"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

UDC 632.95

YUKHTIN, N. N., FILATOV, L. N., SHCHERBATYKH, Yu. I., SMOL'CHENKO, A. I., and SHVINDLERMAN, G. S.

"Preparation of Technical Chloro-Isopropylphenyl Carbamate in Crystalline Form"

V sb. Khim. sredstva zashchity rast. (Chemical Protection of Plants -- collection of works), No 2, Moscow, 1972, pp 31-35 (from RZh-Khimiya, No 22, 25 Nov 73, Abstract No 22N570 by A. F. Grapov)

Translation: In running the reaction of m-ClC_6H_4NCO with absolute iso-PrOH in the absence of solvents, it is easy to obtain chloro-isopropylphenyl carbamate in the form of a melt from which it can be processed quite efficiently in a drum crystallizer to obtain a crystalline product. Example. 68 ml of absolute iso-PrOH at 50-65° is added a drop at a time to 100 ml of 99% m-ClC_6H_4NCO, kept for 30 min at 60-70% and the excess iso-PrOH distilled off at 90°/150-200 mm. The melt with a melting point $\geq$ 45 to 50° is then placed in the crystallizer. Yield of chloroisopropylphenyl carbamate 98.2%, melting point 35.5-36.5°. The laboratory model of the crystallizer consists of a hollow cylinder (150 mm high and 50 mm in diameter) cooled by water. Rate of crystallization 10 to 11 kg/m^2/hour.

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Acc. Nr: AP0036815

Ref. Code: UR 0016

PRIMARY SOURCE: Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, 1970, Nr 1, pp 47-53

THE EFFECT OF DNA INHIBITORS ON THE TRANSFER OF COLICINOGENIC FACTOR I IN SALMONELLA TYPHIMURIUM

V. G. Likhoded, A. Z. Smolenskaya, T. V. Perova, N. V. Balanin

5-fluorouracil, methothrexate, mitomycin C and nalidixic acid proved to inhibit the transfer of colicinogenic factor I during conjugation in S. typhimurium. It was shown that nalidixic acid did not influence the formation of effective contacts and did not kill the auxotrophic bacteria in the synthetic medium, but sharply reduced the colicinogenic transfer. However, the transfer of colicinogenic factor in some of the cells did not depend on DNA synthesis and failed to be depressed by nalidixic acid. It is suggested that the transfer of colicinogenic factor I during conjugation began after completion of its repication.

D. m.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR UDC: 621.396.6-181.5

TOPOROVSKIY, S. A., SMOLENSKAYA, G. N., Institute of Control Computers

"A Method of Making Multilayered Thin-Film Structures"

USSR Author's Certificate No 280593, filed 10ct 68, published 10 Dec 70 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V238 P)

Translation: A method is proposed for making multilayered thin-film structures. The procedure is based on sequential application of current-conducting layers on a substrate, and treating the conductive layers after application of each dielectric layer through its defective sections with a chemical reagent which does not interact with the material of the dielectric layer. To keep the parameters of the structure constant during treatment, a reagent is used which forms a dielectric film on the surface of the conductive layer made up of compounds of the conductive material and the reagent, e. g. a solution of $K_2Cr_2O_7$ in the case of a copper conductive layer.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

UDC 629.7.036.3:536.46

USSR

BORISOV, O. Ya., ROZENFEL'D, E. I., SMOLENSKIY, V. G.

"Study of the Effect of Acoustical Oscillations on a Turbulent Limited Flame"

Teoriya i Praktika Szhiganiya Gaza [Theory and Practice of Combustion of Gas -- Collection of Works], No 5, Leningrad, Nedra Press, 1972, pp 42-53 (Translated from Referativnyy Zhurnal, Aviatsionnye i Raketnye Dvigateli, No 12, 1972, Abstract No 12.34.15, from the Resume).

Translation: It is shown that the imposition of acoustical oscillations of high intensity on a turbulent limited flame during combustion of preliminarily prepared mixtures increases the length of the combustion zone. At the same time, the imposition of acoustical oscillations on a turbulent diffusion flame significantly intensifies the process of combustion in the volume of a furnace due to improvement of the mixing process. 7 Figures; 17 Biblio. Refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

Acc. Nr: AP0044476 Abstracting Service: 4-70 Ref. Code: US0000

CHEMICAL ABST.

84789m Electron resonance spectrum of the magnetically ordered crystal $GaFeO_3$ in the presence of an external electric field. Petrov, M. P.; Kizhaev, S. A.; Smolenskii, G. A. (Inst. Semicond., Leningrad, USSR). *Solid State Commun.* 1970, 8(3), 195-6 (Eng). The electron resonance spectrum has been investigated in the ferrimagnet-piezoelec. crystal $Ga_{2-x}Fe_{1+x}O_3$. Lines shifts and line shape changes have been discovered in the presence of the external elec. field. RCYZ

REEL/FRAME
19771099

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

Acc. Nr: AP0044475 Abstracting Service: 4-70 CHEMICAL ABST. Ref. Code: US000C

84309e Stimulated ferromagnetism and the effects of short-range magnetic ordering in $RbNiF_3$. Petrov, M. P.; Moskaley, V. V.; Smolenskii, G. A. (Inst. Semicond., Leningrad, USSR). *Solid State Commun.* 1970, 8(3), 157-60 (Eng). The temp. dependence of the sublattice magnetizations is calcd. by the const. coupling method. The exchange parameters J_{ef}/k = 39°K and J_{ff} = 0 are detd. The discrepancy between calcns. by const. coupling method and by conventional mol.-field theory is interpreted as a result of short-range magnetic ordering. The stimulated ferromagnetism in $RbNiF_3$ was discovered by S., *et al.* Theoretically this effect in ferromagnets was predicted by J. Smit and H. P. J. Wijn and was discussed by J. S. Smart. This effect consists in the existence of oppositely directed magnetic sublattices in a ferromagnet above the Curie point in the presence of an external magnetic field. The temp. dependence of the sublattice magnetizations in $RbNiF_3$ was measured by NMR, and the same dependence was calcd. by mol.-field theory. It was necessary to take into account the short-range magnetic ordering effects to reach quant. agreement between exptl. temp. dependences of sublattice magnetizations and theoretical ones which were calcd. by mol.-field theory (MFT). An important role was played by the ferromagnetic exchange interaction within Ni (*f*)-Ni (*f*) pairs. RCYZ

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REEL/FRAME
19771098

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--SYNTHESIS OF SOME UNSATURATED 1,6,DISUBSTITUTED 2,5,DITHIOBIUREAS -U-

AUTHOR-(02)-SMOLANKA, I.V., YERSHOVA, I.I.

COUNTRY OF INFO--USSR

SOURCE--UKR. KHIM. ZH. 1970, 36(3), 273-5

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC SULFUR COMPOUND, UREA DERIVATIVE, METAL ION, ORGANIC SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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CIRC ACCESSION NO--AP0137931

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

USSR

NIKIFOROV, B. V., et al., Stal', No 3, Mar 70, pp 215-218

the most effective of all those tested. The use of a tuyere with nose No. 5 reduces the blowing time by 40 percent and increases converter productivity by 20.5 percent. Steels K St. 5sp, K St. 3sp, 35GS, K St. 5 ps, K St. 3ps, K St.Om, 08kp, 10kp, K2, K3, KExp., K3khr, T, and Sv-08A were obtained without any decrease in the yield of acceptable product, deterioration of metal quality, or decrease in refractory lining resistance. In newly designed shops provision should be made for a gas circuit capacity and oxygen feed system sufficient for the operation of converters with a blowing rate of 5-6 cu m/(t. min).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0137931

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RNCS AND H SUB2 NNHCSNH SUB2 FORM THE FOLLOWING SHOWN ON MICROFICHE. SEVERAL OF THE LATTER COMPDS. FORM INSOL. COMPDS. WITH CU PRIME2 POSITIVE, ZN, HG PRIME POSITIVE, HG PRIME2 POSITIVE, BI, AT, AND PB IONS AND MAY BE USEFUL IN GRAVIMETRIC ANALYSIS. FACILITY: UZHGOROD, GOS. UNIV., UZHGOROD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

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USSR UDC 632.95

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UDC 629.7.036.3:536.46

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UDC: 534+536.46

USSR

BORISOV, Yu. Ya., ROZENFEL'D, E. I., SMOLENSKIY, V. G., Moscow

"Influence of Accoustic Oscillations on a Gas Flame in a Limited Space"

Novosibirsk, Fizika Goreniya i Vzryva, No 3, 1971, pp 404-412.

Abstract: This article studies the effects of an accoustic field on a turbulent flame formed under the conditions of limited furnace volume, by analysis of the concentration, temperature and accoustic fields and the characteristics of turbulence in the volume of the furnace. Natural gas was burned in cylindrical, water-cooled furnaces. The application of a high-intensity accoustical field to a flame during burning of a prepared mixture greatly increases the length of the cold core in the flame. The application of an accoustical field to a diffusion flame shortens the cold core and intensifies the process of burning within the volume of the furnace.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

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UDC 621.357.8(088.8)

USSR

SAMETSKIY, B. I., BELOUSOV, V. I., POLYAKOV, A. M., SMOLENTSEV, G. P., KONDRASHKOV, M. P., KUROV, P. YE.

"Solution for Electrochemical Etching of Metals"

USSR Author's Certificate No 308097, filed 7 Apr 69, published 23 Aug 71 (from RZh-Khimiya, No 6 (II), Jun 72, Abstract No 6L286P)

Translation: A solution containing K_2SO_4 is patented for electrochemical etching of metals. It is distinguished by the fact that in order to improve the quality of marking a product made of Cu and its alloys, Na_2CO_3 has been introduced into it. The composition of the solution (in % by weight is as follows): 7.9-8.1% Na_2CO_3, 1.9-2.1 K_2SO_4, and the rest water. Example. When marking with a solution containing 8% Na_2CO_3 by weight, 1.9% K_2SO_4 and the rest water at a voltage of 5 volts on plates made of copper and BRKH-8 bronze, a clear image of the symbols is obtained which is not removed during machining.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR UDC 539.375

KUDRYASHOV, V. G. and SMOLENTSEV, V. I.

"A New Method for Determining the Deformation Viscosity K_{1c}"

Moscow, Konstruktivn. prochnost' staley i splavov i metody yeye otsenki (The Structural Strength of Steels and Alloys and Methods for Their Evaluation, Collection of Works), 1972, pp 9-16 (from Referativnyy Zhurnal -- Mekhanika, No 4, 1973, Abstract No 4V730 by Ye. M. Morozov)

Translation: An experimental method of multiple determination of the material characteristic K_{1c} on the same sample is proposed. A sample with a crack is loaded to the state of the first crack propagation, after which the sample is unloaded and then loaded again to the point of crack propagation. Repeating this process several times and determining K_{1c} each time makes it possible to diminish the error of the test and to expand its experimental possibilities. With the aid of this method the influence of the amplitude of loading on K_{1c} during the growth of the original crack, the rate of loading, the sequence of heat-treatment and start of the original crack, the length of the original crack and the medium, temperature, thickness and geometry of the sample was investigated. (16 bibliographic entries)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR UDC 669.017:539.56:548.735.6:548.4

SMOLENTSEV, V. I., and KUDRYASHOV, V. G., VILS (All-Union Institute of Light Alloys)

"On the Breaking Strength [K_{1c}] of High-Strength Aluminum and Titanium Alloys at Low Temperatures"

Kiyev, Problemy Prochnosti, No. 9, Sep 71, pp 63-66

Abstract : The variation of the breaking strength K_{1c}, characterizing the critical stress intensity ahead of a crack growing under plane deformation conditions, of aluminum alloys V95, V96, V96ts, and VAD-23 and the titanium alloy VT-15 was experimentally investigated on flat notched specimens of different thicknesses by decreasing test temperatures. K_{1c}-values were determined from a given formula as function of the width and thickness of the specimen, the depth of the notch and the fatigue crack, and the load by beginning crack formation. The investigation results, discussed by reference to diagrams, show that the values of K_{1c} do not change by a temperature drop of down to -196 °C. Methods for determining K_{1c} are suggested. Four illustr., two tables, one formula, five biblio. refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR UDC 537.29

SMOLENTSEV, V. P., KHAYRUTDINOV, A. K., OLEYNICHENKO, T. F., and KOBELEVA, T. K., Kazan

"Metallographic Investigations of the Surface Layer of Alloys After Dimensional Electrochemical Treatment"

Moscow, Fizika i Khimiya Obrabotki Metallov, No 1, Jan-Feb 71, pp 135-137

Abstract: Results are presented on metallographic investigations of surface layers of hardened 40KhNMA and OKhN3MFA steels and AVT1 and VTZ-1 alloys after dimensional electrochemical treatment within the whole range of current densities in electrolytes used in the production of channels in long-measuring parts. Recommendations for applying dimensional electrochemical treatment and for the selection of allowances for the after treatment are given. The 40KhNMA and OKhN3MFA steels, hardened to HRC 35-37, and the AVT1 aluminum alloy showed no signs of corrosion by the electrochemical treatment, but the VTZ-1 titanium alloy corroded along the grain boundaries up to a depth of 0.03 mm.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

UDC [621.357:621.79.027]:669.14

VORONOV, V. N., and SMOLENTSEV, V. P.

"The Effect of Electrochemical Treatment on the Quality of Automobile and Tractor Parts"

Sb. Tekhnol. vopr. elektrokhim. obrabotki materialov (Collection of Works on Electrochemical Treatment of Materials, Kazan', 1972, pp 47-50 (from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom, Abstract No 23L232 by A. D. Davydov)

Translation: Comparative fatigue studies conducted with connecting rods made of steel 18Kh2N4BA showed that the fatigue strength of parts polished electrochemically by a dimensional method was higher than of parts polished by abrasives. The main reason for the increase in the fatigue strength was better micro- and macrorelief, absence of a deformed layer with tensile residual stresses and of defective decarburized layers.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

Acc. Nr: AP0037002 Ref. Code: UR 0239

PRIMARY SOURCE: Fiziologicheskiy Zhurnal SSSR, 1970, Vol 56, Nr 2, pp 150-158

ON THE FUNCTIONAL STABILITY OF THE CORTICAL MOTOR RESPONSE AT LESIONED SPINAL FUNCTIONS

Smolentseva, R. V.

Biology-Soil Dept., Leningrad State University, Leningrad

In nembutal anesthetized cats with low-clamped abdominal aorta, a higher functional stability of a cortical motor flexor response was demonstrated compared to the segment flexor reflex.

Comparison of the two series of experiments (first — only cortical motor response was studied, second — the flexor reflex without cortical stimulation was studied) showed the «survival time» of the cortical motor response to surpass the «survival time» of the flexor reflex. Parallel investigation of these responses in the same animal showed lesser difference.

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REEL/FRAME
19721934

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

UDC /629.735.035.3:621.51-226.2/:
629.7.017.1

SMOLIN, A. A.

"Some Regularities of the Damageability of Compressor Blades of Aviation Gas Turbine Engines"

Tr. NII Grazhd. Aviatsii [Works of the Scientific Research Institute of Civil Aviation], Vol 71, 1972, pp 41-60 (from Referativnyy Zhurnal, No 6, Jun 72. 34. Aviation and Rocket Engines. Abstract No 6.34.34)

Translation: Investigation results are presented of compressor blades of the RD-3M-500 engine with mechanical damages. Discussed are also the principles of possible damage of compressor blades obtained from results of a special fault detection of engines during their repair. The distributions make possible to rate the effectiveness of widening standard specifications of the allowable magnitude of mechanical damages. One table.

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SMOLIN, A. P.

JPRS 55835

28 April 1972

GOLD NUGGET OF THE URALS

Translation of Russian-language book by A. P. Smolin, Samorodki Zolota Urala, 1970, signed to press 3 August 1970, Nedra Press, Moscow, 144 pages, UDC 553.411(470.5)(023).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR UDC 620.1:531.782(088.8)

VYDRIN, V. N., AGEYEV, L. M., TISHCHENKO, O. I., SMOLIN, A. P.

"Cam Plastometer"

USSR Author's Certificate No 265518, Filed 26 Oct 68, Published 10 Jul 70 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4I959)

Translation: The invention pertains to techniques and equipment for studying the properties of metals and alloys under various thermomechanical strain conditions. The proposed cam plastometer differs from the known ones by the fact that an additional control cam is rigidly attached to the flywheel. The additional cam is phase-shifted with respect to the operating cam and interacts with the rack and pinion inclusion mechanism on the pinion shaft of which a cam is rigidly attached with a stud which closes the kinematic loading circuit. Stability of inclusion of the kinematic loading circuit in a broad range of deformation rates of the tested sample is insured with this execution of the device.

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UDC 621.833-06:612.831.7

USSR

SMOLIN, L. N., Laboratory for Compensation of Impaired Functions, Institute of Normal and Pathological Physiology, Academy of Sciences USSR, Moscow

"Spinobulbar-Spinal and Propriospinal Reflexes During Natural Sleep and Wakefulness of the Cat"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 7, 1971, pp 9-12

Abstract: In quietly resting and alert or lightly sleeping cats, any stimulation that attracted the animals' attention (e.g., light rapping on the table) strongly inhibited their spinobulbar-spinal reflexes but had no appreciable effect on their propriospinal, mono- or polysynaptic reflexes. During deep sleep, however, the propriospinal reflexes were always inhibited. The spinobulbar-spinal reflexes were also strongly inhibited, sometimes disappearing entirely, but there were instances when they were only mildly affected.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

UDC 669.24

USSR

KALINOVICH, D. F., KOVENSKIY, N. I., and SHOLIN, M. D., Institute of Problems of Material Science, Academy of Sciences Ukrainian SSR

"Determination of the Degree of Nickel Atom Ionization in a Ni-Cr Alloy"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 33, No 2, Feb 72, pp 428-429

Abstract: An evaluation of nickel ion charge was made for an alloy of nickel containing 25 wt% Cr. The method of electron transfer was used to determine the sign and magnitude of the charge. Samples were mixed in an atmosphere of neutral gas and a d.c. current passed through them to develop an electrical field while simultaneously heating them to the required temperature. Data from processes of annealing the alloy samples several times made it possible to plot three curves from which the diffusion coefficients could be calculated. With the aid of the same curves it was possible to determine the rate of migration v* and then the partial rates of electron transfer v. Determination of the magnitude of the effective charge z* was made using the following equation:

$$z^* = a + b(1/T + \rho_0/\alpha)$$

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

KALINOVICH, D. F., et al., Fizika Metallov i Metallovedeniye, Vol 33, No 2, Feb 72, pp 428-429

where z is the degree of nickel atom ionization, b is the coefficient in which enters the cross section of the current carrier dissipation to the migrating ions, ρ_0 and α are the parameters of the electrical resistance temperature relationship. The calculated results for z^* showed that nickel atoms in the investigated alloy have a positive charge close to unity in magnitude. One table, 9 bibiliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

UNCLASSIFIED

1/2 019 PROCESSING DATE--30OCT70

TITLE--DEVELOPMENT AND APPLICATION OF AN ELECTRON TRANSFER TECHNIQUE FOR DETERMINING THE BASIC PARAMETERS OF A METALLIC STATE -U-

AUTHOR-(04)-FRANTSEVICH, I.M., KALINOVICH, D.F., KOVENSKIY, I.I., SMOLIN, M.O.

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK UKRAINS'KOI RSR, VISNIK, VOL. 34, MAR. 1970, P. 24-33

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--METAL CONDUCTIVITY, CARRIER DENSITY, ELECTRON MOBILITY, BINARY ALLOY, ELECTRON INTERACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0655/70/034/000/0024/0033

PROXY REEL/FRAME--1996/0932

CIRC ACCESSION NO--AP0118098

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

UNCLASSIFIED PROCESSING DATE--30OCT70

2/2 019

CIRC ACCESSION NO--AP0118098

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF A THEORETICAL BASIS FOR A METHOD OF DETERMINING THE BASIC METALLIC STATE CHARACTERISTICS OF A MEDIUM, SUCH AS METALLIC ION CHARGES, ELECTRON AND HOLE CONCENTRATIONS, CURRENT CARRIER SCATTERING CROSS SECTIONS AND THE TEMPERATURE PARAMETERS OF ELECTRON AND HOLE CONDUCTIVITIES. THE METHOD IS BASED ON CERTAIN RELATIONS BETWEEN THESE VARIABLES. THE EXISTENCE OF THESE RELATIONS IS SUGGESTED BY AN ELECTRON TRANSFER THEORY DEVELOPED BY KUZ'MENKO AND KHAR'KOV (1960) IN A TWO ZONE QUANTUM MODEL APPROXIMATION. EXAMPLES OF THE PRACTICAL IMPLEMENTATION OF THIS METHOD ARE GIVEN FOR SEVERAL BINARY ALLOYS.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 023 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--STATE OF NICKEL ATOMS IN A NICKEL MOLYBDENUM ALLOY -U-

AUTHOR-(03)-KALINOVICH, D.F., KOVENSKIY, I.I., SMOLIN, M.D.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(3), 929-31

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--NICKEL ALLOY, MOLYBDENUM, SOLID SOLUTION, NICKEL ISOTOPE, RADIOACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1290 STEP NO--UR/0181/70/012/003/0929/0931

CIRC ACCESSION NO--AP0116752

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 023 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0116752

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN NI-23 AT. PERCENT MO, THE CHARGE ON THE NI IONS WAS DETD. FROM ELECTROTRANSPORT AT 1100-1300DEGREES, I.E., IN THE REGION OF EXISTENCE OF A SOLID SOLN. WIRE SECTIONS 70 MM LONG AND 0.45 MM IN DIAM. WERE USED. ON THE CENTRAL SECTION OF THE SPECIMEN, 3 MM LONG, A THIN LAYER OF PURE NI CONTG. RADIOACTIVE PRIME63 NI WAS ELECTRODEPOSITED. DISTRIBUTION OF RADIOACTIVITY WAS MEASURED ALONG THE LENGTH OF THE SPECIMENS. FROM THESE CURVES, THE PARTIAL VELOCITY OF ELECTROTRANSPORT AND THE DIFFUSION COEFF. AT THE TEMP. OF THE EXPT. WERE DETD. ALSO, THE VELOCITY OF MIGRATION OF THE RADIOACTIVE ZONE DURING ANNEALING WAS DETD. THE VALUES OBTAINED ARE TABULATED. FACILITY: INST. PROBL. MATERIALOVED., KIEV, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

UNCLASSIFIED PROCESSING DATE--20NOV70

1/2 037

TITLE--ACCEPTOR ROLE OF MOLYBDENUM IN AN ALLOY WITH NICKEL -U-

AUTHOR-(04)-KALINOVICH, D.F., KOVENSKIY, I.I., SMOLIN, M.D., STATSENKO, V.M.

COUNTRY OF INFO--USSR

SOURCE--FIZ. METAL METALLOVED. 1970, 29(3), 653-5

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--MOLYBDENUM CONTAINING ALLOY, NICKEL ALLOY, IONIZATION, ELECTRON ACCEPTOR, ELECTRON DONOR, NICKEL ISOTOPE, MOLYBDENUM ISOTOPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0341 STEP NO--UR/0126/70/029/003/0653/0655

CIRC ACCESSION NO--AP0126097

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 037 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126097

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY USING RADIOACTIVE PRIME63 NI AND PRIME99 MO AND THE METHOD OF ELECTRON TRANSFER, THE SIGN AND IONIZATION DEGREE OF MO ATOMS IN THE ALLOY NI,MO 20 AT. PERCENT AT 950-1300DEGREES WERE DETD. EQUATIONS WERE OBTAINED FROM THE TEMP. DEPENDENCE OF MO AND NI DIFFUSION COEFFS. THE FOLLOWING VALUES WERE DETD. FOR THE EFFECTIVE CHARGE OF THE MIGRATING IONS, TAKING INTO CONSIDERATION ALL FORCES WHICH MAY ACT ON THE IONS DURING ELECTRON TRANSFER FOR NI AND MO (1ST AND 2ND FIGURES, RESP.): AT 950DEGREES 38.8, NEGATIVE 9.90 ESU, 2.95 TIMES 10 PRIME NEGATIVE10, 4.05 TIMES 10 PRIME NEGATIVE10 CM PRIME2-SEC; AT 1050DEGREES 37.5, NEGATIVE 9.45 ESU, 1.29 TIMES 10 PRIME NEGATIVE9, 1.86 TIMES 10 PRIME NEGATIVE9 CM PRIME2-SEC; AT 1150DEGREES 36.3, NEGATIVE 8.96 ESU, 5.30 TIMES 10 PRIME NEGATIVE9, 6.83 TIMES 10 PRIME NEGATIVE9 CM PRIME2-SEC; AT 1300DEGREES 33.5, NEGATIVE 8.23 ESU, 2.86 TIMES 10 PRIME NEGATIVE8, 3.47 TIMES 10 PRIME NEGATIVE8 CM PRIME2-SEC. THE VALUES OF THE EFFECTIVE CHARGE FOR NI AND MO INDICATE A DONOR ACCEPTOR INTERACTION. FACILITY: INST. PROBL. MATERIALOVED., KIEV, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR UDC 539.4:624.012

VILKOV, K. I., SMOLIN, N. I.

"The Problem of the Strength of Inclined Sections of Bending Elements of Concrete with Porous Clay Filler"

Stroit. Mekh. i. Stroit. Konstruktsii [Construction Mechanics and Construction Structures -- Collection of Works], Gor'kiy, 1972, pp 69-71, (Translated from Referativnyy Zhurnal, Mekhanika, No 11, 1972, Abstract No 11 V1020 by M. Kh. Leybur).

Translation: Results are presented from a study of the strength and crack resistance of inclined cross sections of bending elements of concrete with porous clay filler in order to supplement and refine the norms for planning of light concrete structures. Twelve beams of rectangular cross section differing in concrete strength, type of loading and quantity of longitudinal reinforcement were manufactured and tested. The beam cross section was 48 × 20 cm, the length was 400 cm, initial span 360 cm, subsequent spans 220, 240 and 260 cm. The strength of the concrete was 144-214 kg/cm^2, the specific gravity 1,550 to 1,650 kg/cm^3 [sic -- Tr.]. To assure rupture of the beams in inclined cross sections, their longitudinal reinforcement was

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR UDC 539.4:624.012

VILKOV, K. I., SMOLIN, N. I., Stroit. Mekh. i. Stroit. Konstruktsii, Gor'kiy, 1972, pp 69-71.

excessive, using high-strength reinforcing rods. It was noted that the strength of the inclined cross sections of the beams of this concrete was less than that of elements of heavy concrete, resulting from the lower resistance of the light concrete to extension and shear. The authors assume a reduced value of coefficient $K = Q_{\delta}C/R_{u}bh^{2}_{0}$, characterizing the relative resistance of the compressed zone of the concrete in the inclined cross section, for the porous clay filler concretes. In place of the value of 0.15 used in the norms (SniP II-V. 1-62), they recommend a value of $K = 0.12$.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 027 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--DISCRETENESS OF THE FIELD DISTRIBUTION OF THE INTENSITY OF THE BARKHAUSEN EFFECT OF YTTRIUM FERRITE -U-

AUTHOR-(03)-PAVLOV, V.F., RYABINKIN, L.N., SMOLIN, R.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. TEKH. FIZ. 1970, 40(4), 859-61

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., EARTH SCIENCES AND OCEANOGRAPHY, PHYSICS

TOPIC TAGS--YTTRIUM COMPOUND, FERRITE, SINGLE CRYSTAL, GARNET, MAGNETIC PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0282 STEP NO--UR/0057/70/040/004/0859/0861

CIRC ACCESSION NO--AP0124041

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 027 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0124041

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DISTRIBUTION OF THE NO. OF JUMPS IN THE INTENSITY ALONG THE FIELD WAS DETD. FOR Y FE GARNET SINGLE CRYSTAL. THE DISCRETE NATURE OF THE DISTRIBUTION CURVES SUPPORTS THE GROUP ORIGIN OF THE JUMPS DURING MAGNETIC REVERSAL. THE NATURE OF THE DISTRIBUTION IS VERY STABLE, WHICH IS ATTRIBUTED TO THE STABILITY OF THE DYNAMICS FOR THE MAGNETIC STRUCTURES DURING REPEATED REVERSALS. THE EXISTENCE OF RESOLN. LIMITS WITH RESPECT TO THE FIELD, ABOVE WHICH THE FORM OF THE DISTRIBUTION CURVE REMAINS UNCHANGED, INDICATES THE LIMITATIONS OF THE METHOD OF TAKING THE CURVES IN A SLOWLY CHANGING FIELD. FACILITY: INST. FIZ., KRASNOYARSK, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--CRYSTAL STRUCTURES OF THE RARE EARTH PYROSILICATES -U-

AUTHOR-(02)-SMOLIN, YU.I., SHEPELEV, YU.F.

COUNTRY OF INFO--USSR

SOURCE--ACTA CRYSTALLOGR., SECT. B 1970, 26 (PT.5), 484-92

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--CRYSTAL STRUCTURE, SILICATE, RARE EARTH COMPOUND, X RAY DIFFRACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1056 STEP NO--DE/0000/70/026/000/0484/0492

CIRC ACCESSION NO--AP0123049

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123049

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY X RAY DIFFRACTION, 4 STRUCTURE TYPES OCCUR IN THE RARE EARTH PYROSILICATES. THEY HAVE THE FOLLOWING SYMMETRY: SILICATES OF SC, YB, TM, C2-M; SILICATES OF ER, HO, Y. P2 SUB1-B; SILICATES OF Y, HO, DY, GD, PNA2 SUB1, AND THE RARE EARTH SILICATES FROM EU TO LA, P2 SUB1 2 SUB1 2 SUB1. THE CRYSTAL STRUCTURES OF YB SUB2 SI SUB2 O SUB7 (A EQUALS 6.802, B EQUALS 8.875, C EQUALS 4.703 ANGSTRUM, BETA EQUALS 102DEGREES 07PRIME, C2-M, Z EQUALS 2), ER SUB2 SI SUB2 O SUB7 (A EQUALS 4.683, B EQUALS 5.556, C EQUALS 10.79 ANGSTRUM, GAMMA EQUALS 96DEGREES, P2 SUB1-B, Z EQUALS 2), GD SUB2 SI SUB2 O SUB7 (A EQUALS 13.87, B EQUALS 5.073, C EQUALS 8.33 ANGSTRUM; PNA2 SUB1, Z EQUALS 4), ND SUB2 SI SUB2 O SUB7 (A EQUALS 5.394, B EQUALS 12.95, C EQUALS 8.72 ANGSTRUM, P2 SUB1 2 SUB1 2 SUB1, Z EQUALS 4) HAVE BEEN DETD. AND REFINED BY A LEAST SQUARES METHOD WITH THE USE OF COMPLETE 3 DIMENSIONAL INTENSITY DATA. INTENSITIES WERE MEASURED ON A SINGLE CRYSTAL DIFFRACTOMETER WITH A SCINTILLATION COUNTER, USING MONOCHROMATIC MO K ALPHA RADIATION. THE FINAL R VALUES FOR THESE STRUCTURES WERE 0.054, 0.062, 0.073, AND 0.077, RESP. THE AT. COORDINATES, BOND LENGTHS, AND VALENCY ANGLES ARE GIVEN. THE SIMPLE PI BONDING THEORY IS INSUFFICIENT FOR DESCRIBING THE BOND ORDERS AND BOND LENGTHS IN THE SILICATE ANIONS OF THESE COMPDS. THE MAJOR FACTOR RESPONSIBLE FOR THE MAGNITUDE OF THESE VALUES APPEARS TO BE THE POLARIZATION EFFECT OF CATIONS. FACILITY: INST. SILICATE CHEM., LENINGRAD, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

UNCLASSIFIED PROCESSING DATE--20NOV70

1/2 025

TITLE--CRYSTAL STRUCTURE OF A LOW TEMPERATURE FORM OF SAMARIUM PYROSILICATE SM SUB2 SI SUB2 O SUB7 -U-

AUTHOR-(03)-SMULIN, YU.I., SHEPELEV, YU.F., BUTIKOVA, I.K.

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COUNTRY OF INFO--USSR

SOURCE--KRISTALLOGRAFIYA 1970, 15(2), 256-61

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--CRYSTAL STRUCTURE, SAMARIUM COMPOUND, SINGLE CRYSTAL, CRYSTAL GROWING, SILICON COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0898 STEP NO--UR/0070/70/015/002/0256/0261

CIRC ACCESSION NO--AP0116408

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 025 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0116408

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE OF SM SUB2 SI SUB2 O SUB7 WAS DETD. FOR SINGLE CRYSTALS PREPD. BY CRYSTN. FROM A MELT IN A 3I SUB2 O SUB3 SOLN. THE CRYSTALS HAVE TETRAGONAL SYMMETRY, SPACE GROUP P4 SUB1, AND THE LATTICE PARAMETERS ARE A 6.695 PLUS OR MINUS 0.005 AND C 24.40 PLUS OR MINUS 0.02 ANGSTROM. 1420 REFLECTIONS WERE MEASURED WITH A DIFFRACTOMETER WITH A SCINTILLATING COUNTER, AND THE STRUCTURE WAS REFINED BY THE LEAST SQUARES METHOD TO A VALUE OF R EQUALS 0.044. THE AT. COORDINATES AND THE INTERAT. DISTANCES ARE GIVEN, AND THE STRUCTURE IS DESCRIBED. FACILITY: INST. KHIM. SILIKAT., LENINGRAD, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 018 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--NEW SILICON OXYGEN RADICAL SI SUB6 O SUB15 TRIPLE TWO STORY RING IN THE (NI(EN) SUB3)SI SUB2 O SUB5.8 AND 7H SUB2 O STRUCTURE -U-

AUTHOR--SMOLIN, YU.I.

COUNTRY OF INFO--USSR

SOURCE--KRISTALLOGRAFIYA 1970, 15(1) 31-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SILICON COMPOUND, HYDROGEN, OXYGEN COMPOUND, CRYSTAL, HYDROGEN BONDING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0020 STEP NO--UR/0070/70/015/001/0031/0037

CIRC ACCESSION NO--AP0102120

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 018 UNCLASSIFIED

CIRC ACCESSION NO--AP0102120 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE (NI(EN) SUB3)SI SUB2 O SUB5.8 AND 7H SUB2 O CRYSTALS BELONG TO THE P6 SUB3 SPACE GROUP WITH A 17.375 AND C 15.185 ANGSTROM, AND Z EQUALS 6. THE STRUCTURE WAS REFINED BY USING THE LEAST SQUARES METHOD WITH THE CRUICKSHANK WEIGHTING SCHEME; THE RELIABILITY INDEX WAS 0.091. A NEW RADICAL (A TRIPLE 2 STORY RIGN OF SI SUB6 O SUB15) WAS FOUND. THE (NI(EN)3) PRIME2 POSITIVE COMPLEX (I) HAS THE GAUCHE GAUCHE GAUCHE CONFIGURATION AND KKK CONFORMATION. DETN. OF THE ABS. CONFIGURATION POINTS TO THE L MODIFICATION OF I. THE RADICAL AND I ARE CONNECTED BY MEANS OF H BONDS.

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Acc. Nr. AP0048470 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code UR0070

104895y Determination of the crystal structure of $Er_2Ge_2O_7$. Smolin, Yu. I. (Inst. Khim. Silikatov, Leningrad, USSR). *Kristallografiya* 1970, 15(1), 47-51 (Russ). The $Er_2Ge_2O_7$ was obtained from soln. in a Bi_2O_3 melt. The crystal belongs to the tetragonal system, and its symmetry group is $P4_12_12$. The remaining characteristic parameters of the crystallographic lattice are: $a = 6.778$ and $c = 12.34$ Å; $Z = 4$; $d_m = 6.99$ and $d_c = 6.94$. For each unit cell of Er_2GeO_7 there are 8 Er atoms occupying 1 common position. Coordination according to O is 7.

J. Pabis-Machej

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USSR

UDC 537.533.2+537.534

SMOLIN, YU. Z., TURKEVICH, YU. G.

"Emission From an Antimony-Cesium Cathode Under the Action of Laser Radiation on Glass With Nd"

Tr. Leningr. politekhn. in-ta (Works of Leningrad Polytechnical Institute, 1970, No 311, pp 56-58 (from RZh-Fizika, No 12(I), Dec 70, Abstract No 12Zh644)

Translation: It was observed that the dependence of the emission photocurrent (I) on radiation intensity (P) obeys the law $I \sim P^{\alpha}$, where $\alpha = 1.6-2.2$. The authors propose that this dependence may be associated either with two-photon absorption or with stepwise absorption through the admixture level with a small lifetime. A. Zh.

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USSR

UDC 632.95

SMOLINA, A. A.I., SHOMOVA, Ye. A., RUDAVSKIY, V. P., KOVAL', A. A., SHCHEVCHENKO, V. I.

"Insecticidal and Fungicidal Activity of Esters of N-carbacyramido Phosphoric Acids"

Fiziol. aktivn. veshchestva. Resp. mezhved. sb. (Physiologically Active Materials. Republic Interdepartmental Collection), 1972, vyp. 4, pp 19-22 (from RZh-Khimiya, No 5 (II), 1973, Abstract No 5N578)

Translation: The results are presented from testing compounds containing residues of phosphoric and halogen carboxylic acids $RC(OR') = NPO(OR')_2$ ($R = CCl_3$, CF_3, $R''CCl_2$, R'' = alkyl) and $R'''CCl_2CONHPO(OR'')_2$ (R''' = alkyl) simultaneously for contact insecticidal activity against Calandra oguzae L., Drosophila S. P. and fungicidal toxicity in pure cultures of Fusicladium dendriticum (Wallr.(Fusk., Verticillium dahliae Rleb. $MeCCl_2C(OEt) = NOP(OEt)_2$, $EtCCl_2C(OEt) = NPO(OEt)_2$, $PrCCl_2C(OEt) = NPO(OEt)_2$ cause 100% destruction of Drosophila S. P. with 5 and 10% concentration of the solution in acetone after 24 hours. The tested compounds demonstrate very weak fungicidal activity.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

UDC 632.95

SMOLINA, A. I., STOLPER, A. L., and KHASKIN, I. G.

"Hematocidal Properties of Several Dichloroacetate Esters"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 10, No 2, (100), 1972, pp 42-44

Abstract: Dichloroacetate esters are of special interest as nematocides because the starting material from which they are made, chloral, is a cheap industrial product. Larvae of the gallic nematode Meloidogyne Sp. and in several cases larvae of the stem potato nematode Dytilenchus destructor Thorn were used as test objects. Methyl, ethyl, proply, amyl, allyl, ortho-cresyl, and hexyl esters were effective in the laboratory tests, and the allyl, amyl, and hexyl esters were effective in field experiments.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

UDC 543.39

ZHARIKOVA, G. G., MARKELOVA, S. I., BOBKOVA, T. S., LANDAU, N. S., SMOLINA, G. S., and SILAYEV, A. B., Moscow State University imeni M. V. Lomonosov, Moscow

"Destruction of Lacquer and Paint Coatings by Bacteria and Actinomycetes"

Moscow, Prikladnaya Biokhimiya i Mikrobiologiya, Vol 7, No 2, Mar-Apr 71, pp 236-242

Abstract: From the soil of various regions of the USSR, the following strains of bacteria and Actinomycetes were isolated which were found to cause destruction of surface coatings: Bacillus sphaericus var. 2P, Bac. cohaerens var. 4P, Bac. subtilis var. 1B, Flavobacterium acetylicum var. 7P, Mycobacterium sp. var. 1P, Propionibacterium pentosaceum var. 4B, Micrococcus aurantiacus var. 14C, Micrococcus aurantiacus var. 16 C, Actinomyces globisporus var. 9B, Actinomyces globisporus var. 10C, Actinomyces sp. Var. 10B. The cultural, morphological, and biochemical characteristics of the eight bacterial strains were determined. The behavior of surface coatings based on epoxy resin, alkyd resin, teflon, pentaphthalic resin, PVC, and organosilicon resin with respect to the 11 microorganisms isolated was determined in tests in which a sample of the surface coating was kept for 1 yr in contact with

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

ZHARIKOVA, G. G., et al., Prikladnaya Biokhimiya i Mikrobiologiya, Vol 7, No 2, Mar-Apr 71, pp 236-242

a culture medium containing (in g/l.) $CaCO_3$ 3, $MgSO_4$ 0.5, KH_2PO_4 1, KCl 0.2, agar 20 (pH 7.0-7.5). The only source of C for the microorganism was the coating. The samples were examined every month. The behavior of alkyd resin, epoxy resin, and teflon coatings with respect to mixtures of some of the microorganisms was determined in similar tests. The results of the tests are tabulated. The bacteria and actinomucetes isolated can be used for determining whether or not a surface coating is resistant to the action of microorganisms.

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USSR

ZHITOVA, Ye. I., IPPOLITOVA, L. A., MINEYEV, A. M., SMOLINA, N. N., and STREZH, N. P., Gor'kiy Medical Institute, Gor'kiy Oblast Sanitary Epidemiological Station, and Gor'kiy City Sanitary Epidemiological Station, Gor'kiy

"Diagnostic Significance of Lot Titers of the Complement Fixation Reaction With Some Antigens"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 48, No 2, Feb 71, pp 72-75

Abstract: Sera of patients and healthy persons giving a positive reaction in the complement fixation test with ornithosis antigen also contained antibodies to R. prowazekii antigen in approximately 50% of cases. The relative frequency of ornithosis-R. prowazekii cross reactions increased with increasing titers of the R. prowazekii antigen at which a positive complement fixation reaction was obtained. To exclude diagnostic errors, repeated tests with both antigens should be carried out. Sera

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USSR

ZHITOVA, Ye. I., et al, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 48, No 2, Feb 71, pp 72-75

that show positive complement fixation reactions with antigens of ornithosis, R. prowazekii, and Q-fever gave positive reactions with toxoplasmosis antigen (1:10 - 1:5) in more than 2/3 of cases.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 012

UNCLASSIFIED

TITLE—NUCLEOPHILIC REARRANGEMENT WITH 1,2,MIGRATION OF CHLORINE DURING THE DEAMINATION OF 2,CHLOROETHYLAMINE -U-

PROCESSING DATE—30OCT70

AUTHOR-(03)-REUTOV, O.A., SMOLINA, T.A., POLEVAYA, O.YU.

COUNTRY OF INFO—USSR

SOURCE—DOKL. AKAD. NAUK SSSR 1970, 191(2), 366-8 (CHEM)

S

DATE PUBLISHED———70

SUBJECT AREAS—CHEMISTRY

TOPIC TAGS—CHLORINATED ORGANIC COMPOUND, AMINE, CARBON ISOTOPE, THIONYL CHLORIDE, CHEMICAL REACTION MECHANISM

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED

PROXY REEL/FRAME—2000/0700

STEP NO—UR/0020/70/191/002/0366/0368

CIRC ACCESSION NO—AT0124372

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 012

UNCLASSIFIED

CIRC ACCESSION NO--AT0124372 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DEAMINATION OF 2,CHLOROETHYLAMINE,1, PRIME14 C IN HCL AT 0DEGREES WITH 1 MOLE NANO SUB2 WAS FOLLOWED BY RADIOTRACING OF THE PRODUCTS FORMED FROM THE AMINE PREPD. EITHER VIA N PRIME14 CCH SUB2 OH TREATMENT WITH LIALH SUB4, OR IWTH PCL SUB5. THE 1ST METHOD RESULTED IN SOME 3-4PERCENT MORE REARRANGED PRODUCT IN THE DEAMINATION REACTION THAN FOUND IN THE PRODUCTS FROM THE 2ND METHOD OF SYNTHESIS. IT WAS SHOWN THAT CONVERSION OF HOCH SUB2 CH SUB2 NH SUB2 WITH SOCL SUB2 TO CICH SUB2 CH SUB2 NH SUB2 RESULTS IN 9PERCENT MIGRATION OF THE NH SUB2 GROUP, SO THAT THE PRIME14 C TAG APPEARS TO THAT EXTENT IN THE POSITION ADJACENT TO THE CL ATOM. TWO ALTERNATE GENERAL SCHEMES OF REACTION WERE SUGGESTED.

FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

UNCLASSIFIED

TITLE--MASS SPECTROMETRIC STUDY OF AMINODEOXY SUGARS -U-

PROCESSING DATE--30OCT70

AUTHOR-(05)-VULFSON, N.S., ZOLOTAREVA, G.M., BOCHKAREV, V.N., SMOLINA, Z.I., UNKOVSKIY, B.V.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD, NAUK SSSR, SER. KHIM 1970, (2), 437-9

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--MASS SPECTROMETER, SUCROSE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0517

STEP NO--UR/0062/70/000/002/0437/0439

CIRC ACCESSION NO--AP0121191

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 012

CIRC ACCESSION NO--AP0121191 UNCLASSIFIED PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MASS SPECTRA WERE DESCRIBED BY LINE TABULATIONS FOR 10 3,AMINO,3,4,DIDEOXY SUGARS. IN THE MOL. IONS OF THESE SUGARS, A NEW FORM OF RING CLEAVAGE WAS FOUND IN WHICH THE 2-3 BOND IS RUPTURED ALONG WITH THE CYCLIC HEMIACETAL BOND, SO AS TO FORM AFTER MIGRATION OF THE H ATOM TO THE N FRAGMENT, AN ION R SUB2 N PRIME POSITIVE:CHCH SUB2 CHROH AS A RESULT OF ENERGETIC ADVANTAGE OF THIS FORM OF CLEAVAGE VS. THE CONVENTIONAL ONES OBSERVED FOR OTHER SUGAR DERIVS.

FACILITY: INST. KHIM. PRIR. SOEDIN., MOSCOW, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

UDC 535.34

SMOLINSKIY, Ye. S., PALAMARYUK, V. Ye., DIMITRASHCHUK, A. T., and GUMINETSKIY, S. G.

"Method of Investigation of Absorption Spectra of Colloidal Solutions Under Deep Mode Conditions"

Minsk, Zhurnal Prikladnoy Spektroskopii, Vol 14, No 3, Mar 71, pp 502-507

Abstract: The design and operating principle of a device for study of the absorption spectra of colloidal solutions under deep mode conditions are described. The solutions are illuminated from above, and the light receivers consist of spherical and planar ground glass elements. The method of measuring the index of absorption α of colloidal solutions using these receivers is described. Results from determination of α for scattering media with various concentrations of glass powder are presented.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

UDC 531.1

SMOLITSKIY, KH. L., Leningrad

"Errors of a Gyrocompass in a Cardan Suspension Placed on a Moving Base"

Moscow, Mekhanika tverdogo tela, No 3, May/Jun 71, pp 29-39

Abstract: The errors in a gyrocompass in a Cardan suspension placed on a slowly moving base are studied. Slowly changing characteristics for the motion of the frame which account for high-frequency nutation oscillations are studied. Simple linear differential equations for slowly changing characteristics of the motion by reducing the components of the discrepancies to zero are given. Integration of these equations leads to formulas describing the errors in the gyroscope as a function of the inertia of the frames, their initial velocities and the nature of the motion of the base. Uniform rotation of the base is discussed in detail and the cases in which the rotor returns to the initial position after a total revolution of the base are identified. Results of a numerical example show that the data coincide well with results obtained by V. G. Afonin by numerical integration.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

UDC: 621.791.052:621.735.2

KISELEV, YE. D. and SHOLIY, V. A. (Engineers), Main Welding Laboratory, Main Administration of Hoisting and Conveying Machinery Manufacture, Krasnoyarsk

"Effect of Cold Straightening on the Mechanical Properties of Welded Joints"

Moscow, Svarochnoye proizvodstvo, No 1, Jan 72, pp 22-24

Abstract: In order to determine the practicability of cold straightening of welded parts of crane structures, a study was made on both the strength and plastic properties of welds as a function of straightening conditions. Use was made of welded specimens from St.3 sp steel, 10, 16, and 30 mm thick with either parallel or perpendicular arrangement of weld lines. The butt welds were done by the automatic submerged technique. The effect of cold straightening on the mechanical properties of welds is shown to increase with the thickness of the sheets. In the tensile tests, the failures appeared to occur in the base metal rather than in the weld metal. There were no cracks in either the weld metal or the heat-affected area. The study indicates that both the strength and plastic properties of butt welds of

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

KISELEV, YE. D. (Engineer), et al, Svarochnoye proizvodstvo, No 1, Jan 72, pp 22-24

St.3 sp 10-mm steel sheets after straightening on roll levellers are within GOST 380-60 specifications for St.3 steel. The straightening of butt welds of 16-30 mm sheets with either parallel or perpendicular arrangement of weld lines and axes of beads failed to lower the strength and plastic properties below those specified in GOST 380-60. The straightening of welds of St.3 sp 16-mm steel and higher made under rigid conditions with mutually perpendicular axes of both the welds and beads showed a significant reduction of the plastic properties. (4 illustrations, 2 tables, 2 bibliographic references).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 021

UNCLASSIFIED

TITLE--OPHTHALMONEUROLOGICAL METHODS OF EXAMINING STRABISMIC CHILDREN -U-

PROCESSING DATE--30OCT70

AUTHOR-(02)-SMOLIYANINOVA, I.L., EIDINOVA, M.B.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK OFTAL'MOLOGII, 1970, NR 3, PP 9-12

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--OPTHALMOLOGY, NEUROLOGY, PEDIATRICS, MEDICAL EXAMINATION, VISUAL DEFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0123

STEP NO--UR/0357/70/000/003/0009/0012

CIRC ACCESSION NO--AP0129379

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

Coatings

UDC 621.74.015:621.744.37

USSR

KUMAININ, I. B., BAUMAN, B. V., OREKHOV, A. I., ISAYEVA, T. A., SMOL'KIN, A. A., and ZOTOVA, N. G., Moscow Institute of Steel and Alloys"

Ceramic Antiscorching Coatings for Steel Castings"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 7, 1973, pp 53-56

Abstract: Antiscorching coatings with ceramic type bonding agents wer developed on the base of metallophosphates. Starting materials for the production were orthophosphoric acid H_3PO_4, aluminum hydroxide $Al(OH)_3$, chromium acid Cr_2O_3. The coatings possess high refractoriness and resistance, high thermal stability, and chemical inertia in the working temperature interval. They also have high technological qualities, as good covering power, and high sedimentation stability. The coatings do not contain scarce materials and are not expensive. Results of industrial tests presented of antiscorching coatings on carbon steel and alloy steels. Comparative results of petrographic analyses of antiscorching coatings are discussed by reference to microsections of the mold and of metal-mold

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PROCESSING DATE--30OCT70

UNCLASSIFIED

2/2 021

CIRC ACCESSION NO--AP0129379

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE GREAT MAJORITY OF CHILDREN WITH CONVERGENT STRABISMUS UNDER EXAMINATION DEMONSTRATE THE SYMPTOM IMPLICATED BASE OF THE PONS VAROLII. THIS SYMPTOM FINDS ITS EXPRESSION IN THE LAXITY OF THE EFFERENT NERVE ON THE SIDE OF THE SQUINT, COMING IN CONJUNCTION WITH A MILD SLACKNESS OF THE FACIAL NERVE AND OF ALL MUSCLE GROUPS ON THE SIDE CONTRALATERAL TO THE SQUINTING EYE. A NUMBER OF SIMPLE AND WIDELY ACCESSIBLE OPTHALMONEUROLOGICAL METHODS OF INVESTIGATION ARE SUGGESTED. THESE PERMINT DETECTION OF THE SAID DISTURBANCES AND COLLECTION OF ADDITIONAL INFORMATION AS TO THE STATE OF THE CENTRAL NERVOUS SYSTEM OF THE CHILD IN EACH INDIVIDUAL CASE.

FACILITY: OTDEL OKHRANY ZRENIYA DETEY, MOSKOVSKOGO NAUCHNO-ISSLED. INSTITUT GLAZNYKH BOLEZNEY IM. GEL'MGOL'TSA, NAUCHNO-ISSLED. INSTITUT DEFEKTOLOGII, AKADEMII PEDAGOGICHESKIKH NAUK SSSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

UDC 621.383.8

USSR

BUTSLOV, M. M., Doctor of Sciences, GORNOSTAYEV, V. A., KARAPETYAN, B. O., MARKOV, A. A., Doctor of Sciences, SMOLKIN, G. Ye., Doctor of Sciences, and SOFIYEV, G. N., Candidate of Sciences

"Electron-Optical Pulse Apparatus for Astronomical Investigations"

Leningrad, Optiko-Mekhanicheskaya Promyshlennost', No 10, Oct 72, pp 54-56

Abstract: A study is made of the problems to develop an installation for the investigation of astronomical objects with transitional radiation on the basis of pulsed cascade image converter tubes. This installation must be applicable for the solution of a large circle of astronomical problems requiring short-term exposures. The demands made to the principal parameters of a similar installation are indicated. The installation and the generator of frame scannings (GFS) and shutter pulses are described by reference to the flow chart and the functional diagram. The results of testing the GFS by making use of a PDM-3 type converter are presented in form of frequency-contrast characteristics. The latter give an idea of the contrast transfer in the whole range of frequencies. Four illustr., six biblio. refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 045 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--NONIMPACT SHOCK WAVES IN A MAGNETIZED PLASMA -U-

AUTHOR-(04)-ZAGORODNIKOV, S.P., SMOLKIN, G.YE., STRIGANOVA, YE.A., SHOLIN, G.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. TEKH. FIZ. 1970, 40(4), 717-27

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PLASMA SHOCK WAVE, SHOCK WAVE STRUCTURE, SHOCK WAVE FRONT, TEMPERATURE GRADIENT, IRREVERSIBLE PROCESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1177 STEP NO--UR/0057/70/040/004/0717/0727

CIRC ACCESSION NO--AP0124831

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 045 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124831

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE AND THE NATURE OF THE PROPAGATED COLLISIONLESS SHOCK WAVES, IN A PLASMA, WAS DETD., BY SPECTROSCOPIC MEASUREMENTS OF THE JUMPS OF TEMP., ON THE FRONT OF THE WAVES. WITH INCREASE OF THE ALFVEN MACH NO., SPECIFIC IRREVERSIBLE PROCESSES ARE OBSD. EVIDENTLY RELATED TO THE INCREASE IN THE EFFICIENCIES OF NONCOLLISIONAL DISSIPATIVE PROCESSES AND TO THE CHANGE IN THE CHARACTER OF THE INTERACTION OF THE ALTERNATING MAGNETIC FIELD WITH INCREASE OF ITS AMPLITUDE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

Optical

USSR

UDC 535.853.089+621.326.75

SMOLKIN, I. K., FEDOROVA, Ye. P., CHURAKOVA, R. S.

"Miniature High-Stability Infrared Radiation Source"

Optiko Mekhanicheskaya Promyshlennost', No 12, 1972, p 69.

Abstract: The authors have developed a small ceramic infrared light source with indirect heating. The source has a spectral radiative capacity in the 5-50 μ range at up to 1,300°C similar to that of silicon carbide, without its main defects: it does not require forced cooling, is small, has reliable silver contacts and consumes only about 50 w electric power. The source is simple in design: it consists of a ceramic radiating tube 3 mm in diameter and 40 mm long and a platinum spiral heater inside the tube. Repeated measurements showed that after a 30-minute warmup period, if the ceramic light source was protected from air currents, the stability of the light flux produced was within limits of 0.1% for 15 minutes and 0.3% per day.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 021 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--RADIANT INTENSITY OF FILAMENT LAMPS -U-

AUTHOR-(03)-SMOLKIN, M.I., SUVOROVA, N.N., NIKITICHEVA, A.M.

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COUNTRY OF INFO--USSR

SOURCE--SVETOTEKHNIKA (USSR), NO. 1, P. 16-17 (JAN. 1970)

DATE PUBLISHED----JAN70

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

TOPIC TAGS--VISIBLE LIGHT RADIATION, RADIATION INTENSITY, SPECTRAL, DISTRIBUTION, COLOR, ELECTRON TUBE FILAMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0129 STEP NO--UR/0311/70/000/001/0016/0017

CIRC ACCESSION NO--AP0130891

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 021 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0130891

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER PROVIDES A METHOD, BASED PARTLY ON CALCULATIONS AND PARTLY ON MEASUREMENT, OF DETERMINATION OF THE RADIANT INTENSITY AND ITS SPECTRAL DISTRIBUTION OF LIGHT AND COLOUR TEMPERATURE FOR A GIVEN TEMPERATURE OF THE SOURCE. CURVES ARE GIVEN SHOWING SPECTRAL DISTRIBUTION OF RADIANT INTENSITY OF IODINE LAMP AND THE DEPENDENCE OF LIGHT INTENSITY, RADIANT INTENSITY OF THE BULB AND THE FILAMENT ON THE POWER AND COLOUR TEMPERATURE. THE RESULTS OF THE MEASUREMENT SHOW RADIANT INTENSITIES OF A WHOLE SERIES OF LAMPS RATED 25-1500 W AND ARE IN CLOSE AGREEMENT WITH THE CALCULATED RESULTS.

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JPRS 59266

12 June 1973

UDC: 621.313.12:538.4:533.95

THERMODYNAMIC CYCLES OF ATOMIC POWER PLANTS WITH MHD-GENERATORS

[Article by V. L. Dekhtyarev, V. N. Khalaydzhi, Yu. V. Smolkin, and I. Z. Kopp, Moscow, Teplofizika Vysokikh Temperatur, Russian, Vol 11, No 2, 1973, pp 385-389]

The possibility in principle of achieving high temperatures of the coolant in high-temperature gas-cooled reactors leads to a need for investigation of the prospects of use of gaseous MHD-generators at atomic power plants [1-3]. The first stage in solving this task is the selection of very rational thermodynamic cycles.

Usually considered are temperature levels insufficient to obtain the thermal ionization needed to assure electric conductivity of the working medium. Therefore MHD-generators based on non-equilibrium plasma are primarily investigated.

To create the necessary electric conductivity the coolant pressure at the reactor outlet must be lower than the optimal from the point of view of the planning of the reactor, the compressor and the heat exchangers.

In the present work helium with an ionized additive at a pressure of 1.0 mn/m^2 and temperatures of 2000, 2200 and 2500°K was taken as the working medium of the MHD-generator. When argon is used its pressure in the reactor can be increased to 3.0-5.0 mn/m^2 [3]. However, because of heat-transfer properties much worse than those of helium, the increase of pressure does not lead to reduction of the heat-exchange surfaces.

A thermodynamically very simple cycle with an MHD-generator can be organized much like the cycle of a closed-cycle gas-turbine power plant, in which an MHD-generator is included in place of the gas turbine. In such a cycle the power regeneration factor $\emptyset = Q_{reg}$ [4] has high values. Therefore to

Smolkin, Yu. V.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

UDC 621.396.6-186.5

SMOLKO, G. G., ZAUMYSLOV, Yu. V., ZHETLOV, V. N.,

"Electron-Ion Technology of Making Integrated Circuits"

Elektron. prom-st', Nauchno-tekhn. sb. (The Electronics Industry, Scientific and Technical Collection), 1970, No 1, pp 89-91 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10V177)

Translation: The authors discuss the principal areas of work on electron-ion technology ("Elionics") in microelectronics, and the advantages of this technology over other methods, particularly in the making of hybrid microcircuits. Comparative characteristics of masking and elionic technology are given from the standpoint of the equipment and personnel required. It is shown that only the use of elionics will make it possible to solve a number of problems in the future development of microelectronics. Two tables, bibliography of five titles. N. S.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR UDC: 621.375.127(088.8)

BUTUZOV, Yu. A., ROZHDESTVENSKIY, A. N., SMOL'KOV, V. V., UCHAYEV, A. L.

"A Protection Device for a Low-Frequency Amplifier"

USSR Author's Certificate No 278771, filed 29 May 69, published 3 Dec 70 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6D128 P)

Translation: A device is proposed for protecting an audio frequency amplifier under overloads. The device contains preamplification stages, a push-pull output, and a feedback circuit with transformer. To improve the reliability and speed of the protector, the base of the transistor in the feedback circuit is loaded by a diode bridge connected to the transformer, and the collector is loaded by a voltage divider. Connected between the resistors of the voltage divider is the controlling electrode of a protection thyristor. The cathode of this thyristor, the collector of the input transistor and the emitter of the output transistor (of different polarity) in the preamplifier are connected to the negative terminal of the power supply through a current-limiting resistor.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 013 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--LEAD ACID BATTERY ELECTRODES -U-

AUTHOR-(05)-YEMELYANOV, N.M., SMOLKOVA, V.S., ROMANOVA, I.L., SELITSKIY, I.A., RUSIN, A.I.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 262,200
REFERENCE--OTORYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--26JAN70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--PATENT, BATTERY ELECTRODE, LEAD, LEAD OXIDE, SULFURIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1782 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0109743

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2/2 013 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AA0109743

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE ELECTRODES ARE PREPD. BY MIXING PB OXIDES WITH H SUB2 SO SUB4, SMEARING THE MIST. ONTO A LATTICE, DRYING, FORMING, REPEATED DRYING, AND INTRODUCING A BINDER. THE DRIED OUT PLATES ARE SATD. IN THE BINDER SOLN., WITH SUBSEQUENT REMOVAL OF THE SOLVENT. FACILITY: SCIENTIFIC RESEARCH STORAGE BATTERY INSTITUTE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

UDC 62-72

ZHURBA, A. S., SMOL'NIK, YU. YE., KATRUSH, R. V., SABIROVA, G. V., and USUPOVA, L. G., All Union Scientific Research Institute of Petrochemical Processing

"The Influence of the Depth of Hydropurification of the Fractions of Jet Fuel on Their Low Temperature Properties"

Kiev, Khimicheskaya Tekhnologiya, No 3,(63), May-Jun 72, pp 17-19

Abstract: The effect of the depth of hydrofining being used as the first stage of the hydrogenation process of jet fuels with increased content of aromatic hydrocarbons has been investigated in regard to the low temperature properties of the hydrofined fuel. It has been noted that after deep hydrofining the temperature of the initial crystallization is raised and a turbidity is observed proceeding the crystallization by some 12-14°C. It has been determined that this turbidity is caused by accumulation of poorly branched paraffin hydrocarbons of high molecular weight.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

UDC 665.52

ZHURBA, A. S., SMOL'NIK, Yu. Ye. (deceased), BRYANSKAYA, E. K., and MARTYNYUK, A. D., All Union Scientific Research Institute of Petrochemistry

"Production of Jet Fuel With Improved Qualitative Properties"

Kiev, Neftyanaya i Gazovaya Promyshlennost'", No 4, 1973, pp 36-38

Abstract: Hydrogenation conditions for kerosene fractions 130-180, 130-240 and 180-240°C over aluminum-platinum catalyst AP-56 were investigated. It was established that at 40 atm and 300°C the degree of conversion of mono and bicyclic aromatic hydrocarbons is 90%. The hydrogenation product should be used as the low aromatic component for the production of commercial reactive fuel by mixing it with straight distillate.

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USSR UDC 665.658.2.661.715.7

SMOL'NIK, YU. YE., ZHURBA, A. S., UKUROVA, L. G., and KATEUSH, M. V.
All Union Scientific Research Institute of Petrochemical Processing

"Hydrogenation of Aromatic Hydrocarbons of Narrow Fractions of Aviation Kerosene"

Moscow, Neftepererabotka i Neftekhimiya, No 2, 1972, pp 1-3

Abstract: Hydrogenation of aromatic hydrocarbons, fractions 130-180 and 180-240°C, on an industrial aluminum-platinum catalyst AP-56 was studied. The optimal conditions for this process are: pressure -- 40 atms, temperature -- 275-325°C. Under such conditions and at a 1.5 hr^{-1} volume rate of addition of starting material, the hydrogenation of both fractions exceeds 85%. The yield of the product is approximately 97 weight-%. The catalyst used is quite stable even after 200 hrs.

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Acc. Nr: AP0047350 Ref. Code: UR0589

PRIMARY SOURCE: Vestnik Khirurgii imeni I. I. Grekova, 1970, Vol 104, Nr / , pp 65-68

ACUTE ULCERS OF THE GASTROINTESTINAL TRACT

By L. A. Smolnikov and V. S. Dyukov

Thirteen patients with acute ulcers were investigated. Single ulcers were observed in 4 patients, multiple — in 9. Acute ulcers were mostly located in the stomach (in 9 patients) and more rare in the intestine. The course of acute ulcers was complicated by perforation in 10 cases, hemorrhage — in 3 cases. The clinical picture of ulcer perforation depends on its localization and frequently does not show a classic picture of peritoneal shock. The diagnosis of such a complication is very difficult. Hemorrhage, as a complication of acute ulcer promptly leads to grave anemia and often results in patients' death.

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USSR UDC: 621.317.784

SMOLOV, V. B., ISMAILOV, Sh. Yu., CHERNYAVSKIY, Ye. A., DOBORDZHGINIDZE, D. D.

"An Analog-Digital Watt Meter"

USSR Author's Certificate Number 290226, filed 29/07/69, published 9/04/71 (translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 3, 1972, Abstract No 3 A256 P)

Translation: An analog-digital watt meter for alternating current is suggested, containing a dc voltage-to-code converter with balanced tracking, a programmed distributor, and switches. In order to increase operating speed, the watt meter contains an analog memory unit and a digital-analog multiplier consisting of a register and a digitally controlled voltage divider. The input to the voltage-to-code converter is connected to the common terminal of one switch, one terminal of which is connected to the source of voltage being measured, while the other terminal is connected to the output of the digitally controlled voltage divider. One input of the analog memory is connected to the source of current being measured, the other input is connected to the output of the flip-flop of the voltage-to-code converter. The output of the analog memory is connected to the input of the digitally controlled voltage divider; the discrete output of the voltage-to-code converter

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR

SMOLOV, V. B., ISMAILOV, Sh. Yu., CHERNYAVSKIY, Ye. A., DOBORDZHGINIDZE, D. D., USSR Author"s Certificate Number 290226, filed 29/07/69, published 9/04/71 (translated from Referativnyy Zhurnal Avtomatika Telemekhanika i Vychislitel'naya Tekhnika, No 3, 1972, Abstract No 3 A256 P)

is connected to the common terminal of the second switch, one terminal of which is connected to the register of the digital-analog multiplier, while the other is connected to the output of the entire device. Two figures.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR UDC 621.3. 087.9:621.3.0832.4

SMOLOV, VLADIMIR BORISOVICH; KANTOR, YEVGENIY L'VOVICH

"Bridge Computing Devices"

Mostovyye vychislitel'nyye ustroystva (of English above), Leningrad, "Energiya," 1971. 176pp 24 ref. ill. 71 k.

Abstract: In the book the basic theory, elements of design, and examples of practical application are considered for bridge computing devices (BCD) which fulfill basic mathematical operations with an error on the order of a ten hundredth portion of a percent. The distinctive features of the BCD are simplicity of structure, processing of information of any form (discrete, analog, combined) and nature (angle of rotation, linear displacement, temperature, pressure, time interval, electrical voltage, etc.) without transformation, and also the possibility of using an optimum piecewise-exponential approximation. Use of BCD in automated control system makes it possible to decrease considerably the amount of equipment and to relieve the programs of an electronic computer assuring to them a significant improvement of the reliability-economical characteristics. The material of the book is a generalization of scientific investigations made by the authors at the Department [kafedra] of Computing Techniques of the Leningrad Electrotechnical Institute imeni V.I.Ul'yanov (Lenin). The book is intended for specialists in the field of computing and information devices.

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USSR

SMOLOV, VLADIMIR BORISOVICH and KANTOR, YEVGENIY L'VOVICH, Mostovyye Vychislitel'nyye ustroystva, Leningrad, "Energiya," 1971. 176 pp, 24 ref. ill. 71 k.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

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SMOLOV, VLADIMIR BORISOVICH and KANTOR, YEVGENIY L'VOVICH, Mostovyye Vychislitel'nyye ustroystva, Leningrad, "Energiya," 1971. 176 pp, 24 ref. ill. 71 k.

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SMOLOV, VLADIMIR BORISOVICH and KANTOR, YEVGENIY L'VOVICH, Mostovyye Vychislitel'nyye ustroystva, Leningrad, "Energiya," 1971. 176 pp, 24 ref. ill. 71 k.

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SMOLOV, VLADIMIR BORISOVICH and KANTOR, YEVGENIY L'VOVICH, Mostovyye Vychislitel'nyye ustroystva, Leningrad, "Energiya," 1971. 176 pp, 24 ref. ill. 71 k.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

Converters

USSR UDC 681.142.6:681.142.33

SMOLOV, VLADIMIR BORISOVICH; CHERNYAVSKIY, YEVGENIY ALEKSANDROVICH; POLYANSKAYA, TAT'YANA IVANOVNA; KURDIKOV, BORIS ALEKSANDROVICH

"All-Purpose Electronic Information Converter"

Universal'nyye elektronnyye preobrazovateli informatsii (cf English above), Leningrad, "Mashinostroyeniye," 1971, 312 pp. 2 tab. 160 ill. 54 ref. 1 r 28 k

Abstract: In the book the theoretical prerequsites are considered which lie at the base of planning of electronic information converters; an account is presented of the basic elements and units fulfilled by semiconductor elements. Great importance is alloted to problems of conversion of the normalized amplitude of a-c voltage into binary code; the possibility is shown of fulfillment of mathematical operations with coding of the d-c and a-c voltages; and problems are considered of the evaluation of information reliability of voltage conversion. The book is intended for engineers concerned with problems of the construction of up-to-date systems of monitoring and control, both in the field of contemporary machine-building and in other branches of technology which use digital and combined computing devices. It will be useful also for students and graduate students of higher educational institutions who are connected with the development of devices for computing, control, and information-measuring techniques.

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USSR

SMOLOV, VLADIMIR BORISOVICH, et al., Universal'nyye elektronnyye preobrazovateli informatsii, Leningrad, "Mashinostroyeniye," 1971, 312 pp. 2 tab. 160 ill. 54 ref. 1 r 28 k

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

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SMOLOV, VLADIMIR BORISOVICH, et al., Universal'nyye elektronnyye preobrazovateli informatsii, Leningrad, "Mashinostroyeniye," 1971, 312 pp. 2 tab. 160 ill. 54 ref. 1 r 28 k

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

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SMOLOV, VLADIMIR BORISOVICH, et al., Universal'nyye elektronnyye preobrazovateli informatsii, Leningrad, "Mashinostroyeniye," 1971, 312 pp. 2 tab. 160 ill. 54 ref. 1 r 28 k

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SMOLOV, VLADIMIR BORISOVICH, et al., Universal'nyye elektronnyye preobrazovateli informatsii, Leningrad, "Mashinostroyeniye," 1971, 312 pp. 2 tab. 160 ill. 54 ref. 1 r 28 k

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SMOLOV, VLADIMIR BORISOVICH, et al., Universal'nyye elektronnyye preobrazovateli informatsii, Leningrad, "Mashinostroyeniye," 1971, 312 pp. 2 tab. 160 ill. 54 ref. 1 r 28 k

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 028 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--A DEVICE FOR MULTIPLYING AND DIVIDING WIDTH MODULATED SIGNALS -U-

AUTHOR-(02)-SMOLOV, V.B., OGRYUMOV, YE.P.

COUNTRY OF INFO--USSR

SOURCE--PATENT NO 260290, FILED 8 DEC 68
REFERENCE--MOSCOW, OTKRYTIYA, IZOBRETENIYA, PROMYSHLENNYYE OBRAZTSY,
DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--PATENT, PULSE WIDTH MODULATION, SIGNAL ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0733 STEP NO--UR/0402/70/000/000/0000/0000

CIRC ACCESSION NO--AA0126442

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 028 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AA0126442

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THIS AUTHOR'S CERTIFICATE INTRODUCES A DEVICE FOR MULTIPLYING AND DIVIDING WIDTH MODULATED SIGNALS. THE UNIT CONTAINS A BALANCED BRIDGE WITH AUTOMATIC PROCESSING OF THE RESULT. AS A DISTINGUISHING FEATURE OF THE PATENT, THE WORKING RANGE OF THE DEVICE IS EXTENDED BY MAKING EACH ARM OF THE BRIDGE IN THE FORM OF A SWITCH AND RESISTOR CONNECTED IN SERIES, AND CONNECTING A PULSE WIDTH MODULATOR INTO THE CIRCUIT FOR PROCESSING THE RESULT THROUGH A DIFFERENTIAL AMPLIFIER. THE OUTPUT OF THE MODULATOR IS CONNECTED TO THE SWITCH IN ONE OF THE ARMS OF THE BRIDGE. FACILITY: LENINGRADSKIY ELEKTROTEKHNICHESKIY INSTITUT IM. V. I. UL'YANOVA LENINA.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

USSR S UDC 681.333.5

SMOLOV, V. B., UGRYUMOV, YE. P., Leningrad Electrical Engineering Institute imeni V. I. Ul'yanov (Lenin)

"A Device for Multiplying and Dividing Width-Modulated Signals"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 3, 1970, p 130, patent No 260290, filed 8 Dec 68

Abstract: This Author's Certificate introduces a device for multiplying and dividing width-modulated signals. The unit contains a balanced bridge with automatic processing of the result. As a distinguishing feature of the patent, the working range of the device is extended by making each arm of the bridge in the form of a switch and resistor connected in series, and connecting a pulse width modulator into the circuit for processing the result through a differential amplifier. The output of the modulator is connected to the switch in one of the arms of the bridge.

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1/2 015 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--DIFFERENTIATED DETERMINATION OF XYLENE AND TOLUENE ISOMERS IN NONAQUEOUS SOLVENTS -U-

AUTHOR-(03)-KRESHKOV, A.P., GURETSKIY, I.YA., SMOLOVA, N.T.

COUNTRY OF INFO--USSR

SOURCE--MATER. IKH PRIMEN. 1970, (2), 53-6

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--XYLENE, TOLUENE, OXIDATION, CARBOXYLIC ACID, POTENTIOMETRIC TITRATION, ISOMER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/008 STEP NO--UR/0303/70/000/002/0053/0056

CIRC ACCESSION NO--AP0140297

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 015 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140297

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MIXTS. OF PHME AND O, M, AND P XYLENE WERE OXIDIZED 40-5 MIN WITH KMNO SUB4 SOLN. AT 95-80EGREES TO GIVE BZOH AND THE CORRESPONDING DIBASIC ACIDS. IR SPECTRA AND GAS CHROMATOG. SHOWED THAT ONLY CARBOXYLIC ACIDS WER FORMED, THERE WAS NO DECARBOXYLATION. EACH PRODUCT GIVES A CHARACTERISTIC POTENTIOMETRIC TITRN. CURVE AND CAN BE DETD. IN THE PRESENCE OF OTHER COMPONENTS. THE TITRNS. WERE CARRIED OUT IN AN ACETONE WATER MECN ISO PROH MIXT. AGAINST ISO PROK. THE MEAN ARITHMETIC DETN. ERROR WAS LESS THAN OR EQUAL TO 5.36PERCENT.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

1/2 009 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--EVALUATION OF NONAQUEOUS SOLVENT AUTOPROTOLYSIS CONSTANTS -U-

AUTHOR-(04)-KRESHKOV, A.P., ALDAROVA, N.SH., SMOLOVA, N.T., RYAGUZOV, A.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(4), 1126-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ALIPHATIC ALCOHOL, GLYCOL, KETONE, DICARBOXYLIC ACID, SOLVENT ACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0795 STEP NO--UR/0076/70/044/004/1126/1127

CIRC ACCESSION NO--AP0136229

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110010-1

2/2 009 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136229

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTOPROTOLYSIS CONSTS., PK SUBS, WERE ESTD. FOR A NO. OF ALIPHATIC ALCS. (MEOH TO OCTANOL), GLYCOLS, AND KETONES FROM THE LINEAR RELATIONSHIP PK SUBS VS. PK SUBA, WHERE PK SUBA WAS THE ACID CONST. OF A DICARBOXYLIC ACID IN A GIVEN SOLVENT GROUP, AND FROM THE EXPRESSION PK SUBS EQUALS E SUBS -K SUBES, WHERE E SUBS IS THE RELATIVE ACIDITY SCALE AND K SUBES THE COEFF. OF THE RELATIVE ACIDITY SCALE. THE K SUBES VALUES FOR THE SOLVENTS DECREASED IN THE ORDER KETONES GREATER THAN ALCS. GREATER THAN GLYCOLS GREATER THAN H SUB2 O. FACILITY: MOSK. KHIM.-TEKHNOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN EQUATION FOR CALCG. THE PK OF ELECTROLYTES IS SUGGESTED WHICH CAN BE APPLIED ONLY IF THE POTENTICMETRIC TITRN. IS ACCOMPANIED BY PPT. FORMATION. BY MEANS OF THIS EQUATION, THE PK OF O, M, AND P,PHTHALIC ACIDS WERE CALCD. THE EFFECTS OF H SUB2 O AND MECN ON THE DIFFERENTIATING ACTION OF ME SUB2 CO WITH RESPECT TO PHTHALIC ACID ISOMERS WERE STUDIED. H SUB2 DECREASES THE ACTION AND MECN HAS NO ESSENTIAL EFFECT ON THE DIFFERENTIATING ACTION OF ME SUB2 CO. THIS WAS TAKEN INTO ACCOUNT DURING THE DEVELOPMENT OF THE METHOD FOR ANALYZING MIXTS. OF PHTHALIC ACID ISOMERS IN A MIXED ME SUB2 CO,MECN,H SUB2 O SOLVENT.

FACILITY: MOSCOW CHEM.-TECHNOL. INST., MOSCOW, USSR.

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SMOLOVIK, I. K.

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DISTINCTIONS IN LEVEL AND STRUCTURE OF HOSPITAL CARE FOR RURAL PATIENTS IN DIFFERENT TYPES OF CITIES

[Article by Ye.A. Loginova, M.V. Potekhina, V.M.Shipova, N.T. Trubilin, I.K. Smolovik, L.F. Bugun, A.K. Plyasunov, Z.P. Taranenko, Ye.P. Kolesnikov, A.P. Sarcyev, Yu.I. Baybakov, All-Union Scientific Research Institute of Social Hygiene and Public Health Organization imeni N.A. Semashko, Rostovskaya, Ul'yanovskaya, and Kurskaya oblast health departments; Moscow, Sovetskoye Zdravookhranenive, Russian, No 12, 1971, submitted 24 March 1971, pp 16-21]

Urban therapeutic institutions play an important role in rendering qualified and particularly specialized care for the rural population.

It is a known fact that the volume of medical care rendered to the rural population by urban institutions is increasing annually, however, to date this is not taken into consideration in planning urban public health care. In addition, there are still insufficient special investigations to substantiate the rural residents demand for specialized hospital and extramural care at different stages of organization of rural public health.

The absence of differentiated standards of the demands of the rural population with regard to special forms of medical care makes it imperative to pursue indepth investigations of the level and distinctions of the demand for different forms of therapeutic and prophylactic care in concrete institutions of different types of cities.

For this purpose, the All-Union Scientific Research Institute of Social Hygiene and Public Health Organization imeni N.A. Semashko, jointly with the oblast public health departments of Rostovskaya, Ul'yanovskaya, Kurskaya, Vologodskaya oblasts and the Bashkir Ministry of Health conducted a complex study of the level and structure of hospital, polyclinic, and visiting consultation services offered to rural residents in the different cities.

In this article we submit the results of a study of the level and structure of hospital care rendered to the rural population in different types of cities in Rostovskaya, Ul'yanovskaya, and Kurskaya oblasts; data pertaining to other bases are undergoing statistical processing.

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