"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR UDC 547.185

AVAYEVA, S. M., and SKLYANKINA, V. A., Moscow State University

"Certain Characteristics of the Hydrolysis of O-Phosphoserine Methyl Ether"

Leningrad, Zhurnal Obshchey Khimii, Sep 71, Vol 41, No 9, pp 2081-2085

Abstract: The object of this study was the hydrolytic behavior of O-phosphoserine methyl ether in order to elucidate the functioning of phosphoproteins and enzymes of phosphorus metabolism. The study of the hydrolysis of O-phosphoserine methyl ether in water and buffer solutions revealed the unusual lability of the phosphate-ester bond and the very high decomposition rate of this compound at pH 5-8. The hydrolysis rate constants have been calculated and are given in tabular form for various buffers. The decomposition rate constants of the ester in the presence of acids and bases are shown to be 10-100 times higher than its hydrolysis rate in water; in this case the decomposition rates are determined by the pK of the acid or the base. The decomposition of O-phosphoserine methyl ether yields phosphoric acid, serine methyl ether and O-phosphoserine. A detailed analysis of the hydrolysis rate indicates two different directions of the reaction depending on the presence of either hydroxylamine or the presence of phosphoric acid.
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USSR

AVAYEVA, S. M., and SKLYANKINA, V. A., Zhurnal Obshchey Khimii, Sep 71, Vol 41, No 9, pp 2081-2085

The quantitative ratio of the decomposition products of the ester is determined by the conditions of hydrolysis.

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USSR UDC 681.626.44

SKLYANNOY, A. L., FEDOROV, A. D., STRETOVICH, M. D.

"A Tape Perforator With Electromagnetic Drive"

Moscow, Otkrytiya, Izobreteniya, Promychlennyye Obraztsy, Tovarnyye Znaki, No 12, 1970, Author's Certificate No 267190, filed 20 Nov 67, p 119

Abstract: This Author's Certificate introduces a tape perforator with electro-magnetic drive. The device contains a punch and die, code electromagnets and armatures, a drive electromagnet with armature, and a tape transport drum connected to a ratchet wheel and pawl. As a distinguishing feature of the patent, the reliability of the perforator is improved by fastening levers to the armature of the electromagnetic drive; connecting these levers by axles to the armatures of the code electromagnets and adding a frame on which the ends of these levers rest, a pusher which is common for all punches, and also a connecting link which interacts with a roller to transmit motion through the pawl and ratchet wheel to the tape transport drum.

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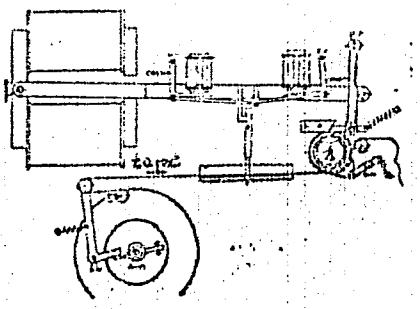
SKLYANNOY, A. L., et al., Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 12, 1970, Author's Certificate No 267190, filed 20 Nov 67, p 119



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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

Acc. Nr: AP0101488 Abstracting Service: CHEMICAL ABST. 6-70 Ref. Code: UR0079

121641e Interaction of distannoxanes, alkoxy- and siloxystannanes with sodium, sodium acetylides, and sodium methylate. Komarov, N. V.; Sklyanova, A. M.; Akchurina, I. S. (Irkutsk. Inst. Org. Khim., Irkutsk, USSR). *Zh. Obshch. Khim.* 1970, 40(2), 336-9 (Russ). In reaction of Na, MeONa or Na acetylides with compds. contg. SnOSn, SnOSi and SnOC bonds, the Sn-O link is most reactive. Adding 2.3 g Na to 42.78 g $(Et_3Sn)_2O$ resulted in exothermic reaction which after 2 days standing, followed by addn. of 10.85 g Me_3SiCl and heating in Et_2O 7 hr gave 81.6% $Me_3SiOSnEt_3$, b_7 76-7°, d^{10} 1.1638, n_D^{20} 1.4559, 78.4% $(Et_3Sn)_2O$ and NaCl. Use of Et_3SiCl in the above gave 72% $Et_3SiOSnEt_3$ (I) b_2 90°, 1.1194, 1.4625. Similarly, Et_3SnOMe and Na, followed by Et_3SiCl gave 76% Et_3SiOMe and 81% $(Et_3Sn)_2O$. Treating I with Na, then with Me_3SiCl, gave 59% $Me_3SiOSiEt_3$ and 44.7% $(Et_3Sn)_2O$. Reaction of 49 g $(Et_3Sn)_2O$ with 0.11 mole NaC:CH gave $Et_3SnC{:}CH$, b_{10} 58-9°, and 97% $Et_3SnC{:}CSnEt_3$, b_{10} 151-2°, —, 1.5095. Similar reaction with Et_3SnOMe gave 7.3% and 63% yields of these, resp. PhC:CNa and $(Et_3Sn)_2O$ in Et_2O gave in 8 hr 55% $Et_3SnC{:}CPh$, b_1 102-4°, —, 1.5583, and 39% $Et_3SnC{:}CCH{:}CH_2$, b_3 79-80°, —, 1.5998. Similar reaction, but with $Et_3SiOSnEt_3$, in 12 hr

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gave 63% $Et_3SnC{:}CPh$, some Et_3SiOH, and $PhC{:}CH$. Similarly, Et_3SnOMe gave 84.7% $Et_3SnC{:}CPh$ and MeOH. MeONa and $(Et_3Sn)_2O$ in Et_2O overnight gave after treatment with Et_3SiCl, 33.9% Et_3SnOMe, b_{15} 78°, 29.4% $Et_3SiOSnEt_3$, b_5 100°, and some starting material; while MeONa and $Et_3SiOSnEt_3$, followed by Me_3SiCl gave 29.3% Et_3SnOMe and 21% $Me_3SiOSiEt_3$.

G. M. Kosolapoff

13 S.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR UDC 576.858.095.383:576.312.31

BEREZINA, O. N., SKLYANSKAYA, Ye. I., SEMENOVA, N. P., and PETERSON, O. P., Institute of Virology imeni D. I. Ivanovskiy, USSR Academy of Medical Sciences, Moscow

"Changes in the Matrix Activity of Chromatin in Response to Viral Infection"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 71, pp 397-402

Abstract: The matrix activity of DNP preparations was determined in the RNA-polymerase system in vitro. The tests were performed on 10-day old chick embryos infected with $3x10^3$ ID_{50} of A/WSN influenza virus and with $3x10^7$ ID_{50} of vaccinia virus. Control tests showed that the presence of DNA matrixes, magnesium ions, and ribonucleoside triphosphates was required for RNA synthesis. The DNP matrix activity decreased to 60% of the control level early in the course of infection with either pathogen. The development of the infection was accompanied by inhibition of the euchromatin complex in the cell genome and stimulation of the heterochromatin complex. Inhibition coincided with a decrease in the concentration of RNA and of residual proteins in the DNP preparations, while an increase in the concentration of these components coincided with stimulation of matrix activity.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

UDC 576.858.43

BEREZINA, O. N., SKLYANSKAYA, Ye. I., KOZLOVA, I. A., PETERSON, O. P., and ZHDANOV, V. M., Academician, Academy of Medical Sciences USSR

"Electrophoretic Separation of the Principal Proteins from Cells Infected with Different Viruses"

Moscow, Doklady AN SSSR, Vol 190, No 5, 1970, pp 1225-1228

Abstract: Changes in the synthesis of total histones and their fractions in nuclei of infected cells and in desoxyribonucleic acid complex were studied. The dynamics of accumulation and of changes in principal cytoplasm protein was studied also. One hour after infection the number of protein bands increases, most with moderate electrophoretic mobility. After 3 hrs, additional slow-moving bands appear, and this increase continues for 5 hrs. After 7 hrs, the protein bands begin to disappear, but various minor bands appear. Analogous results were observed 24 hrs after infection with pox vaccine, some increase with influenza virus, and no change in protein bands with Herpes virus. After 48 hrs, no increase in the protein bands was noted. The results obtained correspond to the dynamics of accumulation of viruses in chick embryo tissue. Four histone fractions were isolated from infected tissues: lysine-rich histones - f_1, relatively lysine-rich fractions f_{2a} and f_{2b}, and a fraction rich in arginine - f_3. Electrophoretic analysis of individual fractions showed that a continuous disappearance of lysine-rich fracti

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USSR

BEREZINA, O. N., et al., Doklady AN SSSR, Vol 190, No 5, 1970, pp 1225-1228

(f_1) occurs in cells infected with the pox virus and influenza vaccine, while in fractions f_{2a} and f_{2b}, additional principal and minor bands appear. The arginine-rich fraction in the infected material does not differ from that in controls.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

1/2 021 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ELECTROPHORETIC SEPARATION OF BASIC PROTEINS OF CELLS INFECTED WITH DIFFERENT VIRUSES -U-

AUTHOR-(05)-BEREZINA, O.N., SKLYANSKAYA, YE.I., KOZLOVA, I.A., PETERSON, O.P., ZHDANOV, V.M.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(5), 1225-8 VIROL

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ELECTROPHORESIS, SMALLPOX, VACCINE, INFLUENZA VIRUS, HERPES SIMPLEX VIRUS, TISSUE CULTURE, PROTEIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/0704 STEP NO--UR/0020/70/190/005/1225/1228

CIRC ACCESSION NO--AT0122790

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

2/2 021 UNCLASSIFIED

CIRC ACCESSION NO--AT0122790 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ELECTROPHORESIS IN POLYACRYLAMIDE GEL WAS USED TO FRACTIONATE CHICK FIBROBLAST CULTURES GROWN ON MATRICES WITH ADDN. OF BULL SERA OR ON TISSUES FROM 11 DAY CHICK EMBRYOS. THE INFECTION WAS INTRODUCED INTO ALLANTOIDAL SPACE AND EMPLOYED THE VIRUS MATERIAL OF SMALLPOX VACCINE, INFLUENZA, OR HERPES. THE TYPICAL ELECTROPHOREGRAMS WERE SHOWN FOR THE TREATED CULTURES; THE CHANGES IN THE ACCUMULATION OF BASIC PROTEINS VARY WITH DURATION OF THE EXPT. WITHIN 1 HR OF INFECTION TO NO. OF SEPD. PROTEINS INCREASES MAINLY IN THE GROUP OF MEDIUM ELECTROPHORETIC MOBILITY; WITHIN 3 HR, PROTEINS WITH SLOW MOBILITY APPEAR AND BY 5 HR THE BASIC PROTEIN FRACTIONS EXCEED THOSE OF THE CONTROLS BY A FACTOR OF 4 OR MORE; BY 709 HR THE NO. OF DISTINCT PROTEIN ZONES DECLINES, BUT MINOR ZONES APPEAR AT THE SAME TIME. THE INCREASED TOTAL AMOUNT OF BASIC PROTEINS IS CAUSED BY INCREASED FRACTIONS OF HISTONES WITH MODERATE LEVELS OF LYSINE; IT IS PROBABLY THIS PROTEIN FRACTION THAT IS CONNECTED WITH THE INHIBITING ACTIVITY OF BASIC CYTOPLASM PROTEINS.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

UDC 621.382.3.002

ANTROPOV, V.D., NIKISHIN, V.I., NOVIKOV, YU.I., BULGAKOV, S.S., SKLYAR, A.A.

"Microwave Transistor Prepared By The Method Of Ion Implantation"

V sb. Novoye v tekhn. poluprovodn. proiz-va (New Semiconductor Production Technology--Collection Of Works), Voronezh, Voronezh University, 1971, pp 152-157 (from RZh:Elektronika i yeye primeneniye, No 4, April 1972, Abstract No 4B423)

Translation: The production is described of a microwave n-p-n^+ transistor with the use of a method of ion doping. The ion doping was conducted on ILU-3 equipment. The transistors were prepared on epitaxial Si films with a resistivity of 2 ohm.cm. B^{11} and P^{31} were used as the doping admixture. Doping was done at room temperature. Transistors obtained by the combined ion-diffusion method and by the ion doping method only were compared. It is shown that with the aid of the latter method transistors can be obtained with a frequency of 1-2 GHz with developed power on the order of 1 watt. 12 ref. S.I.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR UDC 621.791.1:621.57

KHRENOV, K. K., CHUDAKOV, V. A., KOZOLUP, P. M., LYMAR, P. I., and SKLYAR, I. D.

"Magnetic Impulse Welding of Domestic Refrigerator Tubes"

Kiev, Avtomaticheskaya Svarka, No 8, Aug 70, pp 74-75

Abstract: A brief description is given of technology for the magnetic-impulse welding of copper and aluminum tubes 6 and 8 mm in diameter, respectively. The technology was developed jointly by the Institute of Electric Welding imeni Ye. O. Paton and the Dnepropetrovsk Plant for Radio Relay Devices (DZARP). A copper tube is introduced inside the aluminum tube with a certain clearance. In order to retain the inside diameter of the copper tube a 30KhGS steel rod is inserted inside it, and is removed after welding by a special device. The welding is achieved by an inductor, supplied by an 80-microfarad capacitor bank with a voltage of 20 kv and capacity of 16 kilojoule. The energy required for welding is 4.4-6.5 kilojoule and is determined by the inductor parameters. The current is about 165-200 kilo amperes. The inductor coils are water cooled.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

1/2 013 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--USE OF ADSORPTION REFINING FOR INCREASING THE STABILITY OF HYDROCRACKING DISTILLATES -U-

AUTHOR-(03)-KLIMENOK, B.V., STEKHUN, A.I., SKLYAR, I.M.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., NEFT GAZ 1970, 13(3), 59-64

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS, PROPULSION AND FUELS

TOPIC TAGS--THERMAL STABILITY, DIESEL FUEL, PETROLEUM REFINING, PETROLEUM HYDROCRACKING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/2082 STEP NO--UR/0152/70/013/003/0059/0064

CIRC ACCESSION NO--AP0127455

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

2/2 013 UNCLASSIFIED

CIRC ACCESSION NO--AP0127455 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A DIESEL OIL FRACTION, B. 180-350DEGREES, OBTAINED FROM A HYDROCRACKED DEASPHALTATE, HAD HIGH CONTENT OF N COMPDS., A HIGH ACIDITY AND IODINE NO., A DARK COLOR, AND LOW STABILITY COMPARED WITH STD. FUEL. AFTER REFINING IT WITH SYNTHETIC SPHERICAL AND CRUMBLED AL SILICATE AS ADSORBENT AT 80 AND 50DEGREES, RESP., A STABLE COMPONENT FOR DIESEL FUEL WAS OBTAINED. THE EFFECT WAS OBTAINED BY ADSORPTION OF THE UNSTABLE RESINOUS MATTER, CONSISTING MAINLY OF HETEROCYCLIC COMPDS. OF N AND S AND THE OXIDN. PRODUCTS OF THEIR UNSTABLE COMPONENTS. ADSORPTION REFINING WAS MORE ADVANTAGEOUS THAN HYDROFINING. THE ADSORBENTS WERE REGENERATED FOR 2 HR AT 550DEGREES. CHARACTERISTICS OF THE PRODUCTS AND EXPTL. DATA ARE PRESENTED.

FACILITY: UFIM. NEFT. INST., UFA, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

1/2 024 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--CHEMICAL STABILIZATION OF HYDROCRACKING DISTILLATES -U-

AUTHOR-(04)-EYGENSON, A.S., STEKHUN, A.I., SKLYAR, I.M., CHERTKOV, YA.B.

COUNTRY OF INFO--USSR

SOURCE--KHIM. TEKHNOL. TOPL. MASEL 1970, 15(2), 1-4

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CHEMICAL PURIFICATION, IR SPECTRUM, SPECTROSCOPIC ANALYSIS, OPTIC PROPERTY, PETROLEUM HYDROCRACKING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/1117 STEP NO--UR/0065/70/015/002/0001/0004

CIRC ACCESSION NO--AP0054024

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

2/2 024 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054024

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PURIFICATION OF A HYDROCRACKING DISTILLATE (58.3PERCENT PARAFFINIC NAPTHENIC AND 31.8 AND 9.9PERCENT MONO AND BICYCLIC AROMATIC HYDROCARBONS) WITH 10PERCENT BY VOL. OF FRESH 86PERCENT H SUB2 SO SUB4 AND ALTERNATIVELY WITH 10PERCENT BY VOL. OF SPENT H SUB 2 SO SUB4 FROM ALKYLATION PROCESSES RESULTED IN REDNS. IN: ACIDITY FROM 5.5 TO 1.8 AND 1.2 MG KOH-100 ML, S CONTENT FROM 0.54 TO 0.32 AND 0.34PERCENT, IODINE NO. FROM 14.7 TO 4.4 AND 3.6 G I-100 G, TAR CONTENT FROM 61.0 TO 7.2 AND 7.6 MG-100 ML, N CONTENT FROM 0.128PERCENT (0.090PERCENT N BASES) TO 0.0028 AND 0.0024PERCENT (0.00011 AND 0/0.00012PERCENT N BASES), AND STABILITY AS MEASURED BY REDNS. IN OPTICAL DENSITY FROM 1.6 TO 0.054 AND 0.075 TAU BEFORE AND FROM 1.85 TO 0.149 AND 0.320 TAU AFTER HEATING 2 HR AT 140DEGREES IN THE PRESENCE OF CU. GROUP HYDROCARBON COMPN. WAS ALMOST UNCHANGED. REDNS. IN IODINE NO. REFLECTED, NOT REDUCED UNSATD. HYDROCARBON CONTENT, BUT REDUCED HETEROCYCLIC COMPD. CONTENT, WHICH WAS CONFIRMED BY IR SPECTRAL ANAL. OF THE EXTS. WHEN THE VOL. RATIOS WERE REDUCED TO 1:50 AND 1:40, RESP., ALL THE CHANGES WERE SMALLER. THE NONHYDROCARBON MIXTS. IN 3.8PERCENT YIELD BY THIS METHOD CONTAINED 6.58PERCENT S, 3.6PERCENT N, AND 3.49PERCENT O.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

1/2 012 UNCLASSIFIED

TITLE--THERMOPLASTIC COAL PRODUCT -U- PROCESSING DATE--30OCT70

AUTHOR-(05)-SHUSTIKOV, V.I., VOEVODINA, M.V., SKLYAR, M.G., ARONOV, S.G., LERNER, V.G.

COUNTRY OF INFO--USSR

SOURCE--BRIT. 1,180,325

DATE PUBLISHED--04FEB70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--COAL, THERMOSPLASTIC MATERIAL, HYDROGEN, CONDENSATION REACTION, PHYSICAL CHEMISTRY PROPERTY, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/1383 STEP NO--UK/0000/70/000/000/0000/0000

CIRC ACCESSION NO--AA0121863

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

2/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AA0121863

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERMOPLASTIC COAL CAN BE OBTAINED IN A YIELD OF UP TO 95PERCENT OF THE COMBUSTIBLE MASS OF THE COAL BY HEATING A COAL WITH H CONTENT ABOVE 5.5 WT. PERCENT AT A TEMP. 10-20DEGREES BELOW THE TEMP. OF THE MAX. RATE OF DESTRUCTION FOR 5-20 MIN IN AN ATM. OF NATURAL OR COKE OVEN GAS, THEN RAPIDLY COOLING TO SMALLER THAN 30DEGREES TO PREVENT THE DEVELOPMENT OF POLYCONDENSATION REACTIONS. THE VOLATILE PRODUCTS OF B.P. BELOW 200DEGREES ARE REMOVED PRIOR TO THE HOLDING PERIOD. IN AN EXAMPLE, A HUMIC COAL OF GRANULE SIZE 0.5-6.0 MM WAS HEATED TO 380-85DEGREES IN THE PRESENCE OF COKE OVEN GAS, AND HELD AT 395-400DEGREES FOR 20 MIN. THE PRODUCT HAD THE FOLLOWING PROPERTIES: MELTING TEMP. 235DEGREES, SOLY IN C SUB6 H SUB6 23.8, YIELD OF VOLATILES 36.2, COMPARED TO VALUES OF 393, 6.27, AND 45.87, RESP., BEFORE TREATMENT. FACILITY: UKRAINIAN SCIENTIFIC RESEARCH INSTITUTE OF COAL CHEMISTRY.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

1/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ADVANCES IN THE STUDY OF THE THERMAL DECOMPOSITION OF COALS -U-

AUTHOR-(02)-SKLYAR, M.G., SHUSTIKOV, V.I.

COUNTRY OF INFO--USSR

SOURCE--KHIM. TVERD. TOPL. 1970, (2), 30-9

DATE PUBLISHED--------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, MATERIALS

TOPIC TAGS--THERMAL DECOMPOSITION, COAL, PRESSURE EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2008 STEP NO--UR/0467/70/000/002/0030/0039

CIRC ACCESSION NO--AP0125596

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

2/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0126596

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A COMPILATION OF EXPTL. TECHNIQUES USED FOR THE STUDY OF THERMAL DECOMPN. OF COALS AND THEIR INFLUENCE ON COAL STRUCTURE, MECHANISM OF THERMAL PROCESSES, DESTRUCTION UNDER PRESSURE, AND HEAT SHOCK. FACILITY: UKR. NAUCH. ISSLED. UGLEKHIM. INST., KHARKOV, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

1/2 027 UNCLASSIFIED

TITLE--CHROMATOGRAPHIC DETERMINATION OF THE SPECIFIC SURFACE OF COKE ACCORDING TO THE THERMAL DESORPTION OF ARGON -U- PROCESSING DATE--30OCT70

AUTHOR-(03)-SKLYAR, M.G., BASKINA, YE.B., MARIYCH, L.I.

COUNTRY OF INFO--USSR

SOURCE--KOKS KHIM. 1970, (3), 21-3

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--COKE, CHROMATOGRAPHY, ARGON, KRYPTON, NITROGEN, LOW TEMPERATURE EFFECT, POROSITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0522 STEP NO--UR/0068/70/000/003/0021/0023

CIRC ACCESSION NO--AP0119441

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

2/2 027 UNCLASSIFIED

CIRC ACCESSION NO--AP0119441 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MEASUREMENTS OF COKE SURFACES BY BENZENE ADSORPTION ARE LOWER THAN BY KR BECAUSE SOME OF THE COKE PORES ARE INACCESSIBLE TO THE LARGE BENZENE MOLS. THE AR ATOM IS SMALLER, WITH A SOLID MONOLAYER SURFACE OF 15.4 ANGSTROM PRIME2; IT PROVIDES A MORE EXACT SURFACE MEASUREMENT THAN N AS DETD. CHROMATOGRAPHICALLY AND STATISTICALLY. A DETECTOR WAS USED FOR DETG. THERMAL COND. AND AN AUTOMATIC RECORDING POTENTIOMETER FOR CHROMATOGRAPH (TSVET). AT MINUS 195DEGREES, THE AR WAS ADSORBED BY THE COKE. THE COKE SAMPLE WAS THEN HEATED TO ROOM TEMP., THE AR DESORBED AND THE POTENTIOMETER RECORDED A CHANGE IN THE MIXT. COMPN. AS A DESORPTION PEAK. THE PEAK DURATION WAS SIMILAR TO 1 MIN AT A RATE OF GAS FLOW OF 60ML-MIN. THE ADSORPTION DESORPTION CYCLE CONTINUED FOR SIMILAR TO 10 MIN. EXPRESSIONS ARE SUBMITTED FOR THE INTERNAL SP. SURFACE, IN TERMS OF MATERIAL QUANTITY ADSORBED BY THE MONOMOL. LAYER, AND FOR CALCN. OF THIS QUANTITY. METHODS ARE ALSO GIVEN FOR DETG. THE VOL. OF THE ADSORBED AR AND THE PEAK SURFACES. THESE DETNS. WERE SIMPLER, SHORTER AND MORE SENSITIVE THAN BY FORMER METHODS. THE SURFACE VALUES DEPENDED MORE ON THE COKING PROCESS, E. G., HEATING RATE AND FINAL TEMP., THAN ON POROSITY. THE SURFACES VARIED FROM 0.62 M PRIME2-G FOR 1268DEGREES, WITH A 51.3PERCENT POROSITY TO 1.00 FOR 1372DEGREES, WITH A 52.6PERCENT POROSITY, RESP.

UNCLASSIFIED

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USSR

UDC: 576.895.421

SKLYAR, V. YE., Donetsk State University

"The Fauna of Ixodid Ticks in Southern Donetsk'aya Oblast"

Leningrad, Parazitologiya, Vol 4, No 6, Nov/Dec 70, pp 524-526

Abstract: A study was conducted to determine the habitats, species composition, and seasons of greatest activity of Ixodes ticks in Southern Donetsk'aya Oblast. A total of 671 ticks were gathered from wood, field, and domestic mice and gray hamsters during all seasons of the year and from other rodents during the warm months. The species composition of the ticks was as follows: Ixodes laguri; Ixodes redikorzevi: Ixodes crenulatus; Rhipicephalus turanicus, Rhipicephalus rossicus; Rhipicephalus pumilio Sch.; and Dermacentor marginatus.

Rhipicephalus rossicus ticks predominate in the area investigated: of 671 ticks gathered, 515 (77%) were of this species. Second in number were the Ixodes Laguri ticks. Tick activity was greater during the spring and summer.

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USSR

UDC 547.962

LIKHTENSHTEYN, G. I., FROLOV, YE. N., MESNAYKO, N. F., LEYCHENKO, L. A., and SKLYAR, YU. S., Institute of Chemical Physics, Academy of Sciences USSR Moscow

"An Investigation of the Structure of a Modeled Iron-Sulfur Protein by the Method of Spin and Luminescence Labels"

Moscow, Molekulyarnaya Biologiya, Vol 6, No 2, Mar/Apr 72, pp 201-209

Abstract: The research described in the present article concerned the problem of the mutual arrangement and interaction of iron ions in iron-sulfur proteins. Artificial iron-sulfur proteins, synthesized from human serum albumin, were analyzed by the method of spin and luminescence labels, with the aid of an electron microscope, paramagnetic sound, nuclear gamma-resonance, and analytic ultracentrifugation in the density gradient. The spin label method is based on the specific reaction of the iron- and sulfur-containing centers of the given proteins with a paramagnetic iminoxyl derivative of n-chlormercurobenzoate. The luminescence labels method is based on the phenomenon of the migration of energy via an inductive-resonance mechanism between luminescence donor centers and luminescence-extinguishing acceptor centers. The results obtained by both methods indicate that the iron ions do not act as individual active centers, but instead form a

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USSR

LIKHTENSHTEYN, G. I., et al., Molekulyarnaya Biologiya, Vol 6, No 2, Mar/Apr 72, pp 201-209

polynuclear complex which participates in catalysis as a single unit. This appears to be an extemely general characteristic of nonhemin enzymes and carriers.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

UDC: 541.1+669.225+660.48.5+539.16

SKLYARENKO, I. YA., MALININ, G. F., PRISELKOV, YU. A., ZIMAKOV, I. YU., and SPITSYN, VIKT. I., Department of Radiochemistry, Moscow State University; Institute of Physical Chemistry, Academy of Sciences USSR

"Vaporization of Silver Under Beta-Irradiation of the Evaporating Surface"

Moscow, Vestnik Moskovskogo Universiteta, Serija II. Khimiya, no. 6, vol. 11, Nov-Dec 70, pp 737-739

Abstract: A number of earlier papers have been devoted to the effect of both external and internal irradiation on the vaporization of various substances. Most investigations, however, were conducted under conditions of inadequately high vacuum and in atmospheres of residual gases which, combined with radiation, could have had specific effects on the metal's surface. The objective of this study was vaporization of pure silver under β-irradiation of its surface under high vacuum of $1 \cdot 10^{-8}$-$5 \cdot 10^{-9}$ ter. The irradiation source was an equilibrium mixture ^{90}Sr-^{90}Y applied by

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USSR

SKLYARENKO, I. YA., et al, Vestnik Moskovskogo Universiteta, Serija II. Khimiya, no. 6, Vol. 11, Nov-Dec 70, pp 737-739

sintering, in the form of strontium oxide, to the inner surface of the ceramic cover of the Knudsen chamber. The radiation dosage was 32 rad/sec. The measurements were made by a device designed for determining vapor pressure by effusion. The effusive flow was measured by a specially equipped mass spectrometer (omegatron) calibrated for silver within 13% to 1157°C. Vacuum was produced by a heterotonic titanium pump. The basic components of residual gases were CO, H_2 and a small amount of H_2O. The effusion chamber proper was made from alundum which was inert to silver. The experimental data and the derived equations show that the employed strength of β-irradiation of silver under conditions of high-vacuum and surface purity had hardly any effect on the process and kinetics of vaporization.

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SKLYARENKO, V.V.

SO: JPRS 59299
14 June 73

EFFECT OF DISORIENTATION OF THE SUBSTRATES ON THE DEGREE OF LATTICE PERFECTION OF THE EPITAXIAL LAYERS OF GALLIUM ARSENIDE

[Supplement to the Article by L. G. Lavrent'yevoy, M. P. Yakubenya, O. M. Ivlevoy, V. D. Dedkova, N. N. Ivanovoy, L. G. Nesteryuk, L. F. Porokhovnichenko, V. V. Sklyarenko; Novosibirsk, Protsessy Rosta i Struktura Monokristallicheskikh Sloyev Poluprovodnikov -- Trudy Simpoziuma, Nauka, Part 2, 1969, pp 187-188]

This article appeared in the first part of the collection (page 371). When assembling the material the editors failed to include this table. We beg the authors' pardon and include this table in the present publication.

Specimen No	Ampoule diameter d, mm	$[I_2]$	Gas transport m, mg/hr	Specimens oriented (111)A: V, microns/hr	N_ϕ, cm^{-2}	I_1/I_2	N_g, cm^{-2}	$N_{g.yn}$, cm^{-2}	Disoriented specimen: Disorientation angle	V, microns/hr	I_1/I_2	N_g, cm^{-2}	$N_{g.yn}$, cm^{-2}
Closed gas transport system													
6125	22	0,67	58	21		1,95	$9,0\cdot10^5$	$1,3\cdot10^5$	2°		1,55	$5,0\cdot10^5$	$6\cdot10^3$
6155	22	0,67	66	24	650	1,92	$1,0\cdot10^6$	$1,2\cdot10^5$	3°	27	1,52	$2,6\cdot10^5$	$1\cdot10^3$
6188	22	0,67			750	1,95	$4,3\cdot10^5$	$5,0\cdot10^5$	4°	32	1,55	$3,7\cdot10^5$	$6\cdot10^3$
6133	22	0,67				1,96	$1,4\cdot10^6$	$5,4\cdot10^5$	6°		1,56		
7159	15	0,67	17		300	1,58	$1,3\cdot10^5$	$1\cdot10^2$	2°		1,54	$2,5\cdot10^5$	-
7160	15	0,67	28	14	760	1,69	$2,4\cdot10^6$	$6\cdot10^2$	4°	25	1,52	$7,8\cdot10^5$	-
7155	12	0,67	20	8	100	1,64	$2,5\cdot10^6$	отж.	2°	28	1,50	$9,9\cdot10^5$	-
7156	12	0,67	21	8	110	1,60	$1,5\cdot10^5$	отж.	4°	24	1,46	$3,5\cdot10^5$	-
Open gas transport system													
206		15,5	30	10	6	1,56			2°		1,50		
183		15,5		10	4	1,50	$1,7\cdot10^5$	-	3°	29	1,50	$1,0\cdot10^5$	-
205		15,5	30	10	6	1,50	$1,4\cdot10^5$	-	4°	16	1,50	$1,3\cdot10^5$	-
209		29	140	21	18	1,50	$4,0\cdot10^5$	-	2°	22	1,50	$2,3\cdot10^5$	

Note: in column 3 the symbol $[I_2]$ denotes the following: for the closed gas transport system, the iodine concentration in mg/cm^3; for the open gas transport system, the saturated vapor pressure of iodine above the source in mm Hg.

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Acc. Nr: AP0034208 Abstracting Service: CHEMICAL ABST. 4-70 Ref. Code: UR 0078

71252f Polarographic study of the complexing of iron(III) with acetate. Sklyarenko, L. S.; Radionova, N. S. (USSR). *Zh. Neorg. Khim.* 1970, 15(1), 103–5 (Russ). Complexing of Fe(III) with AcO^- was studied polarographically by using graphite-paste electrode (made of 6 g *B*-3 graphite and 3.5 ml α-bromonaphthalene). At pH 1.5–2.5, presence of $Fe(OH)^{2+}$ and $Fe(OH)_2^+$ species in *M* KNO_3 supporting-electrolyte medium was confirmed. The change of $E_{1/2}$ with concn. of AcO^- at pH 2.5 is given. At 6.5×10^{-4} *M* AcO^-, the Fe(III) is bound primarily as $[FeOAc]^{2+}$ and, on increasing concn. to 4×10^{-3} *M* AcO^-, as $[Fe(OAc)_2]^+$. At pH 4.5 and log $[AcO^-] > 1.0$, Fe(III) exists mainly as $[Fe(OAc)_3]$. Formation consts. of $Fe(OAc)^{2+}$, $Fe(OAc)_2^+$, and $Fe(OAc)_3$ are 1.6×10^3, 2×10^6, and 1.6×10^9, resp. HMJR

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1/2 009 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--FORMATION OF NEODYMIUM, EUROPIUM, AND YTTERBIUM CARBONATES AND THEIR BEHAVIOR IN AQUEOUS POTASSIUM CARBONATE SOLUTIONS -U-

AUTHOR-(02)-SKLYARENKO, YU.S., RUZAYKINA, L.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 778-84

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--RARE EARTH COMPOUND, NEODYMIUM COMPOUND, YTTERBIUM COMPOUND, CARBONATE COMPOUND, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0453 STEP NO--UR/0078/70/015/003/0778/0784

CIRC ACCESSION NO--AP0126205

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2/2 009 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0126205

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SYSTEMS OF MCL SUB3 K SUB2 CO SUB3 PRIME NEGATIVE H SUB2 O (M EQUALS ND, EU, YB) WERE STUDIED AT 30DEGREES BY POTENTIOMETRY AND BY CHEM. AND ELEMENTAL ANAL. NORMAL CARBONATES M SUB2 (CO SUB3) SUB3 (I) (M EQUALS ND, EU) AND BASIC CARBONATE YB(OH)CO SUB3 FORM AT N EQUALS 1.5 (N EQUALS CO SUB3 PRIME2 NEGATIVE:M PRIME3 POSITIVE). IN THE PRESENCE OF AN EXCESS OF K SUB2 CO SUB3, THE NORMAL CARBONATE CONVERTED TO THE CORRESPONDING BASIC CARBONATES, ND AT N LARGER THAN 4.0 AND EU AT N EQUALS 1.5-20. SOLY. OF I(M EQUALS ND), I(M EQUALS EU), AND YB(OH)CO SUB3 IN WATER IS 1.11 TIMES 10 PRIME NEGATIVE6, 1.94 TIMES 10 PRIME NEGATIVE6, AND 5.54.10 PRIME NEGATIVE6 MOLE-L., RESP. FACILITY: INST. GEOKHIM. ANAL. KHIM. IM. VERNADSKOGO, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

1/2 008 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--STATISTIC CHARACTERISTICS OF OUTPUT SIGNAL OF LINEAR DYNAMIC SYSTEM WITH POSSIBLE DISTURBANCES -U-

AUTHOR--SKLYAREVICH, A.N.

COUNTRY OF INFO--USSR

S

SOURCE--AVTOMATIKA I TELEMEKHANIKA, 1970, NR 4, PP 40-46

DATE PUBLISHED--------70

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

TOPIC TAGS--LINEAR SYSTEM, AUTOMATIC CONTROL SYSTEM, STATISTIC ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1713 STEP NO--UR/0103/70/000/004/0040/0046

CIRC ACCESSION NO--AP0118691

UNCLASSIFIED

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CIRC ACCESSION NO--AP0118691 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A LINEAR DYNAMIC SYSTEM WITH POSSIBLE DISTURBANCES IS ANALYZED. THE RATE OF THE OCCURENCE OF THE DISTURBANCES IS CONSIDERED TO BE CONSTANT. THE MOMENT OF THE DISTURBANCE AVERAGED SYSTEM RESPONSE AS WELL AS THE DEPENDENCES BETWEEN THE OUTPUT AND THE INPUT SIGNAL EXPECTATIONS AND THE CORRELATION FUNCTIONS ARE ESTABLISHED WHEN THE INPUT SIGNAL IS STOCHASTIC. THE USE OF THE ELABORATED METHOD IS ILLUSTRATED WITH AN EXAMPLE.

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USSR

DENISENKO, O. S., and SKLYAREVICH, A. N.

UDC 577.4

"The Verification Capabilities of a Test of an Inertial Automaton"

V sb. Teoriya konech. avtomatov i yeye pril. (Theory of Finite Automata and its Application - collection of works), No 1, Riga, Zinatne, 1973, pp 47 - 63 (from RZh Matematika No 12, 1973, abstract No 12 V475)

Translation: Questions of checking an inertial automaton are considered. The errors considered are a constant and an additional signal inversion in the circuit. v(t) designates the output function of a correctly operating automaton and u(t) the output function of an improperly working automaton. If the equation

$$z\bar{u} + \bar{z}u = 1$$

holds for the input selection (test) A, this indicates that test A will detect the problem. The article gives conditions which make it possible to determine the testing capacity of each test.

Abstract by Kh. Madatyan.

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USSR

SKLYAREVICH, A. N. UDC 577.4

"Frequency of Failures of Automata Under Periodic Preventive Maintenance"

V sb. Vopr. sinteza konechn. avtomatov (Problems in the Synthesis of Finite Automata -- Collection of Works), Riga, "Zinatne", 1972, pp 143-149 (from RZh-Matematika, No 9, Sep 72, Abstract No 9V431)

Translation: The frequency of breakdown of automata (systems) is determined by introducing weighting coefficients that take into account the possibility of accumulation of breakdowns and the periodic performance of complete maintenance. Approximate relationships are obtained which can be used in engineering calculations of reliability indices for the system. Authors abstract.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

SKLYAREVICH, A. N. UDC 577.4

"Failure Intensity of Automata During Periodic Preventive Maintenance"

V sb. Vopr. sinteza konechn. avtomatov (Problems of Synthesizing Finite Automata — collection of works), Riga, Zinatne Press, 1972, pp 143-149 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V431)

Translation: The failure intensity of automata (systems) is defined by introducing the weight coefficients considering the possibility of accumulation of damage and periodic complete preventive maintenance. The approximate relations are obtained which can be used for engineering calculations of the reliability indexes of the systems.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

SKLYAREVICH, A. N., VANGE, KH. L.

UDC 577.4

"Structural Method of Constructing the Function for Checking a Combination Automaton"

V sb. Tekhn. diagnostika (Technical Diagnostics — collection of works), Moscow, Nauka Press, 1972, pp 191-194 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V429)

No abstract

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

SKLYAREVICH, A. N., DENISENKO, O. S.

"Sequence of Tests Used to Check Automata for Multiple Defects"

Izv. Leningr. Elektrotekhn. In-ta. [Works of Leningrad Institute of Electric Engineering], 1972, No 118, Part 1, pp 98-102 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V444 by Kh. Madatyan).

Translation: An algorithm is suggested for construction of complete checking tests for an automaton, determined by its logic plan. Defects such as constant 0.1 and inversion of a signal are analyzed.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

UDC: 539.172.3:539.2

ARTEM'YEV, A. N., ALESHIN, K. P., MIRZABABAYEV, R. M., SKLYAREVSKIY, V. V., SMIRNOV, G. V., and STEPANOV, Ye. P.

"Mössbauer High Angular Resolution Diffractometer"

Moscow, Pribory i Tekhnika Eksperimenta, No 6, 1971, pp 64-66

Abstract: A Mössbauer diffractometer, designed for a broad variety of measurements with x-rays and gamma radiation, is described. The essential characteristic of this instrument is the low count rate of gamma quanta even with strong gamma ray sources, thus resulting in the repeated and prolonged measurement of a single peak. The instrument contains an x-ray tube in addition to the Mössbauer source, thus permitting the correction and investigation of a crystal structure preparatory to operation with gamma radiation. The basic structure of the instrument is that of the URS-50IM x-ray equipment. A description of it is given together with an external-view photograph and a sample of the spectrum for a quartz crystal and an α-Fe_2O_3 monocrystal. The authors thank I. B. Filippov and M. A. Volkov for their assistance in preparing and setting up the instrument. They are associated with the Institute of Atomic Energy at Moscow.

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1/2 027

UNCLASSIFIED

TITLE--DIRECT OBSERVATION OF THE INTERFERENCE BETWEEN INTERNAL CONVERSION AND PHOTOEFFECT IN DYSPROSIUM 161 -U-

PROCESSING DATE--09OCT70

AUTHOR-(04)-LUKASHEVICH, I.I., GOROBCHENKO, V.D., SKLYAREVSKIY, V.V., FILIPPOV, N.I.

COUNTRY OF INFO--USSR

SOURCE--PHYS. LETT. A 1970, 31(3), 112-13

DATE PUBLISHED--------70

S

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--RESONANCE ABSORPTION, GAMMA IRRADIATION, ENERGY SPECTRUM, EXCITATION CROSS SECTION, PHOTOELECTRON, MOSSBAUER SPECTRUM, DYSPORSIUM ISOTOPE, INTERFERENCE MEASUREMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1982/0660

STEP NO--NE/0000/70/031/003/0112/0113

CIRC ACCESSION NO--AP0052120

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CIRC ACCESSION NO--AP0052120 PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ENERGY DEPENDENCE OF THE CROSS SECTION FOR CREATION OF CONVERSION E DURING THE RESONANT ABSORPTION OF GAMMA RAYS BY PRIME161 DY NUCLEI IN METALLIC DY HAS BEEN INVESTIGATED. THE ASYMMETRY OF THE MUESSBAUER LINE SHAPE OBSD. IN EXPT. IS CONNECTED WITH THE PRESENCE OF AN INTERFERENCE BETWEEN PROCESSES OF PHOTOEFFECT AND INTERNAL CONVERSION.

FACILITY: ACAD. SCI., MOSCOW, USSR.

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Random Signals

SKLYAROV, I.A.

SOV/JPRS 56142
1 June 1972

UDC 62[illegible].7.05[illegible]

SPECTRAL-CORRELATION CHARACTERISTICS OF A PAIR OF ORTHOGONAL BINARY RANDOM SIGNALS

I. A. Sklyarov, Candidate of Technical Sciences
G. G. Danayadov, Candidate of Technical Sciences

Pages [illegible]

When solving certain practical problems, the necessity for the random processes connected with each other and orthogonal to each other arises. The components of the envelope of the normal narrow band random process investigated, for example, in the monograph [1] are, as is known, an example of such processes. The necessity for orthogonal random processes arises, for example, in communications engineering and radar when using orthogonal coding of the messages. Orthogonal coding permits realization of simultaneous transmission of two or several messages over one channel and independent separation of them in spite of the fact that their spectra overlap. Let us assume that we are given a random binary process x(t) with a deterministic cycle interval T_0.

In the preceding article it was demonstrated that two processes x(t) and y(t) are orthogonal to each other if they are related by the expression

$$y(t) = x(t)f(t), \qquad (1)$$

where f(t) is a regular meander with the period $2T_0$ assuming values of ± 1.

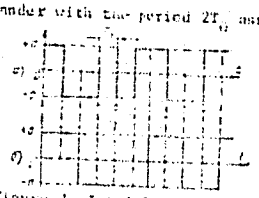

Figure 1. Initial and orthogonal processes

The possible realizations of the initial and orthogonal processes are presented in Figures 1,a and b. The process x(t) can be described by a simple homogeneous discrete Markov chain.

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UDC: 621.652:669.018.95(088.8)

(5)

ARABEY, B. G., BAULIN, Yu. N., ZVEREV, I. I., ZUKHER, M. S., KOKONIN, S. S., MARKOV, Yu. M., PORTNOY, K. I., SKLYAROV, N. M., TYURIN, V. A.

"Metal Ceramic Friction Material"

USSR Author's Certificate Number 346373, Filed 15/12/69, Published 18/08/72 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G422P, by S. Krivonosova).

Translation: A metal ceramic friction material, for example for braking devices, is suggested, containing ZrC and B carbide. In order to increase the stability of the coefficient of friction, B nitride and metals of the Fe group are introduced to the composition, taken in any combination with the following ratio of components (in wt. %): B carbide -- 10-50, Fe-group metals, taken in any combination, 3-35, B nitride 1-5, ZrC -- remainder. The material suggested has the following properties: s. g. 5.52 g/cm^3; coefficient of friction at braking temperature 600° 0.50-0.55, at 800° 0.45-0.50; stability of coefficient of friction with specific braking energies 450 kgm/cm^2 0.75-0.88; at 923 kgm/cm^2 0.80-0.95; wear with specific braking energies of 450 and 923 kgm/cm^2, in μ/tori 2-6 and 6-11 respectively; permissible volumetric

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USSR

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Arabey, B. G., Baulin, Yu. N., Zverev, I. I., Zukher, M. S., Kokonin, S. S., Markov, Yu. M., Portnoy, K. I., Sklyarov, N. M., Tyurin, V. A., USSR Author's Certificate Number 346373, Filed 15/12/69, Published 18/08/72.

temperature 800°, heat conductivity factor in t/m.° at 100° 48.1, 200° 44.0, 400° 35.9, 600° 29.5, 800° 27.3, 1000° 26.4; specific heat capacity (in cal/g·°) at 100° 0.134, 200° 0.136, 400° 0.150, 600° 0.161, 800° 0.169, 1000° 0.184; tensile strength at 20° 36 kg/mm^2; bending strength at 20° 62 kg/mm^2; shear strength at 20° 13.8 kg/mm^2; a_H 0.15 kgm/cm^2.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

UDC 621.172.62-408.3

(3)

PASHKOV, P. O., YAVOR, A. A., SAVCHENKOV, E. A., KOTOV, N. V., SKLYAROV, N. N., MIKHEYEV, A. A., and PLATONOV, A. A., Volograd Polytechnic Institute, All Union Scientific Research Institute of Aviation Materials

"Properties of High-Strength Clad Sheet Steel in Tension"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 12, 1973, pp 37-40

Abstract: Specimens of VKS-1 steel, 1.5 mm thick, clad with the corrosion-resistant KhN78T (EI435) alloy, 13-15% of sheet thickness, were tested for mechanical properties by the method: axial tension - static bending - biaxial tension - tensile fracture (crack sensitivity). The investigation results indicate that VKS-1 clad steel possesses higher strength and plasticity in comparison with steel without cladding and higher resistance to rupture. The strength of VKS-1 steel in biaxial tension comes up to maximum values; besides, the strength in axial tension is 20-25% higher than the strength of homogeneous VKS-1 steel. The application of electroslag remelting contributes to increased plasticity under tension for high-strength clad steel, but to a smaller degree than for homogeneous steel. Three figures, two tables, seven bibliographic references.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

UDC 620.171.2

SKLYAROV, N. M., KONONCHUK, N. I., ZHUKOV, S. L., ZHUKOV, N. D., VASIL'EV, B. N., AKIMOV, L. M., LAPITSKIY, Yu. A., BELYAYEV, M. S., KRIVONOGOV, G. S., ISHCHENKO, I. I., POGREBNYAK, A. D., and KUFAYEV, V. N. (Moscow, Kiev)

"Estimating the Heat Resistance of Heat-Resistant Alloys Under Actual Operating Conditions"

Kiev, Problemy prochnosti, No 1, 1971, pp 13-21

Abstract: Problems concerned with estimating the endurance of heat-resistant materials under unstable loading conditions are analyzed. A method is suggested for producing and using "secondary" endurance characteristics, increasing the accuracy of estimation and calculation of guaranteed durability under operating conditions and forced equivalent loading modes. These secondary characteristics represent the dependence of the durability of materials on combinations of preceding programed and subsequent stationary loads in various proportions. The formula of linear addition of damage applies. The secondary characteristics are produced by accelerated testing over limited test periods with extrapolation to the area of increased durability.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

UDC: 620.171.2

SKLYAROV, N. M., KONONCHUK, N. I., ISHCHENKO, I. I., POGREBNYAK, A. D., LUZITSKIY, L. P., SHIPIL', V. Ya., LAPITSKIY, Yu. A., SINAYSKIY, B. N., KUFAYEV, V. N., Kiev

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

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

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

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SKLYAROV, N. M., et al, Kiev, Problemy Prochnosti, No 3, Mar 73, pp 100-104

temperatures and durabilities. The spectrum of loads is studied in combination with the sequence of their application, i.e., in time.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

UDC 621.394.542.3

PELEKHATYY, M. I., POTAPOV, N. A., SKLYAROV, S. I., SMIRNOV, V. N.

"Problems in the Reception and Transmission of Pseudo-Random PM Signals"

Moscow, Elektrosvyaz', No 7, 1970, pp 32-38

Abstract: This article deals with the following two problems in phase-modulated information transmission: the possibility of reducing the ratio of the side levels of the correlation function to the central lobe through a transformation of the signal; finding a principle on which to construct a new class of pseudo-random sequences with good autocorrelation and inter-correlation characteristics when the signal transformation is introduced. To improve the ratio of the central lobe of the correlation function to the side lobe, a transformation in which two parts of the same signal are multiplied is used. The transformation is made by breaking a sequence up into two orthogonal components. The authors show how their methods can be applied to binary and quaternary sequences.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

1/2 013 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--ON VERTICAL PROFILES AND DIURNAL TREND OF WIND VELOCITY VECTOR IN THE BOUNDARY LAYER OF THE ATMOSPHERE OVER THE EUROPEAN TERRITORY OF THE

AUTHOR--SKLYAROV, V.M.

COUNTRY OF INFO--USSR

S

SOURCE--METEOROLOGIYA GIDROLOGIYA, 1970, NR 2, PP 50-62

DATE PUBLISHED--------70

SUBJECT AREAS--ATMOSPHERIC SCIENCES

TOPIC TAGS--DIURNAL VARIATION, WIND VELOCITY, VERTICAL PROFILE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/1220 STEP NO--UR/0050/70/000/002/0050/0062

CIRC ACCESSION NO--AP0103108

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

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CIRC ACCESSION NO--AP0103108 UNCLASSIFIED PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE ARTICLE DATA ON VARIABILITY WITH HEIGHT AND DIURNAL TREND OF RESULTING WIND VELOCITY ARE REPRESENTED FOR DIFFERENT PHYSICAL AND GEOGRAPHICAL ZONES OF THE EUROPEAN TERRITORY OF THE USSR. BRIEF INTERPRETATION OF THESE DATA IN COMPARISON WITH THEORETICAL CALCULATIONS IS GIVEN.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

Acc. Nr: AP0052302 Ref. Code: UR0238

PRIMARY SOURCE: Fiziologichniy Zhurnal, 1970, Vol 16, Nr 2, pp 265-273

PHYSIOLOGICAL PROBLEMS OF PARENTERAL NUTRITION BY FAT EMULSIONS

Ya. P. Sklyarov, B. V. Kachorovskiy

Department of Normal Physiology, Medical Institute, Lvov, Institute of Hematology and Blood Transfusion, Lvov

Summary

Proceeding from the modern data on the nutrient value of fats, a theoretical substantiation is presented of the expediency of fat application for parenteral nutrition. The composition of commercial preparations of fat microemulsions for intravenous parenteral nutrition, produced in different countries is given.

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The mechanisms of evacuation of parenterally administrated fat from the blood bed are described and the proofs of its complete and comparatively quick assimilation are given. Numerous literary data are summed up on the effect of parenteral hyperlipemia on the state and function of different organs and physiological systems of an organism.

An original preparation of high-dispersed fat emulsion for parenteral nutrition (lipoparenteral) is developed and studied by the authors in a physiological experiment. The obtained results prospect for application of this preparation for clinical purposes.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

SKLYAROV, Yu. S.

"One Problem of Synthesis of a Transport Network"

Izbr. Tr. Vses. Mezhvuz. Simpoz. po Prikl. Mat. i Kibernet, Gor'kiy, 1967 [Selected Works of All-Union Interuniversity Symposium on Applied Mathematics and Cybernetics, Gor'kiy, 1967], Moscow, Nauka Press, 1973, pp 329-332 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V504, by the author).

Translation: One version is presented of an algorithm for design of a transport network of arbitrary configuration, based on the method of projection of gradients.

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USSR

UDC: 547.26'118.07

NIFANT'YEV, E. Ye., BLAGOVESHCHENSKIY, V. S., SOKURENKO, A. M., and SKLYARSKIY, L. S.

"Method for Obtaining Functional-Replacing Dialkyl Phosphates"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No. 33, 1971, p 77

Abstract: In this method, hypophosphorous acid is combined with alcohol, carbon tetrachloride, and a base of the type of triethylamine, under heating at from 100-125° C. The process is done in a medium of an inert organic solvent like dioxane. Patent claimed by the M. V. Lomonosov State University.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR UDC: 621.396.6-181.5(088.8)

SKLYARSKIY, Ya. A., TESEOGLU, O. M., CHULOK, M. P.

"A Method of Nondestructive Noncontact Inspection of the Surface of Thin Cylindrical Parts"

USSR Author's Certificate No 280676, filed 8 Apr 69, published 4 Dec 70 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V200 P)

Translation: A method is proposed for nondestructive noncontact inspection of the surface of thin cylindrical parts such as the axial leads of radio components. The procedure is based on flaw detection using light. In order to automate inspection, a light beam shaped to a rectangular cross section by a slot illuminator, the width of the beam being commensurate with the dimensions of the minimum flaw, while the length is greater than the wobble amplitude of the part to be checked, is allowed to fall on the surface being checked in a direction perpendicular to the axis of the part.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

1/2 027 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--CONCERNING THE DIFFERENTIAL DIAGNOSIS OF PROGRESSIVE LEUKOENCEPHALITIS AND GLIOMA OF THE BRAIN -U-

AUTHOR-(05)-LEONOVICH, A.L., SKLYUT, I.A., KARDASH, I.I., KASTRITSKAYA, Z.M., KRASILNIKOVA, N.YA.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKOVA, 1970, VOL 70, NR 5, PP 673-679

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TUMOR, BRAIN, LESION, DIAGNOSTIC MEDICINE, ELECTROENCEPHALOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0232 STEP NO--UR/0246/70/070/005/0673/0679

CIRC ACCESSION NO--AP0117484

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

2/2 027 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0117484

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS CONVENED A CLINICO LABORATORIAL ANALYSIS OF 44 CASE HISTORIES OF PATIENTS WITH PROGRESSIVE LEUKOENCEPHALITIS AND NEUROECTODERMAL BRAIN TUMORS. SPECIAL ATTENTION IS BEING GIVEN TO PSEUDOTUMOROUS SYMPTOMS IN DIFFERENT FORMS OF PROGRESSIVE LEUKOENCEPHALITIS (SCHILDERS, SCHOLZ, VAN BOGARTS DISEASE). FOR DIFFERENTIAL PURPOSES THE AUTHORS UTILIZED OTONEUROLOGICAL AND X RAY CONTRAST METHODS, AS WELL AS EEG DATA. THE PEG OF PATIENTS WITH PROGRESSIVE LEUKOENCEPHALITIS DISPLAYED AN OPEN INTRAHYDROCEPHALIA WITHOUT A DISPLACEMENT OF THE VENTRICULAR SYSTEM. THE EEG CHANGES WERE IN THE FORM OF A DIFFUSE DISORGANIZATION OF THE RHYTHMS WITH A LOW AMPLITUDE ACTIVITY OR HIGH VOLTAGE PAROXYSMS OF ACUTE AND SLOW WAVES. THE OTONEUROLOGICAL CLINICAL PICTURE IN PROGRESSIVE LEUKOENCEPHALITIS IN COMPARISON TO TUMORS WAS CHARACTERIZED BY MULTIPLE FOCI, SUB AND SUPRATENTORIAL SYMPTOMATOLOGY. THIS INDICATES NOT ONLY TO A LESION OF THE HEMISPHERES, BUT OF THE STEM STRUCTURES AS WELL. FACILITY: KAFEDRA NERVNYKH BOLEZNEY BELORUSSKOGO INSTITUTA SOVERSHENSTVOVANIYA VRACHEY AND N-I INSTITUT NERVOLOGII, NEYROKHIRURGII I FIZIOTERAPII, MINSK.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

1/2 010 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--EFFECT OF RARE EARTH METALS ON THE FLAKE SENSITIVITY OF ALLOY STEEL -U-

AUTHOR-(05)-SERBIN, A.P., SKLYUYEV, P.V., SOKOLOV, V.YE., ROMANOV, A.A., FRIDMAN, A.YA.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, METAL. 1970, (1), 245

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--RARE EARTH METAL, NONMETALLIC INCLUSION, STEEL FLAKE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1981/0458 STEP NO--UR/0370/70/000/001/0245/0245

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

CIRC ACCESSION NO--AP0050475

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2/2 010 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0050475

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADDN. OF 0.2-0.3PERCENT RARE EARTH METALS REDUCED THE TENDENCY TO FLAKE FORMATION TO 215, WHILE IMPROVING THE DEGREE OF FINENESS OF NONMETALLIC INCLUSIONS.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

UDC 8.74

SKOB, E. A.

"Generation of Forecasts of the Execution of Complex Plans for Higher Level Administration when Using the AKKORD System"

Sb. tr. In-t gidrodinam. Sib. otd. AN SSR (Collected Works of the Hydrodynamics Institute of the Siberian Department of the USSR Academy of Sciences), 1971, vyp. 4, pp 61-63 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V633)

No abstract

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

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DRUIN, V. A., SKOBELEV, N. K., RUD', V. I., Joint Institute for Nuclear Research

"The Spontaneous Fission of Some Fm Isotopes"

Moscow, Yadernaya Fizika, Vol 12, No 1, 1970, pp 44-49

Abstract: The project was undertaken in order to check the influence of subshell N=152 on the spontaneous fission of Fm isotopes with the number of neutrons N < 152. The spontaneous fission half-lives of isotopes Fm^{246}, Fm^{248}, and F^{250} produced in the reactions U^{233} (O^{18}, 5n) Fm^{246}, U^{238}(O^{16}, 6n) Fm^{248}, and U^{238} (O^{18}, 6n) Fm^{250} are determined. The measured value of the spontaneous fission halflife for Fm^{246}, $T_{sf} \sim 20$ sec, is in agreement with a value obtained earlier, and the value for FM^{248}, $T_{sf} \sim 60$ hours, is greater than that of data published earlier. For Fm^{250} a T_{sf} value of about 10 years was obtained.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

UDC 681.325.65

BOLTYANSKIY, A. A., PSHENICHNIKOV, Yu. V., SKOBELEV, O. P.

"Multichannel Analog-Digital Converters Based on Test Transient Processes in Measurement Circuits"

Novosibirsk, Konf. po avtomatiz. nauch. issled. na osnove primeneniya EVM, 1972--sbornik (Conference on Automating Computer-Based Scientific Research, 1972--collection of works), 1972, pp 77-83 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 72, abstract No 11B301)

Translation: The paper demonstrates the effectiveness of using methods based on test transient modes in measurement circuits to design multichannel analog--digital converters. The methods are formulated on the basis of the simplest model of pickups and measurement circuits in the form of an aperiodic system; the method of instantaneous values, the constant time method, the method of the first derivative, and the method of integral conversion are considered. The structures of multichannel converters for parametric and oscillator pickups developed on the basis of these methods are described. Two illustrations, bibliography of two titles. L. P.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR UDC 621.396.6.049.75.002

SKOBELKIN, V. M.

"Methods and Facilities for Nondestructive Inspection of Multilayered Printed-Circuit Boards"

Tr. NII introskopii (Works of the Scientific Research Institute of Internal Inspection), 1970, vyp. 4, pp 82-91 (from RZh-Radiotekhnika, No 8, Aug 71, Abstract No 8V293)

Translation: The paper presents a survey of methods used for inspecting multilayered printed-circuit boards; the effectiveness of each of these is shown as related to the type of flaws being detected. Methods based on the use of infrared radiation are considered in particular detail. The basic parameters of IR-chambers and IR-pyrometers are presented. Two illustrations, three tables, bibliography of twelve titles. N. S.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

UDC: 621.372.412

BRONNIKOVA, Ye. G., SKOBELKINA, L. B.

"Equivalent Parameters and Temperature-Frequency Characteristics of Resonators made from a Single Crystal of X-Cut Lithium Tantalate"

Elektron. tekhnika. Nauchno-tekhn. sb. Radiokomponenty (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 5, pp 31-34 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6D355)

Translation: The paper presents the results of measurements of the parameters of resonators of Soviet X-cut $LiTaO_3$ single crystals, in particular the dynamic inductance and capacitance, coefficient of electromechanical coupling and temperature coefficient of frequency as a function of the precision of making the cut. It is shown that these crystals have a good future for use in high-frequency wide-band filters. Resumé.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

1/2 016 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--INVERSE POLAROGRAPHIC METHOD FOR DETERMINING THE SOLUBILITY PRODUCT OF SLIGHTLY SOLUBLE SALTS -U-

AUTHOR-(03)-SKOBETS, YE.M., TUROVA, D.S., KARNAUKHOV, A.I.

COUNTRY OF INFO--USSR

SOURCE--UKR. KHIM. ZH. 1970, 36(1) 33-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SOLUBILITY, POLAROGRAPHIC ANALYSIS, ELECTRODEPOSITION, SODIUM NITRATE, POTASSIUM NITRATE, LEAD CHROMATE, MOLYBDENUM COMPOUND, PHOSPHATE, OXALATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1326 STEP NO--UR/0073/70/036/001/0033/0035

CIRC ACCESSION NO--AP0107799

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

2/2 016 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107799

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLY. OF PBC SUB2 O SUB4, PBMOO SUB4, PBCRO SUB4, AND PB SUB3 (PO SUB4) SUB2 WAS DETD. BY MEASURING THE CURRENT PRODUCED ON SOLN. OF A SMALL AMT. PF PB PREVIOUSLY DEPOSITED FROM SOLN. BY ELECTRODEPOSITION. THE SOLY. PRODUCTS CALCD. WERE 3 TIMES 10 PRIME NEGATIVE11, 3.3 TIMES 10 PRIME NEGATIVE12, 6.4 TIMES 10 PRIME NEGATIVE13, AND 1.8 TIMES 10 PRIME NEGATIVE29, RESP. GRAPHS ARE ALSO GIVEN FOR THE SOLY. OF PBC SUB2 O SUB4 IN SOLNS. OF NANO SUB3 AND OF KNO SUB3 OF VARYING IONIC STRENGTHS.

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USSR

UDC 533.9

SKOBEL'TSYN, D. V., Editor

"Plasma Theory"

Moscow, "Nauka," 1972, p 2

Translation: In the thematic collection Trudy FIAN (Transactions of the P. N. Lebedev Physics Institute, Academy of Sciences) volume 61, appear two papers giving reviews of some physics problems worked out in the Laboratory of Plasma Accelerators and Plasma Physics of the FIAN, USSR.

The review "Theory of Oscillations and the Stability of a Semiconductor Plasma With a Small Number of Carriers in a Strong Electric Field", by R. R. Kikvidze and A. A. Rukhadze, is devoted to solid-state plasmas. The paper is primarily concerned with the effective generation of electromagnetic waves in the carrier current of such a plasma in the presence of a negative voltampere characteristic; the characteristics of this phenomenon may put it into serious competition with the well-known Gunn effect.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

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SKOBEL'TSYN, D. V., Editor, "Nauka," 1972, p 2

In the fundamental review article by V. V. Pustovalov and V. P. Silin, "Nonlinear Theory of Wave Interaction in a Plasma," the basis of the theory of nonlinear wave interaction in a hot, rarefied plasma is discussed. Along with a systematic presentation of the procedure for deriving equations describing the nonlinear interaction of the waves in isotropic and anisotropic (magnetized) plasmas, a multitude of specific problems on the interaction of definite types of waves under various conditions is considered.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

USSR

UDC 533.9

SKOBEL'TSYN, D. V., Editor

"Plasma Theory"

Moscow, "Nauka," 1972, pp 282-283

Translation:

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SKOBEL'TSYN, D. V., Editor, "Nauka," 1972, pp 282-283

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020020-0

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UDC 577.1:615.7/9

(2)

BABANOV, G. P., ISAKHANOV, A. L., BUROV, YU. A., SKOBEY, N. A., BABANOV, A. G. and SAVRASOVA, L. I.

"Formation of the Adaptation of the Organism Under the Effect of Nitrile' Acrylate as a Low-Intensity Factor of the Production Environment"

V sb. Toksikol. i gigyena produktov neftekhimii i neftekhim. proiz-v (Toxicology and Hygiene of the Products of Petrochemistry and the Petrochemical Production -- collection of works), Yaroslavl', 1972, pp 45-58 (from RZh-Biologicheskaya Khimiya, No 8, 1973, Abstract No 8F2171)

Translation: Rats were forced to inhale nitrile acrylate for 6 months (I; 0.495 ± 0.01 mg/m^3, 5 hours a day, 6 days a week). The I treatment caused some increase in the number of erythrocytes in the blood (more expressed only during the first month of treatment) and a reduction in the number of leucocytes (more expressed after 4-5 months), an increase in the total amount of portein in the blood serum as a result of albumen and from the second half of the effect of I -- gamma-globulins -- an increase in the free SH-group content in the liver (during the initial period of the treatment) and to a lesser degree in the blood serum and a reduction in the ascorbic acid content in the blood serum and also some increase in the activity of the blood peroxydase and

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BABANOV, G. P., et al., Toxicology and Hygiene of the Products of Petrochemistry and the Petrochemical Production -- collection of works, Yaroslavl', 1972, pp 45-58

catalase. In the second half of the treatment, the changed indexes increased to the initial level. The treatment with I cased increase resistance to the animals to the effect of extremal factors (temperature drops -- +5°, 10 minutes ; reduced O_2 partial pressure, ethanol narcosis -- 3 g/kg, intraperitoneal). Under the acute effect of I (183 mg/m^3, 2 hours) the changes in the majority of investigated indexes were insignificant. The conclusion was drawn regarding development of adaptation of the organism under the effect of low I concentrations.

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USSR UDC 669.71

BEGUNOV, A. I., and SKOBEYEV, I. K., Irkutsk Polytechnical Institute

"Dynamics of Cathode Heating of Aluminum Electrolyzers of Different Design"

Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Tsvetnaya Metallurgiya, No 6, 1970, pp 58-63

Abstract: The dynamics of heating two aluminum electrolyzers of different design -- one with counterfort-type case with bottom, the other with beam-type case without bottom -- were investigated. Calculations for both designs were carried out for a similar heating regime. Heating was conducted through the innter surface at a constant heat flux q_1 = 1260 kg-cal/m^2 hour, corresponding to the steady heat transfer through the cathode of the electrolyzer with the bottom, until the temperature on the fettling surfaces reached the service temperature of 930°. This was followed by holding at a constant temperature until the flux on the outer surface of the refractory lining attained 98% of the steady-state heat flux. The heating consists of three periods: inertial, regular and holding at constant temperature.

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EGUNOV, A. I., and SKOBEYEV, I. K., Ysvetnaya Metallurgiya, No 6, 1970, pp 58-63

Formulas for heat fluxes and durations of all three periods are derived. The calculated heating temperature and thermal diagrams for both types of electrolyzers are presented and compared. This comparison shows that with the same heating regime, the time necessary for attaining a 930° temperature on the fettling surface for electrolyzers with a case and bottom is one-half the time required for electrolyzers with a bottom (450 and 825 hours). For electrolyzers with a case without bottom, the temperature on all surfaces becomes practically constant in 10-15 thousand hours or 1.5 year. A substantial variation of heat fluxes can be observed over a longer period ($\approx$20,000 hr).

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USSR

UDC 669.71.48

FESHCHENKO, Z. I., SKOBEYEV, I. K., SERGEYEVA, V. N.

"Physical-Chemical Characteristics of Samples of Red Sludge"

Obogashch. i metallurgii polezn. iskopayemykh -- V sb. (Beneficiation and Metallurgy of Minerals -- collection of works), Irkutsk, 1970, pp 77-81 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G195)

Translation: The chemical, crystal-optical, thermal, thermogravimetric, and x-ray analyses of sludges obtained when processing bauxites from the Turgay-skoye deposit (S1) and the Severoural'skoye deposit (S2) were performed. The chemical composition (content in percentage of dried samples at 110°) of S1 and S2 was as follows: Na_2O 9.45 and 3.57, Al_2O_3 20.74 and 14.00, Fe_2O_3 31.14 and 41.50, SiO_2 17.64 and 9.07, CaO 1.68 and 13, TiO_2 4.84 and 3.76, loss on calcination 9.67 and 8.94, H_2O 2.21 and 0.64. The basic component of S1 is the alkaline hydroalumosilicate of the cyolite type corresponding with respect to its composition to the mineral chabazite (Ca, Na) $(AlSi_2O_6) \cdot 6H_2O$. Other components containing Al_2O_3 in S1 are caolinite, galluazite, feldspar and mica; some of the ferrous minerals; limonite, hematite, goethite and

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FESHCHENKO, Z. I., et al., Obogashch. i metallurgii polezn. iskopayemykh -- V sb., Irkutsk, 1970, pp 77-81

hydrogoethite. The admixtures were the following: quartz, feldspar, calcite, magnetite, martite, anatase, rutile, apatite, and pyroxene. Incompletely leached hydrargillite, diaspore and bemite and caolinite in S2 are of interest for sintering. The ferrous fraction contains hematite, hydrohematite, and hydrogoethite. The admixtures are as follows: calcite, quartz, galluazite, opal, anatase, zircon, tourmaline, and amphibole. Alkaline hydroalumosilicates were not detected. There is 1 table and a 7-entry bibliography.

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USSR

UDC 669.71.053.4.094

FESHCHENKO, Z. I., SKOBEYEV, I. K., KUZ'MINA, G. V.

"Study of the Mechanism of Interaction of Alkali with Bauxite Charge Components"

Obogashch. i metallurgiya polezn. iskopayemykh -- V sb. (Beneficiation and Metallurgy of Minerals -- collection of works), Irkutsk, 1970, pp 75-76 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G145)

Translation: The mechanism of interaction of NaOH and the effect of Fe_2O_3 on extraction of Na_2O and Al_2O_3 during leaching of slurry charge cake are studied. The highest extraction of Na_2O was obtained from the charge cakes in which 75% of the Fe_2O_3 content in the slurry is bound in the sodium ferrite. The extraction of Al_2O_3 is constant for all charges. The cause of low extraction of Na_2O from cakes of certain slurry charges is the formation of compounds of the type of $mNa_2O \cdot pCaO \cdot nSiO_2$ from which Na_2O is not extracted in aqueous solution during leaching of the cakes. On treating red slurry with water with lime (in the ratio of $CaO : Na_2O = 3$), at a

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FESHCHENKO, Z. I., et al., Obogashch. i metallurgiya polezn. iskopayemykh, Irkutsk, 1970, pp 75-76

leaching temperature of 96-98°, with a L : S ratio of 5 : 1 for 8 hours, the degree of regeneration of the Na_2O was 94-95%. The leaching of the Al_2O_3 was 34-35%.

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UNCLASSIFIED

SECTION III SO: SELECTED RESEARCH INSTITUTES FACILITIES

PCS-89

SEPT 71

Name: Institute of Biophysics, Pushchino

Description:

(U) During this quarterly reporting period, 25 new articles were identified from the Institute of Biophysics, Pushchino. On the basis of these articles, it was possible to identify 32 new personalities with the Institute. These personalities, the subjects of the articles, and the dates are given below:

All: biophysics / physiology

Aliyeva, S. A.	phosphorylation	1971 (34)
Apikayeva, G. F.	radiation effect	1970 (35)
Aripova, D. F.	radiation effect	1971 (36)
Azhipa, Ya. I.	hypoxia	1969 (37)
Bregadze, I. F.	radiation effect	1970 (35)
Bussel, Ye. P.	luminescence	1970 (38)
Dmitriyeva, T. I.	radiation effect	1970 (39)
Dmitriyeva, V. A.	blood plasma	1969 (40)
Domareva, O. P.	radiation effect	1970 (39)
Dubrov, A. P.	biochemical analysis	1971 (41)
Gabelova, N. A.	muscle physiology	1971 (42)
Ganassi, Ye. E.	radiation effect	1970 (35)
Ivkova, M. N.	serum albumin	1971 (43)
Kasatkin, V. S.	phosphorylation	1971 (34)
Khokhlova, G. K.	muscle physiology	1971 (44)
Kislov, A. N.	salivary gland	1970 (45)
Klyagina, V. P.	oligonucleotide	1970 (46)
Korol, B. A.	radiation effect	1971 (44)
Kosheleva, G. N.	biochemical analysis	1971 (41)

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SKOBEYEV, Ye. M.

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(31)

Kuzmina, S. V.	tissue culture	1970[47]
Markovich, D. S.	lactate dehydrogenase	1971[48]
Medvedeva, I. F.	radiation effect	1971[44]
Peshkova, L. V.	phosphorylation	1971[49]
Pronevich, L. A.	antibiotic	1970[50]
Rodionova, M. A.	mitochondrion	1971[51]
Shchipakin, V. N.	phosphorylation	1971[49]
Skobeyev, Ya. M.	radiation/vibration	1970[52]
Suykova, [illegible]	radiation effect	1970[35]
Tsvetkov, V. D.	blood plasma	1969[40]
Umrikhina, N. V.	lactate dehydrogenase	1971[48]
Vilenchik, M. H.	radiation effect	1970[53]
Zamyatnin, A. A.	muscle physiology	1971[42]

Dubrov and Kosheleva[41] are associated with the Laboratory of Cell Biophysics at the institute. Reference 52 above is of special interest since it presents an investigation of combined stresses, i.e., radiation and vibration. In addition to the above articles, five of the twenty-five[54-58] were authored by persons already identified with the Institute of Biophysics, Pushchino. Reference 55 associates the authors of the article, L. V. Slozhenikina, V. L. Migushina, and A. M. Kuzin, with the Department of Radiobiology at the institute.

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USSR

UDC 621.357.7.035-52(088.8)

GRANOVSKIY, I. B., LIFTMAN, I. B., and SKOBLIKOV, R. I.

"Auto-operator for Galvanic Lines"

Author's Certificate No 316755, filed 28 Nov 69, published 24 May 72 (from Referativnyy Zhurnal -- Khimiya, No 8(II), 1973, Abstract No 8L339P)

Translation: An auto-operator is patented for the galvanic lines which contains a mechanism for transfer, a mechanism for lifting having a flexible traction device, and a clamp for the hangers. It is improved in that in order to increase the reliability, it is provided with an apparatus for accidental disconnections accomplished by a double arm lever, one end of which is connected to a sensor for the accidental shut off and the other with assemblies for the deflection of the flexible traction device.

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USSR

UDC 542.941:546.791.6

BELYAYEV, YU. I., VDOVENKO, V. M., SKOBLO, A. I., and SUGLOBOV, D. N.

"Reduction of Uranyl ion by Titanium (III) in Non-aqueous Media"

Leningrad, Radiokhimiya, Vol 13, No 1, 1971, pp 140-142

Abstract: The reaction of $(C_{10}H_{21})_4NUO_2Cl_3$ with $TiCl_3$ was studied in a series of solvents: dimethylformamide, methanol, TBF, acetone, acetonitrile; its stoichiometry was established for individual cases. In all media studied, a rapid reduction of UO_2^{2+} to U^{4+} occurs at 20° with formation of TiO^{2+} and $UCl_6^{=}$ (dimethylformamide, acetonitrile), UCl_5^{-} (TBF, acetone), UCl_4 (methanol). The high reaction rate and absence of solvent effect would indicate an intraspherical mechanism to be governing this reaction in which the coordinated spheres of U(VI) and Ti(III) are in direct contact during the transfer of oxygen and of the electron.

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Acc. Nr: AP0050804

Abstracting Service: CHEMICAL ABST. 5-70

Ref. Code: UR 0339

S

102072d Experimental determination of the dynamic characteristics of evaporating apparatus in a sugar refinery. Ladanyuk, A. P.; Kornienko, L. I.; Skoblo, D. I. (USSR). *Sakh. Prom.* 1970, 44(1), 55-8 (Russ). A 4-stage evaporator was equipped with sensors for levels in all stages and in the feeding tank, for amts. of juice fed to the evaporator, for temp. and pressure of vapors and juices in the chambers and collectors and for the amt. of condensate from the 1st stage. The data were treated by computer to yield differential equations describing the response of the evaporator to changes in feed rate of steam to the 1st stage, steam take-off from the 1st stage to the 1st vacuum stage of the 1st product, vacuum in condenser, and changes in levels caused by changes in the feed. As for vapor pressure in the heat exchangers and pressure of secondary vapor, the evaporator is self regulating. As for levels, no regulation occurs within permissible ranges.

Olaf Thomsen

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1/2 021 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--RADIOLOGICAL CHARACTERISTICS AND THE COURSE OF EARLY STAGES OF ANTHRACOSIS -U-

AUTHOR-(05)-LYUBOPUDROV, V.YE., ZHILKO, S.M., KIRYUKHINA, N.V., SIROTA, G.M., SKUCHELYAS, A.R.

COUNTRY OF INFO--USSR

SOURCE--FRUNZE, SOVETSKOYE ZDRAVOOKHRANENIYE KIRGIZII, NO 1, 1970, PP 42-44

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RESPIRATORY SYSTEM DISEASE, X RAY APPLICATION, INDUSTRIAL HYGIENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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CIRC ACCESSION NO--AP0123176

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2/2 021 UNCLASSIFIED

CIRC ACCESSION NO--AP0123176 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CHARACTERISTICS OF THE INITIAL STAGES OF ANTHRACOSIS, AS DETERMINED BY X RAY, WERE STUDIED, AND THE COURSE OF THE DISEASE WAS TRACED. COAL MINERS WERE STUDIED ON THE BASIS OF X RAYS REPEATED EVERY TWO TO THREE YEARS. IT WAS ESTABLISHED THAT LINEAR AND NODULAR LOCAL FIBROSES ARE THE INITIAL STAGES OF ANTHRACOSIS. SCLEROTIC FIBROSIS WAS FREQUENTLY COMBINED WITH BRONCHITIS OR EMPHYSEMA, WHICH SEVERLY COMPLICATE THE COURSE OF THE DISEASE.

FACILITY: MEDICAL INSTITUTE IMENI A. M. GOR'KIY. FACILITY: OBLAST CLINICAL HOSPITAL OF OCCUPATIONAL DISEASES, DONETSK.

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USSR

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UDC: 616.24-003.656.6

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LYUBOMUDROV, V. Ye., ZHILKO, S. M., KIRYUKHINA, N. V., SIROTA, G. M., SKOCHELYAS, A. R., TAUSHAN, M. T., and YARTSEVA, P. A., Medical Institute imeni A. M. Gor'kiy, and Oblast Clinical Hospital of Occupational Diseases, Donetsk

"Radiological Characteristics and the Course of Early Stages of Anthracosis"

Frunze, Sovetskoye Zdravookhraneniye Kirgizii, No 1, 1970, pp 42-44

Abstract: Characteristics of the initial stages of anthracosis, as determined by x-ray, were studied, and the course of the disease was traced. Coal miners were studied on the basis of x-rays repeated every two to three years. It was established that linear and nodular local fibroses are the initial stages of anthracosis. Sclerotic fibrosis was frequently combined with bronchitis or emphysema, which severely complicate the course of the disease.

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SKOFERTSA, P. G., GAYDAMOVICH, S. Ya., OBUKHOVA, V. R., KORCHMAR', N. D., YAROVOY, P. I., KLISENKO, G. A., and MEL'NIKOVA, Ye. E., Scientific Research Institute of Hygiene and Epidemiology, Kishinev, Moldavian SSR, and Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Isolation of Kharagysh Virus From the Kemerovo Group in the Moldavian SSR"

Moscow, Voprosy Virusologii, No 6, 1972, pp 709-711

Abstract: A virus isolated in 1971 from an Ixodes ricinus pool collected from sheep in the Moldavian SSR, named Kharagysh by the authors, was lethal to 2-4 day mice and not so to 3-4 week mice. The virus passed through a 100 nanometer pore filter but was retained at 50 nanometers. Sodium desoxycholate and ether had little effect on virus titers. Inasmuch as it was impossible to obtain a hemagglutinating antigen to the virus by usual methods, identification studies were carried out by the complement-fixation reaction. Tests with immune ascitic fluid reactive to several arboviruses were positive only for the Kemerovo group. Moreover, within that group the most pronounced cross-reaction was with the Tribech subgroup. Thus it is demonstrated that Kharagysh virus belongs to the Kemerovo-Tribech group. Apparently I. ricinus plays an important carrier role in the infection cycle.

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KRAVCHENKO, A. F., KRIGER, E. D., MOROZOV, B. V., POLOVINKIN, V. G., and SKOK, E. M., Institute of Semiconductor Physics, Siberian Department, Acad. Sci. USSR, Novosibirsk

"Nernst-Ettingshausen Effects in n-GaAs in the Phonon Drag Region"

Leningrad, Fizika i tekhnika poluprovodnikov, vol 6, No 6, 1972, pp 1150-1151

Abstract: This paper is based on an earlier article written by some of the authors named above and published in the same journal (5, 1971, p 1608) reporting observation of the phonon drag effect of the thermo-emf in n-type GaAs. The present brief communication presents curves of the Nernst-Ettingshausen effects, longitudinal and transverse, as functions of temperature. The measurements made for plotting the curves were conducted in weak magnetic fields. A sharp rise in the effects below 200° K is noticeable in the curves; this is attributable to the drag effect. In the mathematical analysis, an expression is derived for the contribution of the phonon drag to the coefficient of the transverse N-E effect. The authors, associated with the Novosibirsk Institute of Semiconductor Physics, conclude that the relaxation time of long-wave phonons is independent of the wave vector and that the electrons are dragged by the acoustic phonons through the deformation potential.

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A GENERAL PROBLEM WAS CONSIDERED OF THE APPEARANCE OF THERMOELEC. EDDY CURRENTS IN AN INHOMOGENEOUS FILM IF THE TEMP. GRADIENT IS DIRECTED NORMAL TO THE GRADIENT OF CONCN. OF CURRENT CARRIERS. THE DISTRIBUTION OF ELECTROCHEM. POTENTIAL WAS FOUND IN A RECTANGULAR PLATE. ASSUMING A SMALL TEMP. GRADIENT, THE EQUATION IS LINEARIZED AND ELECTROCHEM. POTENTIAL IS FOUND BY SOLVING THE EQUATION OF CONTINUITY UNDER THE CONDITIONS OF ZERO CURRENT AT THE EDGES OF THE PLATE. FACILITY: INST. FIZ. POLUPROV., NOVOSIBIRSK, USSR.

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