USSR UDC 669.24:548/53:620.193.91

LARIKOV, L. N., and BORINSKAYA, S. T., Institute of Metal Physics of the Academy of Sciences UkrSSR

"Change in the Texture of Nickel-Beryllium Alloys During Deformation, Recrystallization, and Aging"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 33, No 4, Apr 72, pp 849-851

Abstract: Crystallographic correlations during recrystallization and aging of nickel-beryllium alloys are discussed on the basis of experiments with electrolytic nickel (99.99%) and nickel-base alloys containing 2, 20.5, 12.5, and 15 at. % Be. The texture deformations of all alloys were investigated after rolling (90%) in one direction. The recrystallization and aging processes were checked roentgenographically and microscopically. The results are discussed by reference to polar figures of differently processed Ni-Be specimens. The textures of collective recrystallization of all alloys, except the low-alloyed, are characterized by chaotic distribution of orientations. The analysis of many experimental data of other authors revealed that specimens with multicomponent deformation textures after recrystallization are often taken as oriented in a disorderly manner. Therefore, the absence of a specific texture after collective recrystallization can have

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USSR

LARIKOV, L. N., and BORINSKAYA, S. T., Fizika Metallov i Metallovedeniye, Vol 33, No 4, Apr 72, pp 849-851

another physical meaning than that by decomposition of supersaturated solid solutions according to the heterogeneous mechanism when disorderly orientations of nuclei develop in every grain. One illustration, ten bibliographic references.

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USSR

UDC 669-157.96

VOSKRESENSKAYA, N. L., CHUCHEV, V. S., GUREVICH, M. YE., KRASNOLISHKOV, V. S., LARIKOV, L. N., RYBALKINA, L. V., and SINITSKIY, N. YE., Institute of Metal Physics, Academy of Sciences Ukr SSR

"Physical Nature of the Processes of formation of Complex Mechanical Properties During the Tempering of a Hardened Alloyed Structural Steel"

Kiev, Metallofizika, No 40, 1972, pp 53-56

Abstract: Calorimetric, x-ray, volumetric, and mechanical tests were used to study the physical processes which take place in the tempering of a complexly alloyed structural steel (approximately 0.33% C, 3% Cr, 3% Ni, Mo, W, and V). The magnitudes of thermal and volume effects were determined in the tempering stages. The types of processes occurring and their effect on the formation of mechanical properties were analyzed. It was established that the optimum combination of strength and ductile properties, obtained as a result of tempering the investigated steel for an empirically selected mode, was associated with the occurrence of processes of internal stress relaxation, primarily at points of their maximum concentration. The hypothesis was made that this phenomenon is related to the development of processes of diffusion "closing" microcracks which cause brittle failure of the material. 3 figures, 6 bibliographic references.

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USSR

UDC 66.094.1 :546.791

VLASOV, V. G., and LARIN, A. A.

"Effect of Some Factors on the Kinetics of Decomposition of Uranium Oxycarbides "

Leningrad, Zhurnal Prikladnoy Khimii, Vol 46, No 4, Apr 73, pp 705-708

Abstract : Studying the effect of various factors on the kinetics of decomposition of uranium oxycarbides, it was shown that with rising temperature the rate of the decomposition is increased, leading to the formation of metallic uranium and carbon monoxide. On the other hand, increased compression of the sample, higher degree of the dispersion and pressure of the gas phase in the reaction space, as well as enlarged layers of the starting material cause a drop in the rate of the dissociation of uranium oxycarbides. This evidently is due to poorer conditions for the removal of carbon oxide. The apparent energy of activation has been found to fluctuate in the range of 31 to 41 Kcal/mole. It was established that the smaller the content of oxygen in the oxycarbide -- the more stable it is. This is probably due to the ordering of the solid solution of uranium oxycarbide.

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UDC [illegible]

LARIN, A. A., and V[illegible], V. G., Ural'sk Polytechnic Institute [illegible] S. M. Kirov

"The Electrical Properties of Uranium Oxycarbides"

Moscow, Zhurnal Neorganicheskoy Khimii, Vol 17, No 2, Feb 72, pp [illegible]

Abstract: The resistivity of the uranium oxycarbides [illegible], $UC_{0.81}O_{0.19}$, [illegible], and $UC_{0.66}$[illegible] at [illegible] was [illegible] found to increase with higher temperatures and with an increasing O content. The relations that were established could be explained by the [illegible] of metal-metal Coulomb interaction and metal-nonmetal [illegible]. In the oxycarbides studied, the concentration of lattice defects, as [illegible] correlation of data obtained by X-ray diffraction and pycnometric density determinations, increases with an increasing O content. Interaction [illegible] the 5f and 6d orbitals of U atoms with participation [illegible] metals, which [illegible] symmetry, could be assumed. With [illegible] atures, the distance between U atoms increased, with the result that [illegible] of the 5f and 6d orbitals decreased. This reduced the [illegible] electrons acting as current carriers. The relative share of [illegible] increased with an increasing O content, so that the [illegible]

USSR

LARIN, A. A. and VLASOV, V. G., Zhurnal Neorganicheskikh Khimii, Vol 17, No 2, Feb 72, pp 291-294

electrons acting as current carriers decreased. The participation of [illegible] increased with an increasing O content, while the number of [illegible] became greater. Excess electrons occupied these vacancies, acting as dispersion centers that reduced the mobility of conduction electrons.

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USSR

UDC 577.4

LARIN, A. A.

"Information Problems of the Theory of Probability Digital Automata"

V sb. Avtomaty, gibridn. i upravlyayushch. mashiny (Automata, Hybrid and Control Machines -- collection of works), Moscow, Nauka Press, 1972, pp 59-65 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V374)

No abstract

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USSR

UDC 616-001.26:616.15-07:541.135

SOKOLOVA, V. A., and LARIN, A. A., Chair of Biochemistry, Kiev Medical Institute

"Distribution of Electrolytes and Water in Whole Blood and Blood Plasma as a Result of Irradiation"

Kiev, Vrachebnoye Delo, Vol 53, No 3, pp 122-124

Abstract: Experiments were performed to determine the whole blood and blood plasma content of sodium, chlorine, and potassium after irradiation of rats with doses of 600 and 900 rads. The rats were sacrificed and their blood examined within 2, 7, 14, 21, and 28 days after irradiation with a dose of 600 rads, and 2, 5, 7, 9, 11, and 13 days after irradiation with a dose of 900 rads. It was established that the changes in the content of electrolytes in the blood and plasma depended on the dose and the time elapsed since irradiation. The content of sodium in whole blood of rats irradiated with either of the doses increased somewhat, with the largest increase noted by 11th to 14th days after the irradiation. Doses of 600 rads had no effect on the plasma content of sodium; a marked increase in the plasma content of sodium was noted in rats irradiated with a dose of 900 rads, with the largest increase noted by the 11th to 13th days after the irradiation. The whole

USSR

SOKOLOVA, V. A., and LARIN, A. A., Vrachebnoye Delo, Vol 53, No 3, pp 122-124

blood and blood plasma content of chlorine increased insignificantly in the course of the experiments, with the largest increase noted on the 7th day after irradiation of the animals with a dose of 600 rads, and on the 5th and 16th days from the moment of irradiation with a dose of 900 rads. The potassium content in whole blood and blood plasma from animals irradiated with a dose of 600 rads decreased; it increased, however, in the blood plasma of the animals irradiated with a dose of 900 rads.

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USSR

LARIN, A. G.

"Experience in Modeling a Morphene (based on materials of Russian verb flexion)"

Nauch.-tekhn. Inform. Sb. Vses. In-t. Nauch. i Tekhn. Inform. [Scientific and Technical Information, Collection of All-Union Inst. of Sci. and Tech. Inform., 1971, Series 2, No 10, pp 30-35, 39, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract No 3 V619 by the author).

Translation: A set of word forms is presented, each of which is assigned a certain number of cemantic units. An algorithm is presented which divides the word forms into segments and assigns these segments various cemantic units. A pair of the form: (segment-cemantic unit) is an analogue of the morphene. The algorithm is based on the material of conjugation of Russian verbs. 5 Biblio. Refs.

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6508

USSR [illegible]

VYD[illegible], [illegible], [illegible], A. N., and YAKOBSON, V. Z., [illegible] Chelyabinsk Polytechnical Institute

"Improving [illegible] Rolling Technology of High-Chromium Steels"

Moscow, Met[illegible], No 8, Aug 7[illegible], pp [illegible]

Abstract: [illegible] Metallurgical Plant in collaboration with [illegible] Polytechnical Institute conducted a study on improving the rolling [illegible] high-chromium steels. The study concerned the [illegible] of various factors [illegible] the tendency of high-chromium steels to [illegible] during blooming and [illegible] pass rolling on heavy section mills. Use was made of mathematical statistics to investigate the effect of heating conditions and departures from the chemical composition of the steel within GOST specifications on rolling. The study [illegible] included the plasticity of Kh25T steel at high temperatures and the [illegible] of the beginning of recrystallization at various [illegible] of [illegible] deformation, and the setting of the working mill. The results served as a basis for [illegible] technology of rolling 2.7-ton ingots of high-chromium steels. The [illegible] a distinctive feature of [illegible] process, namely the [illegible] of the [illegible] sticking to the roll's surface, [illegible] one of the [illegible] The new [illegible], which has been [illegible] at the [illegible] Plant [illegible]
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USSR

VYDRIN, V. N., et al, [illegible]

reduced the amount of [illegible] ... on the 950-mill from 4.[illegible] to 0.92 ... and on the 750-mill from 1.3[illegible] to [illegible]. ... yearly savings on the 750-mill amounted to 42,700 rubles.

Inorganic Compounds

USSR UDC 546.776-386.03

LARIN, G. M., KUZNETSOVA, A. A., YANKINA, L. F., and BUSLAYEV, YU. A., Institute of General and Inorganic Chemistry imeni N. S. Kurnakov, Academy of Sciences USSR

"Structural Studies of the Oxomolybdenum (V) Phosphinate Complexes by the EPR Method"

Moscow, Zhurnal Neorganicheskoy Khimii, Vol 18, No 7, Jul 73, pp 1819-1823

Abstract: The structures of oxomolybdenum (V) phosphinate complexes $MoO(DPP)_3$, $MoOCl(DPP)_2$ and $MoCl_2DPP$, where DPP = $Ph_2P(O)O^-$ were studied in benzene, chloroform and methylene chloride solutions. The g-factors were determined for these complexes. It has been shown that these complexes have a very labile equilibrium. Addition of HCl to the solution of $MoO(DPP)_3$ shifts the equilibrium towards the formation of chlorine containing complexes, all the way to the formation of $MoOCl_4^-$. Dissolving the complex $MoOCl(DPP)_2$ in chloroform is accompanied by the formation of several complexes due to redistribution of the ligands, among which the $MoO(DPP)_3$ and $MoOCl_2DPP$ are the most stable ones.

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USSR

UDC 538.113

IARIN, G. M., SOLOZHENKIN, P. M., DYATKINA, M. Ye., and KOPITSYA, N. Z., Institute of General and Inorganic Chemistry imeni N. S. Kurnakov, Academy of Sciences USSR, and Institute of Chemistry Academy of Sciences TadzhSSR

"Study of the Superfine Structure of Ligands of Complexes in EPR Spectra. Communication V. Investigation of Divalent Copper Dithiophosphinates and Dithiophosphates"

Moscow, Zhurnal Strukturnoy Khimii, Vol 12, No 1, Jan-Feb 71, pp 26-33

Abstract: EPR spectra were taken of copper (II) dietaylditiophosphinate (I), diethyl dithiophosphate (II), and dixylyl dithiophosphate (III). It has been shown that the radical bound to the phosphorus atom has a characteristic effect on EPR spectra. The spinhamiltonian parameters of (I) differed from those of (II) and (III) [they were identical for (II) and (III)], leading to the conclusion that this difference was due to the change in the immediate area surrounding the phosphorus atom. On the basis of experimentally determined values for g-factors, SFS constants, and ΔE, the MO coefficients were calculated and reported. The mechanism of the effect of the radical on the axial-symmetric spin-hamiltonian is discussed.

1/1

USSR

UDC 539.143.43

LARIN, G. M., and MIROSHNICHENKO, I. V., Institute of General and Inorganic Chemistry, Academy of Sciences USSR

"The EPR of Magnetically Diluted Single Crystals of Cuprous Diethyldithiophosphate"

Moscow, Zhurnal Strukturnoy Khimii, Vol 13, No 4, Jul-Aug 72, pp 727-728

Abstract: Single crystals of cuprous diethyldithiophosphate (I) diluted with Ni diethyldithiophosphate in the ratio of 1:300 were subjected to study. The crystals had been grown by the slow evaporation of an acetone solution containing the two compounds. On the basis of the angular relation of the EPR spectrum of I, the mutual orientation of the magnetic axes of the two geometrically nonequivalent Cu complexes contained in a single elementary cell was established. The angle between the Z axes of the g-tensors was 45 ± 1^{0}, while the X_1 and X_2 axes were parallel to each other. A superfine structure derived from the nuclei of the two isotopes ^{63}Cu and ^{65}Cu and a supplementary superfine structure associated with the two equivalent P atoms were observed in the EPR spectrum of I. The EPR spectrum of Cu in I could be described by an axially symmetric spin Hamiltonian from which the ratio of the magnetic moment of ^{63}Cu to that of ^{65}Cu followed that was equal to 0.9329. The supplementary superfine structure 1/2

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IARIN, G. M. and MIROSHNICHENKO, I. V., Zhurnal Strukturnoy Khimii, Vol 13, No 4, Jul-Aug 72, pp 727-728

derived from the P atoms was isotropic. It followed from this that the superfine splitting at the P atoms originated by reason of the spin density of the unpaired electron on the s-orbitals of the P atoms only.

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1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--HEATING BLANKS IN ELECTROLYTE DURING TURNING OF HARD TO MACHINE MATERIALS -U-

AUTHOR-(04)-LARIN, M.N., PROKHOROV, V.V., ABINDER, A.A., MARTYNOV, G.A.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, STANKI I INSTRUMENT, NO 3, 1970, PP 22-23

DATE PUBLISHED--------70

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

TOPIC TAGS--METAL MACHINING, BIBLIOGRAPHY, MAGNETIC ALLOY, METAL HEATING, HOT MACHINING, ALLOY DESIGNATION, TITANIUM ALLOY/(U)YUNDK35TS MAGNETIC ALLOY, (U)VT31 TITANIUM ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1305 STEP NO--UR/0121/70/000/003/0022/0023

CIRC ACCESSION NO--AP0123264

UNCLASSIFIED

2/2 027 UNCLASSIFIED

CIRC ACCESSION NO--AP0123264 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A DESCRIPTION IS GIVEN OF A METHOD FOR CUTTING HARD TO MACHINE MATERIALS WITH HEATING IN AN ELECTROLYTE. THE POSSIBILITY OF OXIDATION FREE HEATING OF THIS TYPE OF MATERIALS DURING THE MACHINING PROCESS IS ESTABLISHED. INSTRUMENT STABILITY IS INCREASED 10-20 TIMES IN TURNING THE YUNDK35TS MAGNETIC ALLOY WITH HEATING IN AN ELECTROLYTE AND A CORRESPONDING INCREASE OF 3-10 IS ACHIEVED IN TURNING THE VTZ-1 ALLOY.

UNCLASSIFIED

USSR

UDC 538.21

KORSUNSKIY, M. I., GENKIN, Ya. Ye., LARIN, M. P., and MILOVANOVA, I. A.

"Magnetic Properties of Alloys of the Nb-Mo System"

Alma-Ata, Akademii Nauk Kazakhskoy SSR -- Seriya Fiziko-Matematicheskaya, No 2, March-April 1971, pp 40-43

Abstract: Experimental measurements of the magnetic susceptibility of pure metals and alloys of the Nb-Mo system at 20°C and -196°C are presented. The magnetic susceptibility of these metals and alloys decreases by 2.8 times with a decrease in the Nb concentration from 100 to 37%.

On varying the temperature from 20° to -196°C the magnetic susceptibility of pure Nb increases by approximately 4%, and that of pure Mo decreases by approximately 4%. Beginning with a Nb concentration of ~70%, the magnetic susceptibility decreases as the temperature drops. At an Nb concentration of 37%, the susceptibility decreases by 80%.

The experimental values of the magnetic susceptibility were compared with experimental data for the electronic heat capacity for alloys of the Nb-Mo

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USSR

KORSUNSKIY, M. I., et al, Akademii Nauk Kazakhskoy SSR -- Seriya Fiziko-Matematicheskaya, No 2, March-April 1971, pp 40-43

system. The ratio of the magnetic susceptibility to the heat capacity, which is independent of the density of states, was found to be a function of concentration and temperature.

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UDC:

USSR

ZASHKVARA, V. V., KORSUNSKIY, M. I., LARIN, M. P., REDKIN, V. S., MASYAGIN, V. YE., KUL'DIYAROV, M. A., and CHOKIN, K. SH., Institute of Nuclear Physics of the Kazakh Academy of Sciences, Alma-Ata (Institut yadernoy fiziki AN Kaz SSR, Alma-Ata)

"Spectrum of Characteristic Energy Losses of Electrons in Osmium"

Leningrad, Fizika Tverdogo Tela, Vol 12, No 1, January 1970, pp 294-296

Abstract: The authors obtained a spectrum of characteristic energy losses of electrons in osmium. This is the first time this has been done and should contribute information about the third transition metal group. The spectrum was produced by reflecting an electron beam with an energy of 0.6-1.4 kev off a flat surface of a massive specimen. Energy analysis of the scattered electrons was carried out by using an electrostatic beta-spectrometer with a cylindrical field. The resolving power of the spectrometer was 0.2%. The spectrum was obtained for two different angles of scattering for the primary beam of electrons. In the first case the beam of primary electrons falls normally to the specimen surface and electrons which had been scattered at a 141° angle in the specimen enter the beta-spectrometer. In the second case the angle between the direction of the primary beam and the specimen surface is 19°30' with electrons analyzed which had been scattered at 39°. The osmium specimen was 0.3 mm thick and was made from low-dispersion powdered osmium pressed and subsequently sintered above 2000°C in a $2 \cdot 10^{-6}$ torr vacuum for several hours. The spectrum was produced without disturbing the vacuum

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ZASHKVARA, V. V., et al., Fizika Tverdogo Tela, Vol 12, No 1, January 1970, pp 294-296

at the above temperature, with registration of electrons scattered at a 39° angle. It was shown that the osmium spectrum did not change with a fall in temperature down to 1400°C. The position of the specimen was changed for taking a spectrum at an angle of 141°. This required disturbing the vacuum. The latter spectrum was produced at a specimen temperature of 1700°C in a $2 \cdot 10^{-6}$ torr vacuum. A graph is given for the two spectra. Energy losses in electron-volts as determined from curve peaks are as follows: (141° angle of scattering) 11.4, 29.8, 46.5, 58; and (39° angle of scattering) 11.3, 24.5, 45.2, 57.4. The energy position of the first loss does not change with the angle of scattering. The ratio of the height of the first peak to the height of the second loss peak decreases as the angle of scattering increases and with increased primary beam energy. At a specimen temperature below 1300°C, the height of the first loss peak falls significantly and reaches 9.7 ev. This may be interpreted as energy lost in exciting surface plasma oscillation. At the same time, the energy loss does not coincide with theory. A significant discreptancy (on the order of 5 ev) exists in the energy position of the second loss peak. This is probably conditioned by excitation of volume plasma oscillation in the osmium for 141° and 39° scattering angles. Energy calculated for

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ZASHKVARA, V. V., et al., Fizika Tverdogo Tela, Vol 12, No 1, January 1970, pp 294-296

a volumetric plasmon using the Langmuir formula with the supposition that all eight s and d are free and form a homogeneous electron gas yields 28.6 ev. This value does not correspond to the second peak energy position obtained in this study. The origins of the remaining peaks in the osmium spectrum are also unclear.

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Acc. Nr: AP0048299 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code: UR0051

94384q Spectrum of electron characteristic energy losses in osmium. Zashkvara, V. V.; Korsunskii, M. I.; Larin, M. P.; Red'kin, V. S.; Masyagin, V. E.; Kul'dyurov, M. A.; Chapkin, K. Sh. (Inst. Yad. Fiz., Alma-Ata, USSR). *Fiz. Tverd. Tela* 1970, 12(1), 204–6 (Russ). The spectrum was obtained of characteristic energy losses of electrons in Os. The spectrum was obtained by reflecting a beam of electrons with energy 1.0–1.4 keV from a plane surface of a massive specimen. The energy losses detd. from the max. of the peaks are 11.4, 23.8, 40.5, and 58 eV for a scattering angle of 141°, and 11.3, 24.5, 45.2, and 57.4 eV for a scattering angle of 39°. The peak of the 1st loss is interpreted as the loss of energy for excitation of surface plasma oscillations, and the 2nd loss, as the energy loss for excitation of vol. plasma oscillations in Os. A. Libuckyj

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19792021

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LARIN, T.V.

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 2/70

244063 ALUMINIUM AND ALUMINIUM-ALLOY PARTS are anodised and then permeated with anti-friction substances. The parts are anodised in two stages, with intermediate heat treatment between. This improves wear resistance and gives a low coeff. of friction. The duration of the first period depends on the thickness of anodised surface required. The second period of 3-8 mins. is done after heat treatment at temps. of 100-160°C or other means of heat and chemical treatment. These conditions enable an anodised film of 80-250 microns to be obtained with channel type porosity between separate layers. After anodising, the parts are neutralised and dried at a temperature of 120-180°C. An anti-friction layer is then applied, e.g. by dusting, of molybdenum disulphide or the like. After drying at polymerisation temps., the anti-friction layer is stuck firmly to the anode film, deeply penetrating its pores. Thickness of the anti-friction layer may be 10-20 microns. The

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Vsesoyuznyy Nauchno-Issledovatel'skiy Institut Zheleznodorozhnogo Transporta

surface layer obtained is an oxide polymer composition consisting of a porous oxide film of 80-200 microns thickness, with hardness 350-550 kg/sq. mm. and an anti-friction filler. 12.4.67. as 1152768/22-1, ASIASH KEVICH, B.M. & LARIN, T.V. Rail Transport Inst. (25.9.69) Bul. 17/14.5.69. Class 48a, Int. Cl. C 23b.

A-3

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19821490

1/2 026 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--RADIOLYSIS OF ACETONE. V. INCLUSION COMPOUND OF ACETONE WITH UREA -U-

AUTHOR-(02)-KARASEV, A.L., LARIN, V.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VYS. ENERG. 1970, 4(1), 56-61

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--RADIOLYSIS, ACETONE, UREA, LOW TEMPERATURE EFFECT, HYDRAZINE, METHANOL, EPR SPECTRUM, QUANTUM CHEMISTRY, FREE RADICAL, PROPANOL, KETONE, METHANE, ETHANE, CARBON MONOXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1115 STEP NO--UR/0456/70/004/001/0056/0061

CIRC ACCESSION NO--AP0104513

UNCLASSIFIED

2/2 026 UNCLASSIFIED PROCESSING DATE--19SEP70

CIRC ACCESSION NO--AP0104513

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. GAS LIQ. CHROMATOG. WAS USED TO STUDY THE END PRODUCTS OF THE RADIOLYSIS OF UREA AT 26DEGREES AND MINUS 196DEGREES, AND OF THE INCLUSION COMPD. OF ME SUB2 CO AND UREA. BASIC PRODUCTS FROM UREA ARE H SUB2 O, CO, NH SUB3, HCO SUB2 NH SUB2, WITH SMALL AMTS. OF HYDRAZINE AND MEOH. QUANTUM YIELDS ARE GIVEN FOR THE VARIOUS COMPDS. THE EPR SPECTRUM SHOWS BASICALLY THE FORMATION OF THE NH SUB2 COHN TIMES RADICAL, WITH RADICALS FORMED AT 0.15 MOLS-100 EV. THE INCLUSION COMPD. GIVES A RADICAL YIELD OF 2.1 MOLS.-100 EV, 1.2 FROM THE ME SUB2 CO, AND 0.9 FROM THE UREA, WITH THE MAIN RADICAL PRODUCT BEING THE HYDROXYISOPROPYL RADICAL. A MECHANISM IS SUGGESTED FOR THE FORMATION OF THIS RADICAL, AND QUANTUM YIELDS ARE GIVEN FOR THE FORMATION OF ISO-PROH, PINACONE, MECOET, DIACETYL, ACETYLACETONE, DIACETONYL, HOAC, ACETALDEHYDE, CH SUB4, C SUB2 H SUB6, WATER, AND CO.

UNCLASSIFIED

UDC 612:797.22

USSR

OSTASHKOV, K. V., LARIN, V. V., SOKOLOV'S'KIY, V. S., SAVITS'KIY, V. A., and BYUTNER, S. I., Odessa Medical Institute

"Thermography of Aqualungers and Some Indexes of Metabolic Processes Under Different Diving Conditions"

Kiev, Fiziologicheskiy Zhurnal, No 5, 1972, pp 614-620

Abstract: Thermography of 10 aqualungers age 20 to 24 showed that diving brings about a variety of metabolic changes, the degree varying with the water temperature and pressure, type of outfit worn, respirator, and intensity of the work done. The extent of chilling of the body increases with decreasing temperature and increasing depth of submersion. The heat loss diminishes if the diving is done in a suit of the wet or dry type, if electrical heating is provided, and the aqualunger does physical work. The amount of air and oxygen consumed depends on the water temperature and type of suit. Breathing oxygen results in a greater heat loss, slower respiratory and pulse rates, and higher arterial pressure than does breathing compressed air. The hypothermia caused by submersion shows the signs of a stress reaction: some blood clotting, leukocytosis, and inhibition of serum hydrolase activity.

1/1

172 024 UNCLASSIFIED PROCESSING DATE--090CT70

TITLE--SELECTIVE ABDOMINAL HYPOTHERMY -U-

AUTHOR-(03)-DEYNEKA, I.YA., LARIN, V.V., OSTASHKOV, K.V.

COUNTRY OF INFO--USSR

SOURCE--FIZIOLOGICHNIY ZHURNAL, 1970, VOL 16, NR 3, PP 363-368

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ABDOMEN, HYPOTHERMIA, DIGESTIVE SYSTEM, HEMORRHAGE, KIDNEY, SURGERY, BACTERIAL DISEASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1994/1120 STEP NO--UR/0238/70/016/003/0363/0368

CIRC ACCESSION NO--AP0115139

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--09OCT70

2/2 024

CIRC ACCESSION NO--AP0115139

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A PERSPECTIVE APPLICATION OF SELECTIVE ABDOMINAL HYPOTHERMY IN CLINICAL PRACTIVE IS GROUNDED AS ONE OF THE MOST EFFICIENT MEANS OF COMBATING PROFUSE GASTROENTERIC BLEEDINGS, FOR COMPLEX TREATMENT OF PANCREATITIS AND CHOLECYSTOPANCREATITIS, OF ACUTE KIDNEY INSUFFICIENCY AND FOR DECREASING THE INTOXICATION PHENOMENA IN ACUTE BACTERIAL INFECTIONS. THE FURTHER APPLICATION OF SELECTIVE ABDOMINAL HYPOTHERMY WILL MAKE IT POSSIBLE TO IMPROVE THE RESULTS OF TREATMENT OF MANY ABDOMINAL DESEASES AND PROVIDE MORE FAVOURABLE CONDITIONS FOR OPERATIVE PROCEDURES. FACILITY: DEPARTMENT OF NORMAL PHYSIOLOGY AND DEPARTMETN OF HOSPITAL SURGERY, MEDICAL INSTITUTE, ODESSA.

UNCLASSIFIED

USSR

UDC 615.372:576.851.555].015.45:
[612.111+612.112.3+612.419

ANOSOV, I. Ya., LARINA, I. A., and ISPOLATOVSKAYA, M. V., Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR

"Effect of Lecithinase C From Clostridium perfringens Type A on the Blood, Bone Marrow, and Phagocytic Activity of Leukocytes of Guinea Pigs Immunized With Analecithinase"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 10, 1971, pp 65-69

Abstract: Guinea pigs immunized twice with analecithinase received a lethal dose of lecithinase C from Cl. perfringens type A 14 days later. Aside from slight lysis of erythrocytes accompanied by brief acceleration of the ESR, the peripheral blood and bone marrow cells did not undergo the progressive qualitative and quantitative changes observed in the nonimmunized control after intramuscular injection of 1 MLD of lecithinase C or a culture of Cl. perfringens type A. Immunization of the guinea pigs with analecithinase also protected the phagocytic activity of the leukocytes from the hemolytic action of lecithinase C. The effect was the same as that in animals that received Cl. perfringens type A toxoid. The microbes phagocytized by the leukocytes were digested, i.e., the microbial cells completely disintegrated.

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USSR UDC 576.851.555.098.31.078.2

ISPOLATOVSKAYA, M. V., KLIMACHEVA, L. V., TOKINOVA, T. M., and LARINA, E. A., Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR, Moscow

"Immunochemical Study of Enzymes of the Cl. perfringens Toxic Complex"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, Apr 71, pp 89-93

Abstract: A study was made of toxins formed by Cl. perfringens upon cultivation on a meat-pancreas medium. Lecithinase, collagenase, hyaluronidase, and neuraminidase were isolated and purified by previously described methods. The first three enzymes were converted by the action of CH_2O into compounds devoid of enzyme activity. Neuroaminidase was not inactivated by CH_2O; the Cl. perfringens toxoid retained neuraminidase activity. The enzymes and inactivated compounds had antigenic properties and induced formation of antibodies upon immunization of mice and rabbits. All enzymes reacted with immune serum Cl. perfringens toxin and also with immune serum to the respective inactivated enzyme. The antibodies to collagenase and hyaluronidase were highly specific; they did not protect mice against a Cl. perfringens culture or the toxin, but only inhibited collagenase or hyalaronidase activity. The toxins and toxoids

USSR

ISPOLATOVSKAYA, M. V., et al, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, Apr 71, pp 89-93

were stable to the denaturing effect of urea and ehtylene chlorohydrin, while collagenase, hyaluronidase, and collagenase were denatured by them. The stability of Cl. perfringens toxin to the action of the denaturing agents was due to the fact that the lethal factor, lecithinase, was resistant to their action. Lecithinase and its nontoxic derivative, inactivated lecithinase, passed at the same rate through Sephadex G-75 and formed precipitation lines in agar with the respective antisera. This indicated that formation of the toxoid is not associated with polymerization of the protein molecules of lecithinase. A study of the lecithinase of Cl. perfringens showed that it is a zinc-containing enzyme. By reacting the lecithinase with cysteine, Zn could be removed from it and the enzyme inactivated in this manner. Stable inactivated lecithinase was obtained upon removal of Zn, which had toxoid properties.

2/2

USSR UDC 612.12+612.419].014.46:576.851.555.098.31

ANOSOV, I. Ya., ISPOLATOVSKAYA, M. V., and LARINA, I. A., Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR

"The Effect of C-Lecithinase from Type A Cl. perfringens on Guinea Pig Blood and Bone Marrow"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 8, Aug 70, pp 117-122

Abstract: Guinea pigs were injected intramuscularly with purified C-lecithinase isolated from type A Cl. perfringens toxin (1 MLD). The animals developed hypochromic anemia, accompanied by aniso- and poikilocytosis, hemolysis, normoblastosis, accelerated ESR, and, in the white blood cells, eosinopenia, leukocytosis (changing to leukopenia with a shift to the left due to the appearance of rodnuclei, immature forms, and myelocytes), slight lymphocytosis against the background of leukopenia, and degeneration of formed elements, which intensified as the pathological processes developed. Edema, pronounced hyperemia, extensive hemorrhages, and karyopyknosis of many cells were evident in bone marrow within 4 hours of injection of C-lecithinase. The number of cells containing RNA and alkaline phosphatase decreased substantially. Erythropoiesis and leukopoiesis

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USSR

ANOSOV, I. Ya., et al. Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 8, Aug 70, pp 117-122

were depressed. The symptoms produced by intramuscular injection of C-lecithinase from type A Cl. perfringens are quite similar to those observed in experimental gas gangrene.

2/2

LARINA, L.

(1)

SO: JPRS 59165
31 May 1973

MISMANAGEMENT IN FERTILIZER PRODUCTION SCORED

[Article by G. Nikolayenkova, head of the republic people's control committee department, A. Kulish, senior engineer of the Chirchik branch of the State Institute of the Nitrogen Industry, L. Larina, group supervisor of the Samarkand Laboratory of the State Surveillance Committee for Standards and Measuring Equipment, and A. [illegible], chairman of the people's control group of the Samarkand China Plant: "Fertilizer Is Not Taken Care Of"; Moscow, Sel'skaya Zhizn', Russian, 27 March 1973, p 2]

Mass checking of the production, transportation, and storage of mineral fertilizer by the people's controllers is continuing in the country. More than 6,000 patrols, specialists, and workers and rural correspondents are taking part in unexpected inspections at enterprises and warehouses and on the roads of Uzbekistan. Today, the newspaper publishes the communique from the inspection team which visited the Samarkand Superphosphate Plant.

We encountered many facts of serious losses in fertilizer and in the raw materials for its production in the shops of the enterprises and on its broad territory. One could only be amazed at such mismanagement.

Nearly 700 tons of ammoniated superphosphate was dumped in heaps along the outside walls of one of the warehouses. These "deposits" are the result of an overfilling of the warehouse.

Because of mismanagement and violations of technical methods, the plant has lost thousands of tons of iron pyrite. In the final count, this amount of raw material is sufficient for the production of a large amount of superphosphate.

Some 200 tons of phosphorite flour was spoiled at the plant as a result of careless storage and contamination. The transporter gallery is in an unsatisfactory state and organizational-technical conditions are violated in the superphospate and ammoniation shops. All of this also leads to large losses in products as the wind disperses it over the territory of the enterprise.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720007-0"

Shortcomings are permitted in the technological process of fertilizer production. For example, as it was learned, complete decomposition of the raw material is not carried out in the superphosphate chamber and the periods of its aging are not followed. The result -- a drop in fertilizer quality. According to the data of the Samarkandskaya Oblast Agrochemical Laboratory, the content of assimilated elements in all five control samples of ammoniated superphosphate was considerably below the norm. The consumers are often supplied with water-logged and deteriorated fertilizer. It has to be pulverized at the farms which leads to additional expenditures and the quality of the fertilizer is also reduced.

An efficient release of product is not organized at the enterprise. The fertilizer is bulk loaded into railroad cars and into vehicle and tractor carts which have not been adapted for carrying it. A large amount of fertilizer is lost as a result and blown away by the wind. The cars are filled, as they say, by eye and later they have to be returned several times from the railroad scales to the shop for additional filling. Valuable time is spent and labor and means are expended. Last year alone the plant paid a fine of 458,000 rubles for railroad car demurrage.

In the final tally, all of these shortcomings broke down the fertilizer production schedule and led to a disruption of the fertilizer delivery plan and to nonproductive expenditures and losses.

The shops are undergoing modernization at the Samarkand Plant and the capacities for ammophos production are being increased. The construction schedule is constantly being violated. The construction and installation work plan during 7 months of this year was fulfilled by only 57 percent. Technical documents are not available at a number of below-grade construction sites.

The mass checking of mineral fertilizer production, storage, and transportation in the republic is continuing. The party, soviet, and administrative organs are taking immediate measures based on the materials of the people's controllers. It is important that this be done universally.

11,841
CSO: 1821-5

1/2 029 UNCLASSIFIED PROCESSING DATE--23OCT7C

TITLE--EFFECT OF SMALL DEFORMATIONS ON THE RECRYSTALLIZATION AND TEXTURE OF LOW CARBON STEEL WITH VARYING SILICON CONTENT -U-

AUTHOR-(02)-LARINA, L.G., MIRONOV, L.V.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 344-7

DATE PUBLISHED--------70

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

TOPIC TAGS--METAL DEFORMATION, LOW CARBON STEEL, SILICON STEEL, METAL TEXTURE, ANISTROPY, MAGNETIC PROPERTY, ANNEALING, HOT ROLLING, ALLOY COMPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1527 STEP NO--UR/0048/70/034/002/0344/0347

CIRC ACCESSION NO--AP0120308

UNCLASSIFIED

2/2 029 UNCLASSIFIED PROCESSING DATE--23OCT7

CIRC ACCESSION NO--AP0120308

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INDUSTRIALLY MELTED STEEL (C 0.007-0.010, SE 0.21-3.06, MN 0.12-0.18, S 0.003-0.005, P 0.008-0.009, CR 0.06-0.07, CU 0.10-0.13, NI 0.044-0.050, AND AL 0.006-0.017 WT. PERCENT) WAS STUDIED. HOT ROLLED BANDS, 0.25 MM THICK, WERE ANNEALED A 780DEGREES UNDER DECARBURAZING CONDITIONS, THEN PICKLED AND COLD ROLLED TO 0.51-0.70 MM THICKNESS, ANNEALED IN H AT 750DEGREES FOR 3 HR, AND DRESSED TO 0.50 MM FINAL THICKNESS. ANNEALING AT 10 PRIME NEGATIVE2 TORR FOLLOWED AT VARYING TEMPS. THEREAFTER THE MICROSTRUCTURE AND TEXTURE WERE DETD. THE MAGNETIC PROPERTIES OF INDUSTRIALLY PREPD. SPECIMENS AT CRIT. DEFORMATIONS WITH VARYING FINAL ANNEALING CONDITIONS WERE ALSO TESTED. THE VALUE OF CRIT. DEFORMATION DECREASED WITH INCREASING SI CONTENT AND TEMP. OF FINAL AND INTERMEDIATE ANNEALING. A SI CONCNS. SMALLER THAN OR EQUAL TO 3PERCENT THE ANISOTROPY DECREASED ONLY AT DEFORMATIONS GREATER THAN CRIT., WHILE AT DEFORMATIONS ABOUT CRIT. THE ANISOTROPY INCREASED. THE LOWER THE SI CONCN. WAS THE MORE PRONOUNCED WAS THE LATTER INCREASE OF ANISOTROPY. THE INTERVAL OF OPTIMUM DEGREE OF REDN. DEPENDED ON THE SI CONCN. AND WAS VERY NARROW. CRIT. DEFORMATION FOLLOWED BY ANNEALING IN A BELL FURNACE DECREASED THE MAGNETIC INDUCTION WHILE ANNEALING AT 1100DEGREES IN A CONTINUOUS FURNACE DID NOT. FACILITY: TSNIICHM IM. BARDINA, MOSCOW, USSR.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--EFFECT OF ADDITIVES OF TRACE FERTILIZERS ON THE TEMPERATURE OF MODIFICATION TRANSITIONS AND ON THE CRYSTAL LATTICE PARAMETERS OF
AUTHOR-(05)-GANZ, S.N., VARIVODA, I.KH., KUZNETSOV, I.YE., OINKEVICH, I.D., LARINA, L.M.
COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(4), 732-5

DATE PUBLISHED-------70

SUBJECT AREAS--AGRICULTURE, CHEMISTRY

TOPIC TAGS--AMMONIUM NITRATE, CRYSTAL LATTICE, TRACE ELEMENT, NITROGEN FERTILIZER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/1627 STEP NO--UR/0080/70/043/004/0732/0735

CIRC ACCESSION NO--AP0127118
UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--27NOV70

2/2 016

IRC ACCESSION NO--AP0127118

BSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF CU(NO SUB3)SUB2, MG(NO SUB3)SUB2, ZN(NO SUB3)SUB2, MNSO SUB4, AND NA SUB2 B SUB4 O SUB7 ADMIXTS. (0.3-2PERCENT) ON THE MONOCLINIC ORTHORHOMBIC TRANSITION TEMP. OF NH SUB4 NO SUB3 WAS INVESTIGATED. THE GREATEST EFFECT WAS OBSD. FOR 0.5PERCENT ZN(NO SUB3)SUB2, STABILIZING THE ORTHORHOMBIC MODIFICATION AT A TEMP. HIGHER BY SIMILAR TO 5.1DEGREES. THE CRYSTAL LATTICE PARAMETERS WERE DETD. FOR 15 MIXTS. AND FOR PURE NH SUB4 NO SUB3. FACILITY: DNEPROPETROVSK. KHIM. TEKHNOL. INST., ONEPROPETROVSK, USSR.

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--11SEP70

1/2 ; 018

TITLE--ALLOYING A MAGNICO ALLOY WITH NEODYMIUM -U-

AUTHOR--LARINA, L.S. CHERNOV, V.M.

COUNTRY OF INFO--USSR

SOURCE--LITEINOE PROIZVOD. 1970, (1), 31-2

DATE PUBLISHED--------70

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

TOPIC TAGS--NEODYMIUM CONTAINING ALLOY, MAGNETIC ALLOY, MAGNETIC PROPERTY, INDUCTION FURNACE, IRON BASE ALLOY, COBALT CONTAINING ALLOY, THERMOMAGNETIC EFFECT, ALLOY DESIGNATION, METAL MELTING/(U)MAGNICO MAGNETIC ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1320 STEP NO--UR/0120/70/000/001/0031/0032

CIRC ACCESSION NO--AP0106097
UNCLASSIFIED

2/2 018 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106097

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IMPROVEMENT OF MAGNETIC CHARACTERISTICS OF MAGNICO ALLOYS WAS STUDIED BY ALLOYING THEM WITH ND. THE ALLOY (CO 23, NI 13.5, AL 8.5, CU 3, S 0.2, AND TI 0.3 WT. PERCENT, FE REST) WAS MELTED IN A 10 KG CAPACITY HIGH FREQUENCY INDUCTION FURNACE WITH AN ACID LINING. ND, (1, 2, 5, 50, 100, AND 500) TIMES 10 PRIME NEGATIVE3 PERCENT, WRIPPED IN AN AL FOIL WAS IMMERSED IN THE MOLTEN ALLOY. THE ALLOY WAS MIXED AND POURED INTO 16 TIMES 16 TIMES 50 MM MOLDS. CONVENTIONAL THERMO MAGENTIC TREATMENT FOLLOWED. OPTIMUM TEMPERING CONDITIONS WERE DETD. BY HEATING AT 2 HR INTERVALS UP TO 8 HR AT 550 AND 600DEGREES AND FOR 1 HR INTERVALS UP TO 6 HR AT 650DEGREES THE OPTIMUM LEVEL OF ND ADDN. WAS 0.005PERCENT. INCREASING ND FROM 0.001 TO 0.05PERCENT INCREASED THE COERCIVE FORCE, HOWEVER, A FURTHER INCREASE UP TO 0.3PERCENT SHARPLY DECREASED THE COERCIVE FORCE. THE MAX. MAGENTIC ENERGY OCCURRED AT 0.005PERCENT ND. RESIDUAL INDUCTION REMAINED UNCHANGED AT 0.001-0.05 ND INCREASING STEADILY WITH LARGER AMTS. THE STRUCTURE OF THE ALLOY WAS DENDRITIC AT ALL CONCNS. THE POLISHING PROPERTIES OF THE ALLOYS WITH ND WERE IMPROVED, SO THAT IN GENERAL THE ND ADDN. WAS ADVANTAGEOUS.

UNCLASSIFIED

Acc. Nr. AP0045173 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code UR0191

90892f Continuous high-pressure copolymerization of ethylene with isobutylene. Gologov, A. P.; Tertsyan, R. A.; Larina, M. V.; Monastyrskii, V. N. (USSR). *Plast. Massy* 1970, (1), 5-7 (Russ). The copolymn. of ethylene (I) with isobutylene (II) was studied in a continuous-flow tubular reactor at 200-20° and 400-2000 kg/cm². High-mol.-wt. products were obtained when the II content was ≥15 mole %; a further increase in II content gave low-mol.-wt. copolymers, accompanied by a sudden decline in m.p. (from 100 to 0°). The tensile strength of I-II copolymers was inversely proportional to II content, declining to 0 when II content was 40 mole %. A radical copolymn. mechanism was proposed. The copolymn. involved chain transfer (via II mols.) and the termination, thus leading to the formation of low-mol.-wt. copolymers. The mol. wt. of the copolymers (500-15,500) and the copolymn. rate were proportional to the pressure. Increased pressure had a favorable effect on the d., tensile strength, elongation at break, and m.p. of the I-II copolymers. CEIR

REEL/FRAME 19780073

UDC 539.3

USSR

YENDZHIYEVSKIY, L. V., LARIONOV, A. A.

"Calculation of Hollow Multisided Ribbed Shells by the Finite Difference Method"

V sb. Prostranstv. konstruktsii v Krasnoyarsk. krave (Three-Dimensional Structures in the Krasnoyarsk Region -- Collection of Works), Krasnoyarsk, 1972, pp 51-59 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V118)

Translation: Structural designs of assembled plane ribbed elements having the shape of a polyhedron inscribed in a spherical or circular surface are discussed. Bending in the normal plane and longitudinal deformation is taken into account for ribs eccentrically conjugate with the plate. Difference equations were obtained from the Lagrange variation equation for the multicontact problem. The solution is given in the linear formulation in displacements. Authors' abstract.

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USSR

UDC 552.321.6(234.851)

BAKHTEYEV, M. K., ABRAMKIN, A. S., VOLODINA, I. V., LARIONOV, A. N., and PROSKURIN, G. F., Moscow Geological Exploration Institute imeni S. Ordzhonikidze, Vorkuta Complex Geological Exploration Expedition

"The Geological Nature of Local Aeromagnetic Anomalies of the Western Slope of the Northern Urals (the Verkhnyaya /Upper/ Pechora River Basin)"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy--Geologiya i Razvedka, No 10, Oct 73, pp 41-48

Abstract: A report is given on a detailed investigation of the aeromagnetic anomalies on the left bank of the Verkhnyaya Pechora river, on the water divides of its left tributaries -- the Vyder'ya, the Temp'ya, and the Man'kaya Volosnitsa. The area of development of stratified metamorphic rock possesses on the whole a negative magnetic field, which is of a strongly varied nature. Numerous local positive anomalies are to be observed against the generally negative background. Two types of anomalies are to be distinguished among the most intensive ones: isometric and linearly elongated. The isometric and linear magnetic anomalies are described. Worthy of note among the geological objects which bring about the local positive magnetic anomalies are the Temp'inskiye hyperbasites. 4 figures. 3 tables. 12 references.
1/1

UDC 616.988.75-022.14-092.9-07

USSR

RITOVA, V. V., LARIONOV, A. S., MOISEYEV, V. P., and PSHENICHNIKOV, V. V., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR and Second Moscow Medical Institute imeni N. I. Pirogov

"Experimental Mixed Influenza-RS-Virus Infection in White Mice"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 12, 1971, pp 31-33

Abstract: Mice were infected with respiratory syncytial (RS) virus, influenza A_2 Hong Kong 68 virus, or both by intranasal injection or aerosol inhalation. The course of the resulting infection was more severe when the animals received nasal injections of the material. The death rate was higher in the animals receiving both viruses simultaneously than in those given only one. The death rate was still higher when the animals received RS virus first and influenza virus 18 hours later, but not vice versa. Injected with placebo, all the mice, as in the control, survived.

1/1

USSR

MOISEYEV, V. P., LARIONOV, A. S., and RITOVA, V. V., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR

"Experimental Study of Mixed Influenza and RS-Virus Infection of Cell Cultures"

Moscow, Voprosy Virusologii, No 5, 1971, p 625

Abstract: A mixed viral infection of green monkey cells caused by influenza A2/Hong Kong and RS virus strains was studied. Infection was induced simultaneously and consecutively with the two viruses at intervals of 3 and 18 hours. Using the immunofluorescence method, the authors found the antigens of influenza A2 and RS viruses in the cells at the same time. When the cells were infected first with RS virus and then 18 hours later with influenza A2 virus, there was a distinct mutual potentiation of the effect of the influenza A2 virus in the RS virus -- cell -- influenza A2 virus system. This phenomenon did not occur in other variants of the experiment.

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UDC 576.858.75(A2).06

USSR

RITOVA, V. V., SCHASTNYY, E. I., OGANESYAN, O. T., CHEBOTAREV, V. V., MOISEYEV, V. P., LARIONOV, A. S., RYKOVSKIY, A. F., SOKOLOVA, N. N., and MEL'NICHENKO, YE. N., Institute of Virology imeni D. I. Ivanovskiy, USSR Academy of Medical Sciences, Moscow

"Study of Influenza A2 Virus Strains Isolated During the 1968-1969 Epidemic from Children in Moscow and in the Moscow Region"

Moscow, Voprosy Virusologii, No 3, May/Jun 1971, pp 291-196

Abstract: Since 1957, there have been five influenza epidemics in the USSR caused by the A2 virus: in 1957, 1959, 1962, 1965 and 1968-1969. The last one was produced by a newly formed variant of the virus and began in July in Hong-Kong, subsequently spread over Japan, and hit the countries of South-east Asia and the US. In fall 1968 there was a sharp rise in the influenza incidence in England and in other countries of Central Europe. In December, individual A2 and B influenza foci were reported in the Soviet Union in organized children's collectives (child care centers, schools, etc), and by the middle of January in many cities of the USSR, the incidences of influenza surpassed the mean seasonal rate by a factor of five. From 350 sick children 141 strains of the flu virus were isolated from nasopharyngeal washings.

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UNCLASSIFIED PROCESSING DATE--16OCT70

1/2 022

TITLE--ELECTROVACUUM ELECTRONIC AND IONIC DEVICES -U-

AUTHOR-(03)-KATSNELSON, B.V., KALUGIN, A.M., LARIONOV, A.S.

COUNTRY OF INFO--USSR

SOURCE--MANUAL, BOOK II. MOSCOW ENERGIYA, 1970, 336 PP

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., ENERGY CONVERSION (NON-PROPULSIVE)

TOPIC TAGS--ELECTROVACUUM, ELECTRONIC EQUIPMENT, ELECTRIC GENERATOR, MODULATOR TUBE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0978 STEP NO--UR/0000/70/000/000/0001/0366

CIRC ACCESSION NO--AM0116470

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--16OCT70

2/2 022

CIRC ACCESSION NO--AM0116470

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TABLE OF CONTENTS: PART V. ELECTRONIC GENERATOR AND MODULATOR TUBES. CHAPTER 18 GENERAL DATA ON MODULATOR AND GENERATOR TUBES 4. CHAPTER 19 REFERENCE DATA ON GENERATOR, MODULATOR AND CONTROL TUBES OF LOW FREQUENCIES 16. CHAPTER 20 REFERENCE DATA ON GENERATOR TUBES FOR OPERATION IN THE RANGE UP TO 30 MC 41. CHAPTER 21 REFERENCE DATA ON GENERATOR TUBES FOR OPERATION IN THE RANGE UP TO 600 MC 71. CHAPTER 22 REFERENCE DATA ON GENERATOR TUBES FOR OPERATION IN THE RANGE ABOVE 600 MC 183. CHAPTER 23 REFERENCE DATA ON PULSE GENERATOR TUBES 213. CHAPTER 24 REFERENCE DATA OF MODULATOR PULSE TUBES 302. THE MANUAL CONSISTING OF 2 BOOKS CONTAINS BASIC DATA ON THE MAJORITY OF CONTEMPORARY ELECTRONIC AND IONIC DEVICES. BOOK 2 CONTAINS DATA ON MODULATOR AND GENERATOR TUBES.

UNCLASSIFIED

1/2 032 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--ELECTROVACUUM ELECTRONIC AND IONIC DEVICES -U-

AUTHOR-(03)-KATSNELSON, B.V., KALUGIN, A.M., LARIONOV, A.S.

COUNTRY OF INFO--USSR

SOURCE--ELEKTROVAKUUMNYYE ELEKTRONNYYE I IONNYYE PRIBORY. MANUAL. BOOK 1. MOSCOW, ENERGIYA, 1970, 601 PP

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--ELECTROVACUUM, ELECTRONIC EQUIPMENT, ELECTRON BEAM OSCILLOGRAPH, TV RECEIVER, ELECTRON BEAM, MEMORY ELEMENT, PHOTOELECTRET, ELECTRON MULTIPLIER, THYRATRON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0976 STEP NO--UR/0000/70/000/000/0001/0601

CIRC ACCESSION NO--AM0116469

UNCLASSIFIED

2/2 032 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AM0116469

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TABLE OF CONTENTS: PREFACE 3. PART I GENERA DATA. CHAPTER 1 DESIGNATIONS OF ELECTRONIC AND IONIC DEVICES 9. CHAPTER 2 EXPLANATIONS TO REFERENCE DATA 12. PART II ELECTRON BEAM DEVICES. CHAPTER 3 BASIC DEFINITIONS 25. CHAPTER 4 TELEVISION RECEIVER TUBES, KINESCOPES 35. CHAPTER 5 ELECTRON BEAM OSCILLOGRAPHIC TUBES 117. CHAPTER 6 ELECTRON BEAM INDICATOR TUBES 199. CHAPTER 7 ELECTRON BEAM MEMORY TUBES 244. CHAPTER 8 ELECTRON BEAM TRANSMITTING DEVICES 275. PART III ELECTROVACUUM PHOTOELECTRONIC DEVICES. CHAPTER 9 GENERAL DATA ON PHOTOELEMENTS AND PHOTOELECKONIC MULTIPLIERS 344. CHAPTER 10 VACUUM AND GAS FILLED PHOTOELEMENTS 351. CHAPTER 11 PHOTOELECTRONIC MULTIPLIERS 370. PART IV IONIC ELECTROVACUUM DEVICES. CHAPTER 12 PHANATRONS AND GLOW DISCHARGE THYRATRONS 457. CHAPTER 13 GLOW DISCHARGE AND CORONA DISCHARGE STABILITRONS 496. CHAPTER 14 DECATRONS 530. CHAPTER 15 GLOW DISCHARGE DIGITAL INDICATORS 547. CHAPTER 16 PHANATRONS AND THYRATRONS WITH AN INCADESCENT CATHODE 552. CHAPTER 17 PULSE THYRATRONS 629. THE MANUAL CONSISTING OF 2 BOOK CONTAINS BASIC DATA ON THE MAJORITY OF CONTEMPORARY ELECTRONIC AND IONIC DEVICES. BOOK I CONTAIN DATA ON ELECTRON BEAM RECEIVER AND TRASMITTER TUBES, ELECTROVACUUM PHOTOELECTRONIC DEVICES AND ELECTROVACUUM IONIC DEVICES. THE BOOK WAS WRITTEN FOR SPECIALISTS WORKING WITH RADIOELECTRONIC EQUIPMENT, AS WELL AS STUDENTS AND RADIO AMATEURS.

UNCLASSIFIED

UDC 621.396.75

USSR

KOMAROV, G. A., LARIONOV, A. S., MEDVEDEVA, L. T., PRAVDUKHIN, V. M.

"Discriminator of a Spatial Delay Tracking Meter"

Tr. Uralskogo politekhn. in-ta (Works of Urals Polytechnical Institute), 1970, Collection 183, pp 74-79 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8G91)

Translation: For direction finding methods using spaced reception, tracking meters are used based on correlation processing of the received signal. The discrimination characteristic of the tracking meter for measuring the relative delay of noise type signals received by the spaced arrays is proportional to the derivative of the correlation function of the signal. When necessary to measure the signal delay with respect to the envelope of the correlation function of the high-frequency noise type signal, the use of a discriminator is proposed in the form of a device operating by the principle of linear conversion of the signal spectrum to a spectrum with different intermediate frequencies with automatic phase compensation on the difference frequency. A calculation of the discrimination characteristic of the discriminator and the results of experimental testing are presented. There are three illustrations and a four-entry bibliography.

1/1

UDC 576.851.45.077.3

USSR

PEYSAKHIS, L. A., LARIONOV, G. M., and STEPANOV, V. M., Central Asian Plague Research Institute, Alma-Ata

"Diagnostic Value of Serological Tests in Detecting Antibodies to Pasteurella pestis"

Moscow, Laboratornoye Delo, No 3, 1973, pp 162-165

Abstract: Experiments were performed with gerbils exposed to fleas infected with Past. pestis strain 151 to determine the relative merits of the passive hemagglutination and antigen neutralization tests as a means of detecting fraction one of the microbe and specific antibodies to it. Four days after exposure, blood was drawn from the animals to run the two tests simultaneously. The antigen neutralization test was found to be superior during both the infectious and postinfectious periods in the three main criteria of the immunological response: frequency of occurrence of antibodies, mean geometric titers, and maximum titers. The antibodies were found more frequently and in higher titers not only during the first two weeks after infection, but throughout the 6 months' observation period.

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UDC 541.49

USSR

LARIONOV, S. V., and IL'INA, L. A., Institute of Inorganic Chemistry, Siberian Branch, Acad. Sc., USSR

"Metal Compounds With 0,0'-Diethylselenophosphate Ions"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 4, Apr 71, pp 762-765

Abstract: The metal 0,0'-diethylselenophosphates were prepared by combining aqueous solutions of sodium 0,0'-diethylselenophosphate (I) and metal nitrates. The products precipitated, were washed with ice water, dried, redissolved in a minimal amount of chloroform, and reprecipitated by addition of hexane. The following derivatives were thus obtained: metal, m.p. given: Cu, 135-136°; Zn, 143-143.5°; Cd, 83-84°; and Bi, 74-75°. To prepare the palladium derivative, an acidified aqueous solution of K_2PdCl_4 was combined with (I). The complex was extracted with chloroform, dried, concentrated, and precipitated by addition of cyclohexane; the product -- palladium bis-0,0'-diethylselenophosphate melted at 115-116°C. Analogously palladium bis-0,0'-diethylthiophosphate, m.p. 119-120° was obtained. Using the cryoscopic method it was shown that these complexes are associated in benzene.

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USSR UDC 669.715.004.82

LARIONOV, G. V., and GERTSUK, N. A.

"The Problems of the Optimal Furnace for Melting of Aluminum Waste and Scrap" (Continuation of the Discussion on Improving the Production of Secondary Aluminum)

Tsvetnyye Metally, No 3, Mar 71, pp 67-69

Abstract: The operation of induction, flame (reflector), and drum rotary furnaces is studied. Recommendations are given for the use of furnaces of each type for melting various types of scrap.

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UDC 669.715.004.82

USSR

LARIONOV, G. V., and GERTSUK, N. A.

"The Problems of the Optimal Furnace for Melting of Aluminum Waste and Scrap" (Continuation of the Discussion on Improving the Production of Secondary Aluminum)

Tsvetnyye Metally, No 3, Mar 71, pp 67-69

Abstract: The operation of induction, flame (reflector), and drum rotary furnaces is studied. Recommendations are given for the use of furnaces of each type for melting various types of scrap.

1/1

USSR

UDC 621.376.2

BRONNIKOVA, YE. G., LARIONOV, I. M., SHPENTSER, B. I.

"Problem of Planning and Designing High-Frequency Single-Layer Single-Side Band Filters"

Elektron. tekhnika. Nauchno-tekhn. sb. (Electronic Engineering. Scientific and Technical Selection), 1970, ser. 9, vyp. 2, pp 45-58 (from Zh-Radiotekhnika, No 9, Sep 70, Abstract No 9D230)

Translation: This article contains an investigation of three possible schematics for single-layer single-side band filters. The difficulties in planning and designing such filters for high-frequencies are demonstrated. The basic problems arising when designing such filters are listed. There are 11 illustrations and a four-entry bibliography.

1/1

1/2 016 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--SCREENING ANTICANCER DRUGS IN THE SOVIET UNION -U-

AUTHOR--LARIONOV, L.F.

COUNTRY OF INFO--USSR

SOURCE--CANCER CHEMOTHER. REP., PART 1 1970, 54(2), 71-8

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTINEOPLASTIC DRUG, TEST METHOD, DRUG TESTING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605044/807 STEP NO--US/0000/70/054/002/0071/0078

CIRC ACCESSION NO--AP0142942

UNCLASSIFIED

2/2 016 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0142942

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SCREENING OF ANTICANCER DRUGS IS SEPD. INTO 3 PHASES: PRIMARY SCREENING, DRUG ACTIVITY ON THE TUMOR SPECTRUM, AND STUDY OF SIDE EFFECTS. FOR ANTIMETABOLITES WALKER 256 (ON WISTAR RATS) AND ADENOCARCINOMA 755 (CA 755) (ON CB7BL MICE), FOR ALKYLATING AGENTS WALKER 256 (NON INBRED RATS) AND 545 (NON INBRED RATS), AND FOR ANTICANCER ANTIBIOTICS ASCITIC LYMPHATIC LEUKEMIA NK-LY AND LYMPHOSARCOMA L1C-L ARE RECOMMENDED. FACILITY: INST. EXPTL. CLIN. ONCOL., MOSCOW, USSR.

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--FLOW THROUGH CUVETTES FOR THE REFRACTOMETER IRF,23 AND THE INTERFEROMETER ITR,2 -U-
AUTHOR-(03)-KURBANBEKOV, E., LARIONOV, O.G., CHMUTOV, K.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 286-7

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--INTERFEROMETER, REFRACTOMETER, TEMPERATURE CHAMBER, TEST CHAMBER/(U)IRF23 REFRACTOMETER, (U)ITR2 INTERFEROMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/0389 STEP NO--UR/0076/70/044/001/0286/0287

CIRC ACCESSION NO--AP0111582
UNCLASSIFIED

2/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0111582

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STANDARD CUVETTE WAS DISMANTLED INTO ITS COMPONENTS, BY HEATING IN A MUFFLE FURNACE AT 300DEGREES OVER CONCN. HNO SUB3. THE RECONSTRUCTED REFRACTOMETER CUVETTE WAS CEMENTED DIRECTLY TO THE PRISM, ITS HERMETICALLY SEALED COVER WAS DRILLED TO ALLOW FOR THE INLET (ALMOST TOUCHING THE PRISM), AND OUTLET (1-1.5 MM SHORTER) CAPILLARIES. THE VOL. OF THE NEW CVETTE WAS 0.2-0.3 ML. SIMILARLY, A NEW INTERFEROMETER CUVETTE WAS CONSTRUCTED, ITS VOL. REDUCED BY AN INSERT, TO 0.3-0.4 ML AND HAVING CAPILLARIES OF 0.5-1 MM DIAM., THE OUTLET ONE BEING 4-5 MM FROM THE BOTTOM OF CUVETTE.

UNCLASSIFIED

USSR UDC 541.49:543.422.4

CHEREMISINA, I. M., IL'INA, L. A., and LARIONOV, S. V., Institute of Inorganic Chemistry, Siberian Affiliate of the Academy of Sciences USSR, Novosibirsk

"Study by IR Spectroscopy of Chelates Formed by Metals with O,O'-Diphenylthioselenophosphate Ions"

Moscow, Zhurnal Neorganicheskoy Khimii, Vol 18, No 5, May 73, pp 1278-1284

Abstract: The synthesis and some properties of complexes formed by metals with O,O'-diphenylthioselenophosphate ions $(PhO)_2P(S)Se^-$ (DPTSP) were described in earlier work. In the present work the compounds formed by K^+ and Zn, Cd, Pb, Bi, Cr, Ni, Co, Pd, Rh, Pt, and Ir ions with DPTSP were studied by IR spectroscopy at 125-3600 cm^{-1}. Furthermore, the low-frequency (125-400 cm^{-1}) spectra of some complexes of metals with O,O'-diethylthio- and O, O'-diethylselenophosphate ions, the spectra of which had already been investigated in the 400-3600 cm^{-1} range, were subjected to study. It was established that for compounds of heavier metals with DPTSP the ν_{PS} band was displaced to lower frequencies from that of 665 cm^{-1} for the DPTSP-K^+ compound. ν_{P-S} and ν_{M-Se} (M = metal) bands were identified in the spectra of the complexes. The results indicated that the DPTSP complexes had a chelate structure and that metal-sulfur in addition to metal-selenium bonds were present in them.

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USSR

UDC 543.42:577/578

BORISOV, A. Yu., LARIONOV, V. N., and MOKHOVA, Ye. N., Interfaculty Laboratory of Bio-Organic Chemistry, Moscow State University imeni M. V. Lomonosov

"Differential Spectrophotomers Used in Biology"

Moscow, Biologicheskiye Nauki, No 8, 1970, pp 118-128

Abstract: A brief account is presented of the history and uses of differential spectrophotometers. The three main types (single-beam, two wave, double-beam) are described, and their technical characteristics are outlined (optical, mechanical, and electronic components; modulation frequency; automatic regulation of intensity; preliminary limitation of frequency bands). The principal features of the spectrophotometers designed by Chance, Klingenberg and Bücher, Duysens, Kok, Lundegard, Witt, and the authors of the article are noted. The parameters and characteristics most appropriate for investigations of cellular respiration, photosynthesis, and oxidative and photosynthetic phosphorylation are summarized.

1/1

USSR

UDC: 621.316.38:629.735.33

BREKHOV, V. M. and LARIONOV, V. P., Moscow Power Institute

"Protection of Aircraft Fairings Against Lightning"

Moscow, Elektrichestvo, No 11, 1972, pp 89-90

Abstract: To protect the nose fairing of the aircraft, the most vulnerable portion of the plane to lightning damage, the surface of the fairing has mounted on it a system of lightning rods, in the form of ribbons of metal joined to the metal of the fuselage. Detailed instructions on how this is done are given. Also given are the results of tests made in the laboratory of the High-Voltage Engineering section of the Moscow Power Engineering Institute, in which the probability of lightning striking certain portions of the fairing was measured through photography. Curves are plotted for the probability of damage to the fairing surfaces as functions of lightning-rod parameters. Results of the tests showed also that best protection is afforded by duralumin ribbons with a cross section of 20-25 mm^2. The authors thank B. A. Smol'tsov for his assistance with the work.

1/1

Graphite

USSR UDC 621.3.035.2

AVDEYENKO, M. A., and LARIONOV, V. V.

"Technology of Refining Graphite Up to a High Degree of Purity"

Moscow, Tsvetnyye Metally, No 2, Feb. 73, pp 48-50

Abstract: A new method of refining graphite has been developed whereby the refining process is reduced from days to hours with the use of a newly designed apparatus in which the graphite is placed in a graphite crucible and the crucible is placed in a water cooled metallic container which is sealed and freon-12 and an inert gas are pumped into the container. A hoist mechanism lifts the container into the furnace, where it is heated; the reaction products are then pumped out and neutralized. The purification process is done at 2300°C and takes 45-60 minutes. Two containers with the crucibles can be placed on a rotating table so that when one container has been processed it is taken from the furnace and the table rotated for processing the next container while a third container is loaded onto the table, thus making the process almost continuous. The crucible with the purified graphite part remains in the metallic container in a vacuum or inert gas atmosphere. With this new apparatus, graphite parts measuring 320 mm in diameter and 650 mm long can be purified.
2 figures, 1 table.
1/1

1/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--THEORY OF ISOTOPE SEPARATION DURING ELECTRODIALYSIS USING ION EXCHANGE MEMBRANES -U-

AUTHOR-(04)-TIKHOMIROV, I.A., DORONIN, V.T., VERGUN, A.P., LARIONOV, V.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 751-5

DATE PUBLISHED--------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, CHEMISTRY

TOPIC TAGS--ISOTOPE SEPARATION, ELECTRODIALYSIS, ION EXCHANGE MEMBRANE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1629 STEP NO--UR/0076/70/044/003/0751/0755

CIRC ACCESSION NO--AP0125251

UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125251

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SEPN. OF 2 ISOTOPIC IONS IS TREATED AS IF OCCURRING IN 2 STEPS, I.E. BY EQUILIBRIUM DISTRIBUTION OF THE MIXT. THROUGHOUT THE ELECTRODIALYZER AND SEPN. OF COMPONENTS WITHIN THIS GENERAL DISTRIBUTION PATTERN. THE FINAL FORM OF THE EQUATION DESCRIBING PARTITIONING OF A BINARY SYSTEM OF ISOTOPES IN ELECTRODIALYZERS USING ION EXCHANGER MEMBRANES IS GIVEN.

FACILITY: TOMSK. POLITEKH. INST., TOMSK, USSR.

UNCLASSIFIED

1/2 037 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--MICRO ARC TYPE OPERATION OF THE ELECTRODES OF A MAGNETOHYDRODYNAMIC GENERATOR -U-

AUTHOR-(04)-ZALKIND, V.I., KIRILLOV, V.V., LARIONOV, YU.A., SEMENOV, N.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. MEKH. TEKH. FIZ.; NO. 1, 130-4(JAN-FEB 1970)

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELECTRODE, MAGNETOHYDRODYNAMICS, ELECTRIC ARC, ARC DISCHARGE, SILICON CARBIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/0114 STEP NO--UR/0207/70/000/001/0130/0134

CIRC ACCESSION NO--AP0127740

UNCLASSIFIED

2/2 037 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0127740

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE OPERATION OF THE ELECTRODES OF A MAGNETOHYDRODYNAMIC GENERATOR WAS INVESTIGATED AT RELATIVELY HIGH CURRENT DENSITIES, USING METALLIC AND SILICON CARBIDE ELECTRODES. IT WAS FOUND THAT, IN CASE OF OPERATION AT HIGH CURRENT DENSITIES, MICRO ARCS ARE FORMED AT THE ELCTRODE SURFACE. THE BOUNDARY BETWEEN THE ELECTRODE AND THE INSULATOR, WHERE POTASSIUM COMPOUNDS ARE DEPOSITED ON THE ELECTRODE SURFACE, WAS FOUND TO EXERT A STRONG INFLUENCE ON THE BEHAVIOR OF THE ARCS, WHICH ARE CONSIDERED AS BEING RESPONSIBLE FOR THE ELECTRO EROSION OF THE ELECTRODE. SUCH MICRO ARCS APPEARED ON METALLIC CATHODES AT CURRENTS OF 5 TO 6 A WITH AN ELECTRODE SURFACE OF 11 CM PRIME2 UNDER CONDITIONS CLOSE TO SHORT CIRCUIT. THE DAMAGING BURNING OF ARCS BETWEEN THE ELECTRODE AND INSULATOR MAY BE PREVENTED BY IMPROVED DESIGN.

UNCLASSIFIED

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USSR

UDC 621.396.6--181.5 (088.8)

BARANOV, A.I., BATESHIAURI, V.D., VOSKOBOYNIKOV, I.I., GAVRILOV, R.A., GALYAMKIN, V.P., GOLUBTSOV, N.S., ZAKHARKOVSKIY, M.B., ZALIPSKIY, A.I., ZLOTIN, V.A., KAZATSKER, L.I., LAGUTKIN, G.V., LARIONOV, YU. S., PREOBRAZHENSKIY, S.P., RAIKIN, D.L., RAMENSKIY, I.V., SIMONOVA, I.S., TIKHOMIROV, B.G., FISHEL', I.SH., SHUBERT, M.M.

"Device For Deposition Of Multilayer Coverings In A Vacuum"

USSR Author's Certificate No 279291, filed 16 June 68, published 30 Nov 70 (from RZh--Radiotekhnika, No 9, Sep 1971, Abstract No 9V272P)

Translation: A device proposed for deposition of multilayer coverings in a vacuum is fulfilled in the form of a number of successively mounted independent operating chambers supplied with evaporators, heaters, and an exhaust system. The device contains a mechanism for transporting substrates, a mechanism for loading and unloading, and a drive mechanism. With the object of increasing the reliability of the device and improving the quality and reproducibility of the coverings deposited, outside of the area of the arrangement of operating chambers and parallel to it a supplementary vacuum chamber is installed, which serves for the deposition in it of the transporting mechanism, and which communicates with each of the operating chambers by means of vacuum-overlapping transfer windows located on the side wall

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USSR

BARANOV, A. I., et al., USSR Author's Certificate No 179291, filed 16 June 68, published 30 Nov 70 (from RZh--Radiotekhnika, No 9, Sep 1971, Abstract No 9V272P)

of the supplementary chamber at places for connection to it of the operating chambers. Each of the operating chambers or a group of them is provided with an individual system of high-vacuum pumping.

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USSR

UDC 911.3.616.988.72(571.13)

AVDEYCHIKOVA, N. I., and LARIONOVA, I. I.

"Serological Research Materials on Ornithosis in Omsk"

V sb. Vopr. infekts. patol. (Problems of Infection Pathology -- collection of works) Vyp. 2. Omsk, 1970, pp 133-135 (from RZh-Meditsinskaya Geografiya, No 4, Apr 71, Abstract No 4.36.82)

[No abstract]

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USSR UDC 528.514

NEVEROV, L. A., KORTEV, N. V., LARIONOVA, T. A., MITROFANOV, V. V., MILASHEVSKIY, A. K., POPOV, YU. V., Candidate of Sciences, RYZHENKO, B. V.

"The New KDG-3 Phototachymeter With Semiconductor Emission Source"

Leningrad, Optiko-mekhanicheskaya Promyshlennost', No 9, Sep 70, pp 35-39

Abstract: The authors describe the operating principle, optical system, construction and test results of the first serially produced phase phototachymeter with gallium arsenide diode as the emission source. The instrument can be used to measure distances of up to 2 km with an error of no more than 15 mm over its entire range. Measurement time is 10-15 minutes. The instrument is equipped with thermostatic control and can be used at temperatures from -50 to +50°C. Power consumption is no more than 5 watts.

1/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--CROSSLINKED COPOLYMERS -U-

AUTHOR-(02)-SHENTAROVICH, P.S., LARIONOVA, V.D.

COUNTRY OF INFO--USSR

SOURCE--USSR 202,52C
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--04FEB70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYMER CROSSLINKING, COPOLYMER, CHEMICAL PATENT, STYRENE, MALEIC ANHYDRIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1451 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128850

UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AA0129850

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INSOL. CROSSLINKED COPOLYMERS THAT SWELL IN WATER WERE PREPD. BY TREATING A STYRENE MALEIC ANHYDRIDE COPOLYMER WITH A CROSSLINKING AGENT, SUCH AS AN ALKALI METAL GLYCOLATE.

FACILITY: INSTITUTE OF CHEMICAL PHYSICS, ACADEMY OF SCIENCES, USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--WATERPROOFING OF MATERIALS -U-

AUTHOR-(05)-SHANTAROVICH, P.S., LARIONOVA, V.D., POTAPOVA, T.P., ZURABYAN, K.M., MATETSKENE, N.I.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,063

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--09MAR70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--WATERPROOFING, CHEMICAL PATENT, LEATHER, ALKALI METAL, GLYCOL, COPOLYMER, STYRENE, MALEIC ANHYDRIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1753 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0136993

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0136993

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MATERIALS SUCH AS LEATHER ARE WATERPROOFED BY TREATING THEM WITH THE REACTION PRODUCT OF AN ALKALI METAL GLYCOLATE AND A COPOLYMER OF STYRENE WITH MALEIC ANHYDRIDE OR POLY(ACRYLIC ACID). FACILITY: INSTITUT KHIMICHESKOY FIZIKI AN SSSR I TSENTRAL'NYY NAUCHNO-ISSLEDOVATEL'SKIY INSTITUT KOZHEVENNOY PROMYSH LENNOSTI.

UNCLASSIFIED

USSR

UDC 632.95

VASHKOV, V. I., ZAKOLODKINA, V. I., KERBABAYEV, E. B., LARIONOVA, V. D., and STREL'NIKOVA, G. N.

"Insecticidal Properties of Agents Containing Bromophos and Ethyl-Bromophos"

Tr. VNII dezinfektsii i sterilizatsii (Works of the All-Union Scientific Research Institute of Dininfection and Sterilization), 1971, vyp. 21, t. 2, pp 157-167 (from RZh-Khimiya, No 18, Sep 72, Abstract No 18N425)

Translation: Insecticides SKh-99 (active agent bromophos), neksagen YeS-80, filariol-20 and filariol-60 (active agent ethyl-bromophos) were tested on houseflies, bedbugs, red cockroaches and mosquitoes. The contact action was compared with that of chlorophos. The insecticides have a considerable residual effect, retaining their insecticidal activity up to 1.5 months when applied to glass. When applied directly to the insects, the best of the chemical is filariol-60; its insecticidal properties are 4-8 times higher than those of chlorophos. When insects come into contact with a glass surface treated with the insecticides, the best chemical is neksagan. Filariol-20, Skh-99 and neksagan YeS-80 are also effective larvicides against Aedes mosquitoes. T. A. Belyayeva.

8581 (CERN-Trans-68-14) PHENOMENOLOGICAL ANALYSIS OF PHOTOPRODUCTION OF CHARGED PIONS ON NUCLEONS IN RANGE OF ENERGIES NEAR THRESHOLD.
Adamovich, M. I.; Lyatinova, V. G.; Kharlamov, S. P.; Yagudina, F. R. (Akademiya Nauk SSSR, Moscow. Institut Fiziki). Translated by F. Quanquin (CERN, Geneva, Switzerland). Trans Preprint No. 108. 24p. (In French). Dep. CFSTI (U. S. Sales Only).

Starting from experimental data, the energy dependence of the electric dipole amplitude E_0 and the combination of the amplitudes of the waves $P\Delta = (M_1^+ - M_1^- + 3E_1^-)$ for the mesons (π^0) and (π^-) are determined. The isotopic components $E_{1/2}^{(1)}$, $E_{1/2}^{(-)}$, $\Delta^{(1)}$, $\Delta^{(-)}$ are obtained. Experiments on linearly polarized photons allow the determination of the value $(2M_{1+} + M_{1-})$ for two values of the photon energy E_γ = 210 and 225 MeV. From the threshold values of the amplitudes E_1 (π^0) and E_0 (π^-) estimates are derived for the πN interaction constant and for the difference of πN scattering lengths S in the isotopic spin ½ or 3/2 states. These latter results are examined in conjunction with the estimates obtained from πN scattering. (tr-auth)

1/2 019 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--ANALYSIS OF NEAR THRESHOLD PHOTOPRODUCTION OF CHARGED PIONS BASED ON DISPERSION RELATIONS -U-

AUTHOR-(05)-ADAMOVICH, M.I., LARIONOVA, V.G., LEBEDEV, A.I., KHARLAMOV, S.P., YAGUDINA, F.R.

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(3), 657-68

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--EMISSION THRESHOLD, PHOTONUCLEAR REACTION, PION, GAMMA SPECTRUM, EXCITATION CROSS SECTION, DISPERSION EQUATION, PARTICLE PRODUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1067 STEP NO--UR/0367/70/011/003/0657/0668

CIRC ACCESSION NO--AP0110757

UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0110757

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHOTOPRODUCTION OF CHARGED PIONS IN THE NEAR THRESHOLD REGION OF THE PHOTON ENERGY IS INVESTIGATED THEORETICALLY. THE AMPLITUDE AND THE CROSS SECTION OF PHOTOPRODUCTION OF PIONS ON N AND THE AMPLITUDE AND THE DIFFERENTIAL CROSS SECTION FOR PI POSITIVE ON P ARE CALCD. THE RESULTS ARE COMPARED WITH EXPTL. DATA.

FACILITY: FIZ. INST. IM. LEBEDEVA, MOSCOW, USSR.

UNCLASSIFIED

USSR UDC: 621.378.325

KORNIYENKO, L. S., KRAVTSOV, N. V., LARIONTSEV, Ye. G., NAUMKIN, N. I., Scientific Research Institute of Nuclear Physics, Moscow State University imeni M. V. Lomonosov

"Injection of a Short Light Pulse Into a Laser With a Long Cavity"

Moscow, Doklady Akademii Nauk SSSR, Vol 209, No 4, 1 Apr 73, pp 826-828

Abstract: The authors discuss certain effects which arise when a short pulse of light is injected into a cavity with a transit time much greater than the pulse duration. Two injection modes are considered. If emission has already taken place in the laser before arrival of the external pulse, a mode of competitive interaction between the short pulse and the "inherent" emission of the laser takes place. In the second case, injection takes place before emission has developed. Conditions are discussed which lead to a quasistationary "traveling" pulse mode under the action of an external pulse. It is experimentally shown that the duration of emission in the traveling pulse mode is greater than in the mode of free emission. The envelope of the emission pulse train approximates the shape of the pumping pulse. Other modes of emission are to be treated in future papers.

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USSR UDC 535.02

KORNIYENKO, L. S., KVARTSOV, N. V., LARIONTSEV, YE. G., Academician PROKHOROV, A. M.

"Some Properties of a Solid-State Laser With Large Resonator Length"

Moscow, Doklady Akademii Nauk SSSR, Vol 193, No 6, 1970, pp 1280-1282

Abstract: The laser dealt with in this article has a resonator whose length is of the order of several meters. With increasing resonator length, the ratio of the resonator band width to the frequency interval between the longitudinal modes can be significantly increased. With the ratio larger than unity, in turn, the band of the resonator can be significantly enlarged, and it can then be expected that the characteristics of such a laser will be close to those of a laser with non-resonant feedback. Resonator lengths can be increased to values of the order of a kilometer under laboratory conditions by introducing an optical delay line into the laser. A sketch of the scheme under which this can be done accompanies the article. Through the use of such a delay line, the diffraction losses as well as the dimen-

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USSR

KORNIYENKO, L. S., et al, Doklady Akademii Nauk SSSR, Vol 193, No 6, 1970, pp 1280-1282

sions of the experimental arrangement can be essentially reduced. The authors find that they can draw certain qualitative conclusions concerning the large resonator length laser by considering the interaction of three longitudinal modes. Analysis of such triple-mode excitation shows that it depends only slightly on intermode coupling arising due to modulation of the inverse population and that the coupling strongly affects the intensity distribution of individual modes in the oscillation spectrum.

2/2

1/2 044 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--AUTOOSCILLATION REGIMES IN AN ANNULAR GAS LASER -U-

AUTHOR-(03)-BIDIKHOV, S.A., LANDA, P.S., LARIONTSEV, YE.G.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, RADIOTEKHNIKA I ELEKTRONIKA, NO 3, 1970, PP 529-538

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GAS LASER, LASER EMISSION COHERENCE, LASER PUMPING, LASER STABILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1351 STEP NO--UR/0109/70/000/003/0529/0538

CIRC ACCESSION NO--AP0123309

UNCLASSIFIED

2/2 044 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0123309

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPETITION OF COUNTERBEAMS IS STUDIED IN AN ANNULAR GAS LASER DURING CONTACT DUE TO SCATTERING. STABILITY OF SINGLEWAVE AND DOUBLEWAVE REGIMES IS INVESTIGATED AND CONDITIONS ARE OBTAINED WHICH ARE ACCOMPANIED BY PERIODIC PUMPING OVER OF ENERGY FROM ONE WAVE TO THE OTHER. A STUDY WAS ALSO MADE OF AUTOOSCILLATION INTENSITIES OF THE PHASE DIFFERENCE OF COUNTERBEAMS. BASIC CHARACTERISTICS OF STEADY STATE REGIMES ARE DETERMINED AND THEIR STABILITY INVESTIGATED.

UNCLASSIFIED

1/2 036 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--BEAT AND SYNCHRONIZATION MODES OF OPPOSED WAVES IN A ROTATING GAS RING LASER -U-

AUTHOR-(02)-LANDA, P.S., LARIONTSEV, YE.G.

COUNTRY OF INFO--USSR

SOURCE--RADIOTEKHNIKA I ELEKTRONIKA, VOL. 15, JUNE 1970, P. 1214-1226

DATE PUBLISHED----JUN70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GAS LASER, LASER SYNCHRONIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1022 STEP NO--UR/0109/70/015/000/1214/1226

CIRC ACCESSION NO--AP0136449

UNCLASSIFIED

2/2 036 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136449

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF THE FREQUENCY CHARACTERISTICS OF A GAS RING LASER, WITH EMPHASIS ON THE DEPENDENCE OF THE FREQUENCY DIFFERENCE OF OPPOSING MODES ON THE MISMATCH BETWEEN INTRINSIC FREQUENCIES WHICH IS PROPORTIONAL TO THE ROTATIONAL VELOCITY. THE ASYMPTOTIC BEHAVIOR OF THE FREQUENCY RESPONSE IS STUDIED FOR ARBITRARY COUPLING COEFFICIENTS BEYOND THE MODE SYNCHRONIZATION REGION. IT IS SHOWN THAT FOR THE CASE OF WEAK COUPLING THE FREQUENCY RESPONSE CURVE INTERSECTS ITS ASYMPTOTE AND EXTENDS ABOVE IT AT LARGE MISMATCH CONDITIONS. IT IS SHOWN THAT UNDER SPECIFIC CONDITIONS THERE CAN BE TWO BEAT MODES DIFFERING FROM EACH OTHER BY THE MEAN INTENSITIES OF THE OPPOSING WAVES AND BY THE AMPLITUDE OF INTENSITY FLUCTUATIONS. IN THE STRONG COUPLING APPROXIMATION, HYSTERESIS OF THE FREQUENCY RESPONSE TAKES PLACE.

UNCLASSIFIED

USSR

UDC 621.375.82

BYKOVSKIY, YU. A., LARKIN, A. I., LEBEDEV, YU. S., and MARKILOV, A. A.

"Holographic Broadening of Optical Spectra"

Moscow, V sb. Kvant. elektronika (Quantum Electronics -- collection of works), "Sov. radio," No 1(13), pp 109-111 (from RZh-Fizika, No 7, 1973, Abstract No 7D1117)

Translation: The method of optically matched filtrations is used for the recognition and broadening of optical spectra. A method of changing the form of a recognized spectrum is proposed for localizing the correlation signal and broadening the range of the space frequencies fixed in the filter. The experimental results of the recognition of the models of complex spectra are given. Authors' abstract.

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USSR UDC: 621.378.385

ASHMARIN, I. I., BYKOVSKIY, Yu. A., DEGTYARENKO, N. N., YELESIN, V. F., LARKIN, A. I., SIPAYLO, I. P., Moscow Physical Engineering Institute

"Pulse Holography Study of Gas Breakdown in Front of a Laser Beam"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 41, No 11, Nov 71, pp 2569-2577

Abstract: The paper is devoted to a study of phenomena which take place in air and in helium at different pressures when the output from a ruby laser is focused on lead, copper, and aluminum targets. The method of pulse holography is used for these purposes. The efficacy of the holographic method for studying these phenomena is demonstrated. It is observed that the axis of symmetry of the beam at atmospheric pressure deviates from the normal to the target in the case of oblique incidence of the laser beam. This effect can be attributed

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ASHMARIN, I. I. et al., Zhurnal Tekhnicheskoy Fiziki, No 11, Nov 71, pp 2369-2377

to localized absorption of the energy of laser emission on the boundary of the beam. It is found that the effect of the laser beam on the probability of gas breakdown in front of the target can be attributed to the ionizing action of ultraviolet radiation. An investigation of the way that the magnitude of the effect depends on the target material and the composition of the ambient gas confirms this hypothesis. The authors thank D. M. Samoylovich and R. V. Ryabov for furnishing the photographic materials and for constructive criticism. Nine figures, one table, bibliography of 14 titles.

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UDC: 537.312.62

USSR

LARKIN, A. I., OVCHINNIKOV, Yu. N.

"Width of the Emission Line Accompanying the Josephson Effect"

Tr. V Bakuriansk. (Sov-Frantsuzsk.) kollokviuma po sverkhtekuchesti i sverkhprovodimosti, 1968, T. 2 (Works of the Fifth Bakurian [Soviet-French] Colloquium on Superfluidity and Superconductivity, 1968, Vol 2), Tbilisi, 1969, pp 280-289 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7D500)

Translation: The Josephson effect consists of two superconductors separated by a thin layer of dielectric. With a constant voltage V across the contact, an alternating current arises and emission with frequency $\hbar\omega = 2eV$. A certain width of the emission line is observed. If external sources maintain constant voltage across the contact, then the line width is determined by the thermal fluctuations in the voltage. In this paper a relationship is found for the width of the line as a function of the parameters of the Josephson contact. In the external magnetic field, the current flowing through the contact has resonance maxima at certain voltages. The width of these maxima is found as well as the width of the emission line close to them. It is shown that the Nyquist formula for current fluctuations through the contact is applicable only when the voltage across the contact is much less than the temperature. Current and voltage fluctuations as well as the width of the emission line are also found for the case where the voltage is commensurate with and greater than the temperature. B. B.

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1/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF INHOMOGENEITIES ON THE STRUCTURE OF THE MIXED STATE OF SUPERCONDUCTORS -U-

AUTHOR--LARKIN, A.I.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 4, PP 1466-1470

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SUPERCONDUCTOR, CRYSTAL DEFECT, TRANSITION TEMPERATURE, ORDERED ALLOY, MATHEMATIC MODEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1498 STEP NO--UR/0056/70/058/004/1466/1470

CIRC ACCESSION NO--AP0106254

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--23OCT70

2/2 027

CIRC ACCESSION NO--AP0106254

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A PHENOMENOLOGICAL MODEL IS PROPOSED WHICH CAN BE EMPLOYED FOR DESCRIBING THE INFLUENCE OF DEFECTS ON THE STRUCTURE OF A MIXED SUPERCONDUCTING STATE. DEFECTS LEAD TO DISAPPEARANCE OF LONG RANGE ORDER IN THE ARRANGEMENT OF THE VORTEX LINES. THE CORRELATION FUNCTION FOR DISPLACEMENT OF THE VORTEXES FROM THEIR ORDERED ARRANGEMENT IS FOUND. THE DIMENSIONS OF THE REGION IN WHICH SHORT RANGE ORDER EXISTS ARE ESTIMATED. FACILITY: INST. TEORETICHESKOY FIZIKI IM. L. D. LANDAU, AN SSSR.

UNCLASSIFIED

USSR UDC 546.45(547.29'):547.571):547.361

LARKIN, I. I., YEVSTAFIYEVA, N. Ye., and SINANI, S. V.

"Organoberylium Compounds and Their Chemical Reactions. VII. Reaction of Beryliumacyl Halides With Aromatic Aldehydes"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 9, Sep 73, pp 1984-1986

Abstract: Studying the reactions of beryliumacyl bromide with variously substituted aromatic halides, it has been established that introduction of two or more substituents on the ring does not change the reaction course and leads to the formation of diacylderivatives of stilbenes. Low yields obtained in some cases are caused by steric hindrance. On the basis of IR spectral data it was shown that all of the synthesized stilbenes have the trans-configuration.

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UDC 621.373:530.145.6

USSR

LAR'KINA, L. P.

"On Calculating the Radial Distribution of Emittance"

V sb. Primeneniye plazmatrona v spektroskopii (Use of the Plasmatron in Spectroscopy--collection of works), Frunze, "Ilim", 1970, pp 17-20 (from Zhurnal prikladnoy khimii, No 2, Oct 70, Abstract No 10D227)

Translation: A table of coefficients is compiled for finding the radial distribution of emittance from the measured distribution of intensity. The computational method includes a procedure for smoothing the initial data by the method of least squares, which reduces by a factor of 2-3 the effect of experimental errors on the results of the calculation. Two illustrations, bibliography of four titles. Resumé.

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1/2 020 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--LATEX FOR FINISHING LEATHER -U-

AUTHOR-(04)-LARKINA, T.A., ZURABYAN, K.M., RAKHLIN, P.I., LEBEDEV, A.V.

COUNTRY OF INFO--USSR

SOURCE--KOZH. OBUV. PROM. 1970, 12(2) 17-21

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--LATEX, SPECIALIZED COATING, BUTADIENE, ACRYLATE, COPOLYMER, ACRYLAMIDE, LEATHER, THERMAL STABILITY/(U)DMMA65 IGP LATEX

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0264 STEP NO--BU/0030/70/012/002/0017/0021

CIRC ACCESSION NO--AP0106920
UNCLASSIFIED