"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112413

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTION OF 2,3,4,5,6,PENTA,O,BENZYL,SYN,MYO,INOSITOL WITH PHOPOCL SUB2 AND 1,2,DI,PALMITOYL,SN,GLYCEROL IN C SUB5 H SUB5 N GAVE 32PERCENT 1,O,(1,2,DIPALMITOYL,SN,GLYCERYL,(PHENYL,PHOSPHORYL),2,3,4,5, 6,PENTA,O,BENZYL,SN,MYO,INOSITOL, M. 53-4PERCENT. HYDROGENOLYSIS OVER ADAMS PT CATALYST AND PD BLACK GAVE THE PHOSPHORYL ANALOG, ISOLATED AS NH SUB4 SALT, M. 169-72PERCENT. THIS GAVE SPECTRA VERY SIMILAR TO THOSE OF NATURAL MONOPHOSPHOINOSITIEDS.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 019 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--SYNTHESIS OF OPTICALLY ACTIVE PENTABENZYL ETHERS OF MYO INOSITOL. TOTAL SYNTHESIS OF PHOSPHATIDYLINOSITOL WITH NATURAL STRUCTURE -U-

AUTHOR-(05)-KLYASHCHITSKIY, B.A., ZHELYAKOVA, E.G., SHVETS, V.I., EVSTIGNEEVA, R.P., PREOBRAZHENSKIY, N.A.

COUNTRY OF INFO--USSR

SOURCE--TETRAHEDRON LETT. 1970, (8), 587-90

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--OPTIC ACTIVITY, POLYNUCLEAR HYDROCARBON, BENZENE DERIVATIVE, ORGANIC PHOSPHORUS COMPOUND, ETHER, GLYCEROL, FATTY ACID, CHEMCIAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/1509 STEP NO--UR/0000/70/000/008/0587/0590

CIRC ACCESSION NO--AP0101593

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 019 UNCLASSIFIED

CIRC ACCESSION NO--AP0101593 PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS TREATED WITH PHOP(O)CL SUB2 AND 1,2 DIPALMITOYL SN GLYCEROL TO GIVE II. II IS HYDROGENATED OVER ADAMS CATALYST AND PD BLACK TO GIVE 1,0, (MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION) (1',2' DIPALMITOYL SN 3' GLYCERYLPHOSPHORYL) SN MYO INOSITOL (III) WHICH HAS A NATURAL STRUCTURE.

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USSR UDC 616.988.73-036.2(470.44)

RUMYANTSEVA, Ye. V., ZHELYABOVSKAYA, K. G., and DRANKIN, D. I., Saratovskaya Oblast Sanitary Epidemiological Station, Saratov Medical Institute

"Ornithosis in Saratovskaya Oblast"

Moscow, Sovetskaya Meditsina, No 9, Sep 70, pp 150-151

Abstract: No case of laboratory-confirmed ornithosis in humans was reported in Saratovskaya Oblast before 1967. As part of an epidemiological study conducted in the oblast from October 1966 to June 1967, 75 hospital patients whose symptoms suggested ornithosis were given serological and skin tests. The 75 subjects had been admitted with tentative diagnoses of typhoid, paratyphoid, pneumonia, influenza, and inflammation of the upper respiratory tract. Eight were diagnosed as having ornithosis (1 with the pneumonic form, 1 with the influenza type). Four of the eight had had occupational or other contacts with birds.

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USSR UDC 547.548.1

TSIVUNIN, V. S., ZHELYAGINA, L. V., and KRUTSKIY, L. N., Kuzbassk Polytechnical Institute

"Reaction of Triphenylphosphine with α,β-Unsaturated Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 2, Feb 73, p 439

Abstract: Reaction of triphenylphosphine with acrylic, methacrylic, and cinnamic acids yields phosphobetaines. Acrylic and methacrylic acids react smoothly overnight in benzene with about a 30% yield. Cinnamic acid reacts much slower, and the yield is poorer. The structure of the products was confirmed by IR analysis and parallel synthesis.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

Acc. Nr: AT0050501 Abstracting Service: NUCLEAR SCI. ABST. 5/70 Ref. Code: UR0141

17937 TO THE THEORY OF INTERACTION BETWEEN A RELATIVISTIC ELECTRON BEAM AND PLASMA. Bogdankevich, L. S.; Zhelyazkov, I. I.; Rukhadze, A. A. (Lebedev Inst. of Physics, Moscow). Izv. Vysah. Ucheb. Zaved., Radiofiz.; 13: 21-7(1970). (In Russian).

The interaction between the limited relativistic electron beam of a small density and plasma being in a strong longitudinal magnetic field is investigated. The critical plasma density, above which the electrostatic instabilities may be developed, is determined. In long enough systems, the critical density of plasma is increased with the growth of its density reaching some value determined by the directed velocity of electrons and the geometrical dimensions of the system. In the systems limited in a longitudinal direction, the critical density of plasma may be dependent also on the system length and magnetic field intensity. In this case the critical density is larger than for a long system. It follows from the analysis of the stability that the maximum current of the electron beam, which may be passed through the waveguide, increases in the relativistic region with the growth of the electron energy as ϵ^3. Due to this possibility, large currents may penetrate through a dense plasma. (auth)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR UDC: 547.94

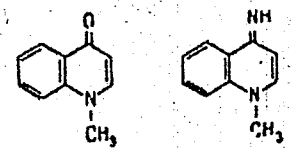
AVRAMOVA, B., ZHELYAZKOV, L., DALEVA, L., STEFANOVA, D., Scientific Research Chemico Pharmaceutical Institute, Sofia

"Biologically Active 1-Substituted-4-Quinolonimines. I."

Tashkent, Khimiya Prirodnykh Soyedineniy, No 1, 1970, pp 98-101

Abstract: Echinopsine-1-methyl-4-quinolone (I) and its structural analog echinopsidine (II) both show physiological activity, but in different ways.

(a)



I II

It is assumed that the difference in the biological effects of these two compounds are due to the structural difference -- the substitutent in the fourth position (=O or the NH group). New 1-substituted quinolonimines which may be considered structural analogs of echinopsidine were synthesized by a four-stage process similar to that used for synthesis of echinopsine:

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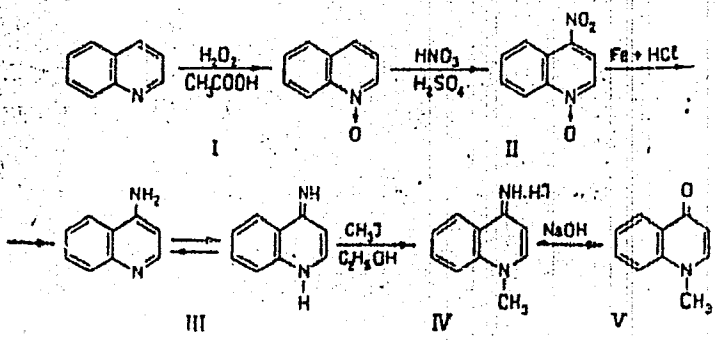
USSR

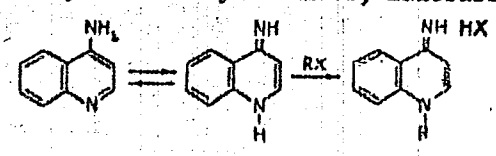
AVRAMOVA, B., et al, Tashkent, Khimiya Prirodnykh Soyedineniy, No 1, 1970, pp 98-101

(b)



except that on the fourth stage, in addition to the methylating agent, 4-aminoquinoline is interacted with various alkyl of aralkyl halides, halosubstituted ketones or other alkylating agents:

(c)



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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

AVRAMOVA, B., et al, Tashkent, Khimiya Prirodnykh Soyedineniy, No 1, 1970, pp 98-101

The reaction was carried out with boiling 4-aminoquinoline together with an excess of the appropriate alkylating agent in a suitable solvent. Reaction time varies from 6 to 25 hours. All the resultant quinolonimines were found to be biologically active with respect to the central nervous system, most of them having centrally stimulating and antidepressant properties. The strongest antidepressant action is shown by echinopsidine, the first member of the homologic series ($R = CH_3$). As the carbon chain associated with the nitrogen atom increases in length to four atoms, the antidepressant property decreases, and there is an increase in non-specific stimulation of the central nervous system. Two aromatic derivatives showed elements of antidepressant activity, though weaker than in echinopsidine, and the double bond in the substitutent seems to lead to a tranquilizing effect. Larger doses of the compounds produce a curare-like myorelaxant effect which increases in strength when the methyl group associated with the nitrogen atom is replaced by heavier radicals. Carbonyl groups in the molecule reduce the myorelaxant effect. With respect to anticholinesterase activity, quinolonimines are much more active than echinopsine, but less active than galanthamine. The quinolonimines are more biologically active and more toxic than echinopsine.

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USSR

UDC: 669.884/.885.053.4.068

DARER, R. S., MUN, A. I., ZHELYDKOVA, G. V.

"Study of Sorption of Lithium and Rubidium by the Hydroxides of Various Metals"

Tr. In-ta Khim. Nauk. AN KazSSR [Works of Institute of Chemical Sciences, Academy of Sciences KazSSR], 1973, No 36, pp 82-86 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G200, by the authors).

Translation: The absorption of Li and Rb by the hydroxides of Fe^3, Al, Sn^{4+}, Ti^{4+} and MnO_2 is studied. The influence of the pH of the solution, various electrolytes, the nature of the sorbent and conditions of its production on the process is determined. The absorption of Li^+ and Rb^+ is strongly influenced by the acid-base properties of the hydroxides. The mechanism of capture of Li^+ and Rb^+ by various hydroxides is studied. The influence of the salt background on the sorption of Li and Rb, MnO_2, $Al(OH)_3$ is studied, and it is shown that the effects of secondary cations are determined by the nature of the electrolytes and the nature of absorption of the microcomponents. 3 figures, 14 biblio. refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 016 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--BLAST FURNACE SMELTING USING BRIQUETTED COKE -U-

AUTHOR-(05)-NEKRASOV, Z.I., KOTOV, K.I., GLADKOV, N.A., GONCHAROV, V.F., ZHEMBUS, M.D.

COUNTRY OF INFO--USSR

SOURCE--MET. GORNORUD. PROM. 1970, (1), 3-5,

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--BLAST FURNACE, COKE, PIG IRON, BRIQUETTING, MECHANICAL STRENGTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0914 STEP NO--UR/0383/70/000/001/0003/0005

CIRC ACCESSION NO--AP0133003

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 016 UNCLASSIFIED PROCESSING DATE--04DEC70

IRC ACCESSION NO--AP0133003

BSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FOR THE EXPTL. SMELTING IN A BLAST FURNACE, A CHARGE CONTG. 10PERCENT BRIQUETTED COKE WAS USED. THE COKE SHOWED MECH. STRENGTHS, M SUB40 EQUALS 85-93PERCENT, M SUB10 EQUALS 3.4-8.8PERCENT, AND CONTAINED S 1.25-1.80, ASH 5.81-10.6, AND MOISTURE 5.8-10.6PERCENT. THE PROCESS PARAMETERS OBTAINED WERE COMPARED WITH THOSE OBTAINED WITH THE USE OF THE USUAL COKE. THE PIG IRON PRODUCED SHOWED NORMAL MN AND S AND SOMEWHAT HIGHER SI CONCNS. (0.81, 0.040, AND 0.92PERCENT, RESP). THE BRIQUETTED COKE ON CHARGING SHOWED SUFFICIENT STRENGTH AND DID NOT FORM A BREEZE. THE LENGTH OF THE OXIDIZING ZONE IN THE FURNACE WAS 1000 MM, AND CO DISAPPEARED AT 250-500 MM FROM THE MOUTH OF TUYERE. MAX. TEMPS. IN THE HEARTH AND BOSH WERE 1845 AND 1380DEGREES, RESP., AND THOSE OF THE PIG IRON AND SLAG AT THEIR TAP HOLES WERE 1515 AND 1580DEGREES, RESP. A CHARGE CONTG. 50PERCENT BRIQUETTEE COKE DOES NOT CAUSE ANY COMPLICATIONS IN THE OPERATION OF THE FURNACE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

Receivers and Transmitters

USSR

ZHEMCHUGOV, V. N.

UDC 621.391:519.2

"Study of the Allowable Power of FM Noise at the Input of the Frequency Converters of an FM Signal Receiver"

Materialy nauchno-tekhn. konferentsii. Leningr. elektrotekhn. in-t svyazi. Vyp. 2 (Materials of the Scientific and Technical Conference. Leningrad Electrotechnical Communications Institute, Vyp. 2), Leningrad, 1970, pp 161-167 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A60)

Translation: This article contains an investigation of transformations of the FM signal and FM noise in a system consisting of a superhigh frequency converter of an intermediate frequency amplifier and a frequency detector. The equation and spectrum of the noise power at the output of the frequency detector are obtained. The allowable intensity of FM interference at the input of the frequency converter of the radio relay line receiver is calculated for transmission of 600 and 2,700 telephone channels.

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(8)

UDC 632.95

USSR

BLIZNYUK, N. K., KHOKHLOV, P. S., KVASHA, Z. N., MARKOVA, L. I., LEVSKAYA, G. S., PROTASOVA, L. D., SOLNTSEVA, L. M., MATYUKHINA, Ye. N., VARSHAVSKIY, S. A., BARANOV, Yu. I., LIBMAN, B. Ya., ZHEMCHUZHIN, S. G.

"Method of Production of Dichlorides or Dibromides of Thiophosphonic Acids or Their Bis Analog"

USSR Author's Certificate No 332095, filed 19/08/69, published 17/04/72 (Translated from Referativnyy Zhurnal Khimiya, No 24(II), 1972, Abstract No 24N591, by T. A. Belyayeva)

Translation: Compounds of the formula $RP(X)X_2$ (I) (R=alkyl, aryl, aralkyl; X=Cl or Br) and $X_2P(S)A(S)PX_2$ (II) (A-bivalent hydrocarbon radical) were produced by the reaction of mono- or dihalo hydrocarbons with S, P and PX_3 with heating to 250-400° in an autoclave of stainless steel or nickel in the presence of catalytic quantities of I_2 or its compounds. Example. A mixture of 0.24 mole PhCl, 0.24 g-atom S, 0.16 g-atom white P, 35 ml PCl_3 and 0.05 g I_2 is heated at 290-330° for seven hours in an autoclave of stainless steel, the PCl_3 is distilled, then vacuum distillation is used to separate I (R=Ph, X=Cl), yield 60%, B. T. 109-112°/3, $n^{20}D$ 1.6241. Similarly, I were produced (given R, X, yield in %, B. P. in °C/mm, $n^{20}D$): 4-ClC_6H_4,

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BLIZNYUK, N. K., et al., USSR Author's Certificate No 332095, filed 10/08/69, published 17/04/72

Cl, 53.5; 124-3/1.5-2, 1.6229; p-MeC_6H_4, Cl, 54.5, 125-7/1, 1.6120; $4FC_6H_4$, Cl, 72.2, 95-7/0.5, 1.6028; Ph, Br, 61, 127-130/2, 1.6850; 4-FC_6H_4, Br, 55, 135-8/1, 1.6758; $PhCH_2$, Cl, 76.4, 120-3/2, 1.6150; 3-FC_6H_4, Cl, 108-110/1.5, 1.5908; 4-$MeC_6H_4CH_2$, Cl, 53.3, 126-9/2, 1.6035; 4-$ClC_6H_4CH_2$, Cl, 61.6, 129-133.2, m. p. 74-6°, --; 2-$FC_6H_4CH_2$, Cl, 61.6, 129-133.2, m. p. 48-9°, --; 2.4-$Me_2C_6H_3CH_2$, Cl, 47.5, 140-1.6045; 2.4-$Cl_2C_6H_3CH_2$, Cl, 43.4, 147-9/2, m. p. 100-1", --. Also produced were II (X=Cl, A=CH_2CH_2), yield 61.5%, m. p. 92-3°. I and II are intermediate products for the production of insecticides, acarocides, fungicides and herbicides.

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USSR

UDC 632.95

KHOKHLOV, P. S., MAFKOVA, L. I., ZHEMCHUZHIN, S. G.

"Preparation of Dithiophosphonates"

USSR Author's Certificate No 329184, filed 4/08/70, published 30/03/72 (Translated from Referativnyy Zhurnal Khimiya, No 24(II), 1972, Abstract No 24N592, by T. A. Belyayeva)

Translation: Dithiophosphonates of the formula RP(S)(SR")OC(Me)=CHCOOR' (I) (R=alkyl or aryal; R' and R"= alkyl), which can be used as physiologically active substances, are produced by the reaction of the anhydride of the corresponding dithiophosphonic acid with acetoacetic ester in an inert organic solvent in the presence of a tertiary base with subsequent alkylation of the salt formed with an alkyl halide. Example. Taking a mixture of 0.03 mole benzyldithiophosphonic acid and 0.03 mole Et_3N in 30 ml C_6H_6, add with mixing at 20-25° a solution of 0.03 mole $AcCH_2COOEt$ in 10 ml C_6H_6, heat to 70-80° for 15 hours until the precipitate dissolves completely, cool, filter, producing Et_3N-salt I (R=$PhCH_2$, R'=Et, R"=H) (II), yield 71.8%, m. p. 149-150°. Take 0.02 mole II in 20 ml C_6H_6, add 0.02 mole EtI, heat 3 hours with agitation at 60-70°, cool, filter, wash the filtrate with water, dry over $MgSo_4$, evaporate, producing I (R=$PhCH_2$, R'=R"=Et), yield 81.2%, after chromatography

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

KHOKHLOV, P. S., et al., USSR Author's Certificate No 329184, filed 4/08/70, published 30/03/72

on a column with silica gel d_4^{20} 1.1690, $n^{20}D$ 1.5739. Similarly, I is produced (R'=Et) (given R, R", yield in percent, d_4^{20}, $n^{20}D$): $PhCH_2$, Me, 78.4, 1.722, 1.5940; $PhCH_2$, Bu, 69.9, 1.1287, 1.5700; $PhCH_2$, $PhCH_2$, 70.2, --, 1.6120; Me, Me, 68, 1.2049, 1.5600, b. p. 146-9°/1.5.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC 632.95

BLIZNYUK, N. K., KALUTSKIY, L. A., ZHEMCHUZHIN, S. G.

"Procedure for Obtaining O-Chloralkyl Amidothiolphosphates"

USSR Author's Certificate No 296773, filed 28 Nov 69, published 15 Jun 71 (from RZh-Khimiya, No 6 (II), Jun 72, Abstract No 6N610)

Translation: Substances with the general formula $ClROP(SR^1)(O)NR^2R^3$ having high fungicidal activity (I; R = alkylene; R^1 = alkyl, aryl, aralkyl; R^2 and R^3 = H, alkyl or R^2R^3N = a ring radical) are obtained by the reaction of cyclic alkyleneglysol chlorophosphites with sulfonamides with heating of an equimolar mixture of reagents to 60-100°. A solution of 0.025 moles of ethyleneglycol-chlorophosphite in 10 mℓ of C_6H_6 is added to a solution of 0.025 moles of phenylsulphenmorpholite in 5 mℓ of C_6H_6 (reaction temperature of the mass $\leq$60°), it is mixed ~ 1 hour at 50-60°, evaporated and I is obtained (R = CH_2CH_2, R^1 = Ph, NR^2R^3 = morpholino) with a yield of 96.3%, a boiling point of 144-5/0.02, d_4^{20} 1.3331, $n^{20}D$1.5655. The I was obtained analogously (R^1, NR^2R^3, the yield in percentages, d_4^{20}, $n^{20}D$ are presented) R = CH_2CH_2, Ph, NHBu, 100, 1.2560, 1.5690; Ph, piperidino, 97.5, 1.2789, 1.5645; Ph, morpholino, 77.6, 1.2982, 1.5630; Ph, ethylenimino, 93, 1.3549, 1.5720, R = $(CH_2)_3$: Ph, morpholino, 91.7, 1.3057, 1.5612;

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

BLIZNYUK, N. K., et al, USSR Author's Certificate No 296772, filed 28 Nov 69, published 15 Jun 71

Ph, piperidino, 86.6, 1.2520, 1.5598; Ph, NHBu, 91.6, 1.2569, 1.5672; Ph, ethylenimino, 93.1, 1.3283, 1.5710; R = CH (Me) CH (Me): Bu, NEt_2, 77.1, 1.0975, 1.4821.

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USSR

UDC 547.341.26'118.07

KHOKHLOV, P. S., MARKOVA, L. I., and ZHEMCHUZHIN, S. G., All-Union Scientific Research Institute of Phytopathology

"A Method of Making Dithiophosphonates"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 7, Mar 72, Author's Certificate No 329184, Division C, filed 4 Aug 70, published 9 Feb 72, p 101

Translation: This Author's Certificate introduces: 1. A method of making dithiophosphonates with the general formula

$$RP(S)(SR'')OC(CH_3)=CHCOOR'$$

where R is an alkyl or aryl, and R' and R" are alkyls. As a distinguishing feature of the patent, the anhydride of the appropriate dithiophosphonic acid reacts with an acetoacetate ester in an inert organic solvent such as benzene, in the presence of a tertiary base such as triethylamine, with subsequent alkylation of the resultant salt with an alkyl halide and isolation of the product by conventional methods. 2. A modification of this method distinguished by the fact that the process is conducted at 0-100°C.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC 632.95

BLIZNYUK, N. K., STREL'TSOV, R. V., KHOKHLOV, P. S., and ZHEMCHUZHIN, S. G., All-Union Scientific Research Institute of Phytopathology

"A Method of Synthesizing Dithiophosphonic Acid Amide-Esters"

USSR Author's Certificate No 259879, filed 17 Jan 69, published 12 Apr 70 (from RZh-Khimiya, No 3, 10 Feb 71, Abstract No 3N557 P)

Translation: Dithiophosphonic acid amide-esters of the general formula $RCONHCH_2CH_2SP(S)(R')NR''R'''$ (I) (R = aryloxyalkyl; R' = alkylaralkyl or aryl; R'' and R''' = H, alkyl, or aralkyl), which have a wide spectrum of physiological activity and may be used as pesticides, are synthesized by the reaction of anhydrides of dithiophosphonic acids with primary or secondary amines in the presence of tertiary amines, followed by treating the resultant dithiophosphonic acid amide salt with RCOCl and ethylenimine. Twenty five thousandths mole of Et_3N is added at approximately 20°C (cooling) with agitation to a mixture of 0.025 mole of methyldithiophosphonic acid anhydride, 0.025 mole of $BuNH_2$ and 30 ml of C_6H_6. The mass is stirred for one hour at 20°C and for two hours at 50°C, after which a solution of 0.025 mole of $2,4\text{-}Cl_2C_6H_3OCH_2COCl$ in 15 ml of C_6H_6 is added slowly, stirred

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

BLIZNYUK, N. K., et al., USSR Author's Certificate No 259879, filed 17 Jan 69, published 12 Apr 70 (from RZh-Khimiya, No 3, 10 Feb 71, Abstract No 3N557 P)

for two hours, and treated with a solution of 0.025 mole of ethylenimine in 5 ml of C_6H_6. The mixture is agitated for one hour at 20°C, 3 hours at 50°C, cooled and the Et_3N hydrochloride is removed by filtration. The filtrate is washed with water, dried, and after concentration by evaporation under vacuum, compound I is obtained in the residue (given are R, R', R'', R''', empirical formula, yield in %, and $n^{20}D$): 2,4-$Cl_2C_6H_3OCH_2$, Me, H, Bu, $C_{15}H_{23}Cl_2N_2O_2PS_2$, 89.5, 1.5865; 2,4,5-$Cl_3C_6H_2OCHMe$, Ph, H, Bu, $C_{21}H_{26}Cl_3N_2O_2PS_2$, 87.5, 1.5975; 2,4-$Cl_2C_6H_3OCH_2$, $PhCh_2$, H, Bu, $C_{21}H_{27}Cl_2N_2O_2PS_2$, 92, 1.6080; 2,4-$Cl_2C_6H_3OCH_2$, $PhCH_2$, Et, Et, $C_{21}H_{27}Cl_2N_2O_2PS_2$, 92, 1.6050; 2,4-$Cl_2C_6H_3OCH_2$, $PhCH_2$, H, $PhCH_2$, $C_{24}H_{25}Cl_2N_2O_2PS_2$, 93.8, 1.6285; 2,4-$Cl_2C_6H_3OCH_2$, $PhCH_2$, H, Ph, $C_{23}H_{23}Cl_2N_2O_2PS_2$, 96.1, 1.6235.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

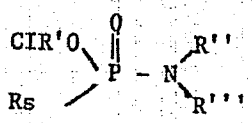
UDC 547.298.1'26.118.07

BLIZNYUK, N. K., KALUTSKIY, L. A., and ZHEMCHUZHIN, S. G., All-Union Scientific Research Institute of Phytopathology

"A Method of Making O-Chloroalkyl-amidothiolphosphates"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 9, Mar 71, Author's Certificate No 296773, Division C, filed 28 Nov 69, published 2 Mar 71, pp 82-83

Translation: This Author's Certificate introduces a method of making O-chloroalkyl-amidothiolphosphates of the general formula



where R is an alkyl, aryl or aralkyl, R' is an alkylene, R'' and R''' are hydrogen, an alkyl, or form together with a nitrogen atom a cyclic system based on phosphorus acid chlorides. As a distinguishing feature of the patent, the process is simplified by interacting cyclic alkylene glycol

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

BLIZNYUK, N. K., et al., Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 9, Mar 71, Author's Certificate No 296773, Division C, filed 28 Nov 69, published 2 Mar 71, pp 82-83

chlorophosphites with sulfenamides with subsequent isolation of the goal product by conventional methods. 2. A modification of this method distinguished by the fact that the process is carried out with heating of an equimolar mixture of the reagents to 60-100°C.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--THIOPHOSPHORYLATED ETHYLAMIDES OF ARYLOXYALKANE CARBOXYLIC ACIDS -U-

AUTHOR-(05)-BLIZNYUK, N.K., STRELTSOV, R.V., KIRILINA, L.E., KHOKHLOV, P.S., ZHEMCHUZHIN, S.G.

COUNTRY OF INFO--USSR

Z1

SOURCE--U.S.S.R. 266,769

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

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC PHOSPHORUS COMPOUND, AMIDE, PHOSPHORUS SULFIDE, ALKANE, CARBOXYLIC ACID, ORGANIC SYNTHESIS, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1422 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128821

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AA0128821

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THIOPHOSPHORYLATED ETHYLAMIDES OF ARYLOXYALKANECARBOXYLIC ACIDS RP(Y)(XR PRIME1)SCH SUB2 CH SUB2 NHCOR PRIME2 (R EQUALS ALKYL, ARYL, ARALKYL, OXYALKYL(ARYL), THIOALKYL(ARYL); R PRIME1 EQUALS ALKYL, ARYL, ARALKYL; R PRIME2 EQUALS ARYLOXYALKYL; X AND Y EQUALS O, S); WERE PREPD. BY TREATING DERIVS. OF P THIO ACIDS WITH DERIVS. OF ARYLOXYALKANECARBOXYLIC ACID. SALTS RP(Y)(XR PRIME1) SH.M (R, R PRIME1, X, AND Y ARE SAME AS THE ABOVE AND M IS AN ORG. OR INORG. CATION), WERE USED FOR P THIOACID DERIVS.; ARYLOXYALKANECARBOXYLIC ACID CHLORIDE WAS USED FOR THE ARYLOXY, ALKANECARBOXYLIC ACID DERIV.; AND THEIR MIXT. WAS TREATED WITH ETHYLENIMINE. THE TITLE PROCESS TOOK PLACE IN AN ORG. SOLVENT, SUCH AS C SUB6 H SUB6, AT 15-20DEGREES.

FACILITY: ALL UNION SCIENTIFIC RESEARCH INSTITUTE OF PHYTOPATHOLOGY.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC 547.341.26.118.07

BLIZNYUK, N. K., STREL'TSOV, R. V., KIRILINA, L. E., and ZHEMCHUZHIN, S. G.,
All-Union Scientific Research Institute of Phytopathology

"A Method of Making Dithiofluorophosphonic Acid Esters"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 35, Soviet Patent No 287016, class 12, filed 31 Oct 69, published 19 Nov 70, p 40

Translation: This Author's Certificate introduces a method of making dithiofluorophosphonic acid esters of the general formula

$$RP(S)FSCH_2CH_2NHCOR'$$

where R is an alkyl, aryl or aralkyl, and R' is an aklyl, aryl or aryloxylalkyl. As a distinguishing feature of the patent, anhydrides of dithiophosphonic acids are treated with potassium fluorides in an organic solvent such as methyl ethyl ketone with subsequent treatment of the resultant salt of dithiofluorophosphonic acid in a carboxylic acid chloride and ethylenimine, and isolation of the product by conventional methods.

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USSR

BLIZNYUK, N. K., et al., Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 35, Soviet Patent No 287016, class 12, filed 31 Oct 69, published 19 Nov 70, p 40

The patent also coverts a modification of this method distinguished by the fact that the process is carried out at 15-60°C.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

UDC: 547.495.1'26.118.07

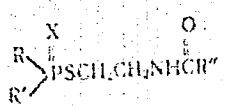
USSR

BLIZNYUK, N. K., STREL'TSOV, R. V., KIRILINA, L. E., ZHEMCHUZHIN, S. G., KHOKHLOV, P. S., All-Union Scientific Research Institute of Phytopathology

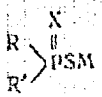
"A Method of Producing Organophosphorus Compounds"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 28, 1970, Soviet Patent No 260475, Class 12, filed 15 May 69, p 26

Abstract: This Author's Certificate introduces: 1. A method of producing organophosphorus compounds of the general formula



where X is oxygen or sulfur, R is an alkyl, aryl, aralkyl, alkoxyl, alkylthio, aryloxy or arylthio, R' is an alkoxy, alkylthio, aryloxy, or arylthio, benzyloxy, benzylthio or amino group, and R" is an alkyl, alkoxyl or amino group. As a distinguishing feature of the patent, the yield of the goal products is increased by interacting amido- or ether salts od phosphorus acids of the general formula



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BLIZNYUK, N. K., et al, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 28, 1970, Soviet Patent No 280475, Class 12, filed 15 May 69, p 26

where X, R and R' have the meanings listed above, and M is an alkali metal or substituted ammonium, with acid chlorides of the general formula

$$R''\overset{\overset{\displaystyle O}{\|}}{C}Cl$$

where R" has the meanings listed above, in an inert organic solvent followed by ethylenimine treatment of the reaction mass and isolation of the goal product by conventional methods. 2. A modification of this method in which the process is carried out at a temperature of 20-80°C.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 008 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--SYNTHESIS AND SOME PROPERTIES OF ACYLVINYLETHYLENIMINES -U-

AUTHOR-(04)-SAVENKOV, N.F., KHOKHLOV, P.S., ZHEMCHUZHIN, S.G., LAPITSKIY, G.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 707-10

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CONDENSATION REACTION, ETHYLENE, IMINE, ORGANIC SYNTHESIS, THICL, CHLORINATED ORGANIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1960 STEP NO--UR/0366/70/006/004/0707/0710

CIRC ACCESSION NO--AP0125549

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 008 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125549

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONDENSATION OF RCOCH:CHCL WITH R PRIME1 H GAVE RCOCH:CHR PRIME1 (I) (R IS ME, PH, OR 4,CLC SUB6 H SUB4, R PRIME1 IS ETHYLENIMINO). THE ACTION OF HCL ON I (R EQUALS ME) GAVE ACCH:CHNHCH SUB2 CH SUB2 CL. SIMILARLY, I REACTED WITH R PRIME2 SH OR R PRIME3 COSH TO GIVE, RESP., RCOCH:CHNHCH SUB2 CH SUB2 SR PRIME2 (II) OR RCOCH:CHNHCH SUB2 CH SUB2 SCOR PRIME3 (III) (COMPD. TYPE, R, AND R PRIME2 OR R PRIME3 GIVEN): II, ME, PH; II, ME, 4,CLC SUB6 H SUB4; II, ME, C SUB6 CL SUB5; II, PH, 2,5,CL SUB2 C SUB6 H SUB3; II, PH, C SUB6 CL SUB5; III, ME, ME; III, PH, PH; III, ME, 2,4,CL SUB2 C SUB6 H SUB3 OCH SUB2; AND III, PH, 2,4,CL SUB2 C SUB6 H SUB3 OCH SUB2.

FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 019 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--QUANTITATIVE ANALYSIS OF HERBICIDES DERIVATIVES OF HALOARYLHYDROXYALKANE CARBOXYLIC ACIDS -U-

AUTHOR--ZHEMCHUZHIN, S.G.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,756

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

DATE PUBLISHED--03MAR70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--CHEMICAL PATENT, HERBICIDE, CHEMICAL ANALYSIS, PHOTOMETRY, HALOGENATED ORGANIC COMPOUND, AROMATIC HYDROXY CARBOXYLIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/0074 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0127701

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

UNCLASSIFIED PROCESSING DATE--27NOV70

2/2 019

CIRC ACCESSION NO--AA0127701

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HERBICIDES ARE QUANT. ANALYZED BY EVAPG. AN ALC. SOLN. OF HERBICIDE, ADDING A SOLN. OF HCL IN MEOH, HOLDING THE OBTAINED SOLN. AT ROOM TEMP., EVAPG., ADDING ETOH AND AN ALK. SOLN. OF NHOH, MIXING, TREATING WITH FE PERCHLORATE, AND SUBSEQUENT PHOTOMETRIC ANAL. OF THE DYED SOLN. OBTAINED. FACILITY: VSESOYUZNYY NAUCHNO-ISSLEDOVATEL'SKIY INSTITUT FITOPATOLOGII.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC 581.14:582.285.22:633.13

SUZDAL'SKAYA, M. V., and ZHEMCHUZHINA, A.I., All-Union Research Institute of Phytopathology imeni B. Vyazema

"The Role of Sexual Reproduction in the Variability of Oat Crown Rust Agent, Puccinia coronata CDA. F. Sp. Avenae Fraser et. Led."

Leningrad, Mikologiya i Fitopatologiya, Vol 7, No 5, 1973, pp 420-424

Abstract: Genetic studies conducted on eight races of Puccinia coronata f. sp. avenae Fraser et Led. (oat crown rust agent) showed that six races (226, 231, 235, 238, 240, 284) were heterozygotic in terms of virulence and color (orange color of uredospores). Dissociation of two races (212 and 239) was achieved for virulence and uredospore color by self fertilization. The resultant data confirmed the generally accepted thesis on the heterozygotic state of the majority of phytopathogen races. For practical purposes the findings indicate that different races of the pathogenic fungus may be obtained which may be less virulent.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC 582.285.22:633.13(47+57)

SUZDAL'SKAYA, M. V., and ZHEMCHUZHINA, A. I., All Union Scientific Research Institute of Phytopathology imeni B. Vyazema

"The Race Composition of Crown Rust of Oats in the USSR"

Leningrad, Mikologiya i Fitopatologiya, Vol 7, No 1, 1973, pp 27-30

Abstract: According to the international register, 260 races of oat crown rust were known in 1970, and they were numbered 201 through 460. An investigation performed in the USSR in 1964-1969 revealed the existence of 44 physiological races in the USSR's main oat regions. Of these, 35 races are specified in the international register (201, 203, 209-212, 226-232, 234-240, 251, 272, 274, 275, 279, 281, 283, 284, 289, 296, 297, 316, 330, 335, and 460) while nine races are new. They have been given conventional designations indicating the year and order of discovery: 1964-1, 1965-1, 1966-1, 1966-2, 1966-3, 1966-4, 1967-1, 1967-2, and 1967-3. Oat strain Santa Fe is resistant to all these nine races. Victoria is susceptible to 1965-1 and Landhafer to 1966-4. Anthony and Trispernia are susceptible to three races, Appler and Bond to four races, Bondvic and Saia to 5 races, and Ukraine to six races. The races most wide spread in the USSR are: 228, 231, 239, and 240. The nine most virulent and dangerous races are: 227, 274, 275, 281, 316, 335, 1964-1, 1967-1, and 1967-3.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC 582.285.22:633.11:582.001.4

KONOVALOVA, N. YE., SUZDAL'SKAYA, N. V., ZHEMCHUZHINA, A. I., SONOKINA, G. K., and SHCHEKOTKOVA, T. V.

"Dynamics of the Race Composition of Agents of Grain Rust in the USSR"

Leningrad, Mikologiya i Fitopatologiya, Vol 4, No 2, 1970, pp 107-122

Abstract: The distribution of brown, yellow, and stem rust of wheat, in hundreds of varieties, and two types of pervarive oat rust throughout the USSR are described, with varying ecological conditions influencing the formation of new types and/or the persistence of the old. A highly virulent rust from the Far East, responsible for destruction of 80% of the crop, had lost its virulence on the West side of the Urals. Mutation depends on many factors, none of which is of similar value in all types. Where the organism passes through an intermediate host, the appearance of new types of very likely: this is rare in asexual stages.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 076 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--CHARACTERISTICS OF P N JUNCTIONS IN PBTE -U-

AUTHOR-(05)-ZHEMCHUZHINA, YE.A., FIGUROVSKIY, YE.N., IVANOV, A.I., INOZEMTSEV, K.I., KIREYEV, P.S.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, RADIOTEKHNIKA I ELEKTRONIKA, VOL. 15, NO. 3, 1970, PP 546-550

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., PHYSICS

TOPIC TAGS--PN JUNCTION, LEAD, TELLURIDE, SINGLE CRYSTAL, MANUFACTURING METHOD, TEMPERATURE GRADIENT, ARGON, ATMOSPHERE, CRYSTAL GROWTH, ELECTRON HOLE, VOLT AMPERE CHARACTERISTIC, JUNCTION DIODE, IR SENSOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605008/812 STEP NO--UR/0109/70/015/003/0546/0550

CIRC ACCESSION NO--AP0139945

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 076 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139945

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ALTHOUGH LEAD TELLURIDE HAS SOME INTERESTING PROPERTIES, ITS P N JUNCTIONS HAVE NOT BEE GIVEN ENOUGH ATTENTION. THIS ARTICLE CONSIDERS THE PROBLEMS IN THE WAY OF OBTAINING PBTE MONOCRYSTALS, THE MANUFACTURE OF THE P N JUNCTIONS AND THE INVESTIGATION OF SOME OF THEIR CHARACTERISTICS. PBTE IS MADE FROM 99.999PERCENT PURE LEAD AND TELLURIUM, BY WEIGHT, BY THE TEMPERATURE GRADIENT METHOD. THE OVEN IN WHICH THE COMPOUND IS SYNTHESIZED, AND ITS TEMPERATURE DISTRIBUTION WITH HEIGHT ARE SOWN IN A DIAGRAM. THE SYNTHESIS WAS MADE IN AN ATMOSPHERE OF SPECTRAL ARGON, AND THE OPERATING TEMPERATURE IN THE SYNTHESIS ZONE AND CRYSTAL GROWTH ZONE WAS MAINTAINED WITH AN ACCURACY OF PLUS OR MINUS 0.5PERCENT C. THE ELECTRON HOLE JUNCTIONS WERE MADE BY THREE METHODS: DIFFUSION OF THE LEAD; VAPORIZATION OF THE TELLURIUM; DIFFUSION OF INDIUM IN THE PBTE. DETAILS OF EACH OF THESE METHODS ARE GIVEN. THE VOLTAMPERE CHARACTERISTICS FOR VARIOUS DIODES, PLOTTED IN SEMILOGARITHMIC COORDINATES, ARE ALSO GIVEN. IT IS STATED THAT THE JUNCTIONS CAN BE USED FOR INFRARED RADIATION SENSORS, LASERS WITH A TUNABLE RADIATION SPECTRUM UNDER PRESSURE, AND SIMILAR DEVICES.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC: 621.382.001.5

ZHEMCHUZHINA, Ye. A., FIGUROVSKIY, Ye. N., IVANOV, A. I., INOZEMTSEV, K. I., and KIREYEV, P. S.

"Characteristics of p-n Junctions in PbTe"

Moscow, Radiotekhnika i Elektronika, Vol. 15, No. 3, 1970, pp 546-550

Abstract: Although lead telluride has some interesting properties, its p-n junctions have not been given enough attention. This article considers the problems in the way of obtaining PbTe monocrystals, the manufacture of the p-n junction, and the investigation of some of their characteristics. PbTe is made from 99.999% pure lead and tellurium, by weight, by the temperature gradient method. The oven in which the compound is synthesized, and its temperature distribution with height are shown in a diagram. The synthesis was made in an atmosphere of spectral argon, and the operating temperature in the synthesis zone and crystal

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

ZHEMCHUZHINA, YE. A., et al, Radiotekhnika i Elektronika, Vol 15, No 3, 1970, pp 546-550

Abstract:

growth zone was maintained with an accuracy of ±0.5% C. The electron-hole junctions were made by three methods: diffusion of the lead; vaporization of the tellurium; diffusion of indium in the PbTe. Details of each of these methods are given. The volt-ampere characteristics for various diodes, plotted on semi-logarithmic coordinates, are also given. It is stated that the junctions can be used for infrared radiation sensors, lasers with a tunable radiation spectrum under pressure, and similar devices.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC 621.791.052.001.24:539.4

MAZUR, V. G., Engineer, ZHEMCHUZHNIKOV, G. V., and NOVIKOV, I. V., Candidates of Technical Sciences, Institute of Electric Welding imeni Ye. O. Paton, Academy of Sciences Ukrainian SSR

"Investigation of Strength Under Static Load of Notched Samples of Joints Made by Electroslag Welding"

Kiev, Avtomaticheskaya Svarka, No 12 (249), Dec 73, pp 11-13

Abstract: Tests were conducted at low temperatures for the static fracture of notched samples of 12KhM steel joints made by electroslag welding and multi-operation welding. It was shown that the critical temperature for drop in rated strength of such samples under static load is low. Normalization lowers this temperature insignificantly. These investigations should be considered only as preliminary ones and the results, which are of practical interest, need further checking using other brands of steel. The article contains 3 illustrations and 3 bibliographic references.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC: 539.4

ZHEMCHUZHNIKOV, G. V., PAVLOV, V. V., Kiev

"Some Characteristic Cases of Brittle Ruptures of Welded Structure"

Kiev, Problemy Prochnosti, No 8, Aug 73, pp 110-113.

Abstract: Certain cases of sudden rupture of welded structures of low-carbon and low-alloy steels are analyzed. It is pointed out that the primary reasons for sudden rupture are a combination of stress concentration, residual tensile stresses and low temperatures.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC 669.187.2

TYURIN, YE. I., and ZHEMCHUZHNYY, M. V., Candidate of Technical Sciences, FEDAN, A. T., Engineer, and PETROV, B. A., Candidates of Technical Sciences, Krasnyy Oktyabr' Plant

"Improvement of Stainless Steel Production Technology"

Moscow, Stal', No 10, Oct 73, pp 895-898

Abstract: Research was conducted by the Krasnyy Oktyabr' Plant jointly with the Volgograd Scientific Research Institute of Machine Building Technology and the Moscow Institute of Steel and Alloys on improving the engineering properties of a number of stainless steels by adding rare-earth metals and microalloying with boron (0.0015-0.0050%). Studies were also performed on the principles of oxidation of impurities in steels baths of varying composition during deep decarburizing using oxygen, and on the features of reducing chromium and iron from the oxides of the high-chromium slag. As a result of this study, an entire series of stainless steels of the austenitic and austenitic-ferritic class was put into mass production, the technology of smelting many stainless steels by a one-slag process was developed and mastered, and the technology of smelting stainless steels with a carbon content less than 0.03%

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

TYURIN, YE. I., et al., Stal', No 10, Oct 73, pp 895-898

is being successfully introduced by the method of remelting tailings with oxygen oxidation. The following persons from the Volgograd and Moscow Institutes have participated in the above mentioned research, which started in 1960: B. S. PETROV, A. F. VISHKAREV, K. I., ANTIPOV, M. N., KUL'KOVA, M. P., SIDEL'KOVSKIY (DECEASED), B. V. IVANOV, YU. V. KRYAKOVSKIY, and N. A. PIROGOV, S. A. BLIZNYUKOV, Candidate of Technical Sciences (Moscow Institute of Steel and Alloys), determined that boron is not a surface-active element on steel Kh23N18 and does not affect the grain boundary state. A. P. OKENKO, Candidate of Technical Sciences, and T. B. SABININA, Engineer, conducted electron microscopy studies of grain-boundary strengthening. Four figures, eight bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC 539.3.01

ZHEMKOV, L. I., MAKEYEV, A. S.

"Nonstationary Thermocontact Problem for a Composite Body of T-Shaped Cross Section"

Tr. Kuybyshev. aviats. in-t (Works of Kuybyshev Aviation Institute), 1972, No. 63, pp 70-75 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V71)

Translation: It is proposed that the solution be found by the method of finite integral transformations and Laplace transformation that makes it possible to reduce the initial problem to finding the solution of a computational system of algebraic equations. Authors' abstract.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR UDC: 621.317.784

ZHENDURAYEV, V. N., KUKUSH, V. D., ZOZULYA, I. I.

"A Transmitted Power Meter With Mixed Inductance-Capacitance Coupling"

Radiotekhnika. Resp. mezhved. temat. nauch. tekhn. sb. (Radio Engineering. Republic Thematic Interdepartmental Scientific and Technical Collection), 1971, vyp. 17, pp 47-53 (from RZh--Radiotekhnika, No 3, Mar 72, Abstract No 3A336)

Translation: The paper describes an instrument for measuring power transmission in waveguide channels with arbitrary load (according to VSWR). The operating principle of the instrument is based on multiplication of microwave signals proportional to the transverse component of the electromagnetic field. The operating principle of the instrument is described and the results of studies are presented. It is concluded that the meter is feasible for use as a monitoring and measurement device in waveguide channels of radio devices. Five illustrations, bibliography of eight titles.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR UDC: 621.376.4(088.8)

ZHENEVSKIY, Yu. P., MUSAYELYAN, S. A., NEVDYAYEV, L. M., and PAVLOV, V. G.

"Second-Generation Device for Demodulating Signals with Pulse-Phase Modulation"

Avt. sv. SSSR (Author's Certificate USSR) Class $21a^4$, 42; $21a^1$, 36/08, (H 03 d 3/24, H 03K 9/04), No. 275170, Application 12.07.68, Publication 12.10.70 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3D94P)

Translation: A device is proposed, which contains a sawtooth voltage oscillator connected to a signal source, a switching circuit with a memory element controlling a source of synchronization, an interpolator, a low-frequency filter, for example, a trigger, and a delay line. To reduce the noise at the communication channel output caused by the random lost operating pulses at the input of the device, the synchronization source is connected to the switching circuit through a coincidence network connected through the control input to the trigger, the switching input of which is directly connected to the signal source while the input of the counter is connected through the delay line to the synchronization source.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR UDC 620.191.193

MOROZOVA, I. K., Engineer; GERASIMOV, V. V., Doctor of Technical Sciences; GROMOVA, A. I., Candidate of Technical Sciences; and ZHENIKHOVA, A. V., Engineer

"Dispersed Composition of Corrosion Products"

Moscow, Teploenergetika, No 10, Oct 70, pp 72-74

Abstract: The purpose of this work was to study the composition of corrosion products found in water as a function of temperature, pH of the medium, and the oxygen content in it. All tests were conducted under static conditions in an autoclave which had an internal surface made of Kh18l0T steel or steel 20. Test time was 100 hours. Test solutions were neutralized deaerated water, NH_4OH (pH = 10), and HNO_3 (pH = 3). After testing, the solution and deposits were removed with a pipet and the autoclave was washed three times with distilled water.

Results of these tests showed that of the particles measuring less than 0.1 micron onlt 1-2% retain their sizes in the case when the iron is in the ionic form and only 3-6% when

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USSR

MOROZOVA, I. K., et al., Teploenergetika, No 10, Oct 70, pp 72-74

the iron is in the colloidal form. The remaining iron is distributed as follows: from 40 to 80% remains in solution in the form of coarse particles (greater than 10 microns) and 15-33% can be observed in the form of deposits on samples of alloys of titanium, zirconium, and nickel. The remaining iron was deposited on the autoclave walls. The test showed that particles less than 0.1 micron is size, obtained at room temperature, increase in size to larger than 10 microns when placed in a medium with a temperature of 300 C.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC 621.357.035:621.79.027

ZHENISHEK, L.

"Installations for Chemical and Electrochemical Surface Processing"

Nauchn.-tekhn. Kong. po Probl. "Razrab. mer Zashchity met. ot Korrozii," 1971. Tezisy Dokl. Vyp 2. Sekts. 4-5 [Scientific and Technical Conference on the Problem "Development of Measures for Protection of Metals from Corrosion," 1971, Theses of Reports, No 2, Sections 4 and 5], Moscow, 1971, pp 136-137 (Translated from Referativnyy Zhurnal, Khimiya, No 3, 1972, Abstract No 3 L343 by A. D. Davydov).

Translation: Brief information is given on the equipment used for galvanic shops produced by KOVO-FINISH Plant (CSSR).

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USSR UDC 542.91:547.9:577.15

PONOMAREVA, V. M., ZHENODAROVA, S. M., Institute of Biological Physics of the USSR Academy of Sciences

"Preparation of Inosine-2',3'-cyclophosphate by Enzymatic Deamination of Adenosine-2',3'-cyclophosphate"

Moscow, Izvestiya Akademii Nauk SSSR -- Seriya Khimicheskaya, No 11, 1972, pp 2632-2633

Abstract: Inosine-2',3'-cyclophosphate was obtained directly from adenosine-2',3'-cyclophosphate (Reanal, Hungary) by incubating the latter with adenosinedeaminaze of the mucilaginous intestine (KF 3.5.4.4.)(Calbiochem, USA) in a 0.2 M phosphate buffer (pH 7.0) for 15 hours at 25°. Analysis of the reaction mixture by the methods of chromatography and electrophoresis on paper and ultraviolet spectrophotometry demonstrated that the deamination takes place quantitatively, but inozine-2',3'-cyclophosphate. The enzyme is separated by gel filtration in Sephadex G-25 after which the mixture was separated by chromatography in a column with a paper powder (Chemapol, Czechoslovakia) in the system made up of propanol-2, concentrated ammonia and water (7:1:2). The yield of inosine-2',3'-cyclophosphate was 25% for the adenosine-2',3'-cyclophosphate used.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

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UDC 547.963.3+542.91

ZHENODAROVA, S. M., KLYAGINA, V. P., Instiute of Biological Physics, Academy of Sciences USSR, Pushchino-na-Oke, Moskovskaya Oblast'

"Stepwise Synthesis of Oligonucleotides. VII. Enzymatic Synthesis of Anomalous Diribunucleosidemonophosphates"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70, pp 2124-2127

Abstract: The following diribonucleosidemonophosphates with anomalous base or anomalous carbon atom were synthesized by enzymatic reaction with ribonuclease: 5-bromouridyl-(3'-5')-uridine, uridilyl-(3'-5')-5-chlorouridine, uridilyl-(3'-5')-6-azauridine, uridilyl-(3'-5')-desoxythimidine, uridilyl-(3'-5')-2',3'-O-isopropylideneuridine and uridilyl-(3'-5')-uridine. The mixtures of corresponding substrates and acceptors (at a ratio of 1:4) were incubated in a tris buffer (pH 7.6) in the presence of pancreatic ribonuclease (36 ug/ml) at 0° for 24 hrs. The products were purified by paper chromatography or paper electrophoresis. The authors thank O. A. SMOLYANINOV for conducting some of the syntheses.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR UDC: 621.373.42.029.64:621.385.64

MASHIN, B. G., SOKOLOV, I. V., VODYANITSKIY, V. I., ZHENOVENKOV, S. I.

"A Superhigh-Frequency Magnetron Oscillator"

USSR Author's Certificate No 270002, filed 1 Aug 67, published 13 Aug 70 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1D353 P)

Translation: To improve the reliability of a magnetron microwave oscillator (see RZh-Radiotekhnika, 1968, 4D366), it is proposed that a full-wave rectifier consisting of two diodes and the secondary of an auxiliary transformer be connected in series with the windings of the electromagnet. At the instant of actuation of the oscillator, the primary winding of the auxiliary transformer is completely connected to the power supply terminals, but under operating conditions, a smaller part of it is connected across the line by means of a switch through the primary of the power transformer. One illustration. V. P.

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Radiobiology

UDC 617-001.28-092:519.24

USSR

ZHERBIN, YE. A., ZHERBIN, R. N., BESYADOVSKIY, R. A., and IVANOV, K. V.,

"Mathematical Model of Radiation Injury for Applying Experimental Data to Man"

Moscow, Meditsinskaya Radiologiya, Vol 15, No 12, 1970, pp 42-44

Abstract: A comparison of the results of animal experiments shows that the general patterns of development of radiation sickness in animals are fundamentally the same as in man. Common distributions of radiation lesions in different species of animals by degree ofseverity suggest that analogous relationships exist in man. Since the reaction to radiation of a given species varies from individual to individual, the phenomenon is largely a random process. The proposed stochastic model of radiation injury involving the use of a normal distribution function makes it possible to extrapolate data obtained in radiobiological experiments (taking into account species sensitivity) to man on the basis of the common distribution patterns of radiation lesions according to the degree of severity. The degree of severity can be precisely determined from the number of individuals dying in a given period of time after exposure.

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Radiobiology

UDC 617-001.28-092:519.24

USSR

ZHERBIN, YE. A., ZHERBIN, B. N., BESYADOVSKIY, R. A., and IVANOV, K. V.,

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

UNCLASSIFIED PROCESSING DATE--23OCT70

1/2 020

TITLE--A DEVICE FOR PROTECTING CHEMICAL CONTAINER TYPE APPARATUS WITH POWDERED POLYMERS -U-

AUTHOR-(03)-ZHERDENKO, A.M., YEFREMENKO, I.P., MISHUROV, V.I.

COUNTRY OF INFO--USSR

SOURCE--KHIM. NEFT. MASHINOSTR. 1970, (2), 38-40

DATE PUBLISHED--------70

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

TOPIC TAGS--SPECIALIZED COATING, CONTAINER, PLASTIC COATING, POLYETHYLENE, EPOXY RESIN, FLUOROCARBON RESIN, PLASTIC FABRICATING MACHINERY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0735 STEP NO--UR/0314/70/000/002/0038/0040

CIRC ACCESSION NO--AP0119642

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119642

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A COATING DEVICE WAS DEVELOPED FOR COATING CONTAINERS, REACTORS, DRUMS, LIDS, ETC. WITH A PROTECTIVE POLYMER COATING. A DIAGRAM OF THE DEVICE AND ITS MODE OF OPERATION WERE PRESENTED. THE USE OF THE DEVICE FOR COATING CONTAINERS WITH MOLTEN POWD. POLYETHYLENE, EPOXY RESINS, AND F CONTG. COPOLYMERS WAS DISCUSSED.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

UDC 620.164.1:[illegible]

USSR

RUBENCHIK, Yu. I., KROSHKIN, V. A., MEDINSKAYA, I. P., ZHERDEV, A. V., VAYNTRAUB, S. S., and SUKHOMLINA, A. G., VNIIPTKhimnefteapparatury [Expansion unknown], Kommunarsk Metallurgical Plant

"Work Hardening of 10G2FR Plate Steel"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 11, Nov 70, pp 55-57

Abstract: A study was made of the effect of thermal hardening and hot rolling of 10G2FR plate steel on its mechanical properties. In the thermally work hardened state at elevated temperatures the tensile strength of 10G2FR steel does not change up to 400° C, but thereafter decreases drastically, so that at 450° C the thermally work hardened metal does not differ from the hot rolled one. The mechanical properties of 10G2FR steel of different thickness in the hot rolled and thermally work hardened states are presented. Use of rare earth metals make it possible to produce a sulfurless metal with a uniform distribution of segregated units along the plate section, ensuring sufficient ductility and strength of the metal when it is made into plates of different thickness.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

UNCLASSIFIED PROCESSING DATE--20NOV70

1/2 030

TITLE--AVIATION AND NAVAL MEDICINE, THE STATE OF THE CARDIOVASCULAR SYSTEMS OF SHIP SPECIALISTS UNDER CONDITIONS OF LONG VOYAGES -U-

AUTHOR-(02)-MAZUROV, K.V., ZHERDEV, G.M.

COUNTRY OF INFO--USSR

SOURCE--VOYENNO-MEDITSINSKIY ZHURNAL, NO 3, 1970, PP 67-68

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HAZARDOUS SOUND, CARDIOVASCULAR SYSTEM, NAVAL MEDICINE, AIR TEMPERATURE, ATMOSPHERIC HUMIDITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3000/0365 STEP NO--UR/0177/70/000/003/0067/0068

CIRC ACCESSION NO--AP0136151

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

UNCLASSIFIED

PROCESSING DATE--20NOV70

2/2 030

CIRC ACCESSION NO--AP0134151

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPARATIVE INVESTIGATIONS HAVE BEEN CONDUCTED OF THE LEVEL OF AIR NOISE, CONVECTION TEMPERATURE AND RELATIVE ATMOSPHERIC HUMIDITY IN SHIPS QUARTERS TO DETERMINE THEIR INFLUENCE ON THE FUNCTIONAL STATE OF THE CARDIOVASCULAR SYSTEM IN SPECIALISTS ON VESSELS WITH GAS TURBINE AND DIESEL INSTALLATIONS DURING LONG VOYAGES IN SUBTROPICAL REGIONS. SPECIALISTS OF MACHINE DIVISIONS AND PERSONNEL OF CONTROL GROUPS HAVE BEEN EXAMINED BEFORE DEPARTURE ON A VOYAGE, AFTER THIRTY DAYS OF THE VOYAGE AND AFTER ITS COMPLETION. TAKING INTO ACCOUNT THAT BEFORE SAILING THE VESSELS HAVE NOT GONE TO SEA FOR A MONTH AND A HALF, WE CONSIDERED IT POSSIBLE TO ADOPT AS BACKGROUND INDICATORS THOSE OF THE STATE OF THE CARDIOVASCULAR SYSTEM IN SHIP'S SPECIALISTS OBTAINED DURING THAT TIME. THE CONVECTION TEMPERATURE OF THE AIR IN LIVING QUARTERS AND MACHINE SECTIONS VARIED IN THE RANGE OF 19-22DEGREES, THE RELATIVE HUMIDITY FROM 70 TO 84PERCENT. THE LEVEL OF AIR NOISE DID NOT EXCEED 60-70 DB WITH A MAXIMUM OF SONIC ENERGY AT LOW FREQUENCIES.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

UNCLASSIFIED PROCESSING DATE--23OCT70

1/2 016

TITLE--STUDY OF THE WORKING SPACE AND OF THE WORKING CONDITIONS OF A 16.5 MVA FURNANCE MAKING SILICOMANGANESE -U-

AUTHOR-(04)-ZHERDEV, I.T., CHKHEYDZE, Z.A., SIORIDZE, G.YA., YASKOV, YE.S.

COUNTRY OF INFO--USSR

SOURCE--STAL' 1970, 30(2), 137

DATE PUBLISHED--------70

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

TOPIC TAGS--FERROALLOY, ELECTRIC FURNACE, CURRENT DENSITY, ELECTRODE PROPERTY, TEMPERATURE DISTRIBUTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1869 STEP NO--UR/0133/70/030/002/0137/0137

CIRC ACCESSION NO--AP0115688

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

UNCLASSIFIED

PROCESSING DATE--23OCT70

2/2 016

CIRC ACCESSION NO--AP0115688

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CHARGE COMPN., TEMP., C.D., AND POWER DISTRIBUTION IN THE CHARGE OF A 7-M DIAM., 3-M DEEP, 3 ELECTRODE FURNACE WERE DETD. RADIAL CURRENT DISTRIBUTION FROM ELECTRODES WAS VERY NONUNIFORM, AND C.D. INCREASED DOWNWARDS, NONE BEING OBSD. IN THE UPPER LAYERS OF THE CHARGE AND UNDER FEEDER SPOUTS TO THE DEPTH OF 2-2.3 M. A SMALL ARC WAS PRESENT IN THE CIRCUIT OF EACH PHASE. POWER DISTRIBUTION PER PHASE WAS SUBSTANTIALLY UNIFORM.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

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1/2 020 PROCESSING DATE--30OCT70

TITLE--DENSITY OF SULFUR HEXAFLUORIDE IN THE MINUS 40 TO PLUS 200DEGREES RANGE AT PRESSURES TO 500 BARS -U-

AUTHOR-(02)-ULYBIN, S.A., ZHERDEV, YE.P.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191 (3), 572-3

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SPECIFIC DENSITY, FLUORIDE, SULFUR COMPOUND, THERMAL EFFECT, HIGH PRESSURE EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/2066 STEP NO--UR/0020/70/191/003/0572/0573

CIRC ACCESSION NO--AT0122295

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0122295

ABSTRACT/EXTRACT--(U) GP-0- 18 ISOTHERMS AT 4-500 BARS IN AN APP. AND SHEINDLIN (1963) WITH AN ERROR OF 0.15PERCENT FOR THE LIQ. PHASES. THE 40.0 TO 45.0DEGREES WAS DETD. MOSCOW, USSR.

ABSTRACT. THE D. OF SF SUB6 WAS DETD. WITH BASED ON THE METHOD OF KIRILLIN 0.25PERCENT FOR THE GASEOUS AND SATD. VAPOR PRESSURE FROM MINUS

FACILITY: MOSK. ENERG. INST.,

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 028 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--DEPENDENCE OF RESIDUAL STRESSES IN A GLASS FIBER REINFORCED PLASTIC BINDER ON HARDENING CONDITIONS -U-

AUTHOR-(05)-ABIBOV, A.L., TITARENKO, G.S., KORINOVASOVA, M.YU., ZHERDEV, YU.V., ZAKHAROV, A.M.

COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970, 6(1), 176

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--GLASS FIBER, REINFORCED PLASTIC, RESIDUAL STRESS, POLYMER BINDER/(U)EDT10 PLASTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0516 STEP NO--UR/0374/70/006/001/0176/0176

CIRC ACCESSION NO--AP0107121

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 028 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0107121

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESIDUAL STRESSES IN AN EDT-10 COMPN. (I) WERE STUDIED AS A FUNCTION OF THE HARDENING TEMP. (UNDER ISOTHERMAL CONDITIONS) AND OF THE EXPTL. TEMP. FOLLOWING SUPPLEMENTAL HEATING. THE NO. OF ISOCHROMES STEADILY DECREASED WITH HEATING REACHING 0 AT A TEMP. (FIXED STRUCTURE TEMP.) WHICH EXCEEDED THE HARDENING TEMP. BY 8-10DEGREES, SUGGESTING THE COMPLETE DISAPPEARANCE OF STRAIN IN I. THE HARDENING TEMP. WAS PROPORTIONAL TO THE FIXED STRUCTURE TEMP. AT 85-180DEGREES.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 021 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--INTERNAL STRESSES AND DIFFUSION OF WATER IN POLYMERS -U-

AUTHOR-(05)-ARTAMONOVA, R.V., VINOGRADOVA, L.A., GARANINA, S.D., ZHERDEV, YU.V., KOROLEV, A.YA.
COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN. SER. A 1970, 12(2), 336-42

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--INTERNAL STRESS, WATER, EPOXY RESIN, POLYETHYLENE, POLYAMINE, FLUID DIFFUSION/(U)ED5 EPOXY RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/0319 STEP NO--UR/0459/70/012/002/0336/0242

CIRC ACCESSION NO--AP0111513
UNCLASSIFIED

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2/2 021 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0111513

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF H SUB2 O AND H SUB2 O VAPOR ON INTERNAL STRESSES IN EPOXY RESIN ED 5 COATINGS HARDENED WITH POLYETHYLENE POLYAMINE AND MODIFIED WITH DEG-1 WERE STUDIED. SWELLING IN H SUB2 O REDUCED, AND EVEN CHANGED THE SING. OF INTERNAL STRESSES PRODUCED DURING THE THERMAL HARDENING AND SUBSEQUENT COOLING TO ROOM TEMP. THE INTERNAL STRESSES WERE INVERSELY PROPORTIONAL TO THE RELATIVE HUMIDITY. THE DIFFUSION COEFF. OF H SUB2 O (D), DETD. FROM KINETIC DATA (2.4 TIMES 10 PRIME NEGATIVE9 CM PRIME2-SEC) AGREED WITH D MEASURED BY THE SORPTION METHOD. AN EQUATION WAS PROPOSED FOR THE EVALUATION OF THE MAX. EXPTL. ERROR IN THE DETN. OF INTERNAL STRESSES BY THE CANTILEVER METHOD (A.T. SANZHAROVSKII, G. I. EPIFANOV, 1961) DUE TO A NONUNIVORM DISTRIBUTION OF H SUB2 O ALONG THE COATING.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 026 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--ADHESION AND INTERNAL STRESSES IN POLYMERS -U-

AUTHOR-(05)-VINOGRADOVA, L.M., ZHERDEV, YU.V., KOROLEV, A.YA., SIMONENKOVA, R.V., ARTAMONOVA, R.V.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN. SER. A 1970, 12(2), 348-54

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--ADHESION, INTERNAL STRESS, EPOXY RESIN, STAINLESS STEEL, ADHESIVE STRENGTH/(U)ED5 EPOXY RESIN, (U)EDGI RESIN MODIFIER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0254 STEP NO--UR/0459/70/012/002/0348/0354

CIRC ACCESSION NO--AP0106910

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 026 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0106910

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADHESIVE STRENGTH OF EPOXY RESIN ED-5 (I) (MODIFIED WITH DEG-1 AND HARDENED WITH POLYETHYLENEPOLYAMINE), STAINLESS STEEL (II) PAIRS WAS STUDIED AS A FUNCTION OF THE HARDENING TEMP. (T) AND WITH REF. TO INTERNAL STRESSES ARISING DUE TO THE FORMATION OF ADHESIVE BONDS. THE ADHESIVE STRENGTH WAS PROPORTIONAL TO T, REACHING A MAX. OF 360 KG-CM PRIME2, WHEN THE INTERNAL STRESSES BROUGHT ABOUT PRESSURE PERPENDICULAR TO THE I-II INTERFACE. A PLOT OF ADHESIVE STRENGTH VS. TEMP. FOR THE I "DISSOLVED" IN II SYSTEM REVEALED THAT THE ADHESIVE STRENGTH DECLINED, REACHING A MIN. AT 100DEGREES AND THEN SUDDENLY INCREASED. A POSSIBLE EXPLANATION FOR THE ANOMALOUS BEHAVIOR WAS GIVEN. MEASUREMENTS OF INTERNAL STRESSES INDICATED THAT EFFECTIVE ADHESION MARKEDLY INCREASED WITH T AT LARGER THAN 100-200DEGREES, PRESUMABLY DUE TO THE FORMATION OF STRONGER ADHESIVE, AND POSSIBLY, CHEM. BONDS. AT LOWER TEMPS. THE ADHESION WAS INDEPENDENT OF T. THE COMPONENT OF THE ADHESIVE STRENGTH RELATED TO FRICTION I.E., THE NORMAL PRESSURE DUE TO INTERNAL STRESSES IN THE POLYMER AND THE STATIC FRICTION COEFF. OF THE I-II PAIR WERE DETD.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR UDC 678.067.5

GARANINA, S. D., ZHERDEV, YU. V., KOROLEV, A. YA., GORYUSHKIN, V. A., and AVRASIN, YA. D., All-Union Scientific Research Institute of Aviation Materials, Moscow, State Committee for Aviation Technology USSR

"Water Diffusion in Fiberglass Plastics"

Moscow, Kolloidnyy Zhurnal, Vol 32, No 4, Jul-Aug 70, pp 508-511

Abstract: The sorption method was used to study water diffusion in brand EDT-10-VO unidirectional winding epoxy fiberglass plastics in relation to the type of surface filler pretreatment, the direction of water molecule diffusion (along and across the fibers) and other factors. It was found that in the case of water penetration across the fibers the diffusion coefficient is lower than for solidified binder EDT-10, which indicates the absence of through pores in this direction. In the case of water penetration along the fibers the diffusion constant is almost two orders higher than across the fibers, which indicates the presence of a large number of microdefects in the plastic mainly in the boundary layer between the glass fiber and the polymer.

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USSR

GARANINA, S. D., et al., Kolloidnyy Zhurnal, Vol 32, No 4, Jul-Aug 70, pp 508-511

Boiling of specimens in water results in the formation of additional microdefects in this boundary layer, which results in a significant increase in the rate of water molecule diffusion. Pretreating the glass-fiber filler surface with chemically active substances (finishes) leads to a significant decrease in the water diffusion coefficient.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 015 UNCLASSIFIED

TITLE--PREPARING HARDENED THIN FILMS FROM THERMOSETTING POLYMERS -U- PROCESSING DATE--23OCT70

AUTHOR-(04)-GARANINA, S.D., GROMOVA, M.V., KOROLEV, A.YA., ZHERDEY, YU.V.

COUNTRY OF INFO--USSR

SOURCE--PLAST. MASSY 1970, (3), 61

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--THERMOSETTING MATERIAL, PLASTIC FILM, FLUOROCARBON RESIN, EPOXY RESIN, POLYESTER RESIN, PLASTIC FABRICATION/(U)FLUOROPLASTY FLUORINE PLASTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0581 STEP NO--UR/0191/70/000/003/0061/0061

CIRC ACCESSION NO--AP0119499

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 015 UNCLASSIFIED

CIRC ACCESSION NO--AP0119499 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THIN FILMS FROM THERMOSETTING POLYMERS (I) WERE PREPD. BY PRESSING I SAMPELS IN A COLLAPSIBLE FTOROPLAST-4 CONTAINER. THE METHOD WAS SUITABLE FOR I WHICH DID NTO LIBERATE LARGE AMTS. OF VOLATILE COMPDS. DURING HARDENING (E.G., EPOXY RESINS, POLYESTERS, AND OTHERS).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR UDC: 621.762.32:539.219

DOROFEYEV, Yu. G., ZHERDITSKIY, N. T., PRUTSAKOV, V. T., MURAL', V. V.
LAMKOV, K. K., Novocherkassk Polytechnical Institute

" Effect of Thermomechanical Treatment on Diffusion of Carbon in Steel Produced by Dynamic Hot-Pressing"

Kiev, Poroshkovaya Metallurgiya, No 4, 1972, pp 36-39.

Abstract: Studies were performed using specimens produced by pressing with subsequent heating and dynamic hot-pressing at 1100°C with holding at this temperature for 20 minutes. After the holding, dynamic hot-pressing was performed at 1100, 1000, 900, and 800°C in a die heated to 600°C with subsequent rapid cooling of the specimens in water. The diffusion of carbon occurred in a rarefied gas medium, using C^{14} as a label. It was found that with high-temperature deformation with shock loads and subsequent hardening, recrystallization processes are suppressed. Therefore, relief of hardening due to elimination of dislocation imperfections occurs incompletely, and the structure of the material has high internal stresses and dislocation

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USSR

DOROFEYEV, Yu. G., ZHERDITSKIY, N. T., PRUDTSAKOV, V. T., MURAL', V. V., LAMKOV, K. K., Novocherkassk Polytechnical Institute, Kiev, Poroshkovaya Metallurgiya, No 4, 1972, pp 36-39.

density and low mosaic block dimensions. The increase in dislocation density reduces the diffusion of mobility of the carbon atoms, resulting from their capture by structural defects, the concentration of which increases with decreasing dynamic hot-pressing temperature.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

USSR

UDC 621.762.002.5(088.8)

DOROFEYEV, YU. G., LEBEDEV, B. A., ZHERDITSKIY, N. T., and KOLESNIKOV, V. A., Novocherkassk Polytechnic Institute

"Die for Making P/M Bushings"

USSR Authors' Certificate No 264136, Cl. 49 h, 11; 49 i, 16, (B 21 j B 21 k), filed 19 Jun 68, published 24 Jun 70 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 3G477P)

Translation: The die consists of a frame, an upper punch suspended from the top of the die frame on a spring, a bottom punch which is the pusher, and a needle passing through the upper punch. In order to make possible the extraction of the needle from a pressed bushing without breaking it, the die is equipped with a double upper-punch lock, which is tripped by guide blocks fastened to the top of the die frame. Four illustrations.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 024 UNCLASSIFIED

TITLE--MICROSTRUCTURE OF IRON POWDER MOULDINGS IN RELATION TO THE MOULDING METHOD -U- PROCESSING DATE--20NOV70

AUTHOR-(04)-DOROFEYEV, YU.G., KRITIN, O.I., ZHERDITSKY, N.T., PRUTSKOV, V.T.

COUNTRY OF INFO--USSR

SOURCE--PORSHKOVAYA MET., APR. 1970, (4), 39-43

DATE PUBLISHED--------70

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

TOPIC TAGS--IRON POWDER, POWDER METAL MOLDING, POWDER METAL PROPERTY, GRAIN STRUCTURE, INTERNAL STRESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0635 STEP NO--UR/0226/70/000/004/0039/0043

CIRC ACCESSION NO--AP0134397

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2/2 024

UNCLASSIFIED

CIRC ACCESSION NO--AP0134397 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MICROSTRUCTURE OF FE POWDER MOULDINGS PRODUCED UNDER STANDARD STATIC AND DYNAMIC CONDITIONS WAS STUDIED AND CORRELATED WITH THE PARAMETERS OF THE MOULDING PROCESS. THUS MATERIALS SUBJECTED TO STATIC AND DYNAMIC MOULDING PROCESSES MAY DIFFER CONSIDERABLY IN MICROSTRUCTURE AND PHYSICOMECHANICAL PROPERTIES, EVEN IF THE FINAL POROSITY IS OF THE SAME ORDER. THESE DIFFERENCES ARE ATTRIBUTED TO DIFFERENCES IN THE STRESS AND STRAIN DISTRIBUTION IN AND BETWEEN THE INDIVIDUAL GRAINS AS CONFIRMED BY HARDNESS MEASUREMENTS.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

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UDC (576.8.097.3+547.23):616-001.28

ZHEREBCHENKO, P. G.

Protivoluchevyye Svoystva Indolilalkilaminov (Antiradiation Properties of Indolylalkylamines), Moscow, "Atomizdat," 1971, 200 pp

Translation: Annotation: Many years of research are presented, together with literature data, on the radioprotective effect of a large number of substances belonging to the class of indolylalkylamines.

An analysis is made of the relationship between the antiradiation activity and some other pharmacological properties of indolylalkylamines on the one hand, and their chemical structure on the other. In addition, data are presented on antagonism and synergism in the radioprotective effect, ways of changing the toxicity of radioprotectors, special features of protecting the hematopoietic organs, and also the leading mechanisms which determine the antiradiation activity of this class of compounds.

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USSR

ZHEREBCHENKO, P. G., Protivoluchevyye Svoystva Indolilalkilaminov, Moscow, "Atomizdat," 1971, 200 pp

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ZHEREBCHENKO, P. G., Protivoluchevyye Svoystva Indolilalkilaminov, Moscow, "Atomizdat," 1971, 200 pp

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

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ZHEREBCHENKO, P. G., Protivoluchevyye Svoystva Indolilalkilaminov, Moscow, "Atomizdat," 1971, 200 pp

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ZHEREBCHENKO, P. G., Protivoluchevyye Svoystva Indolilalkilaminov, Moscow, "Atomizdat," 1971, 200 pp

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ZHEREBCHENKO, P. G., Protivoluchevyye Svoystva Indolilalkilaminov, Moscow, "Atomizdat," 1971, 200 pp

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 029 UNCLASSIFIED

TITLE--ANTIRADIATION PROTECTION -U- PROCESSING DATE--04DEC70

AUTHOR-(02)-KONSTANTINOVA, M.M., ZHEREBCHENKO, P.G.

COUNTRY OF INFO--USSR

SOURCE--RADIOBIOLOGIYA 1970, 10(2), 230-41

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RADIOPROTECTIVE AGENT, ANOXIA, TOXICITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605004/G03 STEP NO--UR/0205/70/010/002/0230/0241

CIRC ACCESSION NO--AP0139615

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 029 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139615

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRESENT DAY VIEW OF THE MECHANISM OF RADIOPROTECTION AND HYPOTHESES ON ITS ACTION ARE DISCUSSED. RADIOPROTECTORS LIKE SH, ANOXIA PRODUCING SUBSTANCES, CHELATING AGENTS, AND SUBSTANCES INDUCING PHYSIOL. CHANGES ARE REVIEWED. THE POSSIBILITY OF LOWERING THE TOXICITY OF SOME SUBSTANCES IS CONSIDERED.

FACILITY: INST. BIOL. RAZV. MOSCOW, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 010 UNCLASSIFIED

TITLE--SPECTRAL CHARACTERISTICS OF HIGH FREQUENCY ELECTRODELESS LAMPS WITH VAPORS OF LEAD AND LEAD SALTS -U-

PROCESSING DATE--27NOV70

AUTHOR-(02)-BAZHOV, A.S., ZHEREBENKO, A.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(4), 760-2

DATE PUBLISHED-------70

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

TOPIC TAGS--ELECTRIC LAMP, ELECTROLUMINESCENT LAMP, LEAD, METAL VAPOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1777

STEP NO--UR/0368/70/012/004/0760/0762

CIRC ACCESSION NO--AP0135344

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 010 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135344

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BASIC SPECTRAL CHARACTERISTICS OF HIGH FREQUENCY ELECTRODELESS LAMPS WITH PB OR PB SALT VAPORS ARE GIVEN AND DISCUSSED.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

1/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--ABSORPTION SPECTRA OF CADMIUM HALIDE CRYSTALS -U-

AUTHOR-(04)-LYSKOVICH, A.B., ZHEREBETSKIY, S.K., CHORNIY, Z.P., PENTSAK, G.M.

COUNTRY OF INFO--USSR

SOURCE--UKR. FIZ. ZH. (RUSS. ED.) 1970, 15(4), 606-10

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--CADMIUM COMPOUND, HALIDE, BROMIDE, CRYSTAL ABSORPTION SPECTRUM, CADMIUM CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0469 STEP NO--UR/0185/70/015/004/0606/0610

CIRC ACCESSION NO--AP0135932

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

2/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0135932

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT 90DEGREESK, THE ELECTRONIC ABSORPTION SPECTRA OF CRYST. CDCL SUB2 AND CDBR SUB2 SHOWED PRESENCE OF IMPURITIES. IN CDCL SUB2, BR IMPURITIES SHIFTED ABSORPTION MAX. TO LONGER WAVELENGTH AND THE PRESENCE OF I CAUSED A LAMBDA SUBMAX AT 246 MMU. ALL INVESTIGATED CDBR SUB2 SAMPLES CONTAINED SOME I IMPURITIES GIVING LAMBDA SUBMAX AT 274 MMU. THE PRESENCE OF PB PRIME2POSITIVE IN CDCL SUB2 AND CDBR SUB2 CAUSES APPEARANCE OF LAMBDA SUBMAX AT 284 AND 315 MMU, RESP. FACILITY: L'VOV. GOSUNIV. IM. FRANKO, LVOV, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

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USSR

UDC 576.851.48.097:616-006.04

MAYKO, I. I., KAGANS'KA, M. B., RASHBA, O. Ya., SHVAYGER, M. O., MANDRIK, T. P., and ZHEREBILO, O. S., Institute of Microbiology and Virology, Academy of Sciences Ukrainian SSR

"Antitumor Activity of Polysaccharide-Containing Complexes of Escherichia coli"

Kiev, Mikrobiologicheskiy Zhurnal, Vol 33, No 5, Sep/Oct 71, pp 548-552

Abstract: The antitumor activity of polysaccharide-containing complexes derived from the alkali-forming mutant KM of E. coli was studied in experiments on mice infected with sarcoma 37, lymphadenoma NK/Ly, lymphoma LyO-1, Ehrlich's tumor, and sarcoma K-239. The following polysaccharide-containing complexes were used: Boivin's antigen; complex antigen prepared according to O. Westfal; complex antigen prepared according to G. Freeman; "alkali" polysaccharides obtained by heating the bacterial mass with alkali; and exocellular polysaccharides isolated from the culture liquid. The highest activity was exhibited by Boivin's and Westfal's antigens, which inhibited the growth of most of the tumors studied. Toxicity (LD_{50} in mg/kg) was 130, 525, 2200, 3000, and 1700 for Boivin's antigen, Westfal's antigen, Freeman's antigen, "alkali" polysaccharides, and exocellular polysaccharides, respectively. The monosaccharide composition of the polysaccharide-containing complexes was determined chromatographically (table).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203810008-7

Steels

USSR UDC 621.785.533:669.018.8

POPOV, I. N., PEREVERSEV, V. M., KOROLEV, P. G., ZHEREBKIN, O. A., and NESTERENKO, V. I., Kursk Polytechnic Institute

"Cyclic Strength and Residual Stresses of Nitrocemented Steel Containing Chromium and Nickel"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 3, 1973, pp 152-154

Abstract: The fatigue strength and residual stresses of 20KhGSNT nitrocemented steel containing chromium and nickel were experimentally investigated. The fatigue strength on bending after nitrocementation did not decrease, in comparison with cementation and temper hardening by repeated heating. The high value of the endurance limit of 20KhGSNT nitrocemented steel is a function of the presence on the surface of the nitrocemented layer of compressive residual principal stresses, determined with the help of the "PION 2" device. The presence of compressive residual stresses on the metal surface results also from the analysis of sources of fatigue failures. Two figures, five bibliographic references.

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Geomagnetic Activity and E_s Formation

(Abstract: "Geomagnetic Activity, E_s Formation and Ionospheric Absorption of Radio Waves," by G. A. Zherebtsov and V. A. Kurilov, Siberian Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Absorption; Moscow, Geomagnetizm i Aeronomiya, Vol X. No 1. 1970. pp 160-162)

In clarifying the dependence of appearance of the E_s layer on geomagnetic activity the authors made a statistical analysis of data from ionospheric soundings made at seven stations during 1965. The locations of the stations made it possible to clarify the latitudinal variation of the dependence of the appearance of E_s with $f_0E_s \geqslant 5$ Mc/sec on the K_p index. In determining this dependence the authors selected days with increased geomagnetic activity (D) for which $\sum K_p \geqslant 18$ and days which were relatively magnetically quiet (Q) with $\sum K_p \leqslant 9$. The number of D and Q days for each season of the year was 40. A positive correlation of the appearance of E_s with $f_0E_s \geqslant 5$ Mc/sec and magnetic activity is observed for latitudes close to the zone of maximum occurrence of auroras and for stations situated at the center of the polar cap zone in summer. For stations in the middle latitudes there is a negative correlation in summer, whereas during winter and the equinoctial period there is no de-

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pendence. Usually in the high latitudes at the time of auroras and particularly in the morning hours after an aurora there is radio wave absorption. However, total absorption, particularly at the group of polar cap stations, is observed during magnetically quiet periods. When there is an undisturbed magnetic field the probability of absorption in the zone of the maximum recurrence of auroras is rather insignificant and in the morning hours attains 10-15 percent in comparison with 30-40 percent during magnetically disturbed periods. For latitudes situated within the zone of maximum recurrence of auroras the percentage of absorption is insignificant on both D and Q days. There is a maximum in the seasonal variation of auroras during the equinoctial period. During the considered period there was not a single case of absorption at middle-latitude stations.

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1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--EVALUATION OF THE BROMSULFALEIN TEST IN CHRONIC HEPATITIS AND CIRRHOSIS OF THE LIVER -U-

AUTHOR-(03)-ZHEREBTSOV, L.A., SHAROVA, YU.A., ZAMCHIY, A.A.

COUNTRY OF INFO--USSR

SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 48, NR 6, PP 52-58

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BROMSULFALEIN TEST WAS USED FOR STUDY OF THE EXCRETORY FUNCTION OF THE LIVER IN 102 PATIENTS SUFFERING FROM CHRONIC HEPATITIS AND CIRRHOSIS OF THE LIVER. THE TEST PROVED TO BE POSITIVE IN 92 CASES. THE INDICES OF THE BROMSULFALEIN TEST FLUCTUATED FROM 6.8 TO 73.5 PERCENT. THE BROMSULFALEIN TEST IS HIGHLY SENSITIVE AND SPECIFIC; IT REFLECTS THE MARKEDNESS OF AFFECTION OF THE FUNCTIONAL CAPACITY OF THE LIVER. THERE EXISTS A CLOSE CORRELATIVE DEPENDENCE BETWEEN INDICES OF THE BROMSULFALEIN TEST, LEVEL OF PROCONVERTIN AND DEGREE OF DYSPROTEINEMIA IN PATIENTS WITH CIRRHOSIS OF THE LIVER. THERE IS A CERTAIN PARALLELISM BETWEEN CHANGES OF THE BROMSULFALEIN TEST, CONTENT OF BILIRUBIN, ERYTHROCYTE MACROCYTOSIS, AND TO A LESSER DEGREE, OF THE MERCURIC CHLORIDE TEST. A POSITIVE DYNAMICS OF THE BROMSULFALEIN TEST IN PATIENTS WITH CHRONIC HEPATITIS AND LIVER CIRRHOSIS WAS OFTEN COMBINED WITH AN IMPROVEMENT OF CLINICAL DATA AND A NUMBER OF FUNCTIONAL TESTS. FACILITY: GEMOTERAPEVTICHESKAYA KLINIKA TSENTRAL'NOGO INSTITUTA GEMATOLOGII I PERELIVANIYA KROVI MZ SSSR, MOSKVA.

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PRIMARY SOURCE: Klinicheskaya Meditsina, 1970, Vol 48, Nr 2, pp 79-84

THE USE OF ALBUMIN IN CIRRHOSIS OF THE LIVER AND PROTEIN DEFICIENCY CAUSED BY OTHER DISEASES

Al'perin, P. M.; Zherebtsov, L. A.; Zamchiy, A. A.

Summary

In 19 patients with liver cirrhosis and in 11 patients with protein deficiency of diverse origin the authors instituted treatment by means of repeated drip transfusions of a 20 per cent albumin solution. In 22 out of 30 patients the general state improved. In a number of cases there were noted an increase of the body weight and diuresis, disappearance or diminution of ascites and edema. Functional liver tests showed no essential changes. Repeated transfusions of albumin resulted in an increase and sometimes normalization of the total serum protein. According to data of paper electrophoresis this rise occurs at the expense of increase of the albumin fraction. The immunoelectrophoregram shows an intensification of those protein fractions, which in patients in the initial state were poorly marked (albumin, $alpha_1$- and $alpha_2$-globulins).

Albumin therapy is an effective means in treating protein deficiency and cirrhosis of the liver.

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TITLE--EFFECT OF MELANOIDIN FORMATION ON THE ACID RESISTANCE OF MALT BETA AMYLASE -U-

AUTHOR-(03)-ZHEREBTSOV, N.A., KHARIN, S.YE., KRAYUSHKINA, E.A.

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SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

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