM. I IS CRYST. AT
ROOM TEMP. BOTH II AND IIA HAVE A PHASE TRANSITION POINT AT 90 DEGREES
AND GLASS POINT AT 20 DEGREES. BY IR SPECTROSCOPY THEY BOTH HAVE 1,4
TRANS CONFIGURATION.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--03JUL70

TITLE--REACTION OF PENTACHLOROPYRIDINE WITH ORGANOMAGNESIUM COMPOUNDS -U-

AUTHOR--IVASHCHENKO, YA.N., MOSCHITSKIY, S.G., YELISEYEVA, A.K.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GEFEKTSIKL. SVEEN. 1970, (1), 58-9

DATE PUBLISHED--70

2
5
12

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHLORINATED ORGANIC COMPOUND, PYRIDINE, ORGANOMAGNESIUM COMPOUND, NICOTINIC ACID, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PRECY REEL/FRAE--1980/1700

STEP.NC--UR/C409/70/000/001/0058/0059

CIRC ACCESSION NO--APCC49782

UNCLASSIFIED

Acc. Nr:

AP0049782

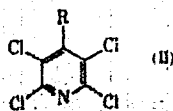
Abstracting Service:

CHEMICAL ABST. 5-70

Ref. Code:

UR0409

100451c Reaction of pentachloropyridine with organomagnesium compounds. Ivashchenko, Ya. N.; Moshchinskii, S. D.; Eliseeva, A. K. (Inst. Org. Khim., Kiev, USSR). *Khim. Geteroatsikl. Soedin.* 1970, (1), 58-9 (Russ). A soln. of 17.5 g pentachloropyridine (I) in 100 ml mixt. of abs. tetrahydrofuran and Et₂O was added dropwise to MeMgI (from 2.4 g Mg and 14 g MeI) in Et₂O and the mixt. heated 2 hr at 50-60° to give 35% 2,2',3,3',5,5',6,6'-octachloro-4,4'-bipyridine, m. 247-8° (EtOH), and 4-methyl-2,3,5,6-tetrachloropyridine (II, R = Me) (IIa). IIa was also obtained, by gradually heating 2.75 g 2,3,5,6-tetrachloropyridine-4-acetic acid 1 hr at 200°, in 95% yield. Similarly prepd. were II (R, b.p./mm, m.p., and % yield given): Me,



90°/0.02, 89-90° (EtOH + H₂O), 25; Et, 93°/0.02, 67-8° (AcOH + H₂O), 85; Pr, 94-5°/0.02, —, 62; Bu, 100°/0.07, —, 68; PhCH₂, 165°/0.15, 105-7° (EtOH), 42. To 1.15 g IIa in 30 ml H₂O at 80-90° was gradually added 1.5 g KMnO₄ during 30 hr to give 0.2 g 2,3,5,6-tetrachloroisonicotinic acid, m. 220-2° (H₂O).
S. K. Banerjee

REEL/FRAME

19801700

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Acc. Nr: AP0047354

Ref. Code: UR0589

PRIMARY SOURCE: Vestnik Khirurgii/imeni I. I. Grekova, 1970,
Vol 104, Nr 1, pp 44-48

LATE RESULTS AFTER CONSTRUCTION OF VASCULAR ANASTOMOSES
IN PATIENTS WITH PORTAL HYPERTENSION

Yeliseyeva, G. P.

Late results were studied in 39 patients with portal hypertension, in whom vascular anastomoses were constructed. The postoperative terms were from 1 to 11 years. The best and reliable means of prophylaxis and treatment of massive hemorrhages from esophageal varices were direct portacaval anastomoses. In 25 patients with this type of anastomosis there were no cases of recurrent hemorrhage in the late postoperative period. However, encephalopathy noted in 8 patients was not an infrequent complication, it being noted more frequently after an end-to-side anastomosis. In patients after splenorenal anastomosis encephalopathy was not observed, but in 3 of 10 patients the recurrent hemorrhage was noted. Patients with vascular anastomosis in hepatic cirrhosis could not be considered absolutely sound, since functional hepatic tests show no tendency to improvement especially protein and prothrombin—formation functions. After vascular anastomoses patients need dispensary control and supporting therapeutic measures.

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REEL./FRAME

19790880

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Acc. Nr: *AP0051953*

Ref. Code: *UR 0219*

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i Meditsiny, 1970 / Vol *69*, Nr *2*, pp *63-66*

IMMUNE RESPONSE OF THE REGIONAL LYMPH NODE CELLS AGAINST THE BACKGROUND OF THE EFFECT PRODUCED BY 5-OXYTRYPTOPHAN AND 3,4-DIOXYPHENYLALANINE

L. V. Devono, L. S. Yeliseyeva (Korovina)

Institute of Physiology of the Academy of Sciences of the USSR (Novosibirsk)

Tests conducted on mice revealed that multiple daily administration of 50 mg/kg of 5-oxytryptophan (5-HTP) by the intraperitoneal route led to the diminution of cells producing antibodies to the bovine serumal albumin. Analogous effect was also achieved with a single introduction of this substance in the same dose, deposited at the site of its administration. An increase of the dose up to 100 mg/kg reduced not only the number of producing cells, but also brought down the amount of the antigen sorbed by the cell. Introduction of 3,4-dioxyphenylalanine was followed by stimulation of the immunogenic process, finding its expression in the rise of the producing cell number. This effect is age-qualified.

REEL/FRA
19820440

2/12

USSR

UDC 632.952.543

MAKAROVA, S. V., and YELISEYEVA, M. A., All Union Scientific Research Institute of Chemical Plant Protective Agents

"Analysis of Fentiuran"

Moscow, Khimiya, v Sel'skom Khozyaystve, Vol 10, No 9 (119), 1973, pp 40-42

Abstract: An analytical method has been developed for determination of the content of tetrazethylthiuran disulfide [TMTD], for the gamma isomer of HCH [hexachlorocyclohexane] and for copper 2,4,5-trichloropholate [TCP] in the combined fungicide for grain -- fentiuran. TMTD is determined after decomposition of fentiuran with phosphoric acid in presence of ethylenediamino-tetraacetic acid tetranitrate to CS_2 , which is then absorbed with methanolic KOH solution and the xanthogenate formed is titrated with a solution of iodine. The gamma isomer of HCH is determined by the hydrolyzable chlorine after preliminary extraction with petroleum ether. The TCP content is calculated from the copper levels obtained iodometrically after mineralization of the preparation and digestion of the combusted residue.

1/1

172 039 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--CHELATE ADSORBENTS BASED ON AMINOPOLYSTYRENE AND RESORCINOL AZO
DERIVATIVES -U-
AUTHOR--(03)-YLLISFYEVA, D.P., SAVVIN, S.B., GRACHEVA, R.F.
COUNTRY OF INFO--USSR
SOURCE--ZH. ANAL. KHIM. 1970, 25(1) 45-8
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--RESORCINOL, CHELATE COMPOUND, ADSORPTION, FORMALDEHYDE,
ORGANIC NITRO COMPOUND, AMINE, STYRENE, POLYMER, COPPER, NIOBIUM,
URANIUM, LANTHANUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/0300 STEP NO--UR/0075/10/025/001/0045/0048
CIRC ACCESSION NO--AP0111494
UNCLASSIFIED

4-(2-NETAARSENATOPHENYLAZO)RESORCINOL, OR 4-(2-PYRIDYLAZO), RESORCINOL
GAVE IV (R IS H, PH, 2-HYDROXYPHENYL, 2-NETAARSENATOPHENYL, OR
2-PYRIDYL, RESP.). ALL IV CHELATE METALS AND CAN BE USED AS THE
SELECTIVE ADSORBENTS FOR CU, U, NB, AND LA. THE ADSORPTION OF THESE
METALS VARIES WITH THE PH IN A DIFFERENT MANNER FOR ALL IV. IV (R
EQUALS 2-PYRIDYL) ADSORBS 90PERCENT CU AND NB FROM N HCL WHILE UO SUB2
AND LA ARE NOT ADSORBED; IV (R EQUALS H) ADSORBS SIMILAR TO 100PERCENT
NB AT PH 1 WHILE CU IS NOT ADSORBED.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--20NOV70
 TITLE--POLAROGRAPHIC STUDY OF THE ENERGY METABOLISM OF DOG LUNG
 MITOCHONDRIA IN THE CCLD -U-
 AUTHOR-(104)-YELISEYEVA, S.V., KOTOVA, YE.N., KABINOVICH, YU.YA.,
 CHECHULIN, A.S.
 CCOUNTRY OF INFO--LSSR
 SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(3), 705-7
 DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--POLAROGRAPHY, DOG, LUNG, MITOCHONDRION, METABOLISM,
RESPIRATION, PHOSPHORYLATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3005/1663

STEP NO--UR/0020/70/191/003/0705/0707

CIRC ACCESSION NO--AT0133568

UNCLASSIFIED

2/2 039 UNCLASSIFIED PROCESSING DATE--02OCT70
 CIRC ACCESSION NO--AP0111494
 ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE NITRATION OF POLYSTYRENE (MOL.

2/2 029

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0133568

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FRESHLY ISOLATED DOG LUNG MITOCHONDRIA CONSUMED O FOR UP TO 3 DAYS UNDER ALL BASIC METABOLIC CONDITIONS WITH RESPIRATORY CONTROLS (LARDY-WELLMAN) OF THE ORDER OF 2.6. THE ADP-O PHOSPHORYLATION COEFF. FOR SUCCINATE WAS ABOUT 2.7, CONSIDERABLY HIGHER THAN THE P-O PHOSPHORYLATION COEFF. CITED IN EXISTING LITERATURE FOR LUNG HOMOGENATES AND MITOCHONDRIA. PRESERVATION OF THE LUNG AT 20DEGREES FOR 1 DAY DID NOT MATERIALLY AFFECT MITOCHONDRIAL BEHAVIOR, BUT IN 2 DAYS DISTURBED METABOLISM APPEARED IN THE CHAIN OF ENERGY ACCUMULATION, INDICATED BY DOUBLING OF THE PHOSPHORYLATION TIME, ALTHOUGH THE CAPABILITY FOR PHOSPHORYLATION OF ADDED ADP WAS MAINTAINED. IN 3 DAYS MATERIAL DAMAGE TO PHOSPHORYLATION AND OXIDN. WAS EVIDENT. FACILITY: MOSK. MED. INST. IM. SECHENOVA, MOSCOW, USSR.

UNCLASSIFIED

Acc. Nr: AP0052066 Y

Ref. Code: UR0396

PRIMARY SOURCE: Patologicheskaya Fiziologiya i
Eksperimental'naya Terapiya, 1970, Vol 14,
Nr 1, pp29-33

OXYGEN TENSION IN THE WALL OF THE STOMACH, SMALL AND LARGE
INTESTINE UNDER NORMAL AND PATHOLOGICAL CONDITIONS

A. P. Krendal', I. M. Epshtayn, S. V. Yeliseyeva

A total of 36 acute experiments were carried out on cats. Using a copper amalga-
mated electrode pO_2 was determined in the wall of the stomach, small and large inte-
stine. The highest initial pO_2 level was found in the wall of the small intestine, and
the lowest — in the large intestine, the stomach occupying an intermediary position.
Under pathological conditions (hyper- and hypoxia, hypervolemia, ischemia) alteration
of pO_2 level in the wall of the small intestine considerably exceeded these changes in
the wall of the stomach and large intestine. The fall of pO_2 caused by blood letting and
ligation of the vessels can be compensated by giving pure oxygen to inhale. Different
conditions of oxygen supply of the stomach and intestine are apparently conditioned
by peculiarities attending the blood supply and the metabolism of these organs.

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REEL / FRAME
19820604

44 2

Epidemiology

USSR

UDC 616.621.5-036.33+576.858.75

IL'INA, T. S., DZHALALOV, KH. D., VARSANOVA, YE. TA., YELISEYEVA, T. S., SEMIKHANIDU, L. G., and KIRGIZOVA, T. M., Laboratory of Virology, Scientific Studies Institute of Epidemiology, Microbiology, and Infectious Diseases

"Epidemiological Characteristic of Three Epidemics of Flu Produced by the A₂ Hong Kong Virus"

Tashkent, Meditainskiy Zhurnal Uzbekistana, No 8, Aug 73, pp 68-73

Abstract: Since the appearance of the A₂ Hong Kong flu virus in January, 1969, in Tashkent, there have been three epidemics. Although the epidemics were similar in a general way, each exhibited particular features of the spread of infection, age of those infected, change with time and season of the year, and immunological characteristics toward various serums. The studies indicated that the cycles of flu produced by the A₂ Hong Kong-68 flu virus showed a tendency toward a gradual damping of the epidemic process, which is expressed in a decrease in the intensity of subsequent epidemics, in the reduction in the severity of the disease, in a decrease in infectiousness among adults, but an increase among young children, and in a general increase in immunity.

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1/2 038

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--EFFECTS OF FUNCTIONAL GROUPS OF VARYING CHEMICAL NATURE OF THE FILM FORMING PROPERTIES OF ACRYLIC POLYMERS -U-

AUTHOR-(02)-GERBER, V.D., YELISEYEVA, V.I.

COUNTRY OF INFO--USSR

SOURCE--LAKOKRASOCH., MATER. IKH PRIMEN. 1970, (1), 4-6

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--ACRYLATE, PLASTIC FILM, ACRYAMIDE, ACRYLONITRILE, METHACRYLIC ACID, POLYMERIZATION, MOISTURE MEASUREMENT, MAGNESIUM, METAL COATING, METAL CORROSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0688

STEP NO--UR/0303/70/000/001/0004/0006

CIRC ACCESSION NO--AP0119596

UNCLASSIFIED

2/2 038

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119596

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COPOLYMN. OF BU METHACRYLATE WITH METHACRYLAMIDE, METHYLOLMETHACRYLAMIDE (I), ACRYLONITRILE, GLYCIDYL METHACRYLATE (II), DIMETHYLAMINOETHYL METHACRYLATE (III), OR METHACRYLIC ACID (IV) IN MEDH-PHME MIXT. CONTG. BZ SUB2 O SUB2 OR AZOBISISOBUTYRONITRILE AT 70DEGREES GAVE POLYMERS WHICH HAD PRACTICALLY IDENTICAL MAIN CHAINS, BUT DIFFERENT SIDE GROUPS. ALL OF THE SIDE GROUPS EXCEPT CN INCREASED THE TENSILE STRENGTH AT BREAK OF THE POLYMER FILMS. MEQ, AMIDE, CO SUB2 H, AND GLYCIDYL GROUPS INCREASED THE ADHESION OF THESE POLYMERS TO METALS. THE PRESENCE OF 5 MOLE PERCENT III IN THE POLYMER INCREASED MOISTURE ADSORPTION FROM THE AIR AT 98PERCENT RELATIVE HUMIDITY 60 FOLD (FROM 0.1 TO 6PERCENT); 5PERCENT I INCREASED MOISTURE ADSORPTION 1 FOLD. THE CORROSION OF MG COATED WITH THE POLYMERS DECREASED IN THE FOLLOWING SUBSTITUENT SERIES: II SMALLER THAN IV SMALLER THAN I SMALLER THAN III.

UNCLASSIFIED

USSR

UDC: 621.315.592

VINOGRADOVA, M. N., DRABKIN, I. A., YELISEYEVA, Yu. Ya., and
NEL'SON, I. V.

"Optical Characteristics of p-Type $Pb_{1-x}Mn_xTe$ Solid Solutions"

Leningrad, Fizika i tekhnika poluprovodnikov, No 8, 1972, pp 1478-1482

Abstract: The work described by this paper is the investigation of infrared reflection and absorption spectra in solid solutions of $Pb_{1-x}Mn_xTe$, with the purpose of explaining the energy structure of these alloys. The reflection spectra were measured with specimens having various carrier concentrations and with an Mn concentration of up to 9% at 300° K, and such spectra are plotted for alloys in which $x = 0.03, 0.06, 0.09$ with identical Hall concentrations. The absorption spectra were obtained for polycrystalline specimens of $Pb_{0.95}Mn_{0.05}Te$ and $Pb_{0.9}Mn_{0.1}Te$ and are reproduced as well. It is found that the introduction of Mn into $Pb_{1-x}Mn_xTe$ alloys leads to a change in the respective positions of light and heavy hole zones, and that the structure of the alloys' valent zones differs substantially from those of PbTe.

1/1

USSR

UDC 539.3:534.1

BOLOTIN, V. V., YELISHAKOV, I. B., Moscow

"Random Vibrations of Elastic Shells Containing an Acoustic Medium"

Moscow, Izvestiya Akademii Nauk SSSR, Mekhanika Tverdogo Tela, No 5, 1971, pp 122-130

Abstract: Previously [V. V. Bolotin, Inzh. zh. MTT, No 1, 1968], a study was made of the problem of determining the sound pressure field inside shells undergoing random vibrations. A method was proposed for calculating the correlation functions and the spectral pressure densities in an acoustic environment and also the noise level inside a shell. A significant restriction was introduced in that the surface functions corresponding to the forms of the natural vibrations of the acoustic medium were assumed to coincide with the forms of the natural vibrations of the shell. In the present paper, the method is generalized to a broader class of shells. Two systems of base functions are used simultaneously -- the functions for the shell and for the acoustic medium. Smooth and reinforced circular cylindrical shells with sound insulation are presented as an example. The calculation is performed as applied to vibrations in a pulsating pressure field from a turbulent boundary layer.

1/1

- 137 -

USSR

YELISHAKOV, I. B., KHROMATOV, V. YE., Moscow

"Oscillations of Panels in a Supersonic Flow in the Presence of Random Effects"

Moscow, Izvestiya Akademii Nauk SSSR, Mekhanika Tverdogo Tela, No 1, January-February 1971, pp 54-58

Abstract: This article contains a study of the effect of the velocity of a head-on supersonic flow on the statistical characteristics of the stress-strain state of a cylindrical panel. The external loads are made up of pressure pulsations in a field of random forces which are considered random time-space functions and a pressure perturbation which depends on the deformations of the panel. The results of a numerical analysis are presented for a number of statistical characteristics of normal displacements of the panel as a function of the Mach number. The effect of the perturbed pressure and mutual correlations of the generalized coordinates is estimated. The method described by Bolotin in "Stochastic Boundary Problems in Plate and Shell Theory" -- the method of canonical expansions -- was used to solve the equations of the stochastic problem.

A numerical example is described and the results of calculating the statistical characteristics on the BESM-4 computer are presented in the form
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USSR

YELISHAKOV, I. B., et al., Izvestiya Akademii Nauk SSSR, Mekhanika Tverdogo Tela, No 1, January-February 1971, pp 54-58

of graphs. From the results of these calculations it appears that when considering the regular pressure component the vibration level of the channel is appreciably lower than the level calculated without considering this component. Several possible causes are suggested to explain the drop in vibration level.

2/2

USSR

UDC 621.396.6.049.75.019.3

YELISOV, L. N., KOZLOV, E. S., SERGEYEV, N. P.

"Utilizing Analog Equipment to Estimate the Reliability of Printed Connections"

V sb. Metody mat. i fiz. modelir. i optimiz. parametrov radioelektron. apparatury. No 1 (Methods of Mathematical and Physical Simulation and Optimization of the Parameters of Radio Electronic Equipment. No 2 -- collection of works), Moscow, 1972, pp 123-124 (from RZh-Radiotekhnika, No 7, Jul 72, Abstract No 7V324)

Translation: The problem of estimating the reliability of printed joints is solved as a problem of elasticity theory. The biharmonic fourth-order equation describing the state of equilibrium of the printed structural element is derived which can be solved by electronic simulation. The solution technique using a vibration test unit with vibration sensors is described in general features the signals from which goes to a computer with modules for separating the harmonic component and envelope, an averaging module and a ratio module. The voltage field of the printed structure is obtained at the system output. The bibliography has 2 entries.

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USSR

UDC 51

GORSTKO, A. B., YELISTRATOV, A. D., and KLYUYEV, V. N.

"On Certain Optimization Problems Involving Macroeconomic Models"

V sb. Mat. analiz ekon. modeley. Ch. 3 (Mathematical Analysis of Economic Models. Part 3 -- Collection of Works), Novosibirsk, 1972, pp 34-50 (from RZh-Matematika, No 3, Mar 73, Abstract No 3V577 from the introduction)

Translation: Suppose that planning takes place during an infinite period. Function $f(c(t))$ at each moment of time t characterizes the effect of consumption $c(t)$. On the set of functions $c(t)$ let us define the functional

$$\Phi(c) = \int_0^{\infty} f(c(s)) e^{\alpha s} ds,$$

where $\alpha < 0$ is the discount coefficient. Function $c(t)$ must satisfy certain conditions. A number of extremal problems arise in accordance with these conditions and the assumptions made.

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USSR

UDC: 577.1:615:779

PAVLOVA, L. P., and YELISUYSKAYA, R. V.

"Nervous Function in Animals Chronically Poisoned with Metadiisopropylbenzene"

Tr. Azerb. NII gigiyeny truda i profzabolevaniy (Transactions of the Azerbaidzhan Research Institute of Industrial Hygiene and Occupational Diseases), 1970, No 5, pp 176-179 (from RZh-Biologicheskaya Khimiya, No 10, May 71, Abstract No 10 FI683 by M. Shuster).

Translation: Mice and rabbits were poisoned with the fumes of metadiisopropylbenzene (I) for 5 hours daily for 5 months 5 times a week (concentration of I 1 and 0.2 mg/L). Straight-line movements (after radial acceleration), muscular strength (MS), and duration of enforced swimming were determined in the animals. The acetylcholine (II) concentration and cholinesterase activity were determined in the animals' blood. The rate of restoration of straight-line movements and MS decreased markedly after poisoning with I. After chronic poisoning with I there was a general tendency for cholinesterase activity to decrease. The concentration of II rose during the first few months of poisoning but began to fall beginning with the 3rd month.

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USSR

UDC: 621.892:621.90.025

YELIZAROV, A. I., Engineer, SUVOROV, A. A., Candidate of Technical Sciences, Senior Instructor"

"Cutting Small-Diameter Threads With Low-Frequency Vibrations"

Moscow, Izv. VUZov: Mashinostroyeniye, No 9, 1972, pp 150-153

Abstract: The paper describes an experimental vibration stand designed and built at the Moscow Higher Technical Academy imeni N. E. Bauman for studying the effect of axial audio frequency vibrations (100-800 Hz) on the process of thread cutting. The installation is based on the 2N118 vertical drill. The basic parts are an oil pump station, a slide-valve unit, and a hydraulic amplifier. These elements are shown in the diagram. The installation operates as follows. Oil is pumped under pressure from station 1 to slide-valve unit 2 with rotating valve. The valve is turned by DC motor 3 and directs the oil alternately into the upper and lower cavities of cylinder 4 while simultaneously connecting the opposite cavity to waste. The valve is made in such a way that in one turn there are 20 vibrations of piston 5 whose upper section holds the work-piece. The frequency of vibrations of this piston is controlled by vary-

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USSR

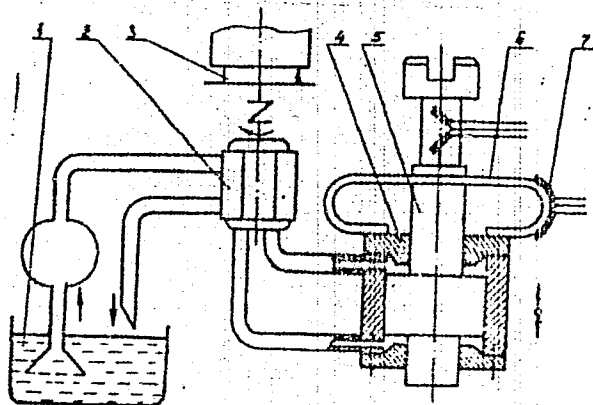
YELIZAROV, A. I., SUVOROV, A. A., Izv. VUZov: Mashinostroyeniye, No 9, 1972, pp 150-153

ing the rpm of the DC motor. Corresponding to every 300 rpm of the motor is another 100 Hz of workpiece vibration. Leaf spring 6 with its upper section securely fastened to the piston is installed on the hydraulic cylinder to fix the piston of the hydraulic amplifier in the middle position and to keep it from turning. Foil strain-gauge resistors 7 are cemented on the neck of the piston and on the spring to register the torque and the vibration amplitude. Curves are given showing torque as a function of vibration frequency for materials which are difficult to machine. It was found that low-frequency vibrations in the axial direction are an effective means of reducing torque and increasing the stiffness of the tap when machining hard materials. The quality of the finished thread is considerably improved by this technique when especially tough materials such as 2Kh13 steel are being machined. Vibrations with a frequency of 400-500 Hz and peak-to-peak amplitude of relative displacement of tap and workpiece of 2-5 μ are recommended for most materials. These data can be taken as a basis for designing an industrial model of the vibration stand, or a vibration chuck.

2/3

USSR

YELIZAROV, A. I., SUVOROV, A. A., Izv. VUZov: Mashinostroyeniye, No 9, 1972, pp 150-153



3/3

USSR

UDC: 621.317.738

YELIZAROV, A. S.

"On the Principles of Designing Instruments for Measuring the Parameters of Nonmutual SHF Two-Terminal -- Pair Networks"

Elektron. tekhnika. Nauchno-tekhn. sb. Kontrol'no-izmerit. apparatura (Electronic Technology. Scientific and Technical Collection. Monitoring and Measuring Equipment), 1970, vyp. 2(20), pp 3-8 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A353)

Translation: The author examines general problems in the technology of measuring the parameters of nonmutual microwave two-terminal -- pair networks. A number of initial assumptions are formulated together with principles for combining direct measurement of any mutual and nonmutual parameter in a single device. The results of this work may be used in developing general-purpose automatic instruments for measuring the parameters of practically all types of coaxial and waveguide two-terminal -- pair networks having both mutual and nonmutual properties. Resumé.

1/1

USSR

UDC 629.114.4:669.14.018.298.2

GULYAEV, A.P., Dr. of Technical Sciences; ZIKKEEV, V.N., Candidate of Techn. Sciences; SKOTNIKOV, V.V., Candidate of Techn. Sciences; KALININ, A.T., Cand. of Techn. Sciences; PROKOP'EVA, I.I., Cand. of Techn. Sciences., and Yelizarov, B.I.

"New Carburizing Steels for Engine Parts of High-Load Capacity Vehicles"

Moscow, Avtomobil'naya Promyshlennost' No 4, Apr 71, pp 37-39

Abstract: Results are presented of an investigation of physical and mechanical properties of the 18KhMFA and 18KhNiMFA steels obtained in electric furnace of 5-ton capacity and rolled into rods 90 and 110-mm in diameter, and intended for manufacturing the transmission box items. The kinetics of austenite transformation at isothermic and continuous cooling, hardenability, brittleness, mechanical properties of steels in carburized and uncarburized state after hardening at 920-950°C in oil and annealing at 180-200°C were studied. The results presented in tabular and graphical form, such as chemical composition, critical points, austenite transformation curves, show two distinct zones of transformation, a ferrite-perlite and a bainite transformations, while the austenite stability in the 18KhNiMFA steel is higher than in the 18KhMFA steel. The microstructures of both steels are similar. The brittleness was evaluated by the cold shortness threshold position, determined by the

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USSR

GULYAEV, A.P., et al, Avtomobil'naya Promyshlennost' No 4, Apr 71, pp 37-39

fracture aspect during serial tests. Both steels satisfy the requirement $T_{50} < - 50^{\circ}$. The comparative tests of various items made of these and other steels, carried out on test stands, confirmed the higher quality of the K18KhNMFA steels over the 15KhGNFA steels.

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USSR

UDC 669.017.1:539.56.001.5

ref 1

ZIKEYEV, V. N., SKOTNIKOV, V. V., GULYAYEV, A. P., ABAKOV, V. T., and
YELIZAROV, B. I.

"Study of Properties of Types 18KhNMFA and 18KhN1MFA Commercially Produced Ex-
perimental Steels"

Spetsial'nyye Stali i Splavy [Special Steels and Alloys--Collection of Works],
No 77, Metallurgiya Press, 1970, pp 207-214

Translation: It is demonstrated that the production, rolling, and heat treatment
of types 18KhNMFA and 18KhN1MFA steels under industrial conditions cause no
difficulties.

The experimental steels are superior in mechanical properties to type
15KhGNFA steel, used for important parts of motor vehicle engines. They have
high brittle rupture resistance and hardenability. 2 figures; 3 tables.

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UDC 621.771.07

USSR

TROFIMOVSKIY, V. A., RUDNITSKIY, L. S., BERKOVSKIY, V. S., YELIZAROV, I. I.,
and AVRUNIN, P. M., Lutuginskiy Plant of Rolling-Mill Rolls; Moscow Insti-
tute of Steels and Alloys; "Dneprospetsstal' Plant," Dnepropetrovsk Metal-
lurgical Institute

"Rolls for Rolling Hard-to-Work Steels"

Moscow, Metallurg, No 1, Jan 71, pp 31-34

Abstract: Rolling-mill rolls from both low-alloy and plain carbon cast iron steels with lamellar graphite, which have been used in the past did not provide proper-quality rolling stock or make possible rhythmic operation of the mills. In recent years extensive use has been made of alloyed quality steels having a higher hardness value and a low rolling temperature range. As a result, the industry faces higher requirements with respect to the wear resistance of passes and over-all service strength. This study involves rolls from cast iron injected with magnesium and cerium with a lower content of chromium, silicon, and phosphorus. Spheroidal graphite and a compact-grained structure stemming from reduced contents of chromium and silicon as well as from injection with magnesium have given the rolls good wear resistance, low

USSR

TROFIMOVSKIY, V. A., et al, Metallurg, No 1, Jan 71, pp 31-34

uniform frictional wear, and surface finish. Low phosphorus (up to 0.28%) and chromium (up to 0.3%) contents provide the required strength since the number of brittle components (carbides) is reduced. The new rolls have been introduced on all break-down and prefinishing stands of the Dnepros-petsstal' Plant. Tables in the original article cite test results of mechanical properties of rolls from magnesium cast iron and cast iron with lamellar graphite as well as comparative data on the resistance of both experimental and ordinary rolls.

2/2

1/2 024 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--THE SYNDROME OF COCCYGOdynIA IN OSTEochondROSIS OF THE LUMBAR
REGION OF THE SPINE -U-
AUTHOR--(04)-YUMASHEV, G.S., YELIZAROV, M.N., VARSHAYICHIK, F.P., FAYZIYEV,
KH.F.
COUNTRY OF INFO--USSR
SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 48, NR 6, PP 116-119
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BONE DISEASE, PAIN, MEDICAL EXAMINATION, DIAGNOSTIC MEDICINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAme--3002/1881

STEP NO--UR/0497/70/048/006/0116/0119

CIRC ACCESSION NO--AP0129241

UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--4P0129241

ABSTRACT/EXTRACT--(U) GP-0-- ABSTRACT. THE CONTROVERSIAL OPINIONS OF SOVIET AND FOREIGN AUTHORS ON THE ORIGIN OF COCCYGEAL PAIN TESTIFY TO THE FACT THAT IT IS STILL INADEQUATELY STUDIED. LITERATURE SOURCES GIVE NO DATA ON THE RELATION OF COCCYGO-DYNIA WITH OSTEOCHONDROSIS OF THE LUMBAR REGION OF THE SPINE. IN 15 (13PERCENT) OUT OF 114 PATIENTS UNDER OBSERVATION COCCYGO-DYNIA WAS OF A SOMEWHAT DIFFERENT CHARACTER THAN THAT DESCRIBED IN OTHER SOURCES. THUS, COCCYGEAL PAIN WAS COMBINED WITH PAIN IN THE LUMBOSACRAL REGION; IT WAS ASSOCIATED WITH MOVEMENTS AND NOTICABLY INTENSIFIED IN INDUCTION OF SYMPTOMS OF STRETCHING THE NERVE TRUNKS. IN SINGLE PURPOSE EXAMINATION OF THE PATIENTS THE AUTHORS DIAGNOSED OSTEOCHONDROSIS OF THE LUMBAR REGION OF THE SPINE. THE DIAGNOSIS WAS CONFIRMED BY MEANS OF EPIDUROGRAPHY AND DISCOGRAPHY. AFTER CONSERVATIVE TREATMENT OF LUMBAR OSTEOCHONDROSIS A SIGNIFICANT IMPROVEMENT OCCURRED IN ALMOST ALL PATIENTS AND THEY RESUMED THEIR WORK. THE AUTHORS ARE OF THE OPINION THAT COCCYGO-DYNIA MAY BE ONE OF THE SYMPTOMS OF OSTEOCHONDROSIS OF THE LUMBAR REGION OF THE SPINE.

FACILITY: KAFEDRA TRAVMATOLOGII I ORTOPEDII I MOSKOVSKOGO MEDITSINSKOGO INSTITUTA IM SECHENOVA, NEVROLOGICHESKOYE OTDELENIYE GORODSKOY KLINICHESKOY BOL'NITSY NO 57 RENTGENODIAGNOSTICHESKIY OTDEL MOSKOVSKOGO NAUCHNO-ISSLED. RENTGENO-RADIOLOGICHESKOGO INSTITUTA I UZBEKSKOGO NAUCHNO-ISSLED. RENTGENO-RADIOLOGICHESKOGO I ONKOLOGICHESKOGO INSTITUTA.

UNCLASSIFIED

1/2 026

UNCLASSIFIED

PROCESSING DATE--20NOV70

TITLE--CERAMIC ARTICLE OF INTRICATE DESIGN -U-

AUTHOR--(031)-KAGANOV, I.R., KOVALEVSKAYA, Z.V., YELIZAROV, N.I.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 267,433

REFERENCE--CIKRYTIYA, IZOBRET., PRIM. OBRAZYSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CHEMICAL PATENT, GRAPHITE, SILICON CARBIDE, CERAMIC
TECHNOLOGY, CERAMIC ENGINEERING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/1778

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

CIRC ACCESSION NO--AAC132044

UNCLASSIFIED

2/2 026

CIRC ACCESSION NO--AA0132044

UNCLASSIFIED

PROCESSING DATE--20NDV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CERAMIC PRODUCTS OF COMPLEX CONFIGURATION WERE PRODUCED FROM COMPONENTS OF SILICIDIZED GRAPHITE BY CEMENTING THEM WITH A MIXT. OF SIC AND WATER GLASS IN A 1:1 RATIO. TO INSURE THE STABILITY OF THE PRODUCTS DURING PROLONGED CONTACT WITH NONFERROUS METAL MELTS, THE CEMENTED PRODUCTS WERE COVERED WITH A COATING CONTG. FE FREE ZRSIO SUB4 AND AN ADDITIVE OF 0.5-10PERCENT H SUB3 SO SUB3 AND WERE FIRED AT GREATER THAN 300DEGREES.

FACILITY: SCIENTIFIC RESEARCH DESIGN CONSTRUCTION INSTITUTE OF MACHINE BUILDING TECHNOLOGY.

UNCLASSIFIED

USSR

UDC: 621.317.53

YELIZAROV, R. S.

"Measuring Losses and Rectifier Ratio in Nonmutual Four-Terminal Networks"

Elektronika. Nauchno-tekhn. sb. Kontrol'no-izmerit. apparatura (Electronic Engineering, Scientific Technical Collection, Control and Measurement Equipment) 1970, No. 3(21), pp 3-14 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3A595)

Translation: Some promising methods for measuring the operating parameters of nonmutual UHF four-terminal networks with ferrites are considered: forward, inverse, total losses, and the rectifier ratio of the four-terminal network. Two variants are proposed for perfecting known measurement systems for forward and inverse losses, as well as a complex automatic device for measuring four-terminal network operating parameters; the characteristic peculiarity of this device is that direct measurement and investigation of the rectifier ratio characteristics are possible. Resume

1/1

USSR

UDC: 519.2

YELIZAROV, Ye. Ya., GONCHAROV, A. N.

"Dynamics of Biocenoses With Regard to Polyphagia"

Kiev, Teoriya optimal'n. protsessov--sbornik (Theory of Optimum Processes--collection of works), 1972, pp 64-71 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V281 by the authors)

Translation: The paper deals with the mathematical model of a biocenosis with one species of predator and several species of prey. It is usually assumed that the rate at which a predator consumes prey of a given species is proportional to the frequency of their encounters; this assumption is confirmed in the case of low concentrations of prey. This paper considers the case of high concentration of prey, where the predator shows selective activity, and its diet begins to be predominated by some of the species of prey which the predator prefers over other species.

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UDC: 66.074.7:546.432:541.46

USSR

KUZNETSOV, Yu. V., YELITZAROVA, A. N., LISITSYN, A. P., FAYZULLIH, F. Z.

"Concerning the Part Played by Ion Exchange in Precipitation of Radium From Sea Water"

Leningrad, Radiokhimiya, Vol 14, No 3, 1972, pp 441-446

Abstract: An investigation was undertaken to determine the extent to which ion exchange is responsible for the accumulation of ^{226}Ra in sediment. Simultaneous direct determinations were made of the absolute concentrations of ^{226}Ra in samples of bottom sediments taken from the Southern and Central sections of the Indian Ocean and from the equatorial section of the Pacific Ocean. The cation-exchange capacity of the same specimens was determined by two independent methods. Analysis of the results shows a direct relationship between cation-exchange capacity of ocean sediments and the ^{226}Ra concentration in these sediments.

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1/2 009
UNCLASSIFIED
PROCESSING DATE--20NOV70
TITLE--SPECTROPHOTOMETRIC STUDY OF PLATINUM COMPLEXES WITH STANNOUS
CHLORIDE -U-
AUTHOR--(02)--MATVIYENKO, L.G., YELIZAROVA, G.L.
COUNTRY OF INFO--USSR
SOURCE--ZH. ANAL. KHIM. 1970, 25(2), 301-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PLATINUM COMPOUND, COMPLEX COMPOUND, TIN CHLORIDE,
SPECTROPHOTOMETRIC ANALYSIS
CENTRAL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3001/0382 STEP NO--UR/0075/70/025/002/0301/0306
CIRC ACCESSION NO--AP0126137
UNCLASSIFIED

2/2 009

CIRC ACCESSION NO--AP0126137

UNCLASSIFIED

PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PT FORMS 2 COMPLEXES WITH SnCl_2 SUB2 AT A PT:SN RATIO OF 1:1 AND 1:2, RESP., IN SOLNS. OF 1-2M CHLORIDES AT A CONST. IONIC STRENGTH OF μ EQUALS 2. IN SOLNS. CONTG. 0.25-0.5M CHLORIDES AT THE SAME IONIC STRENGTH, A COMPLEX WITH A PT:SN RATIO OF 1:2 IS FORMED. THE AV. DIACON. CONST. IN THE 2M HCL MEDIUM EQUALS 1.1 TIMES 10^6 PRIME NEGATIVE AND IN 0.25M HCL 3.7 TIMES 10^6 PRIME NEGATIVE. THE EXISTENCE OF CIS TRANS ISOMERIC FORMS OF THE PT COMPLEX WITH SnCl_2 IS SUGGESTED. THE COEFF. OF MOLAR ABSORPTIVITY AT 310 M μ IS 5 TIMES HIGHER THAN THAT AT 400 M μ , WHICH ENABLES INCREASING THE SENSITIVITY OF THE PHOTOMETRIC DETN. OF PT TO 0.0007 GAMMA-ML. FACILITY: INST. CATAL., NOVOSIBIRSK, USSR.

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USSR

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SHITSKOVA, A. P., YELIZAROVA, O. N., and RYAZANOVA, R. A., Moscow Scientific Research Institute of Hygiene imeni F. F. Erisman

"The Pesticide Cycle in the Environment and Problems of Food Hygiene"

Moscow, Gigiyena i Sanitariya, No 11, 1970, pp 7-10

Abstract: Practical experience with pesticides shows that soil suffers the severest contamination. Organochlorine compounds can be detected in soil long after their initial application, for example, heptachlor and hexachloran are detected after 9-11 years. Trace amounts were found in the lower soil horizons 9-18 months after their initial application, pointing to the possible migration of pesticides via rainwater from upper layers to deeper layers, and their possible entrainment in ground water which is a source of potable water supplies. Soil composition and structure are important in the accumulation of toxic chemicals in rhizomes. For example, the greatest amount of lindane is detected in carrots grown on sandy loam, and the least -- in carrots grown on chernozem soil, though five times more toxic chemicals were applied in the latter case. From our data, potatoes grown in different soils acquired disagreeable organoleptic properties when carbathion was applied in several cases and adversely affected experimental animals.

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USSR

SHITSKOVA, A. P., et al, Gigiyena i Sanitariya, No 11, 1970, pp 7-10

More toxic preparations are in use in treating forest tracts, meadows, and industrial crops, and the amounts applied are being increased. This leads to contamination of forest flora and fauna. To illustrate, after a forest was treated with lindane, the residual amount of the pesticide in grass and leaf samples was 2 mg/kg; in 30-60 days this decreased to 0.2 mg/kg.

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CHEMICAL ABST.

12-69

4R0138

102898g Effect of external conditions on the temperature dependence of the maximum frictional force of rubber with a lubricant along steel. Styran, Z. E.; Elkin, A. L.; Rubman, S. Z.; Voevodskaya, M. V.; Gridunova, E. B. (Mosk. Gos. Pedagog. Inst. im. Lenina, Moscow, USSR). *Kauch. Rezina* 1969, 28(7), 42-5 (Russ). A cube of SKMS-10 (butadiene- α -methylstyrene rubber) was lubricated with a poly(ethylsiloxane) lubricant, brought into contact at 20° with stainless steel, and kept under pressure (P) for a predetd. length of time (t). The max. frictional force (F) required to move the cube along the steel surface with a velocity (V) was then detd. Plots show the change of F with temp. obtained at $V = 100$ mm./min. and $P = 20$ kg./cm.² at -160 to 40°. There is a point at -40° (transition temp., T_i) at which the increase of the temp. does not change F , but the decrease of the temp. increases F to a max. at about -120°. Between -120° and -160°, F decreases. The position of T_i shifts to higher temps. with the increase of P . These observations are partly due to the viscosity (η) changes of the lubricant with temp. and are characterized by Sommerfeld criterion $Z = \eta V/P$. Plots show that the coeff. of friction decreases when Z is < 5 and it increases in the $Z > 5-50$ range. The position of the max. on the F vs. temp. plots is shifted to higher temp. when t is longer. The surface roughness also changes the appearance of the plots.

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Magnesium

USSR

UDC 669.018.29:669.018.672

DRITS, M. Ye., SVIDERSKAYA, Z. A., YELKIN, F. M., and TROKHOVA, V. F.

Sverkhlegkiye Konstruktsionnyye Splavy (Superlight Structural Alloys), Moscow, Izdatel'stvo "Nauka," 1972, 145 pp

Translation of Annotation: This monograph summarizes experimental studies on the structure and properties of magnesium-lithium alloys carried out in the Soviet Union and elsewhere. Systematized data are presented on the nature of the reaction of magnesium with lithium and other elements, as well as the dependence of properties of Mg-Li alloys on their composition, structure, and treatment. Information on the application of superlight alloys in various new branches of technology is also presented.

This monograph is intended for scientists and engineers at scientific research institutes, planning organization, and industrial design institutions dealing with the development, production, and application of light alloys. It may also be useful to teachers and students at higher educational institutions specializing in the metallurgy of light metals.

Translation of Table of Contents:

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DRITS, M. Ye., et al., Sverkhlegkiye Konstruktsionnyye Splavy, Moscow, Izdatel'stvo "Nauka," 1972, 145 pp

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Magnesium

USSR

UDC 669.721*884

VYATKIN, I. P., MUSHKOV, S. V., KECHIN, V. A., and YELKIN, F. M.

"Technological Requirements For the Production of Magnesium-Lithium Alloys"

Moscow, Tsvetnyye Metally, No 6, 1972, pp 43-44

Abstract: Two methods were considered for the preparation of magnesium-lithium alloys. One method required the use of a protective flux consisting of molten lithium chloride and lithium fluoride. It was unacceptable because of many difficulties encountered during the work. The second method uses argon as a protective atmosphere in a 500-kg crucible equipped with a cover. The charge elements are added in the following sequence: at first, a small amount of magnesium ingot with 1.8-2.5% Mn is melted in the crucible at 700° for 4-5 hr, then a high-purity magnesium ingot with not more than 0.005% Na is added at the same temperature, followed by aluminum, zinc, cadmium, and lithium, in that order. The alloy was mixed for 5-15 min after the addition of each alloying element. All metals were added as ingots in order to eliminate impurities, especially Na. Lithium ingots were washed in kerosene at first, wiped up, and dried in air before being placed into the crucible. The whole production process took 9-10 hr. The pouring of the alloy was done at 700-710°C. The alloys (several smeltings) contained
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VYATKIN, I. P., et al., Tsvetnyye Metally, No 6, 1972, pp 43-44

7.79-8.14% Li, 4.64-5.09% Al, 1.42-1.56% Zn, 4.12-4.48% Cd, 0.34-0.39% Mn, and 81% Mg. The concentration of components varied, depending on smelting. Special precautions were taken to exclude Na and chlorides from the alloys.

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USSR

UDC 669.721.5'884:539.4:539.56

GUR'YEV, I. I., YELKIN, F. M., KUDRYASHOV, V. G.

"Dependence of the Mechanical Properties of Magnesium and Binary Mg-Li Alloys on Temperature"

V sb. Struktura i svoystva legk. splavov (Structure and Properties of Light Alloys -- collection of works), Moscow, Nauka Press, 1971, pp 123-127 (from RZh-Metal-lurgiya, No 4, Apr 72, Abstract No 41654)

Translation: A study was made of the effect of alloying Li in the amount of 4, 8, and 14% on the mechanical properties of Mg at test temperatures from -196 to +300°. The increase in Li content in the alloys promotes an increase in plasticity by 5-10 times. The strength decreases by 2-3 times. The increase in the amount of beta-phase with body-centered cubic lattice Li in Mg-Li alloys increases the temperature sensitivity of their strength characteristics. For binary Mg-Li alloys, in contrast to pure Mg, the presence of a plasticity trough at defined test temperatures is characteristic. This indicates the inclination of these alloys toward embrittlement, caused probably by the presence of Na in the alloys. Alloying Mg with lithium essentially reduces the sensitivity of Mg-Li alloys to notching. Three illustrations and a 7-entry bibliography.

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USSR

UDC 541.11

PASECHNIK, V. A., SAMSONOV, G. V., and VEL'KIN, G. B., Institute of High Molecular Compounds, Leningrad, Academy of Sciences USSR

"Thermodynamic Study of Ion-Exchange Equilibrium With Consideration for Solvation in the Ion-Exchange Resin"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 44, No 4, Apr 70, pp 1065-1070

Abstract: A thermodynamic equation has been derived to correlate the constant of ion-exchange equilibrium and the difference of free swelling energy of ion-exchange resins in monoionic forms. The method proposed for analyzing the relation between the selectivity and swelling capacity of ionites is based on a new selection of standard states provided by dehydrated monoionic forms of ion-exchange resins. Use is made of a hypothetical model the admissibility of which for describing real systems may be questionable. The method fails to consider the totality of solvation effects in the exchange resin.

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USSR

UDC 576.851.315.095.1+616-008.97(VIBRIO CHOLERAЕ)

YELKIN, I. I., Moscow Medical Institute imeni I. M. Sechenov

"Cholera Vibrio Survival Time in the Environment and Carrier State"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 5, 1973,
pp 79-83

Abstract: A review of the foreign and Soviet literature on the causative agents of cholera shows that there is no fundamental difference between Vibrio comma and the El Tor vibrio either in survival time in the environment or duration of the carrier state. Study of El Tor epidemics of recent years discloses no evidence that the prolonged vibrio carrier state plays a significant role in spreading or maintaining the disease. The vibrio carrier state is a common phenomenon in the USSR. It varies from region to region, depending on the number of cholera cases, living conditions, educational level of the population, and preventive measures taken by the authorities. Tables list the survival times of cholera vibrios on 25 vegetables and fruits and in seawater, well water, and lake and river water.

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USSR

UDC 614.4

BEZDENEZHNYKH, I. S., and YELKIN, I. I., Institute of Biophysics, Ministry of Health USSR, and First Moscow Medical Institute imeni Sechenov, Moscow

"Prospects for Improving Epidemiological Methods"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 8, Aug 70, pp 3-7

Abstract: A mathematical approach to epidemiology, combined with the traditional methods of observation and experimentation, will facilitate the analysis and prognosis of epidemic processes. Models of important infections can be used to forecast the incidence of a disease, carrier state, and changes in the immunological structure of the population, as well as in the gathering and analysis of information to evaluate an epidemic situation. The introduction of computers promises extensive benefits by permitting continuous observation not only of the course of a disease but also of the timeliness, scope, and quality of preventive measures. Before computers can be used effectively, however, the present disorderly flow of epidemiological information must be systematized.

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USSR

UDC 616.9-036.2-022.375

BEZDENEZHNIK, I. S., and YELKIN, I. I., First Moscow Medical Institute imeni
I. M. Sechenov

"The Effect of Migration and Other Factors on the Intensity of the Course of the
Epidemic Process"

Moscow, Zhurnal Mikrobiologii, Epidemilogii i Immunobiologii, No 7, Jul 70,
pp 5-8

Abstract: In a continuation of a discussion of the epidemic process begun in an
earlier article published in this journal (1969, No. 2), the authors cite a
variety of statistics on some of the factors that are increasing the incidence of
infectious diseases and the likelihood of epidemics. Not only travel between
countries but also migration within countries in assuming enormous proportions.
For example, the number of people transported by railroads in 1966 increased from
248,500,000 in 1913 to 2,450,400,000 in 1966. Automobiles carried 2,048,900,000,000
persons in 1966 (as compared to none in 1913). Intraurban traffic and daily com-
muting are also adverse factors. For example, persons under 30 who spend more
than one hour a day commuting are absent from work because of illness 1-1/2 times
as often as those living within 30 minutes of their jobs. Crowded housing, vast
increases in the number of children attending various institutions, and steady
expansion of restaurants add to the potential threat of intestinal, respiratory,
and other diseases.

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JDC 614.441

USSR

TEPLYAKOV, B. Ya., DROZDOVA, A. A., and YELKIN, I. I., Central Institute of Epidemiology

"Toward a Rational System for Prompt Transmission of Information on the Incidence of Infectious Diseases"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, 1970, pp 141-146

Abstract: The slow and inefficient system used in the USSR for reporting cases of infectious diseases is contrasted with that prevailing in the United States, and a successful experiment they conducted in 1968 to speed up the collection and transmission of information via telegraph and teletype is described. Ten-day and monthly reports in coded form on the incidence of typhoid, dysentery, infectious hepatitis, diphtheria, and seven other diseases were submitted by rayon (and city) and oblast sanitary epidemiological stations 2 or 3 and 5 or 6 days, respectively, after the report period to the appropriate agencies. Analysis of the results revealed comparatively few discrepancies between the ten-day and monthly reports, and a small number of garbles and distortions due to mechanical failure and telegrapher errors. Most of the discrepancies were caused by diseases that present some diagnostic difficulties (typhoid, para-typhoid, dysentery).

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