1/2 025 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--BEHAVIOR OF NUCLEON NUCLEUS INTERACTION CROSS SECTION IN THE HIGH ENERGY REGION -U-

AUTHOR-(02)-BALASHOV, V.V., KORENMAN, G.YA.

COUNTRY OF INFO--USSR

B

SOURCE--PHYS. LETT. B. 1970, 31(5), 310-12

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, SPACE TECHNOLOGY

TOPIC TAGS--NUCLEON INTERACTION, NUCLEUS, ARTIFICIAL EARTH SATELLITE, HIGH ENERGY INTERACTION, PARTICLE CROSS SECTION/(U)PROTON SATELLITE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1051 STEP NO--NE/0000/70/031/005/0310/0312

CIRC ACCESSION NO--AP0124709

UNCLASSIFIED

2/2 025 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0124709

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DATA ON THE P NUCLEUS INTERACTION IN THE 20-600 GEV RANGE OBTAINED IN EXPTS. ON THE PROTON SATELLITES ARE ANALYZED IN TERMS OF THE R. J. GLAUBER MODEL (1967). ESTS. OF POSSIBLE INCREASE OF THE N,N CROSS SECTION WITH ENERGY ARE GIVEN. FACILITY: INST. NUCL. PHYS., MOSCOW STATE UNIV., MOSCOW, USSR.

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--BEHAVIOUR OF NUCLEON NUCLEUS INTERACTION CROSS SECTION IN THE HIGH ENERGY REGION -U-

AUTHOR-(02)-BALASHOV, V.V., KORENMAN, G.YA.

B

COUNTRY OF INFO--USSR

SOURCE--PHYS. LETTERS (NETHERLANDS), VOL. 31B, NO. 5, P. 310-12 (2 MARCH 1970)

DATE PUBLISHED--02MAR70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--NUCLEON INTERACTION, EXCITATION CROSS SECTION, HIGH ENERGY INTERACTION, NUCLEON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/0448 STEP NO--NE/0000/70/000/005/0310/0312

CIRC ACCESSION NO--AP0111641

UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0111641

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DATA ON THE PROTON NUCLEUS INTERACTION IN THE 20-600 GEV RANGE OBTAINED IN EXPERIMENTS ON THE 'PROTON' SATELLITES HAS BEEN ANALYZED IN TERMS OF THE GLAUBER'S MODEL. ESTIMATES OF POSSIBLE INCREASE OF THE NUCLEON NUCLEON CROSS SECTION WITH ENERGY ARE GIVEN. FACILITY: MOSCOW STATE UNIV., USSR.

UNCLASSIFIED

USSR

UDC: None

BALASHOV, Ye. P., LAVRENT'YEV, B. F., PETROV, G. A., and PUZANKOV, D. V.

"Digital Computing Device"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 9, 1973, p 165, No 368606

Abstract: This device contains a magnetic storage unit with a linear selector. The digital readout lines of the latter are connected to a counting amplifier, whose outputs are, in turn, connected to an AND shift. The distinctive feature of the device is that two delay circuits are contained in each digital circuit, with the inputs of each delay joined to the output of the counting amplifier output and the AND shift output for that digit. This arrangement has the effect of simplifying the structure of the device and increasing its operating speed.

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USSR

UDC 681.142.65

BALASHOV, Ye. P., and KNOL', A. I.

Mnogofunktsional'nyye Zapominayushchiye Ustroystva (Multifunctional Memory Units), Leningrad, "Energiya," 1972, 144 pp

Translation of Annotation: The book examines new types of devices for the processing and storage of information: i.e., multifunctional memory units, in which the functions of storage and logical and arithmetic information processing are combined. It examines the problems of synthesis and organization of logical and associative-logical memory units, multichannel devices for counting and converting numerical pulse information, and processors based on immediate-access memory units.

The book is intended for scientific workers, graduate students, engineers, and students in senior courses familiar with the principles of digital computers and engaged in the design and development of memory devices and computer and control systems.

Table of Contents:

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USSR

BALASHOV, Ye. P., and KNOL', A. I., Mnogofunktsional'nyye Zapominayushchiye Ustroystva (Multifunctional Memory Units), Leningrad, "Energiya," 1972, 144 pp

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USSR

BALASHOV, Ye. P., and KNOL', A. I., Mnogofunktsional'nyye Zapominayushchiye Ustroystva (Multifunctional Memory Units), Leningrad, "Energiya," 1972, 144 pp

USSR

BALASHOV, Ye. P., and KNOL', A. I., Mnogofunktsional'nyye Zapominayushchiye Ustroystva (Multifunctional Memory Units), Leningrad, "Energiya," 1972, 144 pp

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USSR

BALASHOV, Ye. P., and KNOL', A. I., Mnogofunktsional'nyye Zapominayushciye Ustroystva (Multifunctional Memory Units), Leningrad, "Energiya," 1972, 144 pp

5/5

USSR UDC: 681.3

BAKASHOV, Yu. K.

"Use of Pseudodivision and Pseudomultiplication Processes for Calculating Some Functions"

V sb. Novyye elementy sistem avtomat., telemekhan. i vychisl. tekhniki (New Elements of Systems for Automation, Remote Control and Computer Technology--collection of works), Minsk, "Vysheysh. shkola", 1970, pp 142-146 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V692)

Translation: Algorithms are presented (in the form of logic diagrams for digital computer programs) which utilize a number system with base $\ln(1-2^{-7})$ and iteration processes of pseudodivision and pseudomultiplication for calculating the functions $\ln\sqrt{x}$ and $\sqrt{x}$ as well as the functions arch $1/x$ and $\sqrt{1-x^2}$. In the latter case, the algorithm is fairly simple and ensures a minimum computation time. I. Shelikhova.

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USSR

UDC 595.421:575.12

BALASHOV, YU. S., Institute of Zoology, Academy of Sciences USSR, Leningrad

"Genotypic Differences Between Natural Populations of the Tick Ornithodoros tartakovskyi (Ixodoidea, Argasidae)

Moscow, Zoologicheskiy Zhurnal, No 12, 1971, pp 1,795-1,801

Abstract: In a study of interspecies reproduction in Ornithodoros tartakovskyi, a very common tick species in Central Asia, individuals from 14 geographic populations several hundred kilometers apart and embracing a substantial portion of the species range (and thus nowhere in direct contact with each other were crossed). Fecundity of the first generation hybrid offspring was used as a criterion of genetic compatibility. A definite gradient of increasing incompatibility was found with increasing distance between the populations. Those closest geographically produced offspring with normal fecundity. Populations far apart, e.g., those from Western Turkmenistan and Southeastern Kazakhstan, produced offspring with lower fecundity or even complete infertility. Genotypically intermediate populations could be successfully crossed with each of the genetically incompatible populations. Despite the incompatibility between the most widely separated populations, they all belong to the same species O. tartakovskyi, as shown by the similar morphological, physiological, [illegible] characteristics. 1/1

USSR UDC 595.421

BALASHOV, Yu. S., Zoological Institute, Academy of Sciences USSR, Leningrad

"Relationships of Bloodsucking Arthropods and Rickettsiae"

Leningrad, Parazitologiya, Vol 5, Vyp No 4, Jul/Aug 71, pp 347-356

Abstract: This is an extensive literature review. Bloodsucking arthropods are vectors and primary hosts of Rickettsia. The characteristic feature of Rickettsiosis is its link with arthropods. Many forms of Rickettsia live exclusively in the insect or tick organism, while the agents of communicable diseases in man and warm-blooded animals represent only a fraction of the overall group of these microorganisms. Intensive multiplication of Rickettsiae takes place within the vectors, and some species may undergo a complete development cycle within the vectors. A three-membered system consisting of the arthropod vector, the rickettsial agent, and the vertebrate host of the infection has been postulated for the maintenance of communicable diseases in natural foci. However, in the case of Ixodes ticks and Trombiculid mites, the rickettsioses may exist for long periods in two-membered parasite systems of the type tick-rickettsia. In recent years the relationship between Rickettsia and their vertebrate hosts have been studied with greater intensity. Many forms of Rickettsia and ticks were studied with

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002200230013-8"

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BALASHOV, Yu. S., Parazitologiya, Vol 5, Vyp No 4, Jul/Aug 71, pp 347-356

modern methods, including electron microscopy, fluorescent anitbody method and tick tissue cultures. Only lice and fleas are effective insects in the transmission of Rickettsioses. They absorb relatively small quantities of blood, but within short time intervals, so that they are capable of obtaining a quantity of Rickettsia sufficient for infection either by virtue of their successive blood intakes or from one single blood intake at the time of the peak of infection in the donor. The pathogenicity of the agent was found to vary from 100% lethality (in the case of lice infected with R. prowazeki) to preservation of life (in the case of Ixodes ticks and Trombiculid mites). Cases are cited in which close relationships between ticks and Rickettsia are demonstrated by the ability of the agent to undergo transovariant transmission for many generations. There are subgeneric groups of Rickettsia associated with specific groups of vectors. Also, rickettsial species show specific differences in their infection threshold, frequency of generalization of the infection, frequency of transovarian transmission, as well as other factors.

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USSR UDC 578.086.8

BALASHOV, Yu. S., Institute of Zoology, Academy of Sciences USSR, Leningrad

"Collection of Ornithodorus papillipes Bir. Ticks in Caves Using CO_2 as an Attractant"

Leningrad, Entomologicheskoye Obozreniye, Vol 51, No 1, 1972, pp 200-201

Abstract: O. papillipes ticks were collected in three caves in the Turkmen SSR by using as an attractant CO_2 slowly released from a cylinder. To facilitate the collection of ticks, the cylinder was placed on a piece of oilcloth with an area of 1 m^2 spread at the bottom of the cave. After the release of CO_2 had been continued for 30 min, hungry specimens including imagoes, nymphs, and some larvae began to accumulate on the oilcloth. After one hour of CO_2 release, large numbers of hungry ticks accumulated in the vicinity of the CO_2 cylinder, whereas only individual specimens of hungry ticks could be collected by sifting the soil of the caves. The ticks attracted to the CO_2 source were in an excited state; they periodically raised the front legs equipped with chemoreceptors (Haller organs) that are used in the search for a prospective host. When the collector of ticks approached, some of the ticks began to move in his direction. Apparently CO_2 not only induced movement of the ticks in the direction of the gas concentration gradient,

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USSR

BALASHOV, Yu. S., Entomologicheskoye Obozreniye, Vol 51, No 1, 1972, pp 200-201

but also increased their aggressiveness towards a warm-blooded host. As compared with the older method of collection that involved prolonged activity in the confined space of tick-infested caves, using CO_2 as an attractant reduces the danger of infection of the collector with spirochetosis as a result of bites by Ornithodorus ticks.

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1/2 028 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--INTERNAL FRICTION AND SHEAR MODULUS OF TITANIUM CONTAINING, TWO PHASE FORMING GLASSES DURING THERMAL TREATMENT -U-

AUTHOR-(03)-BALASHOV, YU.S, VARSHAL, B.G., DARINSKIY, B.M.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(1) 70-3

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--INTERNAL FRICTION, THERMODYNAMICS, PHASE ANALYSIS, TITANIUM GLASS, ALUMINOSILICATE GLASS, SHEAR MODULUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0597 STEP NO--UR/0363/70/006/001/0070/0073

CIRC ACCESSION NO--AP0105580

UNCLASSIFIED

2/2 028 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105580

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF PHASE SEPN. ON ELASTIC AND INELASTIC PROPERTIES OF GLASSES OF THE SIO SUB2 NEGATIVE AL SUB2 O SUB3 NEGATIVE MGO MINUS TIO SUB2 SYSTEM WAS INVESTIGATED BY USING LOW FREQUENCY VIBRATIONS (SIMILAR TO 10 HZ). THE SAMPLES TO BE STUDIED WERE IN THE FORM OF RODS MEASURING 1.5-2 MM IN DIAM. AND 100 MM IN LENGTH. THE CHANGES IN INTERNAL FRICTION AND SHEAR MODULUS OF THESE GLASSES DURING ISOTHERMAL HEATING AND HOLDING WERE STUDIED. IT IS PROPOSED THAT THE OBSERVED CHANGES IN THE INTERNAL FRICTION ARE CAUSED BY SPINODAL PHASE SEPN. AND ARE ASSOCD. WITH THERMODYNAMIC CONSTS. OF THE GLASS.

UNCLASSIFIED

B

USSR UDC 677.52:539.67

POSTNIKOV, V. S., IVANOV, N. V., and BALASHOV, YU. S., Voronezh Polytechnic Institute

"Internal Friction and Shear Modulus of Thin Glass Fibers"

Moscow, Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, Vol 6, No 7, Jul 70, pp 1327-1330

Abstract: The article describes a device created by the authors which makes it possible to use the internal friction method to study the physical properties of thin glass fibers from 5 to 100 microns in diameter. The device is based on a low-frequency torsion micropendulum and makes it possible to study the temperature dependence of internal friction and shear modulus in the -70 to 800° C temperature range with automatic recording of vibrations. A study of the internal friction and shear modulus of sodium silicate, sodium aluminosilicate (Al/Na = 1), and alkali-free aluminoborosilicate fibers showed that

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POSTNIKOV, V. S., et al., Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, Vol 6, No 7, Jul 70, pp 1327-1330

there is a qualitative similarity in the relaxation spectra of macro- and microspecimens. Quantitative differences which are found are evidently due to the more open structure of thin glass fibers.

1/2 028 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--INTERNAL FRICTION AND SHEAR MODULUS OF TITANIUM CONTAINING, TWO PHASE FORMING GLASSES DURING THERMAL TREATMENT -U-

AUTHOR-(03)-BALASHOV, YU.S, VARSHAL, B.G., DARINSKIY, B.M.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(1) 70-3

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--INTERNAL FRICTION, THERMODYNAMICS, PHASE ANALYSIS, TITANIUM GLASS, ALUMINOSILICATE GLASS, SHEAR MODULUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0597 STEP NO--UR/0363/70/006/001/0070/0073

CIRC ACCESSION NO--AP0105580

UNCLASSIFIED

2/2 028 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105580

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF PHASE SEPN. ON ELASTIC AND INELASTIC PROPERTIES OF GLASSES OF THE SIO SUB2 NEGATIVE AL SUB2 O SUB3 NEGATIVE MGO MINUS TIO SUB2 SYSTEM WAS INVESTIGATED BY USING LOW FREQUENCY VIBRATIONS (SIMILAR TO 10 HZ). THE SAMPLES TO BE STUDIED WERE IN THE FORM OF RODS MEASURING 1.5-2 MM IN DIAM. AND 100 MM IN LENGTH. THE CHANGES IN INTERNAL FRICTION AND SHEAR MODULUS OF THESE GLASSES DURING ISOTHERMAL HEATING AND HOLDING WERE STUDIED. IT IS PROPOSED THAT THE OBSERVED CHANGES IN THE INTERNAL FRICTION ARE CAUSED BY SPINODAL PHASE SEPN. AND ARE ASSOCD. WITH THERMODYNAMIC CONSTS. OF THE GLASS.

UNCLASSIFIED

UDC: 620.193.5

TSEYTLIN, Kh. L., SOROKIN, Yu. I., BALASHOVA, A. A., BABITSKAYA, S. M., LEVIN, Ya. S., KONYUSHENKO, A. T., GOLOVKO, R. V., and LADYZHINSKIY, B. S., Scientific Research Institute of Organic Intermediates and Dyestuffs

"High-Temperature Corrosion of Metals in Gaseous Ammonia"

Moscow, Zashchita Metallov, Vol. 6, no. 4, 70, pp 451-454

Abstract: Processes involving the use of ammonia are known to cause corrosion of equipment. The homogeneous reaction of ammonia dissociation in the gas phase begins above 1200--1300°C. In the presence of a catalyst this temperature drops to 300--400°C. Experiments have shown that the type of metal considerably affects the thermal dissociation of ammonia and that this effect is a function of temperature. This study describes in detail the testing and effects of gaseous ammonia on KhN10T steel, KhN78T, N70M27F, and Kh15N55M16V alloys, VT-1 titanium, and MZS copper. The analysis of experimental data shows that there is a fundamental correspondence between the effect of metals on ammonia dissociation and their resistance. Therefore, to insure continuous service of equipment in gaseous ammonia, it is advisable to use materials which

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TSEYTLIN, Kh. L., et al, Zashchita Metallov, Vol 6, no. 4, 70, pp 451-454

will not readily catalyze ammonia dissociation. Materials which are suitable for service under these conditions include carbon steel and N70M27F, Kh15N5S16V alloys up 400°C; Kh18N10T steel and nickel up to 300°C; KhN78T up to 600°C; aluminum, titanium, and copper up to 450°C. Considering the low specific gravity, good technological properties, relative availability, and low cost of aluminum, this metal is preferred in selecting materials for equipment operated in gaseous ammonia at high temperatures. A table illustrating the performance of the above metals during 400 hours of testing with gaseous ammonia at high temperatures, including corrosion rate tensile strength, relative elongation, % and Vickers hardness, prior to and after the experiment, is given in the original article.

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B UDC: 620.193.5

TSEYTLIN, Kh. L., SOROKIN, Yu. I., BALASHOVA, A. A., BABITSKAYA, S. M., LEVIN, Ya. S., KONYUSHENKO, A. T., GOLOVKO, E. V., and LADYZHINSKIY, E. S., Scientific Research Institute of Organic Intermediates and Dyestuffs

"High-Temperature Corrosion of Metals in Gaseous Ammonia"

Moscow, Zashchita Metallov, Vol. 6, no. 4, 70, pp 451-454

Abstract: Processes involving the use of ammonia are known to cause corrosion of equipment. The homogeneous reaction of ammonia dissociation in the gas phase begins above 1200--1300°C. In the presence of a catalyst this temperature drops to 300--400°C. Experiments have shown that the type of metal considerably affects the thermal dissociation of ammonia and that this effect is a function of temperature. This study describes in detail the testing and effects of gaseous ammonia on KhN10T steel, KhN78T, N70M27F, and Kh15N55M16V alloys, VT-1 titanium, and MZS copper. The analysis of experimental data shows that there is a fundamental correspondence between the effect of metals on ammonia dissociation and their resistance. Therefore, to insure continuous service of equipment in gaseous ammonia, it is advisable to use materials which

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TSEYTLIN, Kh. L., et al, Zashchita Metallov, Vol 6, no. 4, 70, pp 451-454

will not readily catalyze ammonia dissociation. Materials which are suitable for service under these conditions include carbon steel and N70M27F, Kh15N5516V alloys up 400°C; Kh18N10T steel and nickel up to 300°C; KhN78T up to 600°C; aluminum, titanium, and copper up to 450°C. Considering the low specific gravity, good technological properties, relative availability, and low cost of aluminum, this metal is preferred in selecting materials for equipment operated in gaseous ammonia at high temperatures. A table illustrating the performance of the above metals during 400 hours of testing with gaseous ammonia at high temperatures, including corrosion rate tensile strength, relative elongation, % and Vickers hardness, prior to and after the experiment, is given in the original article.

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1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ADSORPTION SHIFTS IN POTENTIAL AND ADSORPTION OF SURFACE ACTIVE CATIONS OF CADMIUM AND THALLIUM ON PLATINUM -U-
AUTHOR-(03)-BALASHOVA, N.A., KAZARINOV, V.YE., MANSUROV, G.N.

COUNTRY OF INFO--USSR

SOURCE--ELEKTROKHIMIYA 1970, 6(1), 22-8

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ADSORPTION, SURFACE ACTIVE AGENT, CADMIUM, THALLIUM, PLATINUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/1152 STEP NO--UR/0364/70/006/001/0022/0028

CIRC ACCESSION NO--AP0121711

UNCLASSIFIED

2/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70
CIRC ACCESSION NO--AP0121711
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SPECIFIC CONCLUSIONS REGARDING THE INFLUENCE OF SURFACE ACTIVE CATIONS ON H AND O ADSORPTION ON P CAN BE DRAWN, ON THE BASIS OF THE CHARGE CURVES, ONLY IF THE QUANTITY OF ELEC. CONSUMED IN THE ION ADSORPTION AND DESORPTION PROCESSES IS TAKEN INTO ACCOUNT. QUANT. RELATIONS ARE ESTABLISHED BETWEEN THE POTENTIAL SHIFT IN SURFACE ACTIVE ION ADSORPTION AND THE QUANTITY OF ADSORBED GASES. RELATIONS CANNOT BE ESTABLISHED BETWEEN THE SHIFT VALUES AND THE ION ADSORPTION VALUES, SINCE THE QUANTITIES OF ADSORBED H AND O CANNOT BE PRECISELY DETD. SEP., SINCE THEIR ADSORPTION POTENTIALS ON PT OVERLAP CONSIDERABLY. FACILITY: INST. ELEKTROKHIM., MOSCOW, USSR.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--MUTUAL EFFECT OF HYDROGEN IONS AND SODIUM AND CESIUM CATIONS DURING THEIR ADSORPTION ON PLATINIZED PLATINUM -U-
AUTHOR-(03)-BALASHOVA, N.A., KAZARINOV, V.YE., KULEZNEVA, M.I.

COUNTRY OF INFO--USSR

SOURCE--ELEKTROKHIMIYA 1970, 6(3), 398-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HYDROGEN, SODIUM, CESIUM, ADSORPTION, PLATINUM, ISOTOPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/1136 STEP NO--UR/0364/70/006/003/0398/0399

CIRC ACCESSION NO--AP0121695
UNCLASSIFIED

2/2 024 UNCLASSIFIED PROCESSING DATE--30OCT70
CIRC ACCESSION NO--AP0121695
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF HPOSITIVE ION CONCN. ON THE ADSORPTION OF CS PRIME POSITIVE AND NA PRIME POSITIVE ON PLATINIZED PT WITH A REVERSIBLE H POTENTIAL OF INVESTIGATED. TESTS WERE CONDUCTED IN DIL. SOLNS. OF NA SUB2 SO SUB4 AND CS SUB2 SO SUB4. THE ADSORPTION WAS MEASURED AT PH 0-4, THE AMT. OF ADSORBED CATIONS BEING DETD. BY A RADIOACTIVE TRACER METHOD USING PRIME22 NA AND PRIME134 CS. A MARKED DEPENDENCE OF THE ADSORPTION ON THE H PRIME POSITIVE ION CONCN. WAS NOTED. AN ALMOST COMPLETE DISPLACEMENT OF H PRIME POSITIVE IONS FROM THE ELECTRODE SURFACE BY NA PRIME POSITIVE AND CS PRIME POSITIVE IONS OCCURRED WITH A 5-6 FOLD EXCESS OF THE LATTER IN SOLN. FROM THE DIFFERENCES IN THE ADSORPTION OF CS PRIME POSITIVE AND NA PRIME POSITIVE AT EQUAL CONCN. RATIOS C SUBCSPOSITIVE-C SUBHPOSITIVE AND C SUBNAPOSITIVE-C SUBHPOSITIVE, IT WAS POSSIBLE TO CALC. THE MAGNITUDE OF THE SPECIFIC ADSORPTION OF CS PRIME POSITIVE IN RELATION TO NA PRIME POSITIVE. THE AMT. OF CS PRIME POSITIVE ADSORBED IS 1.5 PRIME POSITIVE -0.2 TIMES MORE THAN THAT OF NA PRIME POSITIVE. FACILITY: INST. ELEKTROKHIM., MOSCOW, USSR.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ADSORPTION OF SURFACE ACTIVE IONS ON RHODIUM -U-

AUTHOR-(03)-BALASHOVA, N.A., GOROKHOVA, N.T., DAVYDOVA, ZH.A.

B

COUNTRY OF INFO--USSR

SOURCE--ELEKTROKHIMIYA MAR. 1970, 6, (3), 436-440

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--RHODIUM, SURFACE ACTIVE AGENT, ION, ADSORPTION, BROMIDE, BIBLIOGRAPHY, ELECTRODEPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0416 STEP NO--UR/0364/70/006/003/0436/0440

CIRC ACCESSION NO--AP0124167

2/2 024 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0124167

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADSORPTION FO SURFACE ACTIVE IONS, PARTICULARLY CD PRIME2 POSITIVE (FROM COSO SUB4 SOLUTIONS) ARE BR PRIME NEGATIVE (FROM NABR SOLUTIONS), ON THE SURFACE OF A RH ELECTRODE (FORMED BY ELECTRODEPOSITING RH ON PT) WAS STUDIED AND CORRELATED WITH THE ZERO CHARGE POTENTIALS IN THE CORRESPONDING ELECTROLYTES. THE RELATIVELY INTENSIVE ADSORPTION OF CD PRIME2 POSITIVE AND BR PRIME NEGATIVE IONS ON THE RH SURFACE (AS COMPARED WITH NA PRIME POSITIVE AND SO SUB4 PRIME2 NEGATIVE FROM NA SUB2 SO SUB4) AND THE SLOWNESS OF THEIR AD AND DESORPTION, AS WELL AS THE ZERO CHARGE CHARACTERISTICS, ALL POINTED TO THE EXISTENCE OF A CHEMISORPTIVE TYPE OF ADSORPTION.

UNCLASSIFIED

USSR UDC 621.387

KASHINKOV, N. G., NIKOL'SKIY, V. M., BALAKIN, V. P., KASHNIKOVA, N. V., TYUREMNOV, G. N., POKRYVAYLO, A. B., TITOV, V. I., and BONDAR', V. I.

"Gas-Discharge Device"

USSR Author's Certificate No 230999, filed 1 Feb 67, published 27 Mar 69 (from RZh-Elektronika i yeye primeneniya, No 1, Jan 70, Abstract No 1A138P)

Translation: The following method is proposed for reduction of the firing voltage and its stabilization during retention of the vibration stability, of a stabilitron tube for glow discharge. In the device, which contains a cathode and anode attached to an insulator with a metallic film deposited on it one or several metallic leads are lead in through the insulator and united outside the discharge gap with the electrodes of the device. The leads are fastened to the insulator, and in so doing a semiconducting region with high ohmic resistance is formed between each of them and the metallic film on the insulator. V. M.

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1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--CIS-TRANS ISOMERISM OF THE PEPTIDE BONDS IN N-METHYLATED ALANINE DIPEPTIDES -U-

AUTHOR-(05)-PORTNOVA, S.L., BYSTROV, V.F., BALASHOVA, T.A., IVANOV, V.T., OVCHINNIKOV, YU.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (4), 825-30.

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ISOMERIZATION, PEPTIDE, CHEMICAL BONDING, NUCLEAR MAGNETIC RESONANCE, ACTIVATION ENERGY, STEREOCHEMISTRY, ENTROPY, ENTHALPY, ALANINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1353 STEP NO--UR/0062/70/000/004/0825/0830

CIRC ACCESSION NO--AP0135132

UNCLASSIFIED

2/2 026 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0155032

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CIS-TRANS ISOMERISM OF THE N METHYLAMIDE LINK IN DIPEPTIDES OF N METHYLALANINE WAS STUDIED BY NMR SPECTRA AT 21-60DEGREES; SOME 20PERCENT OF SUCH PEPTIDES MAINTAIN THE CIS CONFIGURATION. FOR THE ME ESTER OF N ACETYL,D,ALANYL,L,METHYLALANINE, DELTAH OF CIS TRANS TRANSITION WAS 650 CAL-MOLE, DELTAS SUB35 MINUS 0.21 E.U. AND DELTAF SUB35 710 CAL-MOLE, THE TRANS ISOMER POSSESSES THE LOWER VALUES OF FREE ENERGY, ENTHALPY AND ENTROPY OF THE EQUIL. STATE. THE ESTD. ACTIVATION ENERGY OF INTERNAL ROTATION WAS 19.8 KCAL-MOLE FOR THE TRANS AND 18.5 FOR THE CIS FORM. THESE ARE COMPARABLE TO ROTATIONAL BARRIERS IN ET SUB2 NCHO OR ET SUB2 NAC. FACILITY: INST. KHIM. PRIR. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

Acc. Nr: AP0049766 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: 4R 0191

101291n **Effect of the molecular-weight distribution of suspension poly(vinyl chloride) on the technological properties of rigid compositions.** Manushin, V. I.; Balashova, T. S.; Baranova, L. G.; Isakova, V. A.; Zhikharevich, I. B. (USSR). *Plast. Massy* 1970, (1), 26-9 (Russ). The effects of the mol. wt. distribution of suspension poly(vinyl chloride) (I) (3 imported and 2 Soviet brands) on its extrudability were studied. The processability of rigid I compns. was evaluated from the melt index and the behavior of I during processing. Differential mol. wt. distribution curves indicated that I processability could not be properly evaluated from Finketscher const., but also required an evaluation of mol. wt. distribution. Fractional compn. of I and its statistical distribution width indicated a relation between the melt index and the heterogeneity factor (*U*) characterizing the statistical distribution width of I. Two regression equations were derived by statistical treatment of *U* and the melt index. The equations indicated that I extrudability could be quant. evaluated from *U*. CKJR

REEL/FRAME
19801684

BALASHOVA, T. S.

Acc. Nr: AP0049776 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: UR0191

99953q Use of alcohols from wide fractions for preparing unsymmetrical adipates and maleates. Ivanova, G. N.; Pushkova, V. V.; Moskovkina, E. M.; Grishko, N. I.; Balashova, T. S.; Selenskaya, T. N. (USSR). *Plast. Massy* 1970, (1), 17-20 (Russ). Unsym. maleates and adipates, e.g., Bu nonyl maleate, Bu undecyl maleate, maleates from C_{8-10} and C_{7-9} alcs., Bu nonyl adipate, and adipates from C_{8-10}, C_{7-9}, C_{8-10} alcs. were prepd. by a 2-stage procedure. Thus, maleic anhydride and the higher alc. were refluxed (in 1:1.02 molar ratio) at 70-90° without a catalyst, then the lower alc. was added (in a 20% excess) and the mixt. was further refluxed with H_2SO_4 at 140-50°. For unsym. adipates the starting material was adipic acid. The content of the monoester in the reaction mixt. was detd. by ir spectroscopy. The unsym. adipates and maleates were used for the modification of poly(vinyl chloride) (I). Modified I exhibited excellent freeze resistance (to −55°) and good physicomech. properties. CKJR

REEL/FRAME 19801694

USSR UDC 669.295.48

ANUFRIYEVA, N. I., BALASHOVA, Z. N.

"Electrolytic Refining of Titanium Alloy Wastes Containing Aluminum and Manganese"

Tr. Vses. N-i. i Proyektn. In-ta. Alyumin., Magn. i Elektrodn. Prom-sti [Works of All-Union Scientific Research and Planning Institute of the Aluminum, Magnesium and Electrode Indus-ry], 1970, No. 72, pp. 227-236. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 G226 by the authors).

Translation: Studies were performed on the electric refining of wastes of Ti alloys such as OT4. Chips of OT4 alloy, mixtures of chips of OT4 and VT1 alloy, as well as chunks of OT4-1 alloy were refined. Investigation of the influence of the degree of filling of containers, the production of anode material, and the number of fillings of containers on cathode metal grain size were performed. The possibility was demonstrated of refining chunk wastes of OT4-1 alloy. A distribution of the basic components in OT4 and OT4-1 alloys in the refining products is presented. 5 figs; 4 tables.

1/1

USSR UDC 614.712.003.12

BALATSKIY, O. F., and KHALDEYEV, V. T., Sumy Branch of the Khar'kov Polytechnical Institute

"Effectiveness of the Constructions of Gas Purification Units on the Chemical Industry Plants"

Kiev, Khimicheskaya Tekhnologiya, No 4 (70), Jul/Aug 73, pp 17-18

Abstract: Sumy Branch of the Khar'kov Polytechnical Institute carried out studies on the loss from air contamination due to chemical industry and metallurgy. For example, the harvest on control plots was 2-3 times as high as in the contaminated zones. A direct relationship was determined between the growth of the plants and air contamination. After air purification measures were introduced, the air pollution dropped significantly, and so did various diseases, both human animal and agricultural. Various formulas for economical calculation of losses have been proposed.

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Acc. Nr.: AR0103045

Ref. Code: UR 0000

JPRS 49937

Relief of Moho in Black Sea Basin

(Abstract: "Relief of the Mohorovic Discontinuity in the Black Sea Basin and Adjacent Regions," by B. K. Balavadze, T. S. Lebedev, Ya. P. Malovitskiy, P. Sh. Mindeli, Yu. P. NeprochnovV. B. Sologub and A. V. Chekunov; Kiev, Geofizicheskiy Sbornik Akademii Nauk UkrSSR, No 30, 1969, pp 5-12)
From: Moscow, Referativnyy Zhurnal, Geofizika, Svodnyy Tom, No 1, 1970, 1G267

Profile deep seismic soundings, a gravimetric survey and systematic seismic observations have been conducted in the Black Sea and in the zones of its eastern, Northern and western shores. On the basis of a complex interpretation of these data the authors have compiled a new refined variant of a map of the surface of the Mohorovicic discontinuity in the Black Sea basin and adjacent regions. The amplitude of relief of the Moho is about 40 km (from depths of 18-20 km in the Black Sea area to 50-60 km under the Caucasus and Carpathians). In the coastal regions of Turkey, judging from seismic data, the crustal thickness attains 43-49 km. On the whole, there is a clear manifestation of thickening of the earth's crust under mountainous structures and its thinning under basins, particularly under the Black Sea basin. The nature of the change in crustal thickness correlates to a certain

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19861127

AR0103045

degree with the Bouguer anomalies. In the central part of the Black Sea there is no granite layer and sediments with a thickness up to 8-14 km lie directly on the basalt layer. The mean velocity of propagation of seismic waves in the sedimentary layer is only 3.0-3.5 km/sec; it is characterized by undisrupted, virtually horizontal bedding. Velocity on the basaltic layer is 6.6-7.0 km/sec and the boundary velocity at the M discontinuity is 8.0-8.2 km/sec. The Black Sea region is seismically rather active but earthquake foci are located around the Black Sea whereas on the continental slope there are considerably fewer and in the abyssal zone they are almost absent. Bibliography of 43 items.

7/2 19861128 di

USSR

UDC 612.8.015+577.15

ALEKSIDZE, N. G., and BALAVADZE, M. V., Tbilisi State University

"Change in Acetylcholinesterase Activity in Specific Regions of the Rat Cerebral Cortex After Training"

Moscow, Doklady Akademii Nauk, SSSR, Vol 198, No 6, Jun 71, pp 1,455-1,456

Abstract: Acetylcholinesterase (ACE) activity was investigated in one half of the rat cortex while the other half served as the control. This was done in order to eliminate the effect of individual differences, general activity of the animal, and stress on ACE activity. The animals were trained to carry food with an unfavored paw. The cortex contralateral to this paw reflected "training" while the other, the mirror part, was the control. The occipital cortex served as a general control After six days' training ACE activity in region contralateral to the paw used increased by 20% and after 14 days' training by 32%. Meanwhile ACE activity in the occipital cortex of both hemispheres scarcely changed (an increase of 2.5 to 9%). In another series of experiments lasting six days in which the animals carried food with the favored paw, ACE activity tended to increase in the cortical region opposite the paw used (+10%), but not in the occipital region.
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USSR UDC 615.372:576.851.252.095.15

BALAYAN, L. B., and VYGODCHIKOV, G. V., Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR

"Thermostability of Staphylococcus Toxoids"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 7, Jul 70, pp 87-89

Abstract: It was determined in experiments on rabbits that storage of crude staphylococcus toxoid at 42 to 44°C for 5 days had no appreciable effect on its antigenic properties (as measured by the accumulation of Staphylococcus alpha antitoxin in the animals' blood). Storage of purified adsorbed toxoid under the same conditions, on the other hand, reduced its antigenic properties considerably. This reduction in antigenic properties through exposure to elevate temperatures is ascribed to the loss of most of the toxoid proteins due to heating. Experiments to determine the antitoxin-binding activity of the two toxoids showed no dissociation of the toxoid-aluminum hydroxide complex.

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USSR

UDC: 632.95

BALAYAN, L. N.

"New Chemicals to Control Phytonomus on Alfalfa"

Nauch.-tekhn. byul. VNII Khlopkovodstva (Scientific and Technical Bulletin of the All-Union Scientific Research Institute of Cotton Growing), 1971, No 3, pp 22-24 (from RZh-Khimiya, No 7, Apr 72, Abstract No 7N571)

Translation: Five days after spraying alfalfa plots with [illegible] sevin and [illegible], a [illegible] emulsion, or dusting [illegible] powder, using the respective active agents at rates of [illegible] kg/hectare (hexachlorocyclohexane), the population of [illegible] the plots was reduced by [illegible] as compared with the [illegible] control plots, the reduction in the beetle population was [illegible]. [illegible] of insecticide was increased by [illegible], the reduction in [illegible] approximately the same ([illegible]) as at the lower dose. [illegible] the plots treated with insecticides and on the control [illegible] decreased on succeeding [illegible]. The larva population [illegible] spraying at the lower [illegible] doses was [illegible] population on the control plots on the [illegible] day [illegible] [illegible]

USSR

BALAYAN, L. N., Kand.-Tekhn. Sci, VNII Phytopathology, [illegible]

the beginning of the [illegible] period when the [illegible] 10 sq. m. The snail harvest on plots treated with nerine was [illegible] 50% higher than on the control plots, with a corresponding figure of [illegible] for plots treated with hexachlorocyclohexane.

[illegible]

USSR

UDC 541.69+547.554

MNDZHOYAN, A. L., (DECEASED), MARKARYAN, E. A., ALEKSANYAN, R. A., KHORENYAN, G. A., PALAYAN, R. S., and ARUSTAMYAN, ZH. S., Institute of Fine Organic Chemistry imeni A. L. Mndzhoyan, Academy of Sciences Armenian SSR, Yerevan

"Derivatives of Arylalkylamines. II. Constitution and Physiological Activity of Some Substituted Arylalkylamines and Their Derivatives"

Yerevan, Armyanskiy Khimicheskiy Zhurnal, Vol 24, No 8, 1971, pp 703-713

Abstract: By condensing the chlorides of substituted phenylacetic, diphenylpropionic, and diphenylacetic acids with phenyl- and phenoxyisopropylamine, amides I were prepared. Reduction with $LiAlH_4$ converted compounds I into the substituted arylalkylamines II. By cyclizing the amides according to Bishler-Napieralski and then reducing, tetrahydroisoquinoline derivatives III were synthesized. By reacting phenylisopropylamine with indanones and reducing the ketimines that formed, aminoindans IV were obtained. Hydrochlorides of compounds II, III, and IV were effective as coronary dilatants (table). The formulas and properties of compound I and of the hydrochlorides of II and III are listed in tables.

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USSR UDC 541.69+542.91+547.233

MNDZHOYAN, A. L., (DECEASED), MARKARYAN, E. A., BALAYAN, R. S., AVAKYAN, O. M., and TSATINYAN, A. S., Institute of Fine Organic Chemistry imeni A. L. Mndzoyan, Academy of Sciences Armenian SSR, (yerevan)

"Arylalkylamine Derivatives. III. Synthesis and Pharmacological Properties of N-(3,3-Diarylpropyl)-N-Aryl(diphenyl)alkylamines"

Yerevan, Armyanskiy Khimicheskiy Zhurnal, Vo, 24, No 9, 1971, pp 791-797

Abstract: Condensation of veratrole with methyl ester of cinnamic acid in nitrobenzene and in presence of aluminum chloride gave the methyl ester of 3-(3',4'-dimethoxyphenyl)-3-phenylpropionic acid, which could easily be saponified to the free acid, and finally converted to acyl chloride by treatment with thionyl chloride. Condensation of this acyl chloride with homoveratrylamine, phenylisopropylamine and diphenylaminobutane gave respective amides, for example homoveratrylamide of 3-(3',4'-dimethoxyphenyl)-3-phenylpropionic acid, which could be reduced to the respective secondary amines using $LiAlH_4$ in ether. Tested in an assay on rat's spermiduct these amines showed sympatolytic and some of them even adrenalytic activity.

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USSR

UDC 615.372:576.851.49].07

SHAPIRO, N. I., VASIL'YEVA, T. G., MOSLVICHEVA, I. V., DUDKINA, M. I., KRUGLIKHINA, Z. M., SAZONETS, G. I., OZERETSKOVSKIY, N. A., BALAYAN, V. D., and KOVAL'SKAYA, S. Ya., Leningrad Institute of Vaccines and Sera and State Control Institute of Medical Biological Preparations imeni Tarasevich, Moscow

"Molecular Heterogeneity of Endotoxins Extracted From the Typhoid-Paratyphoid Group of Bacilli. Report II. Antigenic Structure and Biological Activity of High and Low-Molecular-Weight Fractions"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 11, 1971, pp 35-39

Abstract: By means of sepharose 2B columns, endotoxin extracts from typhoid (4446) and paratyphoid B (50602) bacilli can be separated into a high-molecular-weight and a low-molecular-weight fraction. Components of the latter fraction retain some serological specificity but are nontoxic, exert a low protective activity, and display no stressor activity. On the other hand, components of the high-molecular-weight fraction have a full antigenic structure, are highly immunogenic and toxic, and display pronounced stressor activity. The high-molecular-weight fraction is the carrier of the biological properties of typhoid and paratyphoid endotoxins.

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USSR UDC 629.783.014:525(47)

BALAYEV, N. F., GRODZOVSKIY, G. L., DANILOV, Yu. I., ZAKHAROV, V. M., KRAVTSEV, N. F., KUZ'MIN, R. N., MAROV, M. Ya., MOROZOV, P. M., NIKITIN, V. Ye., PEROV, S. P., PETUNIN, A. N., UTKIN, V. M., and SHVIDKOVSKIY, Ye. G.

"Scientific Data on the Flight of Automatic Ionospheric "Yantar" Laboratories"

Uch. zap. Tsentr. Aerogidrodinam. in-ta (Scientific Notes of the Central Aerohydrodynamic Institute) 1971, Vol 2, No 2, pp 58-65 (from Referativnyy Zhurnal, Raketostroyeniye, No 11, Nov 71, Abstract 11.41.87 Resume)

Abstract: Launches of automatic ionospheric "Yantar' " laboratories with gaseous plasma-ionic engines up to 100-400 km altitudes were conducted with the aid of geophysical rockets, for the purpose of studying prospects of controlled flight, in upper layers of the atmosphere. Performance of gaseous plasma-ionic engines under ionospheric conditions was studied. Parameters characterising the ion jet-ionospheric plasma interaction, as well as parameters of neutral atmosphere were measured. Scientific data on conducted experiments is presented. 9 figures, 1 table, 11 references.

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USSR UDC 576.851.71.097.21.083.3

BALAYEVA, N. M., and NIKOL'SKAYA, V. N., Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR

"The Stability of Increased Virulence of Rickettsia prowazeki Vaccine Strain E"

Moscow, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 8, Aug 70, pp 36-38

Abstract: The virulence of R. prowazeki vaccine strain E for guinea pigs and white mice was increased by passaging it in the lungs of white mice. The increased virulence persisted through 10 passages (the observation period) in chick embryos. In guinea pigs, the vaccine produced marked immunity to a virulent culture of R. prowazeki (Breinl strain). Preservation of the virulence of the E strain after passaging in the lungs of white mice is indicative of either the selection of virulent individuals present in the original rickettsial population or a mutation in E strain rickettsia arising in the lungs of white mice, with subsequent breeding of mutants.

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USSR

UDC 576.851.71.097.2:576.851.71.094

BALAYEVA, N. M. and GULEVSKAYA, S. A., Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR

"Soluble Rickettsia prowazeki Antigens in Suspension Before and After Treatment With Ether"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, 1970, pp 110-114

Abstract: Soluble R. prowazeki antigens treated with ether differed from untreated antigens because they had less serological specificity (complement-fixation reaction) and a larger content of hemagglutinating substances. The precipitating properties of the antigens were not affected by ether treatment. Electron-microscope study of soluble antigens in a rickettsial suspension in physiological saline (before treatment with ether) revealed partial separation of the microcapsule from the cell wall. Treatment of the suspension with ether resulted in complete separation of the microcapsule, rupture of the cell wall, substantial loss of the cellular contents, and appearance of membranous structures in the cytoplasm (apparently caused by the specific reaction of the microorganism to the chemical agent).

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1/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--ELECTRON MICROSCOPIC STUDY OF RICKETTSIA PROWAZEKI (IN THE LUNGS OF ALBINO MICE) -U-
AUTHOR-(02)-GULEVSKAYA, S.A., BALAYEVA, N.M.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 3, PP 82-85
DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RICKETTSIA PROWAZEKI, WHITE MOUSE, TISSUE CULTURE, CYTOPLASM, ELECTRON MICROSCOPY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1476 STEP NO--UR/0016/70/000/003/0082/0085

CIRC ACCESSION NO--AP0109536

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109536

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS STUDIED THE ULTRA STRUCTURE OF RICKETTSIA PROWAZEKI BY CULTURING THEM IN THE LUNGS OF ALBINO MICE. IT WAS SHOWN THAT RICKETTSIA PENETRATED INTO THE CELL BY PHAGOCYTOSIS AND AFFECTED THE ALVEOLAR EPITHELIUM ENDOTHELIUM OF CAPILLARIES AND HISTOCYTES OF THE LUNGS. RICKETTSIA COULD REPRODUCE IN THE HISTIOCYTES, BUT WERE MOSTLY SUBJECTED TO LYSIS IN THE VACUOLES. IN OTHER CELLS RICKETTSIA FORMED LARGE COLONIES WHICH REPLACED CELULAR ORGANOIDS. RICKETTSIA IN THE COLONIES WERE HOMOGENEOUS BY SIZE AND SHAPE. ULTRASTRUCTURE OF RICKETTSIA PROWAZEKI WAS SIMILAR TO THAT OF THE MAJORITY OF GRAM NEGATIVE BACTERIA. RICKETTSIA CELL IS COVERED WITH A MICROCAPSULAR LAYER 100 TO 150 ANGSTROM IN THICKNESS. THIS LAYER LAY NEXT TO THE THREE LAYER MEMBRANE OF THE CELLULAR WALL, WHICH HAD SMOOTH CONTOURS AND A SIZE UP TO 120 ANGSTROM. THE THREE LAYER CYTOPLASMATIC MEMBRANE SURROUNDED THE CYTOPLASM. THE LATTER CONSISTED OF GRANULES WHICH WERE IDENTICAL TO RIBOSOMES BY SIZE AND SHAPE. THE NUCLEUS WAS FORMED BY DNA FILAMENTS. DATA ON APPLICATION OF VARIOUS METHODS OF FIXATICN ARE PRESENTED.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--SOLUBLE ANTIGENS OF RICKETTSIA PROWAZEKI IN THE SUSPENSION BEFORE AND AFTER TREATMENT WITH ETHER -U-

AUTHOR-(02)-BALAYEVA, N.M., GULEVSKAYA, S.A.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 4, PP 110-114

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RICKETTSIA PROWAZEKI, ETHER, ANTIGEN, SOLVENT EXTRACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/1531 STEP NO--UR/0016/70/000/004/0110/0114

CIRC ACCESSION NO--AP0109591

UNCLASSIFIED

2/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109591

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A COMPARATIVE STUDY OF ETHER AND NONETHER SOLUBLE ANTIGENS DEMONSTRATED THAT TREATMENT WITH ETHER OF SUSPENSION OF TISSUE INFECTED WITH RICKETTSIA PROWAZEKI AIDED IN EXTRACTION OF ADDITIONAL ANTIGENS INTO THE SOLUTION; THESE ANTIGENS DIFFERED FROM THE ONES IN THE SUSPENSION BY A LESSER SPECIFIVITY IN THE COMPLEMENT FIXATION REACTION WITH THE SERUM AGAINST RICKETTSIA MOOSERI AND A GREATER CONTENT OF HEMAGGLUTINATING SUBSTANCES. IN ETHER TREATMENT THE COMPLEMENT FIXATING TITRE OF THE ANTIGEN WITH A HOMOLOGOUS IMMUNE SERUM REMAINED UNCHANGED IN THE MAJORITY OF THE EXPERIMENTS, OR WAS DOUBLE. PRECIPATING AND IMMUNOGENIC PROPERTIES OF ETHER AND NONETHER ANTIGENS WERE THE SAME. IT WAS FOUND BY ELECTRON MICROSCOPIC STUDIES THAT DETECTION OF A SOLUBLE ANTIGEN IN THE SUSPENSION OF RICKETTSIA IN PHYSIOLOGICAL SOLUTION WAS ACCOMPANIED BY THE CHANGES IN RICKETTSIA STRUCTURE CONSISTING OF PARTIAL DETACHMENT OF THE MICROCAPSULE FROM THE CELL. TREATMENT WITH ETHER LED TO FURTHER SEPARATION OF THE MICROCAPSULE, RUPTURE OF THE CELL WALL, CONSIDERABLE LOSS OF CELLULAR CONTENTS, LOSS OF INTACTNES OF CYTOPLASMATIC MEMBRANE AND THE APPEARANCE OF MEMBRANOUS FORMATIONS IN THE CYTOPLASM OF RICKETTSIA.

UNCLASSIFIED

1/2 008 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--VIRULENCE OF RICKETTSIA PROWAZEKII STRAIN E INCREASED AFTER PASSAGES ON GUINEA PIGS. REPORT II -U-
AUTHOR-(02)-BALAYEVA, N.M., NIKOLSKAY, V.N.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK ADADEMII MEDITSINSKIKH NAUK SSSR, VOL 25, NR 2, 1970, PP 17-22
DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RICKETTSIA PROWAZEKI, GUINEA PIG

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/1847 STEP NO--UR/0248/70/025/002/0017/0022

CIRC ACCESSION NO--AP0103595
UNCLASSIFIED

2/2 008 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0103595

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. 1. PASSAGE OF STRAIN E RICKETTSIA PROWAZEKII ON GUINEA PIGS LEADS TO AN INCREASE IN THE VIRULENCE OF THIS STRAIN. 2. IT IS POSSIBLE TO ISOLATE A RICKETTSIAL STRAIN WITH INCREASED VIRULENCE IN THE FIRST PASSAGE FROM GUINEA PIG ORGANS LONG AFTER INFECTION (13TH DAY). 3. A RICKETTSIAL STRAIN WITH INCREASED VIRULENCE WAS ISOLATED IN THE SECOND PASSAGE, USING MATERIAL FROM THE GUINEA PIG'S TUNICA VAGINALIS TESTIS FROM THE FIRST PASSAGE EXTRACTED SOON AFTER INFECTION (72 HOURS) AS THE PASSAGE MATERIAL.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002200230013-8"

USSR UDC 591.169:591.461.2:612.014:43

BALAYEVA, O. S., Institute of Physiology and Experimental Pathology of the Arid Zone, Turkmen SSR Academy of Sciences

"Regeneration of Renal Ultrastructure Following Exposure to High Temperatures"

Ashkhabad, Izvestiya Akademii Nauk Turkmenskoy SSR, Seriya Biologicheskikh Nauk, No 4, 1973, pp 34-39

Abstract: Electron microscopic studies were conducted on kidneys of rats exposed to 42° for one or three hours. The animals were white male rats, 200-210 g in weight; prior to exposure to hyperthermia rectal temperature ranged from 34.8° to 36.3°, after one hour of exposure from 38° to 39°, and after three hours of exposure from 39.4° to 41.0°. A one hour period of exposure elicited largely reactive changes which affected primarily mitochondria and the endoplasmic reticulum, while a three hours of exposure evoked both reactive and degenerative changes with disruption of internal membranes, mitochondria, endoplasmic reticulum membranes, redistribution of lipids, and numerous foci of degeneration. Normalization of the intracellular structures occured in one day following three hours of exposure to 42°, and after three days after three hours of exposure.
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1/2 023 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--EFFECT OF BELOW ZERO TEMPERATURES ON THE PHYSICOMECHANICAL PROPERTIES OF PLASTIC CONCRETE -U-

AUTHOR--(02)--BALBACHAN, I.P., SELETSKIY, L.I.

COUNTRY OF INFO--USSR

SOURCE--BETON ZHELEZOBETON 1970, 16(1), 14-16

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CONCRETE, FURFURAL, ACETONE, MONOMER, LOW TEMPERATURE EFFECT, COMPRESSIVE STRENGTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1058 STEP NO--UR/0097/70/016/001/0014/0016

CIRC ACCESSION NO--AP0124715

UNCLASSIFIED

2/2 023 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124715

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONCRETE MIXES, CONTG. ADDED SIMILAR TO 2PERCENT FURFURAL, SIMILAR TO 12PERCENT FURFURAL ACETONE MONOMER, AND CATALYTIC AMTS. OF PHSO SUB3 H, WERE HARDENED IN THE MINUS 10DEGREES TO PLUS 20DEGREES RANGE. THE LOWERING OF THE TEMP. ONLY SLOWED DOWN THE HARDENING PROCESS AND THE INCREASE OF THE COMPRESSION STRENGTH. E.G., THE CONCRETES HARDENED AT MINUS 10DEGREES TO MINUS 8DEGREES FOR LESS THAN OR EQUAL TO 6 MONTHS HAD A COMPRESSION STRENGTH SIMILAR TO 10PERCENT LOWER THAN THAT OF THE CONCRETES HARDENED AT 20DEGREES. ON WARMING UP THE RATE OF THE HARDENING INCREASED AND THE CONCRETES REACHED THEIR ULTIMATE STRENGTH IN ALL CASES.

UNCLASSIFIED

BALBASHOV, A.M.

SOV/ JPRS 57601
25 JULY 1973

GROWING SINGLE ORTHOFERRITE CRYSTALS BY CRUCIBLELESS ZONE MELTING

A. M. Balbashov and A. Ya. Chervonenkis

FP 3-37

1. Introduction

Among the large gamut of ferrite materials, orthoferrites of rare earth elements occupy a special place because of their specific magnetic and optical properties. Being weak ferromagnets with a clearly expressed uniaxial anisotropy, those materials are ideally suitable for the creation of a system of mobile isolated domains in thin monocrystalline layers [1]. Such a possibility opens up the prospects of creating an entire class of logical and storage units based on the recording, control and readout of domains -- information-carrying media [2, 3]. At the present time, side by side with orthoferrites, attempts are being made to use other uniaxial magnets -- hexaferrites and garnets with complex compositions -- for that purpose [4]. Orthoferrites, however, have a number of advantages over other uniaxial ferrites due to the record-high mobility of their domains, record transparency in visible and infrared light, and relatively high technological level of the synthesis of single crystals. In [5] it was shown that the domain mobility in YFeO con reach 6000 cm/(second)(oersted) at room temperature and 50,000 cm/(second)(oersted) at temperatures, which is higher by several orders of magnitude than in garnets and hexaferrites. The transparency of orthoferrites at room temperature in red light ($\lambda \approx 0.6$ micron) is substantially higher than in all known magnets [6, 7], and in combination with great magneto-optical effect this permits visual study of the domain structure and use of magnetooptical readout

USSR UDC: 621.318.1(088.8)

MEDVEDEV, S. A., KOLCHIN, V. V., BALBASHOV, A. M., CHEPARIN, V. P., Moscow Power Engineering Institute

"A Hexaferrite"

USSR Author's Certificate No 281710, filed 3 Jun 68, published 10 Dec 70 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V465 P)

Translation: This Author's Certificate introduces a hexaferrite which contains iron oxide, strontium oxide and chromium oxide. As a distinguishing feature of the patent, the field of anisotropy is increased to values of 33-40.3 thousand oersteds with a ferromagnetic resonance width of 1.8-2.2 thousand oersteds or less by taking the initial components in the following proportions (in percent by weight): strontium oxide 9.85-9.95, chromium oxide 23.2-32, and the remainder iron oxide.

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USSR

UDC 621.318:549.731

BALBASHOV, A. M., BESSONOV, D. A., CHERVONENKIS, A. YA.

"Study of the Hysteresis Properties of Monocrystals with Garnet Structure"

Dokl. Nauchno-tekhn. konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg. Mosk. energ. in-t, 1970 g. Sekts. Radiotekhnicheskaya. Podsekts. ferritovoy SVCh radiofiziki (Reports of Scientific-Engineering Conference on Advances in Scientific-Research Studies in 1968-1969. Moscow Energetics Institute, 1970, Section on Radio Engineering, Subsection on ferrite microwave physics), Moscow, 1969, pp 151-155 (from RZh-Radiotekhnika, No 2, Feb 70, Abstract No 2B145)

Translation: Results are presented of a study of the hysteresis properties of several garnet-structure ferrites intended for use in microwave phase shifters. The study objective was to establish the material composition, the melting regime, and the subsequent thermal and magnetic treating regimes which will increase the

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USSR

BALBASHOV, A. M., et al, Dokl. Nauchno-tekhn. konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg. Mosk. energ. in-t, 1970 g. Sekts. Radiotekhnicheskaya. Podsekts. ferritovoy SVCh radiofiziki, 1969, pp 151-155 (from RZh-Radiotekhnika, No 2, Feb 70, Abstract No 2B145)

rectangularity of the hysteresis loop, reduce the losses, ensure high thermal stability, and short switching time. The basis of the compositions tested was yttrium ferrite garnet, which has been used successfully in various microwave devices but has a low rectangularity factor. All the measurements were made on monocrystals grown by the method of non-crucible zonal melting with optical heating. The substitution selection is justified. Results are described of the synthesis and study of the monocrystals of the resulting systems. Two illustrations. One reference. V.V.

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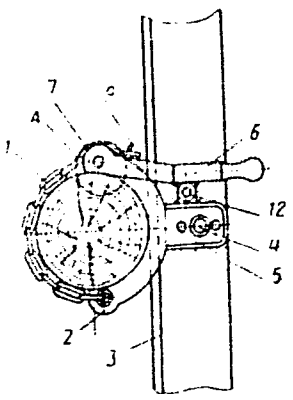
AA0051814 BALBEROV Ya P UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General, Derwent, 1-70

242038 FIXING VERTICAL PROPS in the holds of ships during log loading, using a chain and lever arrangement on the lip of the hatch. Chain 1 is permanently attached at one end to brace 2, while the other end is free. Brace 2 is mounted on the lip of the hatch 3 by means of a shaft and nut 4. After the prop has been positioned in the brace, the chain is passed around it and a link at its free end hooked on to catch 9 of lever 6. The chain is then tightened by turning lever 6 on axle 7, so that



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19820208

AA0051814

AUTHORS: Kuz'min, V. I.; Balberov, Yu. A.; Pisarev, N. Ye.

Gor'kovskiy Institut Inzhenerov Vodnogo Transporta

an eye on the lever fits over a ring on the brace; retaining pin 12 can then be passed through both to fix the lever in position. 18.1.68. as 1211141/29-33, KUZ'MIN, V. I. et al. Inst. of Water Transport Engineering, Gor'kii. (4.9.69) Bul 14/18.4.69. Class 81e, Int. Cl. B 65g.

2/2

19820209

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--RESIDUAL INTERACTION AND THE RE[illegible]NGEMENT EFFECTS IN ATOMIC NUCLEI
-U-
AUTHOR--BALBUTSEV, YE.B.

COUNTRY OF INFO--USSR

SOURCE--TEORETICHESKAYA I MATEMATICHESKAYA FIZIKA, 1970, VOL 3, NR 2, PP 255-264
DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--ATOM, NUCLEUS, OXYGEN ISOTOPE, SPECTRUM, FLUORINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/1124 STEP NO--UR/0646/70/003/002/0255/0264

CIRC ACCESSION NO--AP0130157
UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0130157

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A METHOD OF CALCULATING THE REARRANGEMENT EFFECT CORRECTION TO THE RESIDUAL INTERACTION IN ATOMIC NUCLEI IS GIVEN. THE RESIDUAL INTERACTION IN A EQUALS 18 NUCLEUS IS CALCULATED, THE HAMADA JOHNSTON POTENTIAL BEING USED AS TWO PARTICLE POTENTIAL. THIS RESIDUAL INTERACTION IS USED FOR CALCULATING THE SPECTRA OF PRIME18 O AND PRIME18 F AND THE ISOTOPIC SHIFT IN PRIME17 O. IT IS SHOWN THAT REARRANGEMENT EFFECTS STRONGLY INFLUENCE THE RESULTS OF THESE CALCULATIONS. FACILITY: OB"YEDINENNYY INSTITUT YADERNYKH ISSLEDOVANIY.

UNCLASSIFIED

USSR

UDC 547.26'118

KIRPICHEV, P. P., BAL'CHENKO, R. K., KRUGLYAK, YU. L., MARTYNOV, I. V.

"Reaction of 1,3,2-Dioxaphospholanes With N-Chloroimidoacetic Esters"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 10, 1971, p 2338

Abstract: For the first time, a study was made of the reactions of 1,3,2-dioxaphospholanes with N-chloroacetimidic ethyl ester. It was shown that the reactions of 2-halo- or 2-alkoxy-1,3,2-dioxaphospholanes (I), with 0-1 alkyl substituents at the 4 and 5 C positions in the ring, gave open-chain phosphoryl compounds resulting from breaking of the C-O bond in the ring. In contrast, the reactions of I, with more than one alkyl substituent in 4 or 5 positions, gave the dioxaphospholane ring compounds and a haloalkane. The yields and some physical constants of the compounds obtained are given.

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USSR UDC [621.362:538.3:532.51.018.5.001.2

BAL'CHITIS, A. A.

"An Electrohydrodynamic Induction Method of Energy Flux Conversion Based on Using Orthogonal Electric and Magnetic Fields and Nonconductive Working Fluids"

V sb. Elektrotekhnika (Electrical Engineering--collection of works), Kaunas, 1970, pp 130-133 (from RZh-Elektrotekhnika i Energetika, No 1, Jan 71, Abstract No 1A150)

Translation: The paper presents a theoretical calculation of the time--averaged retarding force and total power developed when a nonconductive working fluid flows in the channel of an electrohydrodynamic generator for one special method of excitation of the generator by an alternating electric field. It is shown that the operation of such a converter is reversible.

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USSR UDC [621.362:538.3:532.5]018.5.001.2

BAL'CHITIS, A. V.

"An Electrohydrodynamic Induction Converter With Traveling Electric Field"

V sb. Elektrotekhnika (Electrical Engineering--collection of works), Kaunas, 1970, pp 134-137 (from RZh-Elektrotekhnika i Energetika, No 1, Jan 71, Abstract No 1A151)

Translation: The paper contains a theoretical analysis of energy conversion in an induction-type electrohydrodynamic generator with traveling electric field $D = D_m e^{f(\omega t - \alpha x)}$, where D_m is the induction amplitude of the electric field, $\alpha = \pi/\tau$, τ is the pole division, and x is the coordinate lengthwise of the channel axis. The rate of flow of the working fluid in the channel is constant and uniform, and the conductivity σ of the fluid is constant. Finite formulas are given in the narrow-channel approximation for calculating the power of the generator. It is concluded from an analysis of the results that electrohydrodynamic induction generators would be effective at high electrodynamic Reynolds numbers, and low sliding s of the working fluid in the traveling field. In the generator mode, maximum power takes place under the condition $sRe_{el} = -1$. It is shown that for a working fluid

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BAL'CHITIS, A. V., Elektrotekhnika (Electrical Engineering--collection of works), Kaunas, 1970, pp 134-137 (from RZh-Elektrotekhnika i Energetika, No 1, Jan 71, Abstract No 1A151)

with low conductivity, the induction method of electrohydrodynamic conversion of energy yields a greater volumetric power density than a magnetohydrodynamic induction generator with a traveling magnetic field. G. A. Razumov.

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USSR

UDC 669.046.5

ANSHELES, I. I., FEDOSEYEV, V. V., OYSK, G. N., YEGOROV, A. V., SOROKIN, S. P., TYURIN, Ye. I., DANILIN, V. I., SELIVANOV, V. M., SIVKOV, S. S., ZYRYANOV, Yu. Ye., and BALDAYEV, B. Ya.

"Use of Electromagnetic Stirring in Vacuum Melting of Steel in a Ladle"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISiS), (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys), Izd-vo "Metallurgiya," No 61, 1970, pp 222-227

Translation of Abstract: Brief technical characteristics are given of the electromagnetic stirring of steel in a ladle. Data are presented on the effect of electromagnetic metal stirring on the uniform distribution of added deoxidizers and alloying elements, and also on the significant increase in the duration of vacuum smelting. A new production technology for the ShKh15 steel is presented in which complete deoxidation and alloying is conducted in the ladle at the end of vacuum smelting. The suggested method is theoretically substantiated. The results of the first experimental melts are presented. 3 tables.

1/1

1/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--CHANNELS OF THE PI PRIME POSITIVE PLUS P YIELDS P PLUS PI PRIME POSITIVE PLUS M GAMMA REACTION AT 2.9 GEV-C -U-

AUTHOR-(04)-BALDIN, A.B., ERGAKOV, V.A., TREBUKHOVSKIY, YU.V., SHISHOV, N.N.

COUNTRY OF INFO--USSR

B

SOURCE--YAD. FIZ. 1970, 11(4), 800-4

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PION PROTON INTERACTION, BUBBLE CHAMBER, EXCITATION CROSS SECTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/2207 STEP NO--UR/0367/70/011/004/0800/0804

CIRC ACCESSION NO--AP0127569

UNCLASSIFIED

2/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0127569

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN INVESTIGATION OF THE CHANNELS OF THE REACTION PI PRIME POSITIVE PLUS P YIELDS P PLUS PI PRIME POSITIVE PLUS M GAMMA (1) WAS MADE BY MEANS OF A 120-L. C SUB3 H SUB8 XE BUBBLE CHAMBER, EXPOSED TO THE 2.9 GEV-C PI PI PRIME POSITIVE MESON BEAM. PHOTOGRAPHS (150,000) OF 2670 EVENTS OF THE REACTION WITH THE P MOMENTUM P SUBP FROM 02. UP TO 0.6-0.8 GEV-C AND OF 1717 EVENTS WITH P SUBP IS GREATER THAN 0.6-0.8 GEV-C WERE STUDIED. THE BRANCHING RATIOS FOR THE REACTIONS (1) WITH DIFFERENT NOS. OF THE GAMMA QUANTA, 2 GAMMS, (3-4) GAMMA, (5-6) GAMMA, AND (7-8) GAMMA ARE (0.655 PLUS OR MINUS 0.020):(0.256 PLUS OR MINUS 0.012):(0.072 PLUS OR MINUS 0.10):(0.017 PLUS OR MINUS 0.010). CROSS SECTIONS OF THE REACTIONS PI PRIME POSITIVE PLUS P YIELDS P PLUS PI PRIME POSITIVE PLUS M PI PRIMEO WITH M GREATER THAN OR EQUAL TO 1 ARE ESTD. AND SHOWN ON MICROFICHE. AN ANAL. OF THE RELATION BETWEEN THE PARTIAL CROSS SECTIONS AND THE PRIMARY PARTICLE PULSES, FOR THE REACTION PI PRIME NEGATIVE PLUS P YIELDS N PLUS NEUTRALS, SHOWED THAT THE CROSS SECTIONS WITHIN THE RANGE OF PI PRIME NEGATIVE MESONS, 2.7-3 GEV-C, HAVE A CONST. VALUE WITHIN THE LIMITS OF STATISTICAL ERROR. FACILITY: INST. TEOR. EKSP. FIZ., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 539.128.2

BALDIN, A. M., BEZNOGIKH, Yu. D., ZINOV'YEV, L. P., ISSINSKIY, I. B., KAZANSKIY, G. S., MIKHAYLOV, A. I., MOROZ, V. I., PAVLOV, N. I., and PUCHKOV, G. P.

"Acceleration and Removal of Deuton Beams from the OIYaI Synchrophasotron"

Moscow, Pribory i Tekhnika Eksperimenta, No. 3, 1971, pp 29-31

Abstract: This article describes the realization of a proposal for accelerating and extracting deutons with existing synchrophasotron systems made in an earlier article (Beznogikh, Yu. D., et al, Reprint OIYaI, 1968, No. R9-4214, Dubna). The basic idea of the proposal was to multiply the linear acceleration by two through halving the velocity of the deutons going into and coming out of the linear accelerator compared to the velocity of the protons. The acceleration in the synchrotron is done in two steps: first, doubling the acceleration; second, reaching the limiting frequency of the accelerating system and then making the transi-

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BALDIN, A. M., et al., Pribory i Tekhnika Eksperimenta, No 3, 1971, pp 29-31

tion to the plateau in the first multiple of the acceleration. By using a debuncher at the accelerator output, the capture of the deutons in first the quasi-betatron and then the synchrotron modes was increased. The authors are associated with the OIYaI (Joint Institute of Nuclear Research, Dubna).

2/2

BALDIN, V.A.

metallurgy

UDC 539.56:669.15-194

TENDENCY OF LOW-ALLOY STEELS TO COLD-SHORTNESS FOR METALLIC STRUCTURES

[Article by V.A. Baldin, P.G. Arono, P.P. Sokolovskiy, Novosibirsk, Khladostoykost' Stali i Splavov [Cold-Resistance of Steel and Alloys], Moscow, Nauka, signed to press 6 August 1970, pp 22-27]

The amount of structural work in the eastern and the northern regions of the nation is growing especially fast at the present time. In this connection, one of the real problems in "construction" metal research is seeking economically effective steels with a low threshold of cold-shortness, as well as the development of methods for a more complete evaluation of this property.

The most widely-used method of evaluating the tendency of one or another steel to cold-shortness is the method based on determining the impact strength in the temperature range from +20° and below.

A whole series of AUSS norms reflect this method, according to which the minimally allowable values of the impact strength are established (e.g. determined on test bars of type 1 (according to AUSS 9454-60) at fixed temperatures.

Because of the spread of the results of impact tests and their "conventionality" a huge amount of material has been collected on the dependence of impact strength of type 1 test bars on temperature for steels used in various branches of industry and construction. This gives a broad base for a qualitative comparison of steels among themselves.

For convenience of comparison of the various brands of steel among themselves for the temperature of the conventional threshold of cold-shortness (T_{cl}) we take the temperature at which the lower boundary of the scattering intersects the values a_n = 3 kpaus.m/cm^2.

Instruments and Equipment

USSR UDC 615.471:[615.835.3.099.07+615.916:546.21]-07

NABATOV, Yu. A., BEREZIN, I. P., BALDIN, V. P., and ROSTOVTSEV, B. N., All Union Scientific Research Institute of Surgical Equipment and Instruments, Moscow

"An Apparatus That Signals Impending Toxicity of Oxygen"

Moscow, Meditsinskaya Tekhnika, No 4, 1971, pp 23-26

Abstract: A device that indicates when oxygen is about to become toxic during a session of hyperbaric oxygen therapy is described. The device automatically records the frequency of brain waves and appearance of "spike potentials" and acceleration of the respiratory and pulse rates after a period of relative slowing in the course of adaptation to high partial pressure of oxygen. When these physiological parameters reach certain values, the memory element is automatically triggered and a signal is sent to the system that controls oxygen pressure in the pressure chamber. The pressure is then automatically lowered to the required level. There is also an attachment for manual control of oxygen pressure.

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BALDIN, V. P.

MEDICINE

JPRS - 54193

01 OCT 1971

UDC 615.471:615.835.3

PRESENT STATE AND FUTURE DEVELOPMENT OF HYPERBARIC OXYGENATION

[Article by I. V. Sultanov and V. P. Baldin of the All-Union Scientific Research Institute of Surgical Equipment and Instruments of the Ministry of Public Health USSR, Moscow; Meditsinskaya Tekhnika, Russian, No 3, 1971, pp 46-51]

In connection with the expanding use of therapy by oxygen under increased pressure and of pressure chambers of different types for various pathological conditions, an independent technical trend has been generated in the manufacture of medical instruments, producing numerous problems related to the development and equipment of therapeutic pressure chambers. The initial period of enthusiasm over this method and of overevaluation of its possibilities is now over, and the range of indications for the use of therapeutic pressure chambers has to a considerable degree been established. Enough experience in developing engineering techniques for this purpose has been accumulated in the world for it to become especially important to evaluate critically the haphazard way in which types of pressure chambers and their equipment have so far been classified. It is also important to determine certain directions for the development of technical procedures for hyperbaric oxygenation. In the end result, successful development of this effective and far from exhausted field of medical technology will depend on how it is evaluated and how its possibilities are determined; and that, furthermore, will prevent uncontrolled development of very costly apparatuses that might perhaps be unsafe for patients or medical personnel.

The following classification of these facilities may be suggested: 1. one-person pressure chamber; 2. baric oxygenation centers in which the chamber can accommodate a patient and a medical group of various specialists; 3. two-person pressure chamber which can accommodate patient and medical worker; 4. pressure chambers for experimental purposes only.

BALDIN, V. P.

JPRS - 54173
01 OCT 71

UDC 615.472:615.835.35:615.462

ANALYSIS OF STRUCTURAL STRENGTH OF THE SHELL OF A THERAPEUTIC PRESSURE CHAMBER BUILT OF ORTHOTROPIC TWO-PLY FIBERGLASS

Article by I. Ye. Harmuk, V.P. Khoroshilov, I.V. Kamitsky, [illegible] A. Sukhanov, and V.P. Baldin of the North Donets Branch of the All-Union Scientific Research Institute of Chemical Engineering and All-Union Scientific Research Institute of Surgical Equipment and Instruments, Moscow; Khimicheskaya Tekhnika, Russian, No 3, 1971, pp 29-[illegible]

Steel is the most widely accepted material used for building shells of various types of pressure chambers. The main disadvantage of steel is its weight, which makes its use in clinical conditions difficult. For technological reasons, the use of titanium is limited so far. Thus, the most promising material is fiberglass, because of its light weight, high strength, technological qualities, and low cost. The strength of a pressure chamber shell can be calculated only when certain investigations are carried out in advance.

The fiberglass shell of a pressure chamber is a thin-walled spun shell of positive curvature. In order to join the shell with other subassemblies, metal stiffening rings are installed at each end of the shell. Under the uniform action of inner force loading, plane stress is generated in the shell wall, with the principal stresses oriented along the annular and meridian directions. To best utilize the anisotropy of the fiberglass, the method of separate two-layer longitudinal and transverse winding is used in manufacturing the shell. A layer is the entire thickness of the wall formed by the winding in one direction, irrespective of the many fires (prepregs) the glass fiber is turned around. [illegible] and transverse winding does not permit obtaining optimal thickness in a shell of double curvature, although are, in contrast to the easily obtainable necessary

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USSR

UDC 669.71.472(088.8)

BALDOVSKIY, L. A., VOLODCHENKO, V. O., GRECHUKHIN, N. V., MELIKYANTS, R. V., MITREYKIN, N. V., and RABINOVICH, B. V.

"Device for Sampling Melted Electrolyte"

USSR Author's Certificate No 271105, Filed 29/11/68, Published 19/08/70 (Translated from Referativnyy Zhurnal-Metallurgiya, No 2, 1971, Abstract No 2 G145 P)

Translation: A device for sampling a melted electrolyte, including a spring-mounted perforated cup with a support rod, is presented. To increase the effectiveness of its operation the outer surface of the cup is wrapped with paper and contains a concentrically mounted cylinder, equipped with cells mounted on a spiral and fastened to the supporting rod by a quick-change joint such as a wedge.

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1/2 016 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--USE OF AN EMANATION METHOD FOR EVALUATING THE REACTIVITY OF FERRIC OXIDE WITH VARIOUS CHEMICAL AND THERMAL HISTORIES -U-

AUTHOR-(03)-BALEK, V., BAIKOV, S.D., ZABORENKO, K.B.

COUNTRY OF INFO--USSR

SOURCE--RADIOKHIMIYA 1970, 12(1), 156-63

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IRON OXIDE, THERMAL EFFECT, THORIUM, RADIOACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0118 STEP NO--UR/0186/70/012/001/0156/0163

CIRC ACCESSION NO--AP0132411

UNCLASSIFIED

2/2 016 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0132411

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTIVITY OF ALPHA FE SUB2 O SUB3 (PREPD. BY VARIOUS METHODS) IN MIXTS. WITH ZNO WAS STUDIED BY INCORPORATING RADIOACTIVE TH IN THE ZNO AND MEASURING THE EMANATION OF RN DURING THE HEATING OF THE ZNO FE SUB2 O SUB3 MIXTS. IN ALL CASES THE REACTIVITY (AT 700-850DEGREES) DEPENDEND ON THE NATURE OF THE SALT FROM WHICH THE OXIDE WAS PREPD. BY THERMAL DECOMPN. IN THE CASE OF SALTS DECOMPD. AT 700DEGREES THE REACTIVITY WAS THE HIGHEST WEHN THE OXIDE WAS PREPD. FROM FERRIC SULFATE (I) AND DECREASED IN THE TRANSITION FROM I TO MOHR'S SALT (II) TO BASIC CARBONATE (III) TO OXALATE (IV); PROLONGED HEATING AT 700DEGREES REDUCED THE REACTIVITY OF THE FE SUB2 O SUB3. IN THE CASE OF SALTS DECOMPD. AT 900DEGREES THE REACTIVITY WAS THE HIGHEST IN THE CASE OF FE SUB2 O SUB3 PREPD. FROM II AND THE LOWEST FOR FE SUB2 O SUB3 PREPD. FROM III, WHILE IN THE CASE OF SALTS DECOMPD. AT 1100DEGREES THE REACTIVITY DECREASED IN THE TRANSITION FROM II THROUGH IV AND I TO III. THE METHOD MAY BE USED SUCCESSFULLY FOR DETG. THE REACTIVITY OF COM. GRADES OF FE SUB2 O SUB3.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--2H FORM PBI SUB2 CONVERSION UPON HEATING -U-

AUTHOR-(04)-ODIN, I.N., BALEK, V., POPOVKIN, B.A., NOVOSELOVA, A.V.

COUNTRY OF INFO--USSR

SOURCE--VESTN. MOSK. UNIV., KHIM. 1970, 11(1), 115-17

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--X RAY DIFFRACTION, LEAD COMPOUND, IODIDE, PHOTOCONDUCTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/1473 STEP NO--UR/0189/70/011/001/0115/0117

CIRC ACCESSION NO--AP0120260

2/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120260

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONVERSION OF THE 2H FORM OF PBI SUB2 INTO A "MIXED" STRUCTURE UPON HEATING IS SHOWN BY THE EMANATION THERMAL METHOD AND BY X RAY DIFFRACTION. THE CONVERSION TAKES PLACE AT A HEATING RATE OF 3-5DEGREES PER MIN AT 140-400DEGREES. THIS CONVERSION IS ONE OF THE REASONS FOR THE INCREASED PHOTOCOND., RESULTING FROM THE MANY DEFECTS.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--APPLICATION OF INERT RADIOACTIVE GASES IN THE STUDY OF SOLIDS. 2. THERMAL DECOMPOSITION OF VARIOUS IRON SALTS AND PREPARATION OF

AUTHOR--BALEK, V.

B

COUNTRY OF INFO--USSR

SOURCE--J. MATER. SCI. 1970, 5(2) 166-70

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THERMAL DECOMPOSITION, IRON OXIDE, IRON SULFATE, OXALATE, CARBONATE, ACTIVITY COEFFICIENT, RADIATION SOURCE, INERT GAS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1323 STEP NO--UR/0030/70/005/002/0166/0170

CIRC ACCESSION NO--AP0107726

UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107796

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BEHAVIOR OF DIFFERENT FE SALTS (FESO SUB4.7H SUB2 O, FEC SUB2 O SUB4.2H SUB2 O, MOHR'S SALT, AND BASIC FE CARBONATE) WAS STUDIED BY MEANS OF THE EMANATION METHOD, DTA, AND DILATOMETRY. THE SALTS WERE HEATED WITHIN THE TEMP. RANGE 20-1100DEGREES, UNDER IDENTICAL CONDITION. THE RESULTS OBTAINED ARE COMPARED AND THE PROCESS OF THERMAL DECOMPOSITION OF THE DIFFERENT SALTS IS DISCUSSED. THE "ACTIVITY" OF FERRIC OXIDE OBTAINED BY DECOMPN. OF VARIOUS FE SALTS IS ESTD., AND IT IS SUGGESTED THAT THE LOW "ACTIVITY" OF THE SULFATE DERIVED FERRIC OXIDES IS RELATED TO A LOW THERMAL ANNEALING RATE, WHILE THE HIGHER "ACTIVITIES" OF THE OTHER 2 RESULTANT FERRIC OXIDES ARE SIMILARLY RELATED TO HIGHER THERMAL ANNEALING RATES.

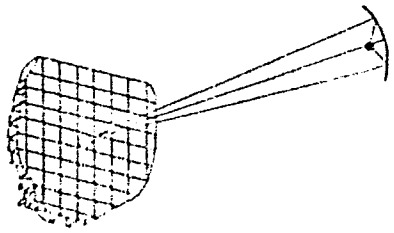
USSR UDC 621.372.853

BAKLENOV, Yu. P.

"Device for Transforming UHF Into Light Signals"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No. 33, 1971, p 175

Abstract: The device consists of a focused electromagnetic radiation source and a glass screen filled with an inert gas. To increase the image dimensions and improve its clarity, the screen is made of glass granules in a single plane. An explanatory sketch accompanies the article.



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Acc. Nr: A7039271 Abstracting Service: INTERNAT. AEROSPACE ABST Ref. Code: 4-70 UR0000

A70-19111 #

COUPLED FLEXURAL VIBRATIONS OF A COMPLEX SYSTEM WITH ALLOWANCE FOR FRICTION (SVIAZANNYE IZGIBNYE KOLEBANIIA SLOZHNOI SISTEMY S UCHETOM TRENIIA).

V. M. Balepin.

IN: INVESTIGATION OF THE VIBRATIONS, STRENGTH, AND STRUCTURE OF AIRCRAFT ENGINE ELEMENTS (ISSLEDOVANIE VIBRATSII, PROCHNOSTI I KONSTRUKTSII DETALEI AVIADVIGATELEI). (A70-19109 07-28)

Edited by G. S. Skubachevskii.

Moscow, Izdatel'stvo Mashinostroenie (Moskovskii Aviatsionnyi Institut, Trudy, No. 180), 1968, p. 15-23. In Russian.

Solution of the problem of determining the resonant frequencies of the coupled flexural vibrations of a complex system with allowance for friction. The frequency equations of the flexural vibrations for an ideally elastic system are derived keeping in mind the conditions that the displacements and reaction forces should be equal at both sides of a coupling point of a complex system, and that (in the case where friction is taken into account) the displacements should be in phase in each subsystem, while the phase of the reaction forces should be shifted with respect to the displacements. It is shown that these conditions can be fulfilled by writing the equations of the coupled vibrations in terms of complex quantities. A graphic method for solving the equations is proposed. V.P.

REEL/FRAME
19740502

1/2 009 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--THE PROBLEM FORMULATION AND THE METHODS OF SEISMIC MODELING OF VOLCANO MAGMATIC CHAMBER -U-

AUTHOR-(02)-AVERKO, YE.M., BALESTA, S.T.

B

COUNTRY OF INFO--USSR

SOURCE--GEOLOGIYA I GEOFIZIKA, 1970, NR 3, PP 81-88

DATE PUBLISHED--------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--VOLCANO, SEISMIC MODEL, MAGMA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/0865 STEP NO--UR/0210/70/000/003/0081/0088

CIRC ACCESSION NO--AP0110586

UNCLASSIFIED

2/2 009 UNCLASSIFIED PROCESSING DATE--02OCT70
CIRC ACCESSION NO--AP0110586
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THREEDIMENSIONAL MODEL OF THE VOLCANO CHAMBER OF AVACHINSKI TYPE IS CONSIDERED. IT SHOWN, THAT THIS MODEL CAN BE SUBSTITUTED BY EASILY MODELLED TWODIMENSIONAL DIFFRACTION PROBLEM WITHIN THE PLANE OF THE BOUNDARY, BASEMENT AND OVERLYING PYROCLASTIC TERRANE. THE METHOD OF SEISMIC MODELLING USED FOR DECISION OF THIS PROBLEM, IS DESCRIBED. FACILITY: IGIG SO AN SSSR, NOVOSIBIRSK.

UNCLASSIFIED

BALETSKAYA M.V.

Acc. Nr: AP0043764 Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1970, Vol 58, Nr 3, pp 810-816

ABSOLUTE MEASUREMENTS OF THE EXCITATION FUNCTIONS FOR KII LINES PRODUCED IN COLLISIONS BETWEEN K^+ IONS AND HE ATOMS

Pop, S. S.; Krivskiy, I. Yu.; Zapesochnyy, I. P.; Baletskaya, M. V.

The absolute course of the excitation functions for the K II spectral lines λ = = 3897.9; 4134.7; 4149.2; 4186.2; 4222.9 + 4225.7; 4283; 4305 - 4309.2; 4388.2; 4503 + + 4595.6 and 4829.2 A and also for the He I line λ = 5875.6 A is measured for ion energies between 0.5 and 34 keV. The excitation functions for the K II lines have two peaks. Qualitatively the course of the excitation functions is the same for all K II lines studied. The maximal values of the excitation cross sections of the K II lines investigated vary between 0.25·10^{-16} and 2.0·10^{-16} cm^2 whereas the maximal value of the total excitation cross section for all measured lines in the visible range of the spectrum is 1.6·10^{-15} cm^2. The theoretical curves calculated by the Landau—Zener formula are satisfactorily agree with the experimental curves.

REEL/FRAME 19770171

USSR

UDC: 621.039.553.3

LAPTEV, N. YA., SPITSYN, V. I., and BALEZIN, S. A., Institute of Physical Chemistry, Academy of Sciences USSR

"Dissolution of Neutron-Irradiated Iron and Steel"

Moscow, Zashchita Metallov, Vol 6, No 1, Jan-Feb 70, pp 23-26

Abstract: A comparative study of the dissolution of radioactive and nonradioactive specimens of Armco-iron and 45-steel in acid solutions was carried out. Crystal lattice defects caused by neutron irradiation accelerate metal dissolution in acid, and the dissolution rate for radioactive specimens is slightly greater. The occurrence of a positive charge in the presence of oxide films or insoluble corrosion products is one of the factors responsible for inhibiting the corrosion of the β-radioactive metal. Saturated calomel was used as the comparison electrode.

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UDC 615.281.8:547.678.3

YERMOL'YEVA, Z. V., Academician of the Academy of Medical Sciences USSR, KORNEYEVA, L. Ye., BALEZINA, G. I., NIKOLAYEVA, O. D., GVAZAVA, I. S., and FADEYEVA, L. L., Institute of Virology imeni D. I. Ivanovskiy of the Academy of Medical Sciences USSR and the Chemical Therapy Group of Academician of the USSR Academy of Medical Sciences Z. V. Yermol'yeva

"Tyleron as an Interferon Inductor"

Moscow, Antibiotiki, Vol 18, No 6, Jun 73, pp 517-520

Abstract: In the current investigation the harmlessness, interferonogenic activity, and protective action (against infectious viral diseases) of tyleron hydrochloride were tested by administering the drug to white mice hypodermically and orally and to monkeys orally. It was established that there is no toxic effect from various dosages of tyleron hydrochloride with either method of introduction. A marked interferonogenic action was obtained where tyleron hydrochloride was given to mice in dosages of 5, 10, and 20 mg/kg and where 25 mg/kg were administered to monkeys. Oral administration proved more beneficial, while no difference was found between a dosage given in one part daily and given in three equal parts daily. Combining tyleron and prodigiozan made it possible to cut the dosage of 1/2

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YERMOL'YEVA, Z. V., et al., Antibiotiki, Vol 18, No 6, Jun 73, pp 517-520

tyleron in half and increased the titer and length of interferon circulation in the blood by 50%. Tyleron was found to have a marked protective effect for influenza pneumonia in mice, despite low titers of circulating interferon. On the basis of this investigation, tyleron hydrochloride may be recommended as an effective interferon inductor.

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AA0040640 Balfanbayev, E.

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 1-70.

242312 CYCLONE FURNACE is more effective for treatment of charges containing a large number of components. It consists of a cylindrical shell 1 with connection 2 for fuel and air feed and connections 3 for filling the charge. The products of combustion go out through a centre tube 4 which has a contraction 7. The shell has enlargements 5 and contractions 6 and again an enlargement 8. The connections 9 are for feeding additional charge. The melt is discharged through a gate 10. The first charge is fed through the connections 3 and due to the heat in pockets 5, precious volatile components are separated. Second charge is fed through the connections 9.

8.6.67 as 1166428/24-6. A.V.TONKONOGY et alia.POWER RES.INST.IN KAZACHSTAN (9.9.69) Bul 15/25.4.69. Class 241, 31a. Int.Cl.F 23c, F 27d.

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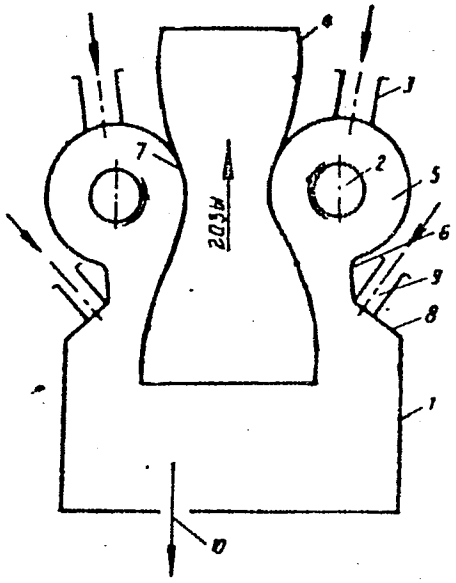

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AA0040640

AUTHORS: Tonkonogiy, A. V.; Vyshenskiy, V. V.; Balfanbayev, E.; Tolmachev, I. Ya.; Agureykin, S. S.; and Ishmayeva, S. A.

Kazakhskiy Nauchno - Issledovatel'skiy Institut Energetiki

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AD

USSR UDC 619.616.988.43-022.39:636.29

KINDYAKOV, V. I., NAGUMANOV, F. M., BALGANBAYEV, Ye. Kh., ZINOV'YEV, B. S., PANKRATOV, L. D., and CHUFARIN, A. M., Kazakh Scientific Research Veterinary Institute

"The Epizootiological Role of Wild Even-Toed Ungulates in Foot-and-Mouth Disease"

Moscow, Veterinariya, No 9, Sep 70, pp 52-53

Abstract: Experiments conducted with roe deer, saiga antelopes, and Caspian deer (marals) showed that these animals are highly susceptible to infection with foot-and-mouth disease. An outbreak of foot-and-mouth disease caused by the A_{22} virus variant occurred in 1967 among cattle that were isolated from contact with other cattle. The virus was introduced by a hunter who had brought the carcass of an infected saiga antelope into the locality. Mass infections of saiga antelope with foot-and-mouth disease occur. The animals showed typical symptoms of the disease and the A_{22} virus was isolated from them. Under the conditions prevalent in Kazakhstan, saiga antelope form one of the principal sources of transmission of foot-and-mouth disease to farm animals; the antelope become infected with this disease from cattle and transmit it to

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