"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UNCLASSIFIED PROCESSING DATE--04DEC70

2/2 014

CIRC ACCESSION NO--AA0137010

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A METHOD IS DESCRIBED FOR OBTAINING ARYLDIBENZYLPHOSPHINE OXIDES OF THE GENERAL FORMULA: WHERE X AND Y ARE HYDRGOEN, ALKYL, OR HALOGEN GROUPS. ARYLDICHLOROPHOSPHINE IS REACTED WITH BENZYL CHLORIDE AND ELEMENTARY PHOSPHORUS. THE REACTION MIXTRUE IS HEATED TO BOILING (170-200 C) WITH AN ALKALI AND THE FINAL PRODUCT IS SEPARATED BY KNOWN METHODS. FACILITY: VSESOYUZNYY NAUCHNO-ISSLEDOVATEL'SKIY INSTITUT FITOPATOLOGII.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

P

USSR UDC 632.95

BLIZNYUK, N. K., KVASHA, Z. N., PROTASOVA, L. D., and VARSHAVSKIY, S. L., All-Union Scientific Research Institute of Phytopathology, Moscow, Ministry of Agriculture USSR

"Method of Producing Pyrocatechin Chlorophosphites"

USSR Authors' Certificate No 250139, filed 10/05/67, published 4/01/70 (from Referativnyy Zhurnal Khimiya, No 16 (II), 25 Aug 70, Abstract No 16 N676 P by I. A. Mel'nikova)

Translation: A mixture of 1.125 mole PCl_3, 0.75 mole pyrocatechin and 0.6 g C_5H_5N is heated 1.5-2 hr with agitation at 60-80° in a current of dry N_2, separating pyrocatechin chlorophosphite (I) with a yield of 91-95%; b. p. 78°/9, $n^{20}D$ 1.5672. I is an organic synthesis intermediate.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 632.95

BLIZNYUK, N. K., PROTASOVA, L. D., and KVASHA, Z. N., VNII (All-Union Scientific Research Institute) of Phytopathology

"Preparation Method of Anhydrides of Phosphacyclopentenic Acid"

USSR Author's Certificate No 314754, filed 4 Feb 70, published 26 Jan 72 (from Referatinvyy Zhurnal -- Khimiya, Svodnyy Tom, No 19 (II), 1972, Abstract No 19N458 P by I. A. Mel'nikova)

Translation: Anhydrides of phosphacyclopentenic acids which are intermediate products in the synthesis of organophosphorous compounds are prepared during the reaction of corresponding acids with their acid chlorides (AC) by heating the mixture in the absence of solvent and HCl acceptor. A mixture of 0.05 moles of phosphacyclopentenic acid (I) and 0.05 moles of AC of I is heated at 150°C for 30 min. to 1 hr followed by a removal of the AC of I (II). The yield of product was 97%, with m.p. 43-44°C, boiling point 215-220°C/1. Acid chlorides of other acids are synthesized similarly (acid involved, % yield, boiling point in °C/mm are given in that order): 2-methyl-I, 93, 190-195/0.5, $n^{20}D$ 1.5265, d_4^{20} 1.2512; 3-methyl-I, 93, 230-235/1. A mixture of 0.05 mole of II and 0.25 mole of absolute MeOH is heated at ~ 20°C for 10-12 hr and ME (methyl ester) of I is separated. The yield 76%, boiling point 80-82°C/2,

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

BLIZNYUK, N. K., et al., USSR Author's Certificate No 314754, filed 4 Feb 70, published 26 Jan 72

$n^{20}D$ 1.4860, d_4^{20} 1.1913. To the remaining amount of I 0.06 mole of AC I is added, the mixture is heated at 100-150°C until evolution of HCl stopps (gas), and evoporate at 130-150°C/15. The residue contains II to which 0.25 mole MeOH is added without a preliminary purification. After separating the methyl ester of I by the above method, the yield was 84% (on conversion to starting II). To the remaining residue (white crystals) AC of I is added again and the whole process is repeated again. The yield of a ready product is 86%. The methyl esters of acids (constant, % yield, boiling point in °C/mm, $n^{20}D$, d_4^{20} are given in this order) are prepared in analogoud way: 2-methyl-I, 80-90, 100-105/2, ~1.4830, ~1.1343; 3-methyl-I, 63-87, 100-105/2, 1.4860, 1.1476.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--GAMMA RADIATION OF PALLADIUM-99 -U-

AUTHOR-(05)-ANTONYEVA, N.M., GRIGORYEV, YE.P., KATYKHIN, G.S., NIKITIN, M.K., PROTASOVA, L.F.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSR, SER. FIZ. 1970, 34(1), 54-8

DATE PUBLISHED--------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--GAMMA SPECTRUM, PALLADIUM ISOTOPE, HALF LIFE, ISOTOPE SEPARATION, RADIATION INTENSITY, RADIOACTIVE DECAY SCHEME, BETA PARTICLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0228 STEP NO--UR/0048/70/034/001/0054/0058

CIRC ACCESSION NO--AP0105304

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

2/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70

IRC ACCESSION NO--AP0105304

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE GAMMA SPECTRUM OF THE PD FRACTION FROM CD IRRADIATED WITH 660-MEV RHO WAS STUDIED WITH GE(LI) DETECTORS. BESIDES PRIME99 PD, THE FRACTION ALSO CONTAINED OTHER PD NUCLIDES, AND PRIME98 RH, PRIME99 RH, AND PRIME104 AG. THE PRIME99 PD GAMMA LINES WERE IDENTIFIED FROM THEIR HALF LIVES AND FROM THE CONSISTENCY IN RELATIVE INTENSITIES DURING VARIOUS STAGES AFTER IRRADN. THE PROBABLY DECAY SCHEME OF PRIME99 PD IS PRESENTED. THE BETA TRANSITIONS TO PIRME99 RH LEVELS SHOWED A HIGH DEGREE OF PROBABILITY: LOG FT EQUALS 4.9 FOR THE 1ST EXCITED LEVEL. SOME SIMILARITIES IN THE DECAY SCHEMES OF PRIME99 PD AND PRIME101 PD ARE POINTED OUT.

FACILITY: NAUCH.-ISSLED. FIZ. INST., LENINGRAD. GOS. UNIV., LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

UDC: 632.95

BLIZNYUK, N. K., PROTASOVA, L. I., KVASHA, Z. N., LEVSKAYA, G. S., VARSHAVSKIY, S. L., and BARANOV, Yu. I., A--Union Research Institute of Plant Pathology

"A Method for Preparing 1,4-Phenylene-bis-O-Alkyl-oxy-2,2,2,-Trichloroethyl-phosphinates"

USSR Author's Certificate No 255266, filed 27 Jun 68, published 24 Mar 70 (from RZh-Khimiya, No 22, 25 Nov 70, Abstract No 22 N653 P by G. V. Kuznetsova)

Translation: Phosphinates with the general formula $CCL_3CH(OH)P(OR)(O)C_6H_4P$-$(O)(OR)CH(OH)CCl_3$ (I) ($R=C_1-C_4$-alkyl; from here on the substitutes are in the para-position) are obtained from the reaction of $ROPH(O)C_6H_4PH(O)OR$ with $CCl_3CH(OH)_2$ in an organic solvent medium under conditions of azeotropic distillation of water. The original phosphonites are formed by the action of excess alcohol on $Cl_2PC_6H_4PCl_2$ (II). A mixture of 0.75 mole of $C_6H_4Cl_2$, 1 g-atom of white phosphorus, 300 ml of PCl_3, and 3 g of I_2 is heated for 6 hours in a stainless steel autoclave at 340-60°. After cooling the excess PCl_3 is driven off and 143.3 g (63.3%) II is obtained by distilling the residue, boiling point 132-3°/1, melting point 58-9°. A solution of 0.02 mole of II in 30 ml of CCl_4 is added at 0-5° and while being mixed to 0.4 mole of ab-

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

BLIZNYUK, N. K., et al, USSR Author's Certificate No 255266, filed 27 Jun 68, published 24 Mar 70 (from RZh-Khimiya, No 22, 25 Nov 70, Abstract No 22 N653 P by G. V. Kuznetsova)

solute MeOH. The excess MeOH and HCl is removed under vacuum (toward the end at 80°) and 0.04 mole of $CCl_3OH(OH)_2$ and 50 ml of C_6H_6 is added to the residue. The mixture is boiled with Dean-Stark packing until water is no longer driven off. C_6H_6 is distilled under vacuum and I (R=Me) obtained in the residue, yield 96% (in II), melting point 146-9°. The next I are obtained in a similar fashion (R, yield in %, and melting point in °C (ethyl alcohol) are given): Et, 97, 186-7; Pr, 85, 190-1; Bu, 61, 186-7; and iso-Bu, 66, 198-9. I can be used as intermediate products in the synthesis of physiologically active substances.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 615.373.612.112].015.4:612.014.3-085.2

PROTASOVA, O. V., PEREPECHKINA, N. P., and MATS, A. N., Institute of Vaccines and Sera imeni Mechnikov

"The Action of Antileukocyte Sera on Heterogeneous Cell Populations"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 11, 1971, pp 132-136

Abstract: Suspensions of mouse spleen cells were drawn into capillary tubes, these were placed in nutrient media without serum (control) and with antileukocyte sera obtained from rabbits and, 24 hrs later, the extent of migration of the cells through the medium was determined. Approximately similar inhibition of migration was induced by sera specific to thymocytes, lymphocytes, and macrophages, while sera containing antibodies to myeloid cells inhibited the migration of the spleen cells to the greatest degree. Since administration of antimyeloid serum to mice receiving skin grafts did not prolong the survival of the grafts, it is concluded that the beneficial effects exerted by antileukocyte sera on transplants are due to the action of antilymphocyte, antithymocyte, and antimacrophage antibodies present in those sera.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--THE MECHANISM OF IMMUNOGENESIS IN VACCINATION WITH S PRIMED MUTANTS OF SALMONELLAE AND SHIGELLAE, REPORT II. NONSUSCEPTIBILITY OF MICE TO S.

AUTHOR-(05)-SERGEYEV, V.V., FROLOVA, M.A., PROTASOVA, O.V., YELKINA, S.I., SHUSTER, B.YU.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 5, PP 126-130

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SALMONELLA, SHIGELLA, BACTERIA MUTATION, IMMUNIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/0141 STEP NO--UR/0016/70/000/005/0126/0130

CIRC ACCESSION NO--AP0114537

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UNCLASSIFIED PROCESSING DATE--16OCT70

2/2 015

CIRC ACCESSION NO--AP0114537

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN COMPARING THE IMMUNOGENIC PROPERTIES THE AUTHORS FOUND THE VACCINE PREPARED FROM THE LIVE S PRIMED CULTURE OF S. ENTERITIDIS BACTERIA TO BE MORE EFFECTIVE IMMUNOLOGICALLY THAN THE VACCINE MADE OF KILLED BACTERIA OF A VIRULENT STRAIN. ALONG WITH INTENSE SPECIFIC IMMUNITY, ORAL IMMUNIZATION WITH S PRIMED MUTANT ALSO PRODUCED THE DEVELOPMENT OF NONSPECIFIC RESISTENCE. IMMUNOLOGICAL RECONSTRUCTION OF CELLS OF THE RETICULOENDOTHELIAL SYSTEM AND OF THE INTESTINE WAS ESTABLISHED BY THE REACTION OF CELLULAR PASSIVE SKIN ANAPHYLAXIS. FACILITY: MOSCOW INSTITUT VAKTSIN I SYVOROTOK IM. MECHNIKOVA.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--STUDY OF THE EFFECT OF TEMPERATURE ON THE BREAKDOWN OF DISPERSE STRUCTURE IN BITUMENS -U-

AUTHOR--PROTNYAGIN, V.D.

COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 3, PP 416-420

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--BITUMINOUS CEMENT, THERMAL EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1585 STEP NO--UR/0069/70/032/003/0416/0420

CIRC ACCESSION NO--AP0125207

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

2/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125207

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BREAKDOWN OF DISPERSE STRUCTURE IN BITUMENS UNDER THE ACTION OF TEMPERATURE HAS BEEN STUDIED BY RHEOLOGICAL METHODS AND A Q METER. THE TEMPERATURE OF THE APPEARANCE OF THE THREE DIMENSIONAL NETWORK AS WELL AS THAT AT WHICH THE FORMATION OF THE STRUCTURE COMPLEXES STARTS HAVE BEEN ESTABLISHED. IRRESPECTIVE OF THE CHEMICAL COMPOSITION OF BITUMENS, THE STRUCTURE IS DETECED PRACTICALLY AT THE SAME VISCOSITY. FACILITY: AKADEMIYA KOMMUNAL'NOGO KHOZYAYSTVA, MOSCOW.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 66.067

PROTOD*YAKONOV, I. O., and ROMANKOV, P. G.

"An Adaptive System of Automatic Regulation of Continuous Absorption"

Ivanovo, Khimiya i Khimicheskaya Tekhnologiya, Vol 15, No 11, 1972, pp 1756-1758

Abstract: Here a countercurrent column adsorber of continuous action and a system of automatic regulation are considered together as an adaptive system. The adsorber consists of a column of indented plates, with the gas entering at the bottom of the column and the sorbent at the top. The regulatory mechanism depends upon 2 parameters: (1) the number of plates, and (2) the hydraulic resistance of the fluidized layer. The first changes by discrete steps, the second continuously. This adaptive system for the automatic regulation of a continuous adsorption process can be used in the automation of adsorption systems.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--A FIVE CHANNEL SEMICONDUCTOR THERMOMETER WITH THERMISTORS -U-

AUTHOR-(03)-PROTODYAKONOV, V.A., SVERDLOV, V.I., TELESHEVSKIY, V.I.

COUNTRY OF INFO--USSR

SOURCE--PRIBORY I SISTEMY UPRAVLENIYA, 1970, NR 3, PP 46-47

DATE PUBLISHED--------70

SUBJECT AREAS--METHODS AND EQUIPMENT, PHYSICS

TOPIC TAGS--THERMOMETER, THERMISTOR, SEMICONDUCTOR DEVICE/(U)MT54 THERMISTOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1649 STEP NO--UR/0445/70/000/003/0046/0047

CIRC ACCESSION NO--AP0136910

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

2/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136910

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN ORDER TO OVERCOME THE PROBLEM OF THE NONLINEAR RELATIONSHIP BETWEEN RESISTANCE AND TEMPERATURE IN THERMISTORS, AN IMPROVED INSTRUMENT HAS BEEN DESIGNED TO INCREASE THE DYNAMIC MEASUREMENT RANGE OF THE UNIT WITHIN THE 17.3-25.8 C TEMPERATURE RANGE. THIS RANGE IS BROKEN DOWN INTO FIVE SUBRANGES WITH ONE MT-54 THERMISTOR FOR EACH, WHICH CAN BE TURNED ON SEQUENTIALLY FOR MEASUREMENT AT FIVE DIFFERENT POINTS IN SPACE. THE MEASUREMENT BRIDGE IS POWERED BY A 2.5 VOLT 50 CYCLE STABILIZED SOURCE. THE INSTRUMENT'S SENSITIVITY FOR THE INDICATED RANGE IS 160 MU A-C. THRESHOLD SENSITIVITY IS 0.01 C, AND MEASUREMENT ACCURACY IS PLUS OR MINUS 0.02 C. LINEARITY FOR EACH OF THE FIVE MEASUREMENT CHANNELS IS NO WORSE THAN 0.5PERCENT.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

Magnetohydrodynamics

USSR UDC: None

DEMIKHOVSKIY, V. Ya. and PROTOGENOV, A. P.

"Electromagnetic Excitation of a Two-Component Plasma in a Quantizing Magnetic Field"

Leningrad, Fizika Tverdogo Tela, vol 14, No 7, 1972, pp 1948-1957

Abstract: The purpose of this paper is to study the quantum effects in the propagation of transverse and longitudinal electromagnetic waves in a solid-state electron-hole plasma inside a strong magnetic field. For this, the following model was used: it is assumed that the electron and hole spectrum with no magnetic field is quadratic and isotropic and imposes no limits on the relationship between the masses and concentrations of the carriers. With these as well as several other conditions satisfied, only the intravalley transitions are taken into account. It is shown that solutions exist near the Doppler-shifted electron and hole cyclotron resonances and that the magnetic quantization causes the appearance of the transmission portions in which the waves can be propagated without attenuation. Finally, it is found that excitations with polarizations opposed to those of a helicon and with a frequency proportional to the difference in concentrations exist in an uncompensated plasma. The authors are associated with the N. I. Lobachevskiy State University at Gor'kiy.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

Acc. Nr: AP0043689 P Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1970, Vol 58, Nr 2, pp 651-656

INTERACTION BETWEEN OPTICAL PHONONS AND ELECTRONS IN A QUANTIZED MAGNETIC FIELD

Demikhovskiy, V. Ya.; Protogenov, A. P.

The dispersion law for longitudinal optical phonons interacting with electrons in a quantized magnetic field is studied. An analysis of the conservation laws shows that in the presence of magnetic quantization in the (ω, q) plane there appear additional sections in which Landau attenuation is absent. Dispersion curves in the region $q \ll \omega / v_0$ and $q \gg 2k_0$ are found. It is demonstrated that in the set under consideration there exist solutions of the acoustic type which are analogous to acoustic plasmons.

1/1 2/ DI

REEL/FRAME
19770093

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 017 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--MASS YIELDS DURING THE FISSION OF URANIUM 235 BY THERMAL AND FAST NEUTRONS FOR FIXED KINETIC ENERGIES -U-

AUTHOR-(03)-ARTEMEV, YU.M., GROMOV, A.V., PROTOPOPOV, A.N.

P

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(2), 290-6

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--NUCLEAR FISSION, URANIUM ISOTOPE, THERMAL NEUTRON, FAST NEUTRON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1980/0387 STEP NO--UR/0367/70/011/002/0290/0296

CIRC ACCESSION NO--AP0048659

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

2/2 017 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0048559

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MASS YIELDS ARE COMPARED FOR THE FISSION OF PRIME235 U BY THERMAL N AND BY 14.8 MEV N AT FIXED TOTAL KINETIC ENERGIES E SUBK OF 148-90 MEV. FOR EQUAL K SUBK, THE POSITIONS OF MAX. YIELDS COINCIDE FOR EXCITATION BY BOTH THERMAL AND 14.8 MEV N. DURING FISSION BY THERMAL N, THE NO. OF N IN THE NECK CONNECTING THE FRAGMENTS AT THE MOMENT OF FISSION IS 15 AT E SUBK EQUALS 189.9 MEV AND 35 AT E SUBK EQUALS 148.3 MEV. THIS INCREASE IN N NO. WITH DECREASE IN E SUBK CORRELATES WITH AN INCREASE IN DEFORMATION AT THE MOMENT OF FISSION. COMPARISON OF THE EXPTL. TOTAL MASS YIELD CURVE WITH THE STATISTICAL MODEL CALCD. CURVE SHOWS GOOD AGREEMENT, BUT THE CALCD. CURVES FOR FIXED VALUES OF E SUBK DIFFER CONSIDERABLY FROM THE EXPTL. CURVES.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UNCLASSIFIED PROCESSING DATE--30OCT70

1/2 024

TITLE--CALCULATION OF THE SIGNAL NOISE RATIO AT THE OUTPUT OF COMPLEX FILTERS SUBJECT TO FM NOISE -U-

AUTHOR--PROTOPOPOV, A.S.

COUNTRY OF INFO--USSR

SOURCE--RADIOTEKHNIKA I ELEKTRONIKA (RADIO AND ELECTRONICS), 1970, NO 2, PP 322-327

DATE PUBLISHED----------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--ELECTRIC FILTER, RADIO NOISE, SIGNAL TO NOISE RATIO, CIRCUIT DESIGN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1852 STEP NO--UR/0109/70/000/002/0322/0327

CIRC ACCESSION NO--AP0130681

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UNCLASSIFIED PROCESSING DATE--30OCT70

2/2 024

CIRC ACCESSION NO--AP0130681

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN INEXACT BUT EASILY VISUALIZED TECHNIQUE IS USED TO OBTAIN FORMULAS WHICH MAKE IT POSSIBLE TO CALCULATE THE S-N RATIO AT THE OUTPUT OF A FILTER HAVING QUADRATIC OR LINEAR PHASE CHARACTERISTICS, AND ALSO AT THE OUTPUT OF A "COMPLEX" FILTER, HAVING A PULSE CHARACTERISTIC CONSISTING OF A DEFINITE NUMBER OF ADJACENT OR SEPARATED PARTIAL SEGMENTS. SOME EXPERIMENTAL RESULTS ARE PRESENTED WHICH CONFIRM THE APPLICABILITY OF THE FORMULAS OBTAINED FOR REAL FILTERS, FM NOISE, AND SIGNALS.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

Oscillators and Modulators

UDC 621.396.66

USSR

PROTOPOPOV, L. A.

"Estimating the Minimum Achievable Error in Synchronizing the Local Oscillator by the Signals of a Remote Ultra Long Wave Transmitter"

Moscow, Radiotekhnika i elektronika, No 10, 1970, pp 2103-2106

Abstract: The synchronization system for a point at a distance from the transmitter is represented by an ultra longwave receiver with a phase automatic frequency control system for the local oscillator. This AFC system is given as the local oscillator feeding into a summer which feeds, in turn, to a voltage multiplier, and back to the summer through a four-terminal network whose structure and parameters are to be optimized. The optimization of the circuit is done by the criterion of the minimum amount of the oscillation frequency dispersion at the system output. An example is given of the computation of the local oscillator frequency range. It is concluded that this type of computation can be used to determine the minimum errors, in transmitting standard frequencies and time on ultra long waves, caused by noise due to fluctuations in the local oscillator frequency and the instability of the wave propagation conditions.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 023 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--MEASURING THE PHASE OF SUPERLONG WAVE SIGNALS DURING THE SOLAR ECLIPSE OF 22 SEPTEMBER 1968, MEASUREMENT OF PHASE OF SUPERLONG WAVE

AUTHOR-(02)-PROTOPOPOV, L.A., KHADZHI, V.A.

COUNTRY OF INFO--USSR

SOURCE--INSTITUTE OF RADIO ENGINEERING AND ELECTRONICS ACADEMY OF SCIENCES USSR; MOSCOW, GEOMAGNETIZM I AERONOMIYA, VOL X, NO 2, 1970, PP 363-364

DATE PUBLISHED-------70

SUBJECT AREAS--NAVIGATION, ASTRONOMY,ASTROPHYSICS

TOPIC TAGS--SOLAR ECLIPSE, SIGNAL FREQUENCY, PHASE ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/1668 STEP NO--UR/0203/70/010/002/0363/0364

CIRC ACCESSION NO--AP0109659

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

2/2 023 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0109659

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON 22 SEPTEMBER 1968 THE AUTHORS MEASURED THE PHASES OF SIGNALS OF THE SUPERLONG WAVE RADIO STATIONS GBR (16 KC-SEC) AND RYES (100 KC-SEC) FOR A PERIOD OF SIX HOURS COVERING THE VISUAL DURATION OF THE SOLAR ECLIPSE. THE MEASUREMENTS WERE MADE FROM 1030 TO 1700 HOURS ON 22 SEPTEMBER AND FROM 0830 TO 1700 HOURS ON 26 SEPTEMBER. THE CURVE FOR 22 SEPTEMBER AND FROM THE END OF THE NIGHT TO DAY TRANSITION. THE SOLAR ECLIPSE EFFECT WAS MANIFESTED DURING THE PERIOD 1300-1600 HOURS AND CONSISTED OF AN INCREASE IN PHASE. THE MAXIMUM PHASE DRIFT WAS PLUS50PLUS1DEGREES BY 1430 HOURS ON 22 SEPTEMBER. THE MAXIMUM RELATIVE CHANGE IN THE FREQUENCY OF THE SIGNAL RECEIVED FROM GBR CAUSED BY THE SOLAR ECLIPSE WAS 2 TIMES 10 NEGATIVE 9 IN ABSOLUTE VALUE. THIS SAME ORDER OF MAGNITUDE OF FREQUENCY CHANGE WAS CAUSED BY TRANSITION FROM DAY TO NIGHT. IN THE SIGNAL PHASE FOR STATION RYES THERE IS SOME INCREASE IN IRREGULAR PHASE VARIATIONS DURING THE TIME OF THE SOLAR ECLIPSE. THERE WERE NO SIGNIFICANT REGULAR DEVIATIONS FROM THE MORMAL PHASE VARIATION FOR REYS ON 26 SEPTEMBER. THIS CAN EVIDENTLY BE ATTRIBUTED TO THE FACT OF A CONSIDERABLY LESSER EXTENT OF THE PROPAGATION PATH FOR THIS SIGNAL THAN FOR GBR SIGNAL AND A DIFFERENT ORIENTATION OF THIS PATH RELATIVE TO THE EAST WEST LINE.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 51:621.391

PROTOPOPOV, O. G., PAKIN, Yu. P., BARSAGAYEVA, S. V.

"Use of a Group Code for Detection and Correction of Errors During Transmission of Messages"

Vopr. Razrab. I Vendrenaya Sredstv. Vychisl. Tekhn., [Problems of Development and Introduction of Computer Equipment--Collection of Works], Tbilisi, 1970, pp 88-93, (Translated from Referativnyy Zhurnal Kibernetika, No 5, 1971, Abstract No. 5V479 by Yu. Pyatoshin).

Translation: Formulas are concluded for estimation of the effectiveness of certain correcting codes in the case of transmission of information with interrogation through a channel without memory using a code for correction and detection of the error.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 536.242:532.517.4.001.5

KRASNOSHCHEKOV, YE. A., PROTOPOPOV, V. S., IGAMBERDYYEV, A. T., GRIGOR'YEV, V. S.

"Experimental Study of Local Heat Transfer Coefficients in the Turbulent Flow of Carbon Dioxide of Supercritical Parameters in a Rectangular Channel Heated on One Side"

[Nauchn. tr.] Tashkent. Politekhn. in-t ([Scientific Works of] Tashkent Polytechnical Institute), 1970, No 65, pp 115-126 (from RZh-Teploenergetika, No 12, Dec 70, Abstract No 12G89)

Translation: An experimental section with a through cross section of 16 × 3.9 mm and a heated length of 256 mm, and also a heated device in the form of a semicylinder of diameter 120 and length 256 mm were made from a single copper block. The thickness of the side walls was the same and equal to 1.9 mm and the thickness of the roof of the channel was 4 mm. Before entering into the channel there was an unheated segment for hydrodynamic stabilization. The section was connected into a closed circulation circuit. The experimental results were compared with

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

KRASNOSHCHEKOV, YE. A., et al, [Nauchn. tr.] Tashkent. politekhn. in-t, 1970, No 65, pp 115-126

heat transfer coefficients calculated from a relationship that holds for turbulent flow of a fluid of supercritical parameters in a circular tube:

$$Nu_f = \frac{\xi/8\, Re_f Pr_f}{12{,}7\sqrt{\frac{\xi}{8}}\left(Pr_f^{2/3}-1\right)+1{,}07}\left(\frac{\bar{c}_p}{c_{p_f}}\right)^n\left(\frac{\rho_c}{\rho_f}\right)^{1{,}1};$$

$$\xi=(1{,}82\lg Re_f-1{,}64)^{-2};$$

$$n=f(T_c/T_f;\ T_f/T_w).$$

Until the development of more exact methods of determining local heat transfer coefficients, it is recommended that they be calculated from the above formula with the introduction of the equivalent diameter of the channel as the characteristic dimension. 4 ill., 1 table, 6 references. Yu. D. Barulin.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 017 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--LEAD AMALGAM ELECTRODE IN THE POTENTIOMETRY OF LEAD. III. POTENTIOMETRIC TITRATION OF LEAD BY SODIUM SULFATE -U-

AUTHOR-(02)-AMANZHOLOVA, YE.S., PROTOPOPOVA, G.D.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK KAZ. SSR, SER. KHIM. 1970, 20(1), 10-20

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--LEAD ALLOY, AMALGAM, SODIUM SULFATE, POTENTIOMETRIC TITRATION, METAL ELECTRODE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0208 STEP NO--UR/0360/70/020/001/0010/0020

CIRC ACCESSION NO--AP0115912

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

2/2 017 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0115912

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PB(NO SUB3)SUB2 AND PB (OAC)SUB2 WERE TITRATED POTENTIOMETRICALLY WITH NA SUB2 SO SUB4 BY USING A PB AMALGAM ELECTRODE, IN THE PRESENCE OF 20-5PERCENT ETOH OR 50PERCENT ETOH, RESP. NH SUB4 NO SUB3 GREATER THAN 0.04N AND NH SUB4 OAC GREATER THAN 0.01N INTERFERED. BA(NO SUB3)SUB2 AND BA(OAC)SUB2 INTERFERE WITH THE DETN. OF THE RESP. PB SALTS; THE EQUIVALENCE POINT CORRESPONDS TO THE SUM OF PB AND BA. THE PB AMALGAM ELECTRODE CAN BE USED IN DETNS OF SO SUB4 PRIME NEGATIVE NEGATIVE AND BA PRIME POSITIVE POSITIVE.

FACILITY: KAZ. GOS. UNIV. IM. KIROVA, ALMA-ATA, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 632.95

LOZINSKIY, M. O., PROTOPOPOVA, G. V., DZYUBAN, A. D., REYDALOVA, L. I., KUKOTA, S. N., PEL'KOS, P. S.

"Pesticidal Properties of α-arylhydrazono-β-oxocarboethoxybutyryl-λ-triphenyl (or trimethylol)-phosphonium Bromides"

Fiziol. aktivn. veshchestva. Resp. mezhved. sb. (Physiologically Active Substances. Republic Interdepartmental Collection), 1972, vyp. 4, pp 33-34 (from RZh-Khimiya, No 2 (II), Feb 73, Abstract No 2N468)

Translation: The synthesis and insecticidal properties of compounds with the following formula are described: $[R_3PCH_2COC(=NNHC_6H_4R')COOC_2H_5]Br$(I) (R = Ph, CH_2OH; R' = H, Cl, alkyl). A solution of 0.02 moles of Ph_3P in 10 ml of C_6H_6 is added to a solution of 0.02 moles of $BrCH_2COC(COOC_2H_5)$ $(=NNHC_6H_4R')$ in 10-15 mℓ of C_6H_6, it is mixed at ~20° for 10 to 12 hours, the precipitate is separated, washed with C_6H_6 and crystallized from the mixture of C_6H_6 and acetone to obtain I (R', the melting point in °C are presented) R = Ph: H(Ia), 144; π-Me (Ib), 143; π-OMe (Ic), 146; π-Cl (Id), 167-8; π-COOMe (Ie), 177-8; π-NO_2, 135-6; 2-OMe-5-NO_2, 146. By a reaction in dimethylformamide, I (R = CL_2OH) is obtained (R' and the melting point in °C are presented): π-CL, 141-2; 2-OMe-5-NO_2, 140. The Ia-e in a concentration of 0.1% have 60 to 100% activity with respect to greenbug (Toxoptera graminum). The I has low activity with respect to red spider mites.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

UDC 632.95

PROTOPOPOVA, G. V., REYDALOVA, L. I., DZYUBAN, A. D., MOLYAVKO, L. I., DOROSHENKO, V. V., MIKHAYLYUCHENKO, N. K., SHOKOL, V. A., DERKACH, G. I.

"Insecticidal Activity of Esters of bis-(3-arylcarbamido) phosphoric and thiophosphoric Acids"

Fiziol. aktivn. veshchestva. Resp. mezhved. sb. (Physiologically Active Materials. Republic Interdepartmental Collection), 1972, vyp. 4, pp 9-11 (from RZH-Khimiya, No 5 (II), 1973, Abstract No 5N579)

Translation: A study was made of the insecticidal activity of esters with the formula $ROP-(X)(NHCONHR')_2$ (I) (X = O or S; R = alkyl, aryl; R' = Ph, $C_6H_4SCN-\pi$, α-pyridyl) for rice weevils, housefly larvae and imago and greenbugs. The I containing the SCN-group have the highest insecticidal activity, and among them the activity rises on going from the methyl to the propyl and isopropyl radicals.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

UDC 632.95

PROTOPOPOVA, G. V., NESTERENKO, N. I., NESYNOV, Ye. P., BESPROZVANNAYA, M. M., and PEK'KIS, P. S.

"Insecticide Activity of Some Arylhydrazones and Aryl Esters E of Iminothio-acids for Rice Weevils and for Grain and Chard Aphids"

Fiziol. aktivn. veshchestva. Resp. mezhved. sb. (Physiological Effects of Compounds, Republic Interscience Symposium), Vyp 4, 1972, pp 68-71 (from Referativnyy Zhurnal -- Khimiya, No 4(II), 1973, Abstract No 4N613 by T. A. Belyayeva)

Abstract: Insecticidal properties of the compounds $PhN{=}C(CN)SC_6H_4R$ (compound I), $PhN{=}C(NHPh)SC_6H_4R$ (compound II), $(EtOOC)_2C{=}NNHC_6H_4R$ (compound III), and the 2-arylthiobenzazols were determined. The highest insecticidal activity for the rice weevils was shown by I (R = p-Me), 67% mortality for a 1% concentration; I (R = p-Br), 94% mortality; II (R = m-Cl), 100% mortality; 2-parachlorophenylthiobenzothiazole, 95% mortality for a 0.1% concentration; and III (R = o-OMe), 100% mortality. It should be noted that for the stereoisomers, the insecticidal properties are stronger for the β-form than the α-form.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

Pesticides

USSR UDC 632.95

PROTOPOPOVA, G. V., DZYUBAN, A. D., REYDALOVA, L. I., GOLIK, G. A., and SHOKOL, V. A.

"Insecticidal and Acariasicidal Properties of the Esters of Phosphazomethylphosphonic Acid"

Fiziol. aktivn. veshchestva. Resp. mezhved. sb. (Physiological Effects of Compounds, Republic Interscience Symposium), Vyp 4, 1972, pp 11-13 (from Referativnyy Zhurnal -- Khimiya, No 4(II), 1973, Abstract No 4N603 by T. A. Belyayeva)

Translation: The esters E of phosphazomethylphosphonic acid under laboratory conditions demonstrate insecticidal and acariasicidal properties of a contact and systemic nature. Of the compounds studied, $MeP(O)(OEt)N{=}P(OisoPr)_3$ compound I) showed the strongest contact effect -- SK_{50} = 1.78 in 3 days for rice weevils and 0.39 for grain aphids. Contact insecticidal activity was increased by using iso-Pr in the trialkoxyphosphazo group. Comp. I in a 0.05% concentration results in 96% mortality of the mite Tetranychus urtical on the second day.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 632.951.911.2

PROTOPOPOVA, G. V., Institute of Organic Chemistry, Academy of Sciences Ukrainian SSR

"Insecticidal Activity of Thioesters of N-Phosphorylated Carbamic Acids"

Moscow, Khimiya v sel'skom khozyaystve, No 11, 1971, pp 31-33

Abstract: Widening the scope of insecticides makes it possible to alternate their use and thereby preclude the build-up of resistance in the pests to a given preparation. The testing procedure of newly synthesized preparations of the class of thioesters of N-(O,S-dialkylthiophosphono)-carbamic acid is described. The LD_{50} of the new compounds is 180 mg/kg. The contact and systemic insecticidal activity of the thiosters of N-phosphorylated carbamic acids was tested under laboratory conditions and that of N-(O,S-dimethylphosphono)-S-ethylurethane was studied under both laboratory and field conditions. The test data indicate the former preparation to be very effective against the rice weevil, 1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

PROTOPOPOVA, G. V., Khimiya v sel'skom khozyaystve, No 11, 1971, pp 31-33

yellow mealworm, the larva and imago of the housefly and the greenbug. The latter preparation was found to be highly effective against the beet aphis at doses of 0.5 kg/ha and the ordinary beet weevil at doses of 2.0 kg/ha.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

UDC 632.95

PROTOPOPOVA, G. V., RAYDALOVA, L. I., KOLODYAZHNYY, O. I., SAMARAY, L. I., and DERKACH, G. I., Institute of Organic Chemistry, Academy of Sciences of the UkrSSR

"A Pesticide"

USSR Author's Certificate No 253483, filed 25 Nov 68, published 8 Apr 70 (from RZh-Khimiya, No 3, 10 Feb 71, Abstract No 3N553 P)

Translation: N-(O-alkyl-S-alkylthiophosphono)-S-ethylurethanes have LD_{50} 170 mg/kg for warm-blooded animals and have systemic and contact insecticidal and acaricidal action. Most toxic for houseflies is $(CH_3O)(CH_3S)$-$(P(O)NHCOSC_2H_5$ (I); 0.01 mg per fly, this compound was 92% fatal (the corresponding figure for chlorophos is 53%); for weevils of the rice and cereal type, most toxic is $(CH_3O)(C_2H_5S)P(O)NHCOSC_2H_5$ which was 100% fatal at 0.25 mg/dm^2 and 100% lethal for aphids at 0.005 mg/dm^2. Compound I is most effective for systemic action on aphids. In field experiments on controlling beet weevils, compound I in a dose of 1 kg/ha was nearly as effective as heptachlor at 2 kg/ha, and is at least as persistent in its effect. Compound I at 0.5 kg/ha was nearly as effective against beet aphids as rogor at 0.3 kg/ha.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UDC 632.951:632.768

USSR

PROTOPOPOVA, G. V., Institute of Organic Chemistry, Academy of Sciences Ukrainian SSR

"Insecticidity of Avenin and Demuphos for Common Beet Weevil and Southern Gray Weevil"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 8, Aug 70, pp 35-36

Abstract: The author studied the action of avenin (dimethyl ester of isopropylurethanphosphoric acid) and demuphos (dimethyl ester of N-methylisopropylurethanphosphoric acid) in the common beet weevil, Bothynoderes punctiventris Germ., as a result of spraying sugar-beet shoots with them as well as the toxicity of the preparation for the southern gray weevil Tanymecus dilaticollis Gyll., in the preseeding treatment of seeds. The work was done with various agricultural crops under laboratory and field conditions. The results indicate that demuphos and avenin can be regarded as promising organochlorine insecticide substitutes for use against these two insects by preseeding treatment of seeds, avenin for wheat, corn and sugar beets, demuphos for sugar beets and sunflowers. The preparations are also effective for spraying sugar-beet shoots.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 007 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--COMPLEX SALTS OF ALLYL ALPHA CHLORO ETHERS WITH ANTIMONY PENTACHLORIDE -U-

AUTHOR-(03)-POPOVA, R.YA., PROTOPOPOVA, T.V., SKOLDINOV, A.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 879-80

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ETHER, ORGANIC COMPLEX COMPOUND, ORGANIC SALT, CHLORINATED ORGANIC COMPOUND, ORGANOANTIMONY COMPOUND, CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2176 STEP NO--UR/0366/70/006/004/0879/0880

CIRC ACCESSION NO--AP0125756

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

2/2 007 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125756

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF SBCL SUB5 IN THE COLD WITH CLCH:CRCHCLCR PRIME1 GAVE INSOL. SALTS: (CL...CH...CR...CH...OR PRIME1) PRIME POSITIVE SBCL SUB6 PRIME NEGATIVE (I) (R AND R PRIME1 GIVEN): H, ME; ME, ET; AND ET, ET. THE ACTION OF ETONA ON I (R EQUALS ME) GAVE CLCH:CMECH(OET) SUB2. ETOH DECOMPD. I (R EQUALS ME) TO A MIXT. OF (ETO) SUB2 CHCHMECH(OET) SUB2 AND ETOCH:CMECHO.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

Acc. Nr. AP0053442 Abstracting Service: CHEMICAL ABST. Ref. Code: 4R0366

110720d Synthesis of the hemialdehyde of succinic acid and its functional derivatives from 2-acetoxyfuran. Tsybina, N. M.; Protopopova, T. V.; Skoldinov, A. P. (Inst. Farmakol., Moscow, USSR). *Zh. Org. Khim.* 1970, 6(2), 209-74 (Russ). Pyrolysis of 2,5-diacetoxy-2,5-dihydrofuran gave 2-acetoxyfuran which, without isolation, was converted to γ-acetoxy-α,β-dehydrobutyrolactone (I). Catalytic hydrogenation of I gave γ-acetoxybutyrolactone (II), which was hydrolyzed under mild conditions to $OCHCH_2CH_2CO_2H$ (III). Under more vigorous conditions instead of III its trimer [1,3,5-tris(β-carboxyethyl)-s-trioxane (IV)] was obtained. Pyrolysis of IV gave III. Alcoholysis of II in the presence of HCl gave $(EtO)_2CHCH_2CH_2CO_2Et$ (V). Alk. hydrolysis of V gave $(EtO)_2CHCH_2CH_2CO_2H$, which was pyrolyzed to γ-ethoxybutyrolactone. The residue of I distn. contained a small amt. bis(2-oxotetrahydrofuryl) ether, formed by the dehydration of the III isomer γ-hydroxybutyrolactone.

CPJR

REEL/FRAME
19830467

7

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

Acc. Nr. AP0041504 Abstracting Service: CHEMICAL ABST. Ref. Code UR0366

89722u N-Alkoxycarbonyl-derivatives of aminals and enamines. Stavrovskaya, A. V.; Protopopova, T. V.; Skoldinov, A. P. (USSR). *Zh. Org. Khim.* 1970, 6(1), 19–24 (Russ). In the reaction of $RCH(OEt)_2$ (I) with $^1/_3$ equiv. $R^1O_2CNH_2$ in the presence of acid catalysts, the main reaction products are $RCH(OEt)NHCO_2R^1$ (II) and only small amts. of $RCH(NHCO_2R^1)_2$ (III) are formed. When 1 equiv. I reacts with 2 equivs. $R^1O_2CNH_2$, III only are obtained. Heating II (R is Me, Et, or Pr, R^1 is Et) at 150–200°/150–200 mm gives $R^2CH{:}CHNHCO_2Et$ (IV) (R^2 is H, Me, Et); II without H on the α C gives $RCH{:}NCO_2R^1$ (V) (R is Ph, R^1 is Me or Et). In the presence of strong acids, II are equilibrated to I–III mixts. The reaction of IV with $R^1O_2CNH_2$ gives III. Conversely, heating III gives IV. The reaction of V with EtOH in the presence of weak acids gives a mixt. of I and III.

CPJR

REEL/FRAME
19751372

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

UDC 621.224-2.001.5(47+57)

ZUBRITSKAYA, M. A., PUPKO, T. YE., KOSMATOVA, G. E., PROTOPOPOVA, V. P., KUZNETSOV, V. I.

"Study of the Stressed State and Strength of the Spiral Chamber with a Steel Reinforced Concrete Shell in the Turbine Unit of the Inguri Hydroelectric Power Plant"

V sb. Nauchn. issled. po gidrotekhn, v. 1969 g. T.1 (Scientific Research in Hydroengineering in 1969, Vol 1 -- collection of works), Leningrad, Energiya Press, 1970, pp 24-25 (from RZh-Elektrotekhnika i Energetika, No 4, Apr 71, Abstract No 4 D81)

Translation: A model (1:6) of a spiral chamber was studied in order to discover the expedient reinforcement of the turbine unit of Inguriges [Inguri Hydroelectric Power Plant] and improve the supporting elements of the spiral chamber and the turbine stator. The most loaded elements turned out to be the stator columns, the stresses at individual points of which reached the yield point of the steel. On the basis of the research results, recommendations were developed with respect to strengthening the stator columns by varying the configuration and increasing their cross sections at the approach to

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

ZUBRITSKAYA, M. A., et al., Nauchn. issled. po gidrotekhn. v. 1969 g. T.1, Leningrad, Energiya Press, 1970, pp 24-25

the stator rings. It turned out to be expedient to increase the rigidity of the turbine unit by increasing the thickness of the base under the generator and raising the floor of the turbine room. For the unique turbines of Inguri-ges recommendations were made to strengthen the shell of the spiral chamber the effectiveness of which will be checked during subsequent tests.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 006 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--INFLUENCE OF SEED AGE ON THE CHARACTER OF THE CYTOGEMETIC ACTION OF MUTAGENS HAVING A DELAYED EFFECT -U-

AUTHOR-(03)-PROTOPOPOVA, YE.M., SHEVCHENKO, V.V., GRIGORYEVA, G.A.

P

COUNTRY OF INFO--USSR

SOURCE--GENETIKA 1970, 6(1), 29-35

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PLANT MUTATION, MUTAGEN, ETHYLENE, IMINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1465 STEP NO--UR/0473/70/006/001/0029/0035

CIRC ACCESSION NO--AP0125093

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

2/2 006 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSICN NC--AP0125093

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF THE PHYSIOL. STATE OF CREPIS CAPILLARIS SEEDS ON THE CYTOGENIC ACTION OF SOME MUTAGENS WITH DELAYED EFFECTS (ETHYLENIMINE, ET METHANESULFONATE, AND MALEIC HYDRAZIDE) WAS STUDIED. IN SEEDS STORED 2 MONTHS, THE MUTAGENS INDUCED ONLY CHROMATID ABERRATIONS. SEEDS STORED A LONGER TIME (TO 6.5 YRS) OR KEPT 12 DAYS AT 50DEGREES SHOWED CHROMATID AND CHROMOSOME ABBERRATIONS WHEN SUBJECTED TO ETHYLENIMINE. FACILITY: INST. DEVELOP. BIOL., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 621.378.33

GUBIN, M. A., POPOV, A. I., PROTSENKO, Ye. D.

"Investigation of Competition Between Two Axial Modes in a Laser With a Uniformly Broadened Line"

Moscow, Kvantovaya Elektronika, Sbornik Statey, No 4, "Sovetskoye Radio", 1971, pp 34-40

Abstract: A simple experimental method is used in a detailed study of the mechanism of interaction between two optical fields in a helium-neon laser, taking the 3.39-micron transition of the $3s_2$-$3p_4$ line in neon as the model for a uniformly broadened transition. A number of supporting facts are given to demonstrate uniformity of broadening on this transition. An investigation was made of the region of stable two-frequency emission as a function of the working parameters of the laser. The transition from two-frequency to single-frequency emission as the competing modes approach each other was studied. In contrast with solid-state lasers, where the effects associated with the dip formed in a homogeneous line in the event of monochromatic field saturation are masked by spatial nonuniformity of the inversion, these effects can be observed in pure form on the 3.39-μ

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

GUBIN, M. A. et al., Kvantovaya Elektronika, No 4, "Sov Radio", 1971, pp 34-40

transition in the He-Ne laser. The observed effects are explained by a simple physical model which utilizes this phenomenon of formation of the dip in the uniformly broadened line as a result of the saturating field effect. From the qualitative standpoint, the effects can be generalized to other lasers with a uniform line when the condition $T_2 \ll T_1$ is satisfied (where T_1 and T_2 are the times of longitudinal and transverse relaxation respectively), assuming that stagnation of the light fields of the competing modes has no effect on the spatial distribution of the inversion. The process of field interaction on the 3.39-micron line is of practical interest in connection with development of frequency standards of high stability, as well as other devices which utilize the sharp frequency dependences of laser power. Five figures, bibliography of twenty-two titles.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 543.544.45.08:662.75:658.382.3

PROTOYEREYSKIY, A. S., BURICHENKO, L. A., CHUMAKOV, Yu. I.

"Miniaturized Gas Chromatograph for Determination of the Content of Aviation Fuels and Toxic Substances in the Air in Production Areas"

Sb. Nauch. tr. Kiev. In-t. Inzh. Grazhd. Aviatsii [Collected Scientific Works of Kiev Civil Aviation Engineering Institute], 1971, No 2, pp 63-67, (Translated from Referativnyy Zhurnal, Metrologiya i Izmeritel'naya Tekhnika, No 7, 1972, Abstract No 7.32.856).

Translation: The design of the units of a small high temperature gas chromatograph for determination of the concentration of toxic substances directly in the air of production areas is described. The device allows rapid, quantitative determination of small concentrations of volatile toxic substances in the air. 4 Figures; 6 Biblio. Refs.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

Analytical Chemistry

USSR

UDC 543.544.45:546.271.2

PROTOYEREYSKIY, A. S., Institute of the Engineers of Civil Aviation, Kiev

"Portable Gas Chromatograph for the Determination of the Content of Toxic Materials in Air"

Kiev, Khimicheskaya Tekhnologiya, No 2 (62), Mar-Apr 72, pp 59-61

Abstract: A portable gas chromatograph is described which represents an improved model of an earlier unit. The modifications were made in the thermostat block, the components were made smaller and lighter, as well as simplier to operate. The unit includes compressed gas cylinders and a recorder. The stainless steel column is kept at the desired temperatures in a thermostat. Two sample ports are available, one for gas samples, one for gasseous-liquid mixtures. The detector is of the flame-ionization type, equipped with an electrometric amplifier. The unit weighs about 30 kg and can be placed for operation on a 40 by 50 cm table.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--INELASTIC SCATTERING OF ELECTRONS AND SECONDARY ELECTRON EMISSION OF DIELECTRICS -U-

AUTHOR-(02)-BRONSHTEIN, I.M., PROTSENKO, A.N.

COUNTRY OF INFO--USSR

SOURCE--RADIOTEKHNIKA I ELEKTRONIKA, VOL. 15, APR. 1970, P 805-811

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., PHYSICS

TOPIC TAGS--INELASTIC SCATTERING, SECONDARY ELECTRON EMISSION, ELECTRON SCATTERING, DIELECTRIC LAYER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1819 STEP NO--UR/0109/70/015/000/0805/0811

CIRC ACCESSION NO--AP0123608

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

2/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123608

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF SECONDARY ELECTRON EMISSION FROM LIF, NAL, KL KBR, AND NACL DIELECTRICS, WITH SPECIAL EMPHASIS ON THE ROLE OF INELASTICALLY REFLECTED ELECTRONS IN THE PROCESS. DIELECTRIC LAYERS WERE IRRADIATED IN VACUUM BY ELECTRON BEAM PULSES FROM 5 TO 10 MSEC IN DURATION. BEAM DIAMETER RANGED FORM 4 TO 5 MM, AND BEAM CURRENT WAS .1 MICROAMPERE. RESULTS ARE GIVEN FOR THE INELASTIC ELECTRON REFLECTION COEFFICIENTS AND THE SECONDARY ELECTRON EMISSION COEFFICIENTS AT VARIOUS LAYER THICKNESSES AND PRIMARY ELECTRON ENERGIES. FACILITY: AKADEMIIA NAUK SSSR, NAUCHNYI SOVET PO FIZICHESKOI ELEKTRONIKE, SESSIIA, LENINGRAD, USSR, FEB. 7, 1969.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 615.616.24-003.656.6

TIMCHENKO, A. N., PROTSENKO, G. A., OSTROVSKAYA, I. S.

"Hygienic Characteristic of a New Form of Amorphous Silicon -- Aerosil"

V sb. Materialy XXI-XXII plenumov Resp. komis. po bor'be s silikozom (Materials of the Twenty-first to Twenty-second Plenums of the Republic Commission for Controlling Silicosis--Collection of Works), Kiev, Naukova dumka, 1972, pp 165-170 (from RZh--Farmakologiya. Khimioterapevticheskiye Sredstva. Toksikologiya, No 3, Mar 73, Abstract No 3.54.881)

Translation: Poisoning rats for three months with Aerosil dust (amorphous SiO_2)M-300 (first group) and Aerosil modified with dimethyl-dichlorosilane and butyl alcohol (second group; concentration 100-120 mg/m^3) was accompanied by the development of typical pulmonary silicosis more sharply expressed in the animals of the first group. USSR, Khar'kov, Institute of Hygiene of Labor and Professional Disease.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

Acc. Nr. AP0034110 Abstracting Service: CHEMICAL ABST. 4-7c Ref. Code UR 0078

74168u Praseodymium nitrite, its preparation and properties. Protsenko, P. I.; Tyleva, T. I.; Protsenko, G. P. (Rostov. Gos. Univ., Rostov, USSR). *Zh. Neorg. Khim.* 1970, 15(1), 9-12 (Russ). $Pr(NO_2)_3 \cdot 5H_2O$ (I), m. 67° with partial decompn., obtained by reaction of Pr sulfate with $Ba(NO_2)_2$, crystallizes as rhombic or monoclinic crystals, depending on the conditions of crystn. At 20°, the d. of I is 2.382 g/cm³; n_γ and n_α are 1.550 ± 0.002 and 1.534 ± 0.002, resp. On heating, I decomp. to bright green $Pr(OH)(NO_2)_2$ at 115°, yellowish green $PrONO_2$ at 329°, and black-brown PrO_2 at 430°. DTA and ir spectra prove that a part of H_2O of I is H_2O of crystn. and a part is coordinated to the Pr ion via O. Structures are proposed.

HMJR

1/1 18

REEL/FRAME

19710753

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

UDC 621.385.64

PROTSENKO, I.I.

"Approximate Method Of Calculation Of The Harmonic Levels In M-Type Devices"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronics Technology. Scientific-Technical Collection. Microwave Electronics.), 1970, No 3, pp 19-25 (from RZh--Elektronika i yeye primeneniye, No 8, August 1970, Abstract No 8A119)

Translation: The mechanism is considered for formation of temporary harmonics in a device with crossed fields, and a method is presented for calculation of the power of the harmonics in relation to the power of a fundamental oscillation. The solution is conducted in three consecutive stages: 1) Evaluation of the level of the spatial harmonics of the beam current; 2) Locating temporary harmonics of the induced current; 2) Locating temporary harmonics of the induced current; 3) Calculation of the level of the harmonic components of the power radiated through the exit slit of the device. A formula is obtained which gives the upper limit for the experimentally measurable levels of the harmonic. The conclusion is made that the presence of harmonics in the spectrum of the output signal is, in principle, inherent to M-Type devices. It is caused by the structure of the space charge cloud and the distinctive features of the electron interaction in a device with crossed fields. 5 ref. G.B.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UDC 533.916

USSR

GABOVICH, M. D., PROTSENKO, I. M., and PORITSKIY, V. Ya.

"Double-Flow Instability of Interwoven Ion Beams Moving in a Single Direction Along an External Magnetic Field"

Kiev, Ukrainskiy Fizicheskiy Zhurnal. No 2, 1973, pp 308-310

Abstract: In an earlier paper published by the authors named above (Gabovich, M. D., et al, Doklady 8-y Mezhdunarodnoy koferentsii po yavleniyam v ionizovannykh gazakh, Vena -- Reports of the Eighth International Conference on Phenomena in Ionized Gases, Vienna -- 1967, p 366) the possibility of exciting oscillations in ion beams moving along a magnetic field with differing velocities was demonstrated; because the equipment used operated in the pulse mode, however, the spectra of the oscillations could not be observed. The present paper remedies this deficiency by describing experiments performed with equipment operating in the steady-state mode. A sketch of the equipment, containing two sources of helium ions in a current of the order of 5 ma and energies of up to 10 kev at either end of an evacuated chamber 70 cm long and 14 cm in diameter, is given. The spectra of the oscillations as functions of the difference between the beam energies are shown together with a curve

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

GABOVICH, M. D., et al, Ukrainskiy Fizicheskiy Zhurnal, No 2, 1973, pp 308-310

showing the dependence of the oscillation amplitude on the difference in beam energies. The facts uncovered by the experiments are found to be in agreement with the theory.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UDC 533.9:538.561

USSR

GABOVICH, M. D., SOLOSHENKO, I. A., PROTSENKO, I. M., TOVMACHENKO, V. N., and KOLOCHKO, V. N.

"Low-Frequency Oscillations in Plasma Formed by an Ion Beam"

Minsk, Kolebaniya i Volny v Plazme, (Oscillations and Waves in a Plasma), "Nauka i Tekhnika," 1971, pp 61-64

Abstract: In a plasma formed by an ion beam, passing through a neutral gas along the magnetic field, the mean energy of the ions is higher than in ordinary gas discharges, comprising approximately 1 eV. The authors examine the case in which the plasma was formed by an ion beam having an energy of approximately 20 keV and a current of about 1 mA. They discuss the investigation carried out on the excitation of ion-cyclotron oscillations in plasma formed by a cylindrical beam; they are also concerned with the investigation of oscillations at lower frequencies in the plasma of a tubular ion beam. On the basis of the data which they obtained, the authors come to the conclusion that the instability generated in the heterogeneous plasma is largely due to the existence of a radial electric field crossed with a longitudinal magnetic field. The article contains 2 illustrations and 6 bibliographic entries.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 038 UNCLASSIFIED

TITLE--LOW FREQUENCY INSTABILITY OF AN INHOMOGENEOUS PLASMA FORMED BY A TUBULAR ION BEAM -U- PROCESSING DATE--04DEC70

AUTHOR-(04)-GABOVICH, M.D., PROTSENKO, I.M., TOVMACHENKO, V.M., KOLOCHKO, V.M.

COUNTRY OF INFO--USSR

SOURCE--UKRAINS'KII FIZICHNII ZHURNAL, VOL. 15, APR. 1970, P. 648.

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LOW FREQUENCY, BEAM PLASMA INSTABILITY, INHOMOGENEOUS PLASMA, MAGNETIC FIELD, NATURAL GAS, LOW FREQUENCY OSCILLATION, ELECTRIC FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0719 STEP NO--UR/0185/70/015/000/0648/0648

CIRC ACCESSION NO--AP0126431

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

2/2 038 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0126431

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTAL RESULTS FOR THE LOW FREQUENCY INSTABILITY OF A PLASMA FORMED BY A TUBULAR ION BEAM WHICH TRAVELS ALONG A MAGNETIC FIELD THROUGH THE NATURAL GAS. A CHARACTERISTIC FEATURE OF THIS PLASMA IS THAT IT HAS INTERNAL AND EXTERNAL BOUNDARIES WITH MUTUALLY OPPOSED DENSITY GRADIENTS ALONG THE RADIUS AND AN UNCHANGED ORIENTATION OF THE ELECTRIC FIELD ARISING FROM INCOMPLETE COMPENSATION OF THE ION BEAM'S SPACE CHARGE. LOW FREQUENCY OSCILLATIONS ARE DETECTED IN THE PLASMA, WITH THE AMPLITUDE MAXIMA LOCALIZED IN REGIONS OF BOTH THE POSITIVE AND NEGATIVE RADIAL DENSITY GRADIENTS. THE RESULTS OBTAINED ARE IN AGREEMENT WITH THE THEORY FOR THE STABILITY OF AN INHOMOGENEOUS PLASMA IN CROSSED ELECTRIC AND MAGNETIC FIELDS. FACILITY: AKADEMIIA NAUK UKRAINS'KOI RSR, INSTITUT FIZIKI, KIEV, UKRAINIAN SSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 539.216.2

GLADKIKH, N. T., ZHUKOVA, N. A., PROTSENKO, I. YE., and CHEKAREV, M. A.,
Kharkov State University imeni A. M. Gor'kiy

"Structure of Vanadium and Chromium Thin Films"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 36, No 1, 1973, pp 84-90

Abstract: The phase composition of vanadium and chromium films was investigated in relation ot thickness and temperature of the substrate, rate of condensation and pressure of residual gases ($\sim 10^{-5}$ and $\sim 10^{-8}$ torr). It is shown that in a vacuum of 10^{-5} torr, FCC phases are formed in the films which are close in their composition to VO and CrO. Structural transformations during aging or annealing of these phases were studied along with the conditions of formation of a phase with the structure of the beta-tungsten type in the chromium films. Relationships of the BCC lattice parameter to thickness for vanadium and chromium films, condensed in a vacuum, were obtained. Thus, the film phase composition is not determined by the absolute pressure of residual gases but by the ratio of the number of metal atoms on the substrate and gas impurity atoms which depends on the condensation rate, substrate temperature, and pressure in the vacuum chamber. Five figures, 18 bibliographic references.
1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

UDC 547.26'118

OVRUTSKIY, V. M., KUZ'MENKO, I. I., and PROTSENKO, L. D., Kiev Scientific Research Institute of Pharmacology and Toxicology

"Aryl Esters of N-[4-(1-Phenyl)2,3-dimethyl-5-oxopyrazolyl]-N',N',-di(2-chloroethyl)-diamidophosphoric Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 5, May 73, pp 1034-1036

Abstract: Title compounds were obtained by reacting the aryl esters of di-(2-chloroethyl)-amidophosphoric acid chlorides with aminoantipyrine in acetone and in presence of triethylamine. The products originally are viscous liquids which crystallize after one passage through an alumina column. No biological data are reported.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

Organophosphorus Compounds

USSR

UDC 547.26.118

RAPP, L. B., and PROTSENKO, L. D., Kiyev Scientific Research Institute of Pharmacology and Toxicology

"Heterocyclic Derivatives of Di(2-chloroethyl)amidophosphoric Acid Aryl Esters"

Kiyev, Ukrainskii Khimicheskii Zhurnal, Vol 39, No 3, Mar 73, pp 273-277

Abstract: The heterocyclic derivatives of di(2-chloroethyl)amidophosphoric acid aryl esters of the general formula $R(XC_6H_4O)P(O)N(CH_2CH_2Cl)_2$ where R = piperidyl, morpholyl, 2-aminopirydyl, 2-amino-4-methylazolyl, amino-p-benzenesulfo-2-aminothiazolyl and X = H, o-CH_3O, o,p-F were synthesized. The compounds were obtained by reacting di(2-chloroethyl)amidophosphoric acid dichloride with phenol followed by reaction with a heterocyclic base in presence of triethylamine.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

Pharmacology and Toxicology

USSR

UDC 615.31:547.415.37.011.5

PROTSENKO, L. D., Kiev Institute of Pharmacology and Toxicology

"Rate of Hydrolysis of Ethylenimine Derivatives of Phosphorus-Containing Acids and Stability of Water and Alcohol Solutions at different pH Values"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, No 7, 1972, pp 50-53

Abstract: Study of the hydrolysis of ethylenephosphoramides by quantitative determination of the ethylenimine groups using the thiosulfate method showed it to be virtually the same for all the compounds. The coxicity of the individual substances was dependent more on the structure than on the rate of hydrolysis. The ethylenephosphoramides were found to be much more stable in an alkaline medium (water and alcohol) (pH 8.0) than in an acid one, with the aryldiethylenephosphoramides much more stable than the acyldiethylenephosphoramides. Almost all of the former remained unchanged for 18 hours, while the latter began to change within 3 hours. Both groups were unstable in an acid medium (pH 2.0); all the compounds began to change in the first 30 minutes.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

UDC 615.277.3.011.5

PROTSENKO, L. D., and TITARENKO, I. P., Kiev Scientific Research Institute of Pharmacology and Toxicology

"Study of the Hydrolysis Products of Some Ethylenephosphoamides"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 1, Jan 72, pp 51-55

Abstract: Hydrolysis of N-benzyl-N',N',N",N"-diethylenetriamide of phosphoric acid (benzo-TEP) and tetraethylenamide of p-phenylenediphosphoric acid was studied by thiosulfate determination of ethyleneimine groups and by paper chromatography. After 23 days the entire sample of benzo-TEP was converted to N-benzoyl-N',N"-bis(2-hydroxyethyl)triamide and benzamide of phosphoric acid. The conversion began at about the third day of the experiment, both products accumulating at the expense of the starting material. Evidently the hydrolysis occurs in two directions: a break in the N-P bond forming the benzamide and addition of water to the two ethyleneimine groups. Most of the benzo-TEP (70%) is converted to the benzamide by the first route. Hydrolysis of p-phenylenediphosphoric acid is faster, all of the starting material being fully converted after 6 days to a single product -- N,N',N",N"-tetra-(2-hydroxyethyl)-tetramide of p-phenylenediphosphoric acid.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR UDC 546.185

PROTSENKO, L. D., and SKUL'SKAYA, N. Ya.

"Ultra-Violet Spectra of Ethyleniminoderivatives of Phosphoric Acids"

Leningrad, Zhurnal Obshchey Khimii, Sep 71, Vol 14, No 9, pp 1933-1937

Abstract: The study covers absorption spectra of more than 60 ethyleniminoderivatives of phosphoric, thiophosphoric, and p-phenyldiphosphoric acids containing radicals of aromatic, aliphatic, heterocyclic amines and phenols, ethyleniminoderivatives of substituted phosphazobenzoyls and phosphazo-p-fluorobenzoyls. The repetition of optical properties among the various ethyleniminoderivatives of phosphoric acids indicates that the absorption in the UV spectral region is determined by aromatic and other substituents at the phosphorus atom; the remaining portion of the molecule hardly affects the spectrum. The nature of absorption by these substituents changes very little when passing from one molecule to another. The absorption maximum position is influenced by the nature of the bond between phosphorus and the substituent as well as by the chemical nature of the aromatic radical (in the case of aromatic substituents). The measurements

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

USSR

PROTSNEKO, L. D., and SKUL'SKAYA, N. Ya., Zhurnal Obshchey Khimii, Sep 71, Vol 14, No 9, pp 1933-1937

were done on a SF-4 spectrophotometer in cells with a 9.99 mm path at concentrations, mostly, from $5 \cdot 10^{-5}$ to 10^{-4} g-mole/l in alcohol solutions.

2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UNCLASSIFIED

PROCESSING DATE--23OCT70

1/2 012

TITLE--ETHYLENIMINE DERIVATIVES OF PHOSPHORYLATED POLYHYDRIX ALCOHOLS -U-

AUTHOR-(03)-PROTSENKO, L.D., SKULSKAYA, N.YA., DERKACH, G.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(2), 464-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IMINE, GLYCEROL, TRIETHYLAMINE, ORGANIC PHOSPHATE, ETHYL CARBAMATE, CHEMICAL DECOMPOSITION, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/0079/70/040/002/0464/0466

PROXY REEL/FRAME--1995/1468

PROCESSION NO--AP0116905

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UNCLASSIFIED

PROCESSING DATE--23OCT70

2/2 012

CIRC ACCESSION NO--AP0116905

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MIXING EQUIMOLAR AMTS. GLYCEROL IN DIOXANE WITH OCNPOCL SUB2 AT 20-5DEGREES, KEEPING THE MIXT. 20 HR AT ROOM TEMP., TREATING IT WITH 3.3 MOLES ETHYLENIMINE AND ET SUB3 N AND KEEPING THE WHOLE 1 HR GAVE 65PERCENT DIAZIRIDIDE OF 1,GLYCERYLURETHANE PHOSPHATE, ISOLATED AS DIPICRATE, DECOMPD. 139-40DEGREES. SIMILARLY WERE PREPD.: DIPICRATE OF 1,3,DIACETYL,2,GLYCERYL URETHANE PHOSPHATE, DECOMPD. 157-9DEGREES; 1,3,DITRITYL,2,GLYCERYL URETHANE PHOSPHATE, M. 115-17DEGREES; 1,2,3,GLYCERYL TRIURETHANE PHOSPHATE HEXAAZIRIDIDE, M. 40-2DEGREES; AND 1,6,DIBENZOYL,D,SORBITYL,2,3,4,6,TETRAURETHANE PHOSPHATE OCTAAZIRIDIDE, ISOLATED AS OCTAPICRATE, DECOMPD. 130-2DEGREES. REACTION OF 2,3,4,6,TETRA,O,ACETYL,D,GLUCOSE WITH (MEO) SUB2 PO(NCO) IN ET SUB2 O GAVE DI-ME 2,3,4,6,TETRA,O,ACETYL,D,GLUCOS,5,YL URETHANE PHOSPHATE, M. 95-7DEGREES.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UDC 547.26'118

USSR

PROTSENKO, L. D., and SKUL'SKAYA, N. YA.

"O,O'-Diaryl-N,N,N',N'-diethylenediamides and O-Aryl-N,N,N',N',N",N"-triethylenetriamides of p-Phenylenediphosphoric Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 5, May 70, pp 1021-1024

Abstract: Continuing their studies on the synthesis of ethylenimine derivatives of p-phenylenediphosphoric acid, the authors synthesized diethylenediamides and triethylenetriamides of p-phenylenediphosphoric acid containing phenol residues. These ethylenimine derivatives are formed by the reaction of p-phenylenediphosphoric acid tetrachloride with ethylenimine and then phenol in the presence of triethylamine.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UDC: 547.185

USSR

PROTSENKO, L. D., SKUL'SKAYA, N. YA., and DERKACH, G. I. (Deceased)

"Ethylenimine Derivatives of Phosphorylated Polyatomic Alcohols"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 2, Feb 70, pp 464-466

Abstract: The article describes the synthesis of ethylenimine derivatives of phosphorylated glycerol and D-sorbitol. Isocyanatophosphoric acid dichloride reacts readily with polyatomic alcohols and their derivatives to give dichlorophosphonyl derivatives of polyatomic alcohols of various degrees of substitution, depending on the number of hydroxyl groups and the ratio of reagent amounts. Subsequent action of ethylenimine on these chlorine derivatives in the presence of triethylamine gives corresponding ethylenimine derivatives. Dialkyl esters of isocyanatophosphoric acids react with polyatomic alcohols analogously to isocyanatophosphoric acid dichloride.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UDC 547.26.118

USSR

RAPP, L. B., PROTSENKO, L. D., and KUZ'MENKO, I. L., Kiev Scientific Research Institute of Pharmacology and Toxicology, Kiev

"Synthesis of Aljyl-Aryl Esters of Di-(2-chloroethyl)amidophosphoric Acid"

Kiev, Ukrainskiy Khimicheskiy Zhurnal, Vol 38, No 9, Sep 72, pp 943-945

Abstract: Phosphorylated chloroethylamines containing residues of phenols, which were prepared in earlier work by the authors, had an inhibiting effect on experimental tumors. For this reason, 15 di-(2-chloroethyl)amidophosphoric acid alkyl-aryl esters (I) were prepared, using the following reactions: $(ClCH_2CH_2)_2NP(O)Cl_2 + RC_6H_4OH$ $(+Et_3N)$ $(ClCH_2.CH_2)_2NP(O)(OC_6H_4R)Cl + AlkOH$ $(+Et_3N)$ $(ClCH_2CH_2)_2NP(O)(OC_6H_4R)OAlk$ (I). The compounds I with Alk = Et, R = H, o-F, p-F, o-Cl, m-Cl, o-Me, p-Me; Alk = Me, R = o-F, o-Cl, H, p-Me; Alk = Pr, R = H; and Alk = Bu, R = H, p-Me, p-F were viscous liquids that were soluble in common organic solvents, but insoluble in water.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UDC 666.1.031.22:536.24

USSR

SEVAST'YANOV, R. I., Candidate of Technical Sciences, BESPALOV, V. P., Engineer, and PROTSENKO, L. M., Engineer, State Scientific Research Institute of Glass

"The Influence of the Altar in the Swelling Point on the Heat Exchange and the Motion of Glass Mass in the Boiling Basin of the Furnace"

Moscow, Steklo i Keramika, No 2, 1973, pp 4-5

Abstract: The expediency of mounting an altar in the zone of the swelling point of a glass-making furnace of sheet glass is analyzed on a physical analog and by examining the BVVS system of the glass-making factory "Proletariy". On the basis of model tests and measurements of temperature and heat fluxes in the "Proletariy" furnace, the influence of different forms of the altar on hydrodynamic properties of the glass mass were determined. The type of an altar without cooling is considered to be the best. The height of the altar has not to exceed the thickness of the return flux of the glass mass, or not to exceed 2/3 of the basin depth. Four figures, four bibliographic references.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

UDC 621.317.75

USSR

PROTSENKO, L. N.

"Analysis of the Accuracy Characteristics of a Meter for Measuring the Signal Parameters by Statistical Simulation"

Metody razrab. radioelektron. apparatury, No 1, (Procedures for Development of Radioelectronic Equipment -- Collection of Works, No 1), Moscow, 1970, pp 179-185 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A408)

Translation: The investigated meter is a set of three disciminators (frequency, time and amplitude). Statistical simulation as applied to analysis of the accuracy characteristics of the meter consists in mathematical description of radiotechnical operations and the information processing algorithm, representation of the operations in discrete form, assignment (by means of a sensor) of random values to destabilizing factors and statistical processing of the output information on digital computers. Block diagrams are presented for the meter and simulation, and the analysis results are given for a specific meter. The bibliography has two entries.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

P

USSR

UDC 621.317.75

PROTSENKO, L. N., KHUKHLAYEV, K. K.

"Application of the Method of Automatic Discrimination Characteristics for Investigation of the Accuracy of Measuring the Frequency and Time Position of a Radio Signal"

Metody razrab. radioelektron. apparatury, No 1 (Procedures for Development of Radioelectronic Equipment -- Collection of Works, No 1), Moscow, 1970, pp 186-188 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A407)

Translation: In analyzing the parametric reliability of the measuring parameters of input signals, the method of automatic pickup of the discrimination characteristics is used. This method consists in taking and automatic reprinting of the discrimination and fluctuation characteristics and systematic errors. Brief information is presented on the algorithm of the automatic discrimination characteristics. It is pointed out that it permits investigation of the accuracy characteristics of multichannel meters for measuring the frequency and time position of radio signals.

1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

1/2 028 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--STUDY OF UV AND BLUE FLUORESCENCE ENHANCEMENT OF L FIBROBLASTS IN VITRO AFTER X IRRADIATION -U-

AUTHOR-(04)-PROTSENKO, M.I., GANIN, A.F., GRUZDEV, A.D., MOSOLOV, A.N.

COUNTRY OF INFO--USSR

SOURCE--TSITOLOGIYA: 12: 214-19 FEB 1970

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TISSUE CULTURE, X RAY RADIATION BIOLOGIC EFFECT, CELL PHYSIOLOGY, RADIATION DOSAGE, FLUORESCENCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1984 STEP NO--UR/9053/70/012/000/0214/0219

CIRC ACCESSION NO--AP0120627

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6

REEL # 25
POGOZHEV, V.A.
to
PROTSENKO, M.I.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202530010-6"