"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 019 UNCLASSIFIED PROCESSING DATE--23OCT7(

CIRC ACCESSION NO--AP0119493

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ME CYCLOHEXANECARBOXYLATE (I) (60 G) WAS OXIDIZED WITHOUT CATALYST 34 HR AT 130DEGREES IN A GLASS COLUMN BY O, INTRODUCED THROUGH A POROUS BOTTOM AT 8 L.-HR. BY CHROMATOGRAPHIC ANAL. THE COMPN. OF THE REACTION MIXT. WAS: I 50.2PERCENT; ME 1-HYDROXYCYCLOHEXANECARBOXYLATE 16.9PERCENT; 2-OXOHEPTANEDIOIC ACID, ITS ENOLIC FORM (2-HYDROXY-2-HEPTENEDIOIC ACID) AND THE LACTONE OF THE LATTER 6.3PERCENT; MONO-ME 1,2,4,BUTANETRICARBOXYLATE 7.8PERCENT; HEZANEDIOIC AICD 4.5PERCENT; AND OTHER COMPDS. (CONTG. SOME CYCLOHEXANONE) 14.3PERCENT. THE NATURE OF THE PRODUCTS SHOWS THAT THE TERTIARY C-H BOND IS MOST VULNERABLE TO O ATTACK, TO FORM A HYDROPERIOXIDE. SINCE THE TERTIARY C OF I IS IN THE ALPHA POSITION, THE ALPHA FREE RADICALS, WHICH FORM ON DECOMPN. OF THE PERIOXIDE, ARE STABILIZED THROUGH CONJUGATION WITH THE PI ELECTRONS OF THE CARBOXYL GROUP. FACILITY: VSES. NAUCH.-ILLSED. INST. NEFTEKHIM. PROTSESSOV, LENINGRAD.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

UDC: 612.822.3-06:612.821.33/.34

GOFMAN, S. S., and FREYDIN, YA. V., Chair of Industrial Physiology and Psychology, Institute of the National Economy, and Laboratory of Medical Radioelectronics, Scientific Research Institute of Labor Hygiene and Occupationad Diseases, Sverdlovsk

"Multichannel Radioelectroencephalographic Study of Man During Nervous and Emotional Stress"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 70, No 11, Nov 70, pp 19-22

Abstract: A Radiotelemetric study was conducted to determine the bioelectrical activity of the brain in 10 students taking an examination. The results revealed an increase in slow activity instead of the expected depression. Slow high-amplitude oscillations predominanted, especially in the occipital regions of one or both hemispheres, occasionally alternating with low-amplitude oscillations. While the students were thinking what to write, and with the eyes temporarily closed, more or less pronounced alpha activity was recorded in all of the leads.

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

GOFMAN, S. S., and FREYDIN, YA. V., Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 70, No 11, Nov 70, pp 19-22

The importance of stress is shown by the fact that these EKG shifts did not take place while the students were attending class prior to the examination period. The appearance of the slow rhythm is regarded as an indication of increased activity of the cortical and subcortical elements, rather than of predominance of the inhibitory processes.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 026 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--SOLUBILITY OF ACETYLENIC HYDROCARBONS IN THE N,N,N',N' TETRAETHYL GLUTARAMIDE -U-

AUTHOR-(02)-FREYDLIN, G.N., BUSHINSKIY, V.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(2) 385-91

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ACETYLENE HYDROCARBON, AMIDE, SOLUBILITY, PRESSURE EFFECT, ENTHALPY, ENTROPY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/0336 STEP NO--UR/0080/70/043/002/0385/0391

CIRC ACCESSION NO--AP0103991

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 026 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0103991

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLY. OF C SUB2 H SUB2 (I), METHYLACETYLENE (II), CH SUB2: CHC:CH (III), HC:CC:CH (IV), AND CO SUB2 IN DRY AND WET N,N,N',N' TETRAETHYL GLUTARAMIDE (V) WAS STUDIED AT 20 TO 50DEGREES AND VARIOUS PRESSURES. THE SOLY. OF THESE HYDROCARBONS INCREASES WITH THEIR MOL. WT. DEVIATIONS FROM THE HENRY LAW WERE OBSERVED AT LOW PRESSURES. THE SOLY. DECREASES WITH INCREASING WATER CONTENT. THE DATA FOLLOW THE KRICHEVSKI EQUATION LN(P SUB2-N SUB2) EQUALS LN K MINUS BETA(1-N SUB1 PRIME2). WHERE P SUB2 IS THE EQUIL. PRESSURE, N SUB2 THE MOLE FRACTION OF GAS IN SOLN., N SUB1 THE MOLE FRACTION OF SOLVENT IN THE LIQ. PHASE, K THE HENRY COEFF., AND BETA A CONST. CONSTS. K AND BETA AND THE ENTHALPY AND THE ENTROPY OF MIXING ARE TABULATED. THE SOLY. OF THESE COMPDS. IN V IS BETTER THAN THAT IN L,VINYL,PYRROLIDONE, SO THAT V IS RECOMMENDED AS A SOLVENT FOR THE SEPN. OF THE PRODUCTS IN C SUB2 H SUB2 PRODUCTION.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

UDC 542.97:547.263:546.11:547.594.3

SHARF, V. Z., FREYDLIN, L. KH., KRUTII, V. N., LYSYAK, T. V., Institute of Organic Chemistry Imeni N. D. Zelinskii, Acad. Sc. USSR

"Investigation of the Homogeneous Hydrogen Transfer From 2-Pentanol to Cyclohexanone in the Presence of Tris(triphenylphosphine)-dichlororuthenium and a Base"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 10, Oct 72, pp 2195-2198

Abstract: Base accelerates the reduction of cyclohexanone through hydrogen transfer from 2-pentanol as well as its hydrogenation and condensation in presence of the tris(triphenylphosphine)dichlororuthenium complex. The hydrogen transfer reaches a maximum at a base concentration of $1.64 \cdot 10^{-3}$M/l under argon atmosphere and at $4.08 \cdot 10^{-3}$M/l under hydrogen. The degree of hydrogenation of the ketone by hydrogen and its condensation increase with increasing concentration of the base. Raising the temperature from 50 to 84°° results in a higher rate of hydrogen transfer; the rate of hydrogenation reaching a maximum at 70°. This evidently is due to the formation of various intermediate complexes catalyzing these processes. The duration of the process has practically no effect on all of the processes discussed.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 547.971.2

EREVDLIN, I. KH., SHARF, V. Z., KROMIY, V. N., and SHCHERBAKOVA, S. I.,
Institute of Organic Chemistry imeni N. D. Zelinskiy, Academy of Sciences USSR

"An Investigation of the Reduction of Cyclohexanone with an Alcohol in the Presence of Tris(triphenylphosphine)dichlororuthenium"

Leningrad, Zhurnal Organicheskiy Khimii, Vol 8, Vyp 5, May 72, pp 979-981

Abstract: The authors investigated the homogeneous catalysis by tris(triphenylphosphine)dichlororhuthenium of the reduction of cyclohexanone with several five- to seven-carbon aliphatic alcohols. Reactions were conducted under reflux condenser under an atmosphere of argon or hydrogen, and analysed by gas-liquid chromatography. The low yield of cyclohexanol shows that condensation is a side reaction. The reaction rates for various degrees of substitution on the alpha carbon were studied. They showed a correlation between increased steric hindrance and slower rate of reaction. The intermediate formation of a hydride of tris(triphenylphosphine)dichlororhuthenium was suggested as a mechanism. Hydrogenation by the ambient medium contributes to the reduction of cyclohexanone.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 547.315.2

FREYDLIN, L. Kh., LITVIN, Ye. F., and TOPURIDZE, L. F., Institute of Organic Chemistry imeni N. D. Zelinskiy, Acad. Sc. USSR

"Study of the Direction and Mechanism of Homogeneous Hydrogenation of Dienes in Presence of Tris-(triphenylphosphine)rhodium Chloride"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 8, No 4, Apr 72, pp 669-674

Abstract: Hydrogenation in presence of $RhCl(PPh_3)_3$ was studied using cis-1,3-pentadiene (I), trans-1,3-pentadiene (II), 2,3-dimethyl-1,3-butadiene (III), 2-methyl-1,3-butadiene (IV), 1,3-butadiene (V) and 1,4-pentadiene (VI); for comparison, monoolefines were also hydrogenated. The hydrogenation rate depends on the structure of the dienes, decreasing in the following order: (VI) (I) (II) (III) (IV). The conjugated diene C=C bonds are hydrogenated much more selectively over $RhCl(PPh_3)_3$ than over rhodium black. (IV) adds hydrogen preferentially at the 1,2-position, while (III) does it exclusively so. During the 1,4-addition of hydrogen, (V) reacts predominantly in the cis-conformation, while (VI) does it in the trans-conformation.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--1,3,DICL CONVERSION MECHANISM IN THE PRESENCE OF ACID CATALYSTS. 1. CONVERSION OF 1,3,PROPANEDIOL, 1,3,BUTANEDIOL AND BETA OXIDES ON CALCIUM

AUTHOR-(04)-FREYDLIN, L.KH., SHARF, V.Z., BARTOK, M., NAZARYAN, A.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 310-14

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PROPANE, BUTANE, HYDROXYL RADICAL, ORGANIC OXIDE, ACID CATALYSIS, FURAN, EPOXIDE, KETONE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0749 STEP NO--UR/0062/70/000/002/0310/0314

CIRC ACCESSION NO--AP0124419

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124419

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRODUCTS FORMED BY PASSAGE AT 275-350DEGREES OVER CA SUB3 (PO SUB4) SUB2 OF HO(CH SUB2) SUB3 OH, TETRAHYDROFURAN, AND ALLYL ALC. WERE TABULATED FOR EACH TEMP. IN 25DEGREES STEPS. SIMILAR DATA ARE REPORTED FOR HO(CH SUB2) SUB2 CHMEOH AND 2,METHYLTETTRAHYDROFURAN, BOTH RUN OVER 230-300DEGREES. THE 1,3,DIOLS ARE CONVERTED INTO A MIXT. OF SATD. AND UNSATD. ALCS., ALDEHYDES, KETONES, EPOXIDES, AND OTHER COMPDS. DEHYDRATION OCCURS BY 2 PATHS TO AN UNSATD. ALC. AND TO A CYCLIC OXIDE, WITH INTRAMOL. CYCLIZATION BEING PREDOMINANT. OXIDES ARE THEN CONVERTED BY ISOMERIZATION TO UNSATD. ALCS. AND CARBONYL COMPDS. MUCH OF THE SATD. ALCS. AND UNSATD. ALDEHYDES IS FORMED BY THE H TRANSFER REACTIONS. 2,2,DIETHYL,1,3,PROPANEDIOL GAVE 11PERCENT 3,3,DIETHYLTRIMETHYLENE OXIDE, 18PERCENT ISOMERIC HEPTENOLS, AND 71PERCENT MIXED PRODUCTS AT 300DEGREES; 2,BUTYL,1,3,PROPANEDIOL GAVE NO TRIMETHYLENE OXIDE DERIVS. BUT 20PERCENT ISOMERIC HEPTENOLS AND 80PERCENT MIXED PRODUCTS. 2,BUTYLTRIMETHYLENE OXIDE WAS 98PERCENT CONVERTED TO ALCS. AND OTHER PRODUCTS AT 300DEGREES. FACILITY: INST. ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/3 014 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--MECHANISM OF 1,3 DIOL CONVERSIONS IN THE PRESENCE OF ACIDIC CATALYSTS. 2. CONVERSION OF 2,4 PENTANEDIOL AND 2 METHYL 2,4 PENTANEDIOL

AUTHOR-(03)-SHARF, V.Z., FREYDLIN, L.KH., NAZARYAN, A.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 597-602

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL REACTION MECHANISM, PENTANE, ALCOHOL, CATALYST, DEHYDRATION, STEREOCHEMISTRY, CARBONYL COMPOUND, ISOMER DIENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0839 STEP NO--UR/0062/70/000/003/0597/0602

CIRC ACCESSION NO--AP0124506

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/3 014 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124506

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONVERSIONS OF 2,4 PENTANEDIOL AND ITS 2 ME ANALOG OVER CA SUB3 (PO SUB4)SUB2 OR AL SUB2 O SUB3 CATALYSTS IN THE TEMP. INTERVAL 140-360DEGREES WERE SHOWN GRAPHICALLY. THE DEHYDRATION OF THESE ALCS. OCCURS SPECIFICALLY IN RESPECT OT THEIR STEREOCHEMISTRY AND RESULTS IN TRANS 1,3 PENTADIENE FROM THE 1ST ALC. ALSO, APPRECIABLE DECOMPN. TAKES PLACE: THE PHOSPHATE CATALYSTS LEADS TO ME SUB2 CO AND ISO PROH, WHILE AL SUB2 O SUB3 GIVES ALSO OSME ACH. THE CARBONYL COMPDS. ARE FORMED BY EITHER ISOMERIZATION OF DEHYDRATION PRODUCTS SUCH AS THE EPOXIDE OR UNSATD. ALC. OR BY DEALDOLIZATION OF THE KETOL FORMED AS AN INTERMEDIATE. IN THE CASE OF THE PHOSPHATE CATALYST THE CLEAVAGE IS CAUSED BY H TRANSFER FORM THE HO GROUPS OF THE DIOL TO THE CARBONYL GROUP TO FORM THIS KETOL, WHICH THEN CLEAVES BY DEALDOLIZATION. THE REACTIONS OCCUR IN THE 100-50DEGREES INTERVAL, AT WHICH DEHYDRATION CANNOT TAKE PLACE. OVER AL SUB2 O SUB3 THE DECOMPN. OF THE DIOL IS LESS PRONOUNCED AND CLEAVAGE VIA THE KETOL IS INHIBITED BY H SUB2 O GENERATED IN THE REACTION OWING TO POISONING OF THE CATALYSTS IN RESPECT OT THE H TRANSFER REACTION. DEHYDRATION OF THE 1ST DIOL OVER CA SUB3(PO SUB4)SUB2 AT 290DEGREES YIELDS MIXED UNSATD. ALCS. CONTG. 68PERCENT 4 PENTEN 2OL AND 32PERCENT TRANS 3 PENTEN 2 OL, WHILE GREATER THAN 325DEGREES THE PRODUCT IS ONLY 4 PENTEN 2 OL; AS THE TEMP. IS RAISED THE YIELDS OF THESE ALCS. DECLINE AND THAT OF DIENE RISES, AND THE FINAL PRODUCT CONTAINS 75-100PERCENT TRANS PIPERYLENE AND 0-20PERCENT CIS ISOMER; THE YIELD OF 1,4 PENTADIENE IS LESS THAN 5PERCENT.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

3/3 014 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSICN NO--AP0124506

ABSTRACT/EXTRACT--2 METHYL 2,4 PENTANEDIOL REACTS ON AL SUB2 O SUB3 EVEN AT 135DEGREES, WHILE AT 190DEGREES THE CONVERSION REACHES 30PERCENT, FORMING HOCME SUB2 CH SUB2 CHMEOH AND ISOMERIC 2 METHYLPENTADIENES, ALONG WITH ME SUB2 CO AND ISO PROH. FACILITY: INST. ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 519.2+519.9

VENTSEL', A. D. and FREYDLIN, M. I.

"S all Random Perturbations of Dynamic Systems"

Moscow, Uspekhi Matematicheskik Nauk, Vol 25, No 1, Jan/Feb 70, pp 3-55

Abstract: The effect of small random perturbations of the white noise type

$$\dot{x}_t^{\varepsilon} = b\varepsilon(x_t^{\varepsilon}) + \varepsilon\sigma(x_t^{\varepsilon})\dot{\xi}_t$$

on a dynamic system $\dot{x}_t = b(x_t)$ is studied, where ξ_t is an r-dimensional Wiener process and $b^{\varepsilon}(x) \to b(x)$ as $\varepsilon \to 0$. The effect of these perturbations over large time intervals which increase with decreasing ε is emphasized. Two problems are discussed: the behavior of the invariant measure μ^{ε} of the process x_t^{ε} as $\varepsilon \to 0$, and the distribution of the position of the trajectory of x_t^{ε} immediately after leaving the compact region. The probability that the trajectory of the process x_t^{ε} in time [0, T] does not deviate from a certain smooth function ϕ_t by more than δ is calculated. It was found that for small ε and δ the major term in this

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

VENTSEL', A. D., et al., Uspekhi Matematicheskikh Nauk, Vol 25, No 1, Jan/Feb 70, pp 3-55

probability has the form $\exp\{-1/2\varepsilon^2 I(\phi)\}$, where $I(\phi)$ is some non-negative functional of ϕ_t. The function $V(x, y)$, the minimum of $I(\phi)$ with respect to the set of functions ϕ connecting points x and y, is used in formulating the answer to both problems. In both problems the process approaches a certain Markov chain and the answer depends on the behavior of the function $V(x, y)$ on graphs related to this chain. The paper was read at a meeting of the Moscow Mathematical Society on 25 March 1969.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

AA0040660

F

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 1-70

242087 SELECTIVE NUTRIENT MEDIUM for the assay of the microorganisms similar to Escherichia coli comprises peptone, sodium chloride, a saccharide and an acid-base indicator, and is modified, for ensuring the possibility of visual detection of the above microorganisms, by introducing into it yeast autolysate as a growth-stimulating agent, Chinosol and bile as inhibitors of the growth of the saprophytic microorganisms and bromocresol purple as the acid base indicator. 22.1.68. as 1212439/28-13, FREIDLIN, E.M. KUKHARKOVA, L.L. Meat Ind. Res. Inst. (5.9.69) Bul 15/25.4.69. Class 6a, Int. Cl. C 12k.

WD

AUTHORS: Freydlin, Ye. M.; and Kukharkova, L. L.
Vsesoyuznyy Nauchno - Issledovatel'skiy Institut Myasnoy Promyshlennosti

4 6

19750250

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 025 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--NEW BOOK TREATS FUNDAMENTALS OF SOCIAL HYGIENE AND PUBLIC HEALTH

ORGANIZATION -U-

AUTHOR--FREYDLIN, S.YA.

F

COUNTRY OF INFO--USSR

SOURCE--MERITED SCIENTIST RSFSR, LENINGRAD; MOSCOW, SOVETSKOYE ZDRAVOOKHRANENIYE, RUSSIAN, NO 5, 1970, PP 71-72

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--PUBLIC HEALTH, HYGIENE, MEDICAL TRAINING, TRAINING MANUAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0597 STEP NO--UR/0753/70/000/005/0071/0072

CIRC ACCESSION NO--AP0132758

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 025 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132758

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE NEW EDITION OF A TEXTBOOK FOR MEDICAL SCHOOLS IS ATTRACTING ATTENTION BECAUSE IN ADDITION TO THE QUESTIONS OF PUBLIC HEALTH ORGANIZATION, IT EXAMINES THE FUNDAMENTALS OF SOCIAL HYGIENE FOR THE FIRST TIME. THE IMPORTANCE OF SOCIAL HYGIENE TO PUBLIC HEALTH IN GENERAL AND AS SUBJECT MATTER FOR TEACHING IN PARTICULAR IS DEMONSTRATED IN THE FIRST CHAPTER. THIS CHAPTER GIVES A CORRECT AND COMPLETE IDEA OF THE ESSENCE OF THE QUESTION, IT IS WRITTEN IN A VERY INTELLIGIBLE STYLE, BUT AT THE SAME TIME IT IS ON A SUFFICIENTLY HIGH SCIENTIFIC LEVEL. THE OTHER 11 CHAPTERS TREAT SPECIFIC AREAS OF SOCIAL HYGIENE AND PUBLIC HEALTH ORGANIZATION TO THE EXTENT NEEDED BY ALL MIDDLE LEVEL MEDICAL WORKERS. THE PRINCIPLES OF SOVIET PUBLIC HEALTH, THE STRUCTURE OF ITS BODIES, THE STRUCTURE OF THE WORLD HEALTH ORGANIZATION, HISTORICAL INFORMATION ON PUBLIC HEALTH IN PREREVOLUTIONARY RUSSIA AND ON THE STAGES OF ITS DEVELOPMENT IN THE SOVIET PERIOD ARE PRESENTED BRIEFLY, BUT VERY CLEARLY IN THE SECOND AND THIRD CHAPTERS.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 026 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--SOME QUESTIONS ABOUT THE ORGANIZATION OF AMBULATORY TRAUMATOLOGICAL AID IN CITIES -U-

AUTHOR--FREYDLIN, S.YA.

COUNTRY OF INFO--USSR

SOURCE--VOYENNO-MEDITSINSKIY ZHURNAL, NO 3, 1970, PP 80-81

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FIRST AID, MILITARY MEDICINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0402 STEP NO--UR/0177/70/000/003/0080/0081

CIRC ACCESSION NO--AP0134170

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 026 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0134170

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN OUR COUNTRY AN EFFECTIVE SYSTEM OF COMBATTING TRAUMATISM AND RENDERING FIRST AID TO THE STRICKEN HAS BEEN CREATED. IN OUR OPINION, CERTAIN QUESTIONS ABOUT THE ORGANIZATION OF TRAUMATOLOGICAL AID TO AN URBAN POPULATION, STATED IN THE PRESENT ARTICLE, ARE TO A CERTAIN DEGREE OF INTEREST TO MILITARY PHYSICIANS.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

TITLE--IRON CARBONYLS AS INHIBITORS OF RADICAL CHAIN REACTIONS OF ORGANOSULFUR COMPOUNDS -U-

AUTHOR-(05)-KANDROR, I.I., PETROVA, R.G., PETROVSKIY, P.V., TERENTYEV, A.B., FREYDLINA, R.KH.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(4), 835-8 (CHEM)

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

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IRON COMPOUND, CARBONYL COMPOUND, ORGANIC SULFUR COMPOUND, ALKENE, CHAIN REACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0698 STEP NO--UR/0020/70/191/004/0835/0838

CIRC ACCESSION NO--AT0124370

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 012 UNCLASSIFIED

CIRC ACCESSION NO--AT0124370 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING MIXTS. OF UNSATD. SULFIDES AND PHSH WITH FE(CO SUB5 (I) (0.5 MOLE PERCENT) IN SEALED AMPULS AT 80DEGREES OR 150DEGREES 10 HR WAS USED AS THE TECHNIQUE FOR STUDYING THE EFFECT OF THE CARBONYL ADDITIVE ON THE REACTION. I INHIBITED THE RADICAL ADDN. OF PHSH TO THE OLEFINS. THE FOLLOWING PRODUCTS WERE OBTAINED FROM THE INDICATED OLEFINS IN THE PRESENCE (ABSENCE) OF I; PHSCH:CH SUB2 100PERCENT MECH (SPH) SUB2 (100PERCENT (PHSCH SUB2) SUB2); PHSCPH:CH SUB2 1000PERCENT MEC(SPH) SUB2 PH (56PERCENT PHSCHPHCH SUB2 SPH AND 27PERCENT MEC(SPH) SUB2 PH); AND MEC(SPH) SUB2 PH 100PERCENT MECH(SPH)PH; NO REACTION TOOK PLACE WITH OR WITHOUT FE(CO) SUB5 WITH PHSH AND MECH(SPH) SUB2. FORMATION OF PHSCHPHME ABOVE RESULTED FROM ADDN. OF PHSH IN ACCORD WITH THE MARKOVNIKOV RULE, AND CONVERSION OF THE MERCAPTAL INTO THE FINAL PRODUCT OCCURRED BY LOSS OF PHS RADICAL, WITH FE(CO) SUB5 INHIBITING THE RADICAL ADDN. OF PHSH OT THE ORIGINAL OLEFINIC SULFIDE. FACILITY: INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 020 UNCLASSIFIED

TITLE—NEW METHOD FOR SYNTHESIZING ARYTHIOLS -U- PROCESSING DATE--30OCT70

AUTHOR-(03)-KOPYLOVA, B.V., KHASANOVA, M.N., FREYDLINA, R.KH.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER KHIM. 2970, (3), 633-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THIOL, ORGANIC SYNTHESIS, PICRIC ACID, BENZENE DERIVATIVE, BORON COMPOUND, COMPLEX COMPOUND, CHLORINATED ORGANIC COMPOUND, CHEMICAL DECOMPOSITION, SULFIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0736 STEP NO--UR/0062/70/003/000/0633/0636

CIRC ACCESSION NO--AP0124406

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 020 UNCLASSIFIED

CIRC ACCESSION NO--AP0124406 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A MIXT. OF 2 G 3,4 CL SUB2 C SUB6 H SUB3 N SUB2 BF SUB4 AND 1.8 G POWD. SC(NH SUB2)SUB2 HEATED IN H SUB2 O TO 50-60DEGREES UNTIL GAS EVOLUTION HAD CEASED GAVE, AFTER EXTN. WITH C SUB6 H SUB6 AND ADDN. OF PICRIC ACID IN ETOH, 1.5 G 3,4 CL(H SUB2 NC(:NH)S)C SUB6 H SUB3 SC(:NH) NH SUB2 2C SUB6 H SUB2(NO SUB2)SUB3 OH, M. 236DEGREES; SIMILARLY 2,6 CL SUB2 C SUB6 H SUB3 N SUB2 BF SUB4 GAVE 90PERCENT 2,6 DICHLOROPHENYLISOTHIURONIUM PICRATE, M. 223-4DEGREES. THE REACTION MIXT. PREPD. SIMILARLY FROM O CLC SUB6 H SUB4 N SUB2 BF SUB4 GAVE AFTER EXTN. WITH C SUB6 H SUB6 AND NEUTRALIZATION WITH NAHCO SUB3, O-CHLORO PHENYLISOTHIURONIUM BICARBONATE, WHICH HEATED WITH AQ. H SUB2 SO SUB4 1-2 HR UNDER N GAVE 22PERCENT O CLC SUB6 H SUB4 SH, B. 204-6DEGREES; SIMILARLY WERE PREPD. O CHLOROPHENYLENEDITHIOL, 22PERCENT, B SUB10 120DEGREES; 2,6 DICHLOROTHIOPHENOL, 50PERCENT, M. 44-6DEGREES; AND P PHENYLENEDITHIOL, 20PERCENT, M. 98DEGREES. SPONTANEOUS DECOMPN. OF P NITROPHENYLENEDITHIOL BICARBONATE GAVE P O SUB2 NC SUB6 H SUB4 SH, DIRECTLY OXIDIZED IN AIR TO THE DISULFIDE, M. 178-9DEGREES. A REACTION MIXT. OF 11.3 G O CLC SUB6 H SUB4 N SUB2 BF SUB4 AND 7.6 G SC(NH SUB2) SUB2 IN H SUB2 O WAS EXTD. WITH C SUB6 H SUB6 AND THE AQ. LAYER, AFTER ADDN. OF CONCD. KOH UNTIL ALK., WAS REFLUXED UNDER N 2 HR TO YIELD AFTE ACIDIFICATION WITH HCL 25PERCENT O CLC SUB6 H SUB4 SH. FACILITY: INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 032 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--RADICAL ADDITION OF METHYL DIBROMOACETATE TO ETHYLENE AND 1 HEXENE -U-

AUTHOR-(02)-FREYDLINA, R.KH., KAMYSHOVA, A.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 721-3

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BROMINATED ORGANIC COMPOUND, ETHYLENE, ACETATE, HEXENE, POLYMER, LACTONE, NMR SPECTRUM, IR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1907 STEP NO--UR/0062/70/000/003/0721/0723

CIRC ACCESSION NO--AP0123691

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 032 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0123691

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TELOMERIZATION OF C SUB2 H SUB4 WITH CHBR SUB2 CO SUB2 ME (I) WITH PEROXIDIC INITIATION WAS DESCRIBED. IN AN AUTOCLAVE 42.5 G I AND 2 G BZ SUB2 O SUB2 FLUSHED WITH N, PRESSURIZED WITH 100 ATM C SUB2 H SUB4, AND THE WHOLE HEATED 7 HR AT 100DEGREES (MAX. PRESSURE 320 ATM), GAVE 66PERCENT CONVERSION PRODUCTS WHICH YIELDED 35PERCENT OF THIS MATERIAL AS MEO SUB2 CCHBR(CH SUB2 CH SUB2) SUBX BR (II) (X EQUALS 1), B SUB5 71DEGREES, N PRIME20 SUBD 1.5084, D PRIME20 1.8446, AND 42PERCENT II (X EQUALS 2), B SUB2 113DEGREES, 1.5056, 1.6555 ALONG WITH TELOMER II (X EQUALS 3) 23PERCENT, WHICH WAS NOT DESCRIBED FURTHER. II (X EQUALS 1) HEATED 8 HR WITH FE (CO) SUB5 AT 135DEGREES GAVE 83PERCENT 2,BORMOBUTYROLACTONE, B SUB5 96-7DEGREES, 1.5088, 1.7640. I AND 1-HEXENE IN THE PRESENCE OF DICYCLOHEXYLPEROXY DICARBONATE INITIATOR GAVE IN 7 HR AT 55DEGREES 80PERCENT CONVERSION PRODUCTS WHICH YIELDED ON DISTN. 70.6PERCENT 1,3,DIBROMO,1,CARBOMETHOXYHEPTANE, B SUB4 117-18DEGREES, 1.4928, 1.5002, AND THIS AFTER REPEATED FRACTIONATION GAVE THE 2 RACEMIC FORMS, B SUB3 113DEGREES, AND B SUB3 117DEGREES, RESP. WHICH WERE CHARACTERIZED BY NMR AND IR SPECTRA. FACILITY: INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 010 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--HOMOLYTIC ADDITION OF THIOPHENOL TO TRIVINYLMETHANE AND RELATED COMPOUNDS -U-

AUTHOR--VASILYEVA, T.T., FEDIN, E.I., FREDLLINA, R.KH.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (1), 100-6

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THERMAL DEGRADATION, THIOL, PHENOL, NUCLEAR MAGNETIC RESONANCE, VINYLBENZENE, CHLORINATED ORGANIC COMPOUND, CYCLOPROPANE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1071 STEP NO--UR/0062/70/000/001/0100/0106

CIRC ACCESSION NO--AP0104469

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 010 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104469

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING 0.94 G HC(CH:CH SUB2) SUB3 WITH 1.1 G PHSH AND 5 MOLE PERCENT BZ SUB2 O SUB2 10 HR AT 80DEGREES IN A SEALED TUBE GAVE 73PERCENT 5,PHENYLTHIO,3,VINYL,1,PENTENE (I), B SUB2 104DEGREES, N PRIME2 SUBDDEGREES 1.5541, D PRIME20 0.9864, PH SUB2 S SUB2, AND STARTING MATERIALS; NMR EXAMN. SHOWED THE PRESENCE OF SOME CYCLOPROPANE DERIVS. I AND PHSH UNDER THESE CONDITIONS IN 10 HR GAVE 30PERCENT CH SUB2:C(CH SUB2 CH SUB2 SPH) SUB2 B SUB1 188DEGREES, 1.6030, 1.0928. 5,CHLORO,3,VINYL,1,PENTENE AND PHSH SIMILARLY TREATED GAVE 60PERCENT CH SUB2:C(CH SUB2 CH SUB2 CL)CH SUB2 CH SUB2 SPH, B SUB2 130DEGREES, 1.5653, 1.0944. 1,CHLORO,3,VINYL, 5,PHENYLTHIOPENTANE AND PHSNA IN ETOH 1 HR AT 70DEGREES GAVE 82PERCENT 3,VINYL,1,5,BIS (PHENYLTHIO)PENTANE, B SUB2 207DEGREES, 1.6037, 1.0917. ALSO REPORTED WERE (CH SUB2:CH) SUB2 CHCH SUB2 CH SUB2 CL, B SUB60 66DEGREES, 1.4525, 0.9167, CH SUB2:CHCH SUB2 CH(CH SUB2 OH) CH:CH SUB2 B SUB11 59DEGREES, 1.4560, 0.8655; CH SUB2:CHCH SUB2 CH(CH SUB2 CL)CH:CH SUB2 B SUB74 76DEGREES, 1.4549, 0.9223; CH SUB2:CHCH SUB2 CH(CH:CH SUB2)CH SUB2 SPH, B SUB1 90DEGREES, 1.5570, 0.9916.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

FREYDLINA, R. Kh.

Acc. Nr. N0100239 Abstracting Service: CHEMICAL ABST. 6-70 Code UK0062

111836q Radiation-chemical telomerization of ethylene by methyl formate. Bryantsev, I. N.; Zagoreta, P. A.; Romina, N. N.; Terent'ev, A. B.; Freidlina, R. Kh. (Inst. Elementoorg. Soedin. Moscow, USSR). *Izv. Akad. Nauk SSSR, Ser. Khim.* 1970, (1), 169-71 (Russ). The telomerization of $H_2C{:}CH_2$ with HCO_2Me gives $Me(CH_2)_nCO_2Me$ (I) (n = 1, 3, and 5), $HCO_2(CH_2)_nMe$ (II) (n = 2, 4, or 6), a compd. of mol. formula $C_{10}H_{20}O_2$, and $C_3H_7CHEtCO_2Me$, whether initiated with *tert*-Bu_2O_2 or γ-irradn. The increase in the reaction temp. increases the yields of I + II (at 125° and 190°, the yields were 0.25 and 7.0% and the *G*-values 0.71 and 20.0, resp.) and the proportion of II in the mixt. increased. The percentages of the products listed above at 125° were 20.1, 27.6, 21.2, 2.5, 4.2, 3.4, 17.0, and 4.0, resp.; and at 190°, 12.6, 19.4, 16.4, 7.8, 15.5, 8.7, 9.4, and 9.7, resp. With *tert*-Bu_2O_2 as initiator, the yield was 24.0% at 140° in 4 hr and the product percentages were 25.9, 20.0, 10.8, 19.4, 9.7, 3.2, 6.2, and 4.3%, resp. CPJR

Y1

REEL/FRAME
19841629

7CB

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

MALYUTOV, M. B. and FREYDLINA, V. L.

"Application of Information Theory to One Problem of Separation of Significant Factors"

Teoriya Veroyatnostey i yeye Primeneniya [The Theory of Probabilities and Its Applications], 1973, Vol 18, No 2, pp 438-440 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V168)

Translation: There are t variables (factors) x_α, $\alpha = 1, \ldots, t$, taking on values of 0 or 1. It is known that some $s \ll t$ of them are significant; function $y = 0$ if all significant factors are equal to 0, and $y = 1$ otherwise. We observe $z = 0$ or 1 with transition probabilities $r_{mn} = P\{z = n|y = m\}$, $m, n = 0, 1$. The problem is to find all significant factors by means of experiments consisting of assignment of values to the factors and observation of the corresponding z, the values of the factors being independent of preceding measurements. Information theory considerations are used to produce a bottom estimate for the number of experiments with fixed probabilities of erroneous decisions. A specific strategy is described for experimentation, as well as methods of analysis of the results. For them, estimates are given of the number of experiments and difficulty of their processing.

1/1

D. Chibisov

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC: 621.791.053:669-153:539.319

FREYDLINA, YE. YU., POPOV, A. S. and ANTONOV, YE. G. (Engineers)

"Effect of Annealing on the Residual Stresses and Mechanical Properties of Welded Joints of MA2-1 and VMD-3 Magnesium Alloys"

Moscow, Svarochnoye proizvodstvo, No 12, Dec 71, pp 33-34

Abstract: The fabrication of welded structures from magnesium alloys involves relieving of residual welding stresses inasmuch as formable alloys of the Mg-Al system tend to stress corrosion. To reduce the tendency to cracking, such structures are subject to annealing. This study concerns the effect of both temperature and annealing time on the values of residual stresses and mechanical properties of welds of MA2-1 and VMD-3 alloys. Use was made of reference holes to measure the residual stresses prior to and after annealing. The annealing temperatures and durations were 250 and 350°C for 0.5 to 20 hrs. The stress measurement results indicate that annealing at 250°C for 0.5 to 1 hr reduces residual stresses to about one half and for more than 2 hrs -- to about one tenth. Annealing at 350°C for 1 hr

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR
FREYDLINA, YE. YU., et al, Svarochnoye proizvodstvo, No 12, Dec 71, pp 33-34

makes possible almost complete relaxation of stresses. The mechanical properties of the tested alloys both before and after annealing are cited. indicating that annealing MA2-1 alloy at 350°C up to 20 hrs leaves its properties unaffected except for the angle of bend and notch toughness. Annealing VMD-3 alloy at 250°C for 6 hrs failed to affect its mechanical properties; annealing at 350°C, for longer durations, the properties of the parent material begin to deteriorate and its plasticity increases; the strength properties of the welds are somewhat improved. (3 illustrations, 1 table).

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

UDC: 621.378.3

BELYAYEV, Yu. N., KISELEV, A. M., and FREYDMAN, G. I.

"Laser with Two Interaction Regions"

Gor'kiy, Izvestiya VUZ--Radiofizika, vol. 14, No. 8, 1971, pp 1182-1188

Abstract: This article is a sequel of a letter written to the editor of the ZhETF (Journal of Experimental and Theoretical Physics, 9, 1969, p 441) by the three authors noted above, in which the possibility of designing a laser with a high transformation coefficient and high output power, using prismatic reflectors whose reflection factor is independent of the frequency within a broad range, was demonstrated. This laser, however, suffered from defects which were eliminated in a new version. The present article describes experiments performed with this second version, which permits a frequency tuning range of 4800 Å, from 9600 to 14,400 Å. A diagram of the experimental apparatus is provided and the experimental method explained. The pumping radiation was obtained from the second harmonic of a neodymium laser with a transparent gate, from which longitudinal or transverse modes could be obtained. A curve

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

BELYAYEV, Yu. N., et al., Izvestiya VUZ--Radiofizika, Vol 14, No 8, 1971, pp 1182-1188

plotted for the efficiency of the laser under test showed it to reach a level of 12%. The authors are members of the Scientific Research Radiophysical Institute.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 024 UNCLASSIFIED

TITLE--SINGLE WAVE APPROXIMATION FOR PARAMETRICALLY AMPLIFIED WAVES -U-

PROCESSING DATE--27NOV70

AUTHOR--FREYDMAN, G.I.

F

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 6, PP 1959-1966

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--WAVE PROPAGATION, TRAVELING WAVE INTERACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2234

STEP NO--UR/0056/70/058/006/1959/1966

CIRC ACCESSION NO--AP0125812

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 024 UNCLASSIFIED

CIRC ACCESSION NO--AP0125812 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS SHWON THAT FOR A SIFFICIENTLY WEAK TRANSVERSE COORDINATE DEPENDENCE OF THE AMPLITUDES OF PARAMETRICALLY AMPLIFIED WAVES WHOSE GROUP VELOCITIES DIFFER AND LIE IN A SINGLE PLANE WITH THE GROUP VELOCITY OF THE PUMPING WAVE, PROPAGATION OF THE WAVES CAN APPROXIMATELY BE DESCRIBED BY AN EQUATION OF THE TYPE OF THE DIFFUSION EQUATION FOR THE AMPLITUDE OF ONE OF THE WAVES. THE MAIN CASES OF INTERACTION BETWEEN THE WAVES AND PUMPING RADIATION BEAMS OR PULSES ARE CONSIDERED WITHIN THE LIMITS OF APPLICABILITY OF THE EQUATION. FACILITY: RADIOFIZICHESKIY INSTITUT GOR'KOVSKOGO GOS. UNIV.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

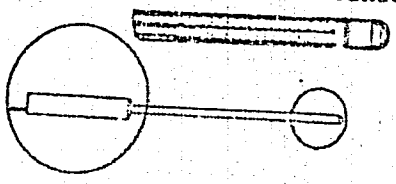
UDC: 615.473.9:615.832.9

SHAL'NIKOV, A. I., ZYUKIN, N. A., GDOVSKIY, V. A., LUR'YE, Yu. Yu., MASLOV, F. M., FREYDOVICH, A. I., Institute of Physical Problems imeni S. I. Vavilov

"A Device for Directional Freezing of Tissues"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraatsy, Tovarnyye Znaki, No 12, Apr 72, Author's Certificate No 333951, Division A, filed 11 Nov 70, published 30 Mar 72, p 19

Translation: This Author's Certificate introduces a device for directional freezing of tissues which contains a vacuum-insulated vessel holding two parallel tubes for delivery and removal of a cooling agent. The device also contains a heat-insulation liner, a charcoal getter and a tip. As a distinguishing feature of the patent, in order to freeze tissues arranged eccentrically relative to the longitudinal axis of the device, a wire helix with high heat conductivity is placed in fixed contact with the tip.



1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

Acc. Nr: AP0044686

Ref. Code: UR 0531

PRIMARY SOURCE: Khirurgiya, 1970, Nr 1, pp 37-43

INFUSION OF MEDICINAL PREPARATIONS INTO THE INTERNAL THORACIC ARTERY AS A METHOD OF TREATING ACUTE MYOCARDIAL INFARCTION

Neymark, I. I.; Freylikh, V. M.

The authors have elaborated a method of treating acute myocardial infarction by administration of medicinal preparations into the left internal thoracic artery after its ligation. The paper analyzes the results of experiments on 90 dogs and the results of treatment in 20 patients with acute myocardial infarction. On the basis of clinical and experimental data the authors arrived at the conclusion that drip introduction of medicinal preparations into the central end of the ligated internal thoracic artery leads to their passage into the pericardial-diaphragmatic artery and through anastomoses of the transitional fold of the pericardium into the coronary arteries. Infusion into the internal thoracic artery of vasodilators, anesthetics and anticoagulants increases the coronary circulation more than two times and intensifies the blood flow in the pericardial-diaphragmatic artery more than six times. In experimental myocardial infarction the infusion normalizas the content of AST, ALT, aldolase and cholinesterase of the blood during the first 12 hours and is conducive to a more rapid healing infarction than in the control dogs. Clinical employment confirmed the efficacy of this method in the complex therapy of myocardial infarction.

1/1

REEL/FRAME
19771417

02 DI

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

UDC 621.372.09

Y. D. FREYLIKHER and I. M. FUKS

"Attenuation of the Average Field in a Waveguide at the Critical Frequency"

Gor'kiy, Izvestiya, VUZov SSSR Radiofizika, Vol 13, No 1, 1970, pp 128-132

Abstract: This article is principally a mathematical one devoted to the computation of the attenuation of normal waves in a plane waveguide with rough, plane walls, and is a follow-up of an article in Vol 12, No 10, page 1521 (1969) of the same journal, written by the same two authors and F. G. Bass. An equation is given for computing the attenuation caused by noncoherent dispersion, this equation is derived from the Dyson nonlinear equation involving the averaged Green function. Because of the roughness of the waveguide walls, the resonance mode is propagated along the waveguide with an attenuation decrement proportional of the two-thirds power of the roughness parameter. The other characteristic waves are weakened to a lesser extent. It is noted that if the

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

V. D. FREYLIKHER, et al, Izvestiya VUZov SSSR Radiofizika, Vol 13, No 1, 1970, pp 128-132

roughness of the waveguide walls is isotropic, there is practically no dispersion in the resonance mode. The authors also remark that in real, smooth waveguides, there is an additional attenuation connected either with dissipative losses or with "de-excitation" of the radiating field into the medium surrounding the waveguide, such as occurs in acoustical waveguides with the violation of the condition of absolute softness f the boundaries. Their estimates for acoustical waveguides with water-air boundaries (in a submerged sound channel, for example) lead them to conclude that even a slight roughness in the walls may lead to substantial attenuation. They thank F. G. Bass and I. A. Urusovskiy for their useful comments on the paper.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 029 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--ATTENUATION OF THE AVERAGE FIELD IN A WAVEGUIDE AT THE CRITICAL FREQUENCY -U-

AUTHOR-(02)-FREYLIKHER, V.D., FUKS, I.M.

COUNTRY OF INFO--USSR

SOURCE--GOR'KIY IZVESTIYA, VUZOV SSSR RADIOFIZIKA, VO 13, NO 1, 1970, PP 128-132

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., NAVIGATION

TOPIC TAGS--WAVEGUIDE LOSS, MICROWAVE ATTENUATOR, NONLINEAR EQUATION, GREEN FUNCTION, ELECTROMAGNETIC WAVE RADIATION, ACOUSTIC WAVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1960 STEP NO--UR/0141/70/013/001/0128/0132

CIRC ACCESSION NO--AP0130740

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 029 UNCLASSIFIED

CIRC ACCESSION NO--AP0130740 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THIS ARTICLE IS PRINCIPALLY A MATHEMATICAL ONE DEVOTED TO THE COMPUTATION OF THE ATTENUATION OF NORMAL WAVES IN A PLANE WAVEGUIDE WITH ROUGH, PLANE WALLS, AND IS A FOLLOW UP OF AN ARTICLE IN VOL 12, NO 12, PAGE 1521 (1969) OF THE SAME JOURNAL, WRITTEN BY THE SAME TWO AUTHORS AND F. G. BASS. AN EQUATION IS GIVEN FOR COMPUTING THE ATTENUATION CAUSED BY NONCOHERENT DISPERSION, THIS EQUATION IS DERIVED FROM THE DYSON NONLINEAR EQUATION INVOLVING THE AVERAGED GREEN FUNCTION. BECAUSE OF THE ROUGHNESS OF THE WAVEGUIDE WALLS, THE RESONANCE MODE IS PROPAGATED ALONG THE WAVEGUIDE WITH AN ATTENUATION DECREMENT PROPORTIONAL OF THE TWO THIRDS POWER OF THE ROUGHNESS PARAMETER. THE OTHER CHARACTERISTIC WAVES ARE WEAKENED TO A LESSER EXTENT. IT IS NOTED THAT IF THE ROUGHNESS OF THE WAVEGUIDE WALLS IS ISOTROPIC, THERE IS PRACTICALLY NO DISPERSION IN THE RESONANCE MODE. THE AUTHORS ALSO REMARK THAT IN REAL, SMOOTH WAVEGUIDES, THERE IS AN ADDITIONAL ATTENUATION CONNECTED EITHER WITH DISSIPATIVE LOSSES OR WITH "DE EXCITATION" OF THE RADIATING FIELD INTO THE MEDIUM SURROUNDING THE WAVEGUIDE, SUCH AS OCCURS IN ACOUSTICAL WAVEGUIDES WITH THE VIOLATION OF THE CONDITION OF ABSOLUTE SOFTENSS F THE BOUNDARIES. THEIR ESTIMATES FOR ACOUSTICAL WAVEGUIDES WITH WATER AIR BOUNDARIES (IN A SUBMERGED SOUND CHANNEL, FOR EXAMPLE) LEAD THEM TO CONCLUDE THAT EVEN A SLIGHT ROUGHNESS IN THE WALLS MAY LEAD TO SUBSTANTIAL ATTENUATION. THEY THANK F. G. BASS AND I. A. URUSOVSKIY FOR THEIR USEFUL COMMENTS ON THE PAPER.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

UDC 620.193.27

FREYMAN, L. I., KHARITONOVA, L. YA., and KOLOTYRKIN, YA. M., Scientific Research Physicochemical Insitute imeni L. Ya. Karpov

"Simulation of Pitting Corrosion by Ultraviolet Light"

Moscow, Zashchita Metallov, Vol 7, No 5, 1971, pp 594-599

Abstract: In evaluating current concept of the spatial distribution of the interphase potential difference ($\Delta\varphi_{1,3}$) in the system metal (1) -- passivating layer (2) -- solution (3), and also the location in the system of the barrier layer largely responsible for impeding the dissolution, the effect of ultraviolet light on pitting corrosion is of direct interest. Experiments were conducted in a quartz cell at 20° with 1Kh18N10T steel in 0.05 N NaCl solution ("extremely high purity"), and the stmosphere was purified nitrogen. Electrodes cut from foil (δ = 0.1 mm) with a 1.4 cm^2 working surface were ground, degreased with ethyl alcohol, and washed with twice-distilled water. Using mercury lamps, the light flux intensity on each of the two working electrode planes was 1.4 cal/cm^2. sec. Ultraviolet illumination does not affect the pitting-formation potential ($\varphi_{pit-form}$) for polished electrodes if stabilization is carried out at a potential of 0.2 v during a period of 5 or 40 minutes. Stabilization at a level of 0.5 v for 6 hours increased

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

FREYMAN, L. I., et al., Zashchita Metallov, Vol 7, No 5, 1971, pp 594-599

$\varphi_{pit-form}$ by a quantity $\simeq$ 350 mv. A comparison was made between dark ($\varphi_{pit-form-dark}$) and illumintated ($\varphi_{pit-form-il}$) potentials of pitting-formation for 1Kh18N10T steel in the 0.05 N NaCl solution.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

UDC 51:621.391

ROMANOVSKIY, I. V., FREYMAN, M. I., and SHARAPOV, V. I.

"The Application of Operations Research Methods to Solve a Problem of Technical Diagnosis"

V sb. Issled. operatsiy i stat. modelir. (Operations Research and Statistical Modeling -- collection of works), First Edition, Leningrad, Leningrad University, 1972, pp 152-159 (from RZh-Matematika, No 11, Nov 73, Abstract 11 V670)

Translation: The following problem in technical diagnosis is considered. The system to be diagnosed consists of m arbitrarily connected elements, each of which can be in one of two states: working or not working. The set of all possible states of the system is given, each characterized by an n-dimensional vector. With a probability of p[i] the system will be in state i. A finite set of all possible tests π is given, each of which has two possible results -- positive or negative. There is a state table, in which the outcome of each test is shown for any state. The costs of the tests c[i] are known. The system diagnosis involves determining its state by performing some series of tests (in the process of diagnosis the system will not change from one state to another). It is required that a diagnosis program be constructed with the minimum average cost.

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

ROMANOVSKIY, I. V., et al., v sb. Issled. operatsiy i stat. modelir., First Edition, Leningrad, Leningrad University, 1972, pp 152-159

The method of branches and bounds is suggested for solving this problem. Two variations of the calculation of the lower bound of the goal function on subsets of solutions are developed. Examples illustrating the operation of the algorithm are given.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

UDC 8.74

FREYMAN, M. I., SHARAPOV, V. I.

"Execution of the Algorithm of the Branch and Boundary Method for Constructing Technical Diagnostics Programs on Computers"

V sb. Tekhn. diagnostika (Technical Diagnostics -- collection of works), Moscow, Nauka Press, 1972, pp 265-270 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V634)

Translation: A study was made of the problem of executing the "branches and boundaries" method on a computer to find the optimal provisional diagnostic procedures. Two versions of constructing the lower bounds and the results of a machine experiment are presented.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC: 621.373.431

BULGAKOV, K. V., FREYMAN, V. B.

"On Optimizing Supply Conditions for High-Power Pulse Installations"

V sb. Izv. Leningr. elektrotekhn. in-ta (News of Leningrad Electrical Engineering Institute--collection of works), 1970, vyp. 86, pp 49-53 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12G235)

Translation: The authors discuss various methods of feeding the load in the pulse mode from a limited-power oscillator: directly from the oscillator through a shaper, and through a converter and shaper (the converter keeps the current at the constant level required by the oscillator). It is shown that the second method is more economical since it permits reducing the power of the supply source. Bibliography of 3 titles. N. S.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 8.74

FREYDZON, I. R., FILIPPOV, L. G.

"Mathematical Models in Ship Training Complexes"

Matematicheskiye modeli v sudovykh obuchayushchikh kompleksakh (Mathematical Models in Ship Training Complexes), Leningrad, Sudostroyeniye Press, 1972, 352 pp, ill. 1 r. 44 k. (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V647K)

No abstract

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 575.24

ROKITSKIY, P. F., MOSSE, I. B., KAMINSKAYA, E. A., and FREYMANIS, Ya. E.

"Study of the Protective Effect of Indene Compounds Against the Genetic Effect of Ionizing Radiations"

Minsk, Voprosy Genetiki i Selektsii (Aspects of Genetics and Selection), "Nauka i Tekhnika," Minsk, 1970, pp 303-304

Translation: The protective properties of aminated indenes specially synthesized at the Institute of Organic Synthesis of the Academy of Sciences Latvian SSR were investigated. It was established that seven of the compounds reduce the frequency of recessive lethal mutations induced in Drosophila by gamma-irradiation by 50-80 percent, and that five of the compounds diminish the level of chromosome reconstructions induced by X-ray irradiation by 50-75 percent.

Certain differences in the protective capacity of the indene preparations when used in combination with normal X-rays and high energy radiation were noted; for example, at a relatively high degree of protection from X-ray irradiation (180 kilovolts) the protective effectiveness of the preparations is reduced

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

ROKITSKIY, P. F., Voprosy Genetiki i Selektsii (Aspects of Genetics and Selection), "Nauka i Tekhnika," Minsk, 1970, pp 303-304

during X-ray bremsstrahlung and is completely absent in most of the indene compounds in irradiation with electrons with an energy of 42 Mev. The possible mechanisms of the genetic effect of the preparations studied are discussed.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

Semiconductor Technology

USSR UDC 536.75. — 621.315.592:547.665

LEBEDEVA, G. I., and FREYMANIS, YA. F., Institute of Organic Synthesis, Academy of Sciences Latvian SSR, Riga

"Entropy of Fusion of Some Organic Semiconductors of the Indene Series"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 44, No 11, Nov 70, pp 2762-2765

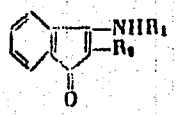
Abstract: In connection with research being done on physicochemical properties of organic semiconductors of the indene series, the authors studied some thermodynamic characteristics of these substances, particularly the entropy of fusion. The article compares the entropy of fusion determined from experimental data with the analogous value calculated by the additive group method on the basis of the homomorphism principle. The entropies of fusion were determined for the following indene compounds from their solubility in benzene:

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

LEBEDEVA, G. I., and FREYMANIS, YA. F., Zhurnal Fizicheskoy Khimii, Vol 44, No 11, Nov 70, pp 2762-2765



I — R_1 = H, *II* — R_1 = C_6H_5, *III* — R_1 = CH_3. Всюду *а*) R_2 = C_6H_5, *б*) R_2 [illegible] $C_{10}H_7$, *в*) R_2 = CH_3, *г*) R_2 = *n*ClC_6H_4, *д*) R_2 = *n*$CH_3OC_6H_4$.

I) R_1 = H, II) R_1 = C_6H_5, III) R_1 = CH_3. Everywhere a) R_2 = C_6H_5, b) R_2 = α-$C_{10}H_7$, c) R_2 = CH_3, d) R_2 = pClC_6H_4, e) R_2 = p$CH_3OC_6H_4$. Satisfactory agreement was found between the additive and experimental values for compounds Ia, Ib, Id, Ie, IIa, IId. The experimental value was higher than the additive value for Ic, IIe, IIIa, possibly due to the presence of phase transitions directly preceding fusion. A lower value was found for

2/3

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

LEBEDEVA, G. I., and FREYMANIS, YA. F., Zhurnal Fizicheskoy Khimii, Vol 44, No 11, Nov 70, pp 2762-2765

$\Delta S^{exp}f$ than for $\Delta S^{add}f$ in the case of IIb, possibly due to the effect of steric factors on the free rotation of the molecule.

The authors thank B. P. MATSEYEVSKIY for discussing the work.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 575.595.773.4

KAMINSKAYA, E. A., MASE, I. B., and FREYMANIS, Ya. F.

"Effect of Indene Preparations on the Genetic Effect of Different Energy Radiations"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Biologicheskikh Nauk, No 1, 1971, pp 42-46

Abstract: The hypothesis that the protective capacity of indene preparations with respect to genetic disorders induced by high-energy radiation is inversely proportional to the increase in the ion density of radiation was tested. Drosophila melanogaster was irradiated with x-rays and electrons with energies of 42 Mev. Five indene preparations known as F-38, F-11, F-44, F-25, and AV-69 were applied in maximum concentrations not affecting the normal development of Drosophila. Two tests were carried out, test one to establish the frequency of recessive sex linkage with lethal mutations, and test two -- to determine the frequency of chromosome aberrations. The results of the tests established

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

KAMINSKAYA, E. A., MASE, I. B. and FREYMANIS, Ya. F., Izvestiya Akademii Nauk BSSR, Seriya Biologicheskikh Nauk, No 1, 1971, pp 42-46

that, contrary to claims in the literature, the protective effectiveness of indene preparations decreases when radiation energy is increased, while increased sensitivity is manifested in some cases.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

FREYMANIS, I

Acc. Nr: AP0048825 Abstracting Service: CHEMICAL ABST. 4/70 Ref. Code: 4R0366

90388w Spiro ketones based on β-diketones. V. Enamines of spiro ketones and some of their chemical properties. Sternbergs, I.; Freimanis, I. (USSR). *Zh. Org. Khim.* 1970, 6(1), 48-51 (Russ). In an attempt to alkylate spiro[3,5-diphenylcyclohexanone-4,2'-indan-1',3'-dione] (I) (Shternberg, I. Ya. *et al.*, 1968) through their enamines I was reacted with morpholine (II) in the presence of p-$MeC_6H_4SO_3H$ (III) to give spiro[1,3-diphenyl-5-morpholinocyclohex-4-ene-2,2'-indan-1',3'-dione], which on recrystn. in AcOH was hydrolyzed by the air moisture to the high m. I isomer, regardless of whether high or low m. I isomers were used in the reaction. A mechanism of I isomerization involving II is proposed. The reaction of 1-dimedonyl-1,5-diphenylpent-4-ene-3-one with II in the presence of III gave directly spiro[5,5-dimethylcyclohexane-1,3-dione-2,1',3'-diphenyl-5'-morpholinocyclohex-4'-ene-2']. Similarly spiro[5,5-dimethylcyclohexane-1,3-dione-2,2'-1',3'-di-p-anisyl-5'-morpholinocyclohex-4'-ene-] was prepd. CPJR

1/1

REEL/FRAME
19800588

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

Acc. Nr: AP0052526 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: UR0459

101173a **Reasons for the discoloration of aromatic polyimides.** Bikson, B. R.; Freimanis, Y. (Inst. Org. Sin., Riga, USSR). *Vysokomol. Soedin., Ser. A* 1970, 12(1), 69-73 (Russ). Several aromatic polyimides derived from 1,2,4,5-benzenetetracarboxylic acid (I), 3,4,3',4'-biphenyltetracarboxylic acid, and 3,3',4,4'-diphenyl oxide tetracarboxylic acid (II) with aromatic diamines were studied by spectrophotometry in order to evaluate the relation between the structure of the polymers and their discoloration. Of the polyimides studied, the most discolored was the I-benzidine copolymer. The discoloration increased with decreased conjugation in the carbonyl part of the polymer. Further studies with the *p*-anisylimide of I and the corresponding bisimide of II suggested that discoloration was due to the structure of the polymer chain, with the optical d. being markedly dependent on the structure of the anhydride and conjugation. Introduction of O bridges lowered the polymer thermal stability and improved the optical properties. A route to polyimides having a good combination of thermal stability and mech. and optical properties was discussed. CKJR

1/1

REEL/FRAME
19821169

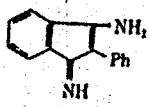
7

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

Acc. Nr: AP0053448 Abstracting Service: CHEMICAL ABST. Ref. Code: UR 0366

111132a Cyclic β-aminovinylimines. X. Synthesis of unsymmetrical 2-substituted 1-imino-3-aminoindenes. Usov, V. A.; Nakele, V.; Freimanis, I. (Inst. Org. Sin., Riga, USSR). *Zh. Org. Khim.* 1970, 6(2), 384-9 (Russ). The reaction of 2-(R-substituted)-1-amino-3-ethoxyindene salts (R is Ph or Me) with $PhNH_2$ gave unsym. 2-(R-substituted)-1-imino-3-anilinoindene salts, which on basification are converted to the corresponding bases. The amine exchange (B. Eistert, *et al.* 1955) between $PhNH_2$ and 1-imino-2-phenyl-3-aminoindene (I) gave 1-imino-2-phenyl-3-anilinoindene and 1-phenylimino-2-phenyl-



(I)

3-anilinoindene (II). Heating II with $AcONH_4$ gave 3-amino-2-phenylindone and a small amt. of I. The alkylation of II or I with triethyloxonium fluoroborate gave 1-phenylimino-2-phenyl-3-ethylphenylaminoindene or 1-imino-2-phenyl-3-ethylaminoindene.

CPJR

REEL/FRAME
19830473

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

Polymers and Polymerization

USSR

UDC 547.622

RIED, W., and FREITAG, D., Institute of Organic Chemistry, Frankfurt University, West Germany

"Oligophenyls, Oligophenylenes and Polyphenyls -- A Class of Thermally Stable Compounds"

Moscow, Uspekhi Khimii, Vol 39, No 4, 1970, pp 662-678

Abstract: The article describes methods for the synthesis of oligo- and polyphenyls, as well as their physical properties and the relationship between the character of the addition of benzene rings and the thermal stability of the products. Classical and new methods for the synthesis of p-oligophenyls, linear m-oligophenyls, cyclic m-oligophenyls, linear o-oligophenyls, cyclic o-oligophenyls, highly arylated oligophenyls and p-polyphenyls are compared. The melting point of p-polyphenyls rises with an increase in the degree of polymerization. The introduction of methyl groups and addition in the meta position results in a lower melting point and improved solubility of the prod-

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

RIED, W., and FREITAG, D., Uspekhi Khimii, Vol 39, No 4, 1970, pp 662-678

ucts. o-Oligophenyls melt at lower temperatures than the p-isomers. p-Septiphenyl is the highest-melting of this class (melting point 545°).

The article was translated from the German by A. S. LEBEDEVA.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

UDC 539.4

FREYTAG, V. A., Leningrad Scientific Research and Design Institute of Chemical Machinery

"Design Features of Containers Operating Under Internal Pressure at Low Temperatures"

Kiev, Problemy Prochnosti, No 8, Aug 70, pp 85-92

Abstract: A differential approach is outlined for the strength design of containers (in relation to metal plasticity) intended for chemical machinery operating at low temperatures. Engineering design methods for joining cylindrical shells with conical, elliptical, semispherical, and flat bottoms are illustrated.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--A PHOTODOSIMETER FOR TECHNICAL PHOTOMETRIC MEASUREMENTS -U-

AUTHOR-(03)-GAVRIK, V.V., GOROKHOVSKIY, YU.N., FREYVERT, A.M.

COUNTRY OF INFO--USSR

SOURCE--LENINGRAD, OPTIKO-MEKHANICHESKAYA PROMYSHLENNOST', NO 2, FEB 70, PP 25-29

DATE PUBLISHED----FEB70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PHOTOMETER, RADIATION INTENSITY, DOSIMETER, ILLUMINATION, OPTIC MEASUREMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1581 STEP NO--UR/0237/70/000/002/0025/0029

CIRC ACCESSION NO--AP0118564

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118564

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A DESCRIPTION IS GIVEN OF A SMALL SIZE DEVICE INTENDED FOR TECHNICAL PHOTOMETRIC MEASUREMENTS OVER A WIDE RANGE OF LIGHT FLUXES (10 PRIME6) AT MAXIMUM ILLUMINATION AND BRIGHTNESS (100,000 1X AND 20,000 NIT) INSTEAD OF A PHOTOMETER BENCH AND INDUSTRIAL CONTROL ADJUSTING DEVICES. RETICULATE ATTENUATORS OF LIGHT USED IN THIS PHOTODOSIMETER ARE SPECTRALLY NONSELECTIVE AND ARE DISTINGUISHED BY THE LONGEVITY.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 039 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--A METHOD OF CONTROL OF THE STRUCTURE OF FIBROUS PARTS -U-

AUTHOR-(02)-SATTAROV, D.K., FREYVERT, K.M.

COUNTRY OF INFO--USSR

SOURCE--LENINGRAD, OPTIKO-MEKHANICHESKAYA PROMYSHLENNOST', NO 2, FEB 70, PP 57-60

DATE PUBLISHED----FEB70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--OPTIC IMAGE, FIBER OPTICS, QUALITY CONTROL, FIBER COMPOSITE, LIGHT SCATTERING, OPTIC MEASUREMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1578 STEP NO--UR/0237/70/000/002/0057/0060

CIRC ACCESSION NO--AP0118561

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 039 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118561

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MEASUREMENTS WERE PERFORMED OF THE LIGHT DISTRIBUTION ACCORDING TO THE IMAGE OF A LUMINOUS SLIT AT THE OUTLET LATERAL SURFACE OF A FIBROUS PART AND THERE WERE DETERMINED OPTIMUM CONDITIONS OF THE CONTROL OF THE STRUCTURE OF FIBROUS ELEMENTS.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

Acc. Nr. AP0054346 Abstracting Service: CHEMICAL ABST. 10/70 Ref. Code 4R0032

117429z Amperometric determination of triphosphate ion. Omarkulova, G. O.; Songina, O. A.; Freze, N. A. (Kaz. Khim.-Tekhnol. Inst., Alma-Ata, USSR). *Zavod. Lab.* 1970, 36(1), 20–1 (Russ). $Na_5P_3O_{10}$, until recently, was detd. indirectly either by titrn. of H^+ evolved by addn. of excess Zn^{++} at pH 3.8 or by pptn. by $BaCl_2$ at pH 5. $P_2O_7^{4-}$ interferes with the latter method. Presently $P_3O_{10}^{5-}$ is detd. directly either by chromatog. or gravimetrically by pptn. with $Co(en)_3Cl_3$. The amperometric procedure is a variant of this gravimetric method. The titrn. was carried out with a dropping Hg electrode at −0.8 V vs. SCE. The soly. of the ppt. was decreased by adding EtOH to 30–50% by vol. One g of $Na_5P_3O_{10}$ was dissolved in H_2O and dild. to 100 ml. A 10-ml aliquot plus sufficient HCl (~0.5 ml) to give pH 3.6 and 10 ml of a buffer soln. made up of 105 ml HOAc, 25–30 ml of EtOH, and 5–6 small pellets of gelatin were placed in the polarographic cell. O was purged by bubbling

1/2

REEL/FRAME
19831491

18

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

AP0054346

through CO_2 for 3–5 min and the soln. was titrated with $Co(en)_3Cl_3$ with agitation and continued CO_2 purging. The ppt. formed slowly and a const. current reading indicating the equivalence point was not achieved until 4–5 min after the 1st appearance of the ppt. Statistical comparison of the gravimetric and amperometric methods at the 95% confidence level gave variances of 0.28% and 0.30%, resp. Thus, while the accuracy of both procedures was exptl. the same, the amperometric method is preferred because a detn. takes only 20–30 min.

Herman Koretzky

2/2

PN

19831492

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 621.791.856:669.28

ALEKSEYENKO, G. N., NERODENKO, M. M. (Electric Welding Institute imeni YE. O. PATON, Academy of Sciences Ukrainian SSR), BIRYUKOVA, T. A., DANIYELYAN, T. A., MAL'TSEV, M. V., FREZE, M. I. and SHCHUKIN, A. A. (Moscow)

"Effect of Heat Treating on the Properties of Molybdenum-Carbon-Nickel Alloys and Their Weld Joints"

Kiev, Avtomaticheskaya svarka, No 4, Apr 72, pp 47-49

Abstract: The study deals with the properties of intermediate products from TSM-3 structural molybdenum alloy (0.05-0.10% wt % C and 0.01-0.10% Ni) following annealing. The specimens were tensile-tested at room temperature, at $2.5 \cdot 10^{-3}$ sec^{-1} deformation rates and were arc-welded in a controlled inert-gas atmosphere. The specimens were pre-annealed for 1 hour in vacuum (10^{-5} mm Hg) at 800, 1100, 1200, 1300, 1400, 1500, 1600, and 1700°C. Metallographic examinations indicate that recrystallization begins at 1200°C and is completed at 1400°C. Maximum plasticity was shown by specimens with a completely recrystallized structure. Pre-annealing appears to upgrade the weld quality. Nickel tends to concentrate along the grain boundaries and not only hinders carbon diffusion, but also

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

ALEKSEYENKO, G. N., et al, Avtomaticheskaya svarka, No 4, Apr 72, pp 47-49

promotes strengthening of the metal bond in the boundary layers owing to the localized increase of electron concentration. This strengthening of grain boundaries by nickel appears to be the determining factor in raising the plasticity of TSM-3 alloy in recrystallized state. (2 illustrations, 3 tables, 4 bibliographic references)

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 669.28

FREZE, N. I., BIRYUKOVA, T. A., and MURZINOV, N. A.

"Feautes of Melting Alloys of the Mo-C-Ni System"

Moscow, Tsvetnyye Metally, No 7, Jul 72, pp 81-83

Abstract: The purpose of this work was to study the effect of melting method on the loss and distribution of nickel in the cross section of ingots of alloy TSM-3 (0.01-0.10% Ni, 0.05-0.10% C, balance Mo). The cold brittleness temperature of the cast metal was also studied. Ingots were melted in an electron-beam furnace and in vacuum-arc furnaces operating on d-c and a-c current. For electron-beam melting an 80-mm-diameter crystallizer was used. A 110-mm-diameter crystallizer was used for electric-arc melting. In the process of electron-beam melting of the electrodes, a large nickel loss resulting from vaporization and segregation throughout the ingot was observed. Use of electrodes made of alloyed nickel and carbon pellets made it possible not only to reduce nickel loss during melting but also to significantly improve the uniformity of nickel distribution. Arc melting in a "dry" crystallizer using d-c current led to an extremely nonuniform distribution of nickel in the cross section of the ingot caused by condensation of the vaporizing nickel on the crystallizer walls, enriching the surface layers. When a-c current was used

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

FREZE, N. I., etal, Tsvetnyye Metally, No 7, Jul 72, pp 81-83

for arc melting, very little nickel segregates, owing to the constant infusion of the molten ingot.

Ingots obtained from a single electric-arc remelt exhibited an almost complete absence of nickel segregation. The nickel loss here amounted to 80-85%, but the high concentration content of oxygen in the electrode increased the oxygen content in the ingots (up to 0.007%). The use of combined electrodes (unalloyed pellets of high-purity Mo and Mo pellets alloyed with carbon as well as nickel plate) helped to lower the content of gas impurities. Cold brittleness of alloy TSM-3 was determined from the change in bend angle in which the temperature of transition from ductile to brittle was taken as the minimum temperature at which samples could be bent 90°. The alloy produced by electron-beam melting had the lowest cold brittleness temperature, while the alloy produced by single electric-arc remelting had the highest transition temperature. It was established that the higher the rate of crystallization, the higher the degree of solid solution saturation by interstitial elements and the higher the cold brittleness temperature. 3 figures, 1 bibliographic reference.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC: 669.28'849'788

FREZE, N. I., SHCHUKIN, A. A., ABALIKHIN, A. V., MAL'TSEV, M. V., MIL'MAN, Yu. V., KURDYUMOVA, G. G.

"All-Union Scientific Research and Design Institute of Refractory Metals and Hard Alloys"

"A Molybdenum-Based Alloy"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 12, Apr 72, Author's Certificate No 334270, Division C, filed 28 Sep 70, published 30 Mar 72, p 104

Translation: This Author's Certificate introduces a molybdenum-based alloy which contains rhenium. As a distinguishing feature of the patent, the physicomechanical properties of the alloy are improved by adding carbon, taking the components in the following proportions in percent:

rhenium	35-50
carbon	0.02-0.2
molybdenum	base

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

Conferences

USSR UDC 621.791.008.1

FRID, A.

"Conference on New Developments in Welding Technology"

Kiyev, Avtomaticheskaya Svarka, No 11 (224), Nov 71, p 77

Abstract: The Conference on New Developments in Welding Technology took place in Tbilisi, 28-30 June 1971. It was sponsored by the Georgian Scientific Research Institute of Scientific and Technical Information, the Electric Welding Institute imeni Ye. O. Paton, the local branch of the All-Union Scientific Research Institute of Electric Welding Equipment, and the Republic Scientific and Technical Societies Mashprom, power engineers, and the electrotechnical industry. More than 100 organizations were represented by 250 specialists. Professor G. Sh. Mikeladze, President of the State Committee of the Council of Ministers of the Georgian SSR opened the Conference at which more than 30 reports were made. V. Ye. Paton, Candiate of Technical Sciences, reported on "Trends in Developing Equipment of Automatic and Semi-Automatic Arc Welding and Works in This Field at the Institute of Electric Welding of the Academy of Sciences of the Ukrainian SSR". M. KH. Shorshorov, Doctor of Technical Sciences, reported on V-shaped press welding. K. D. Gutterman, Doctor of Technical Sciences, reported on the use of parametric sources for

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

FIRD, A., Avtomaticheskaya Svarka, No 11 (224), Nov 71, p 77

feeding devices for arc cutting of metals. V. Ye. Nedorezov, Candiate of Technical Sciences, reported on new welding equipment developed by the "elektrik" Plant. D. D. Khrycheva, Engineer, reported on the use of pressure contact but welding in the production of carbide-silicon heaters. N. M. Sutovskiy, Engineer, reported on the development of a welding method by friction and the forced formation of joints. The welding of titanium alloys was discussed by I. I. Murav'yev, Engineer. O. Ya. Mosiashvili and R. N. Suladze, Candidates of Technical Sciences, discussed plasma-arc-cutting of metals, M. G. Devdariani, Engineer - arc ignition in plasmatrons, R. A. Grigorishvili, Engineer, - a new feeding source developed for the plasma-arc furnace of the Chelyabinsk Metallurgic Plant, P. A. Dzhaparidze, Engineer, - economic effectiveness in cutting metals with various components of the plasma producing medium, T. K. Bakhtadze, Engineer - automats for welding T-joints. Reports were also made by representatives of the Ural Polytechnic Institute and enterproses of Odessa, Kazan', and elsewhere.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--EFFECT OF LIMING ON THE RATE OF STRONTIUM-90 DIFFUSION IN SOIL -U-

AUTHOR-(03)-PROKHOROV, V.M., FRID, A.S., RYZHINSKIY, M.V.

COUNTRY OF INFO--USSR

F

SOURCE--AGROKHIMIYA 1970, (2), 40-8

DATE PUBLISHED--------70

SUBJECT AREAS--AGRICULTURE, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--SOIL CHEMISTRY, STRONTIUM ISOTOPE, ADSORPTION, CALCIUM OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/0496 STEP NO--UR/0485/70/000/002/0040/0048

CIRC ACCESSION NO--AP0128065

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0128065

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY INCREASING THE CAO DOSES FROM 0.04 TO 0.7 OR FROM 4 TO 70-80PERCENT, BASED ON THE HYDROLYTIC ACIDITY, THE RATE OF PRIME90 SR DIFFUSION DECREASES BUT ON FURTHER INCREASING THE DOSES TO 90-100PERCENT DIFFUSION AGAIN IS ENHANCED; 3 FACTORS SERVE AS AN EXPLANATION: (1) CHANGE OF THE CATION COMPN. OF THE ABSORPTIVE COMPLEX AND OF THE SOIL SOLN., (2) CHANGE OF DIFFUSION RATE OF THE ABSORBED IONS, AND (3) INCREASE OF THE CONCN. OF THE SOIL SOLN.

FACILITY: AGROFIZ. NAUCH.-ISSLED. INST., LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

AA0046287

FRID, B.I. UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 1/70

241120 CONVERTING SOUND SIGNALS OF SET DURATION FOR ANALYSIS. Human articulation of words or syllables requiring spectral analysis, for the purpose of perfecting recognition devices for such sounds, is transient in nature, rendering complex the differentiation of the signal from the attendant noise. The proposed method of increasing duration improves the retention of the spectral composition once it is converted from transient to fixed. It can then be recorded and made use of on tape. The method consists of transcribing the sound with a time lag to another carrier. The recording is first made on one tape recorder and then transcribed, with a given interval, by some electrical means to two other recorders. From these the recording is transferred back to the first, on which it appears, necessarily shif-

19781439

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

AA0046287

ted in time. Depending on the complexity of the signal, this recording can again be played on to another machine and transcribed back, as often as necessary. By this means a continuous noise signal can be produced, with superimposed on it the continued spectrum of the desired signal. 21.9.67. as 1184001/18-24. N.I.APRELEV et alia. (15.8.69.) Bul.13/1.4.69. Class 42m[4], 42g. Int.Cl. G06g, G11b.

EB

AUTHORS: Aprelev, N. I.; Dominyak, I. A.; Frid, B. I.

3/3

19781440

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC: 621.374.4:621.382.2

TABACHNIKOV, I. Ya., FRID, I. R., KAUSOV, S. F., VIZEL', A. A.

"Calculation of the State of a Varactor in a Parallel Frequency Multiplication Circuit"

V sb. Poluprovodn. pribory i ikh primeneniye (Semiconductor Devices and Their Application--collection of works), Vyp. 23, Moscow, "Sov. radio", 1970, pp 172-191 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10D25)

Translation: Formulas are derived which can be used to determine the efficiency, input and output impedance, and also the external bias voltage across the semiconductor diode, in a varactor with gradual and sharp junction from the breakdown voltage, maximum frequency and capacitance for doubling, tripling and quadrupling the frequency in a parallel circuit. A theoretical comparison is made of the effectiveness of a semiconductor diode with sharp and gradual junction in a frequency doubler. Experimental investigations of semiconductor diodes with abrupt junction in a frequency tripler up to 10 GHz, and semiconductor diodes with gradual junction in a doubler in the decimeter wavelength range showed agreement with the proposed computational formulas. Bibliography of nine titles. Authors' abstract.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

1/2 007 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--METHYLATION OF ADAMANTANE -U-

AUTHOR-(03)-BAGRIY, YE.I., FRID, T.YU., SANIN, P.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 498

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ADAMANTANE, METHYLATION, ALKANE, ALUMINUM CHLORIDE, ALUMINUM BROMIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0834 STEP NO--UR/0062/70/000/002/0498/0498

CIRC ACCESSION NO--AP0119738

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

2/2 007 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119738

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TREATING ADAMANTANE IN NONANE OR 2,3,5-TRIMETHYLHEXANE WITH ALCL SUB3 OR ALBR SUB3 IN MOLAR RATIOS OF 1:3:1.5, RESP., 30 HR AT 60DEGREES WITH ALCL SUB3, OR 2.5 HR AT 160DEGREES WITH ALBR SUB3, GAVE A VARIETY OF ALKYLATES, RESULTING FROM METHYLATION BY THE ALKANES. WITH ALCL SUB3 THE FOLLOWING WERE FORMED: 1,3-DIMETHYLADAMANTANE 5PERCENT, 1,3,5-TRI-ME ANALOG 32PERCENT, 1,3,5,7-TETRA-ME ANALOG 15PERCENT, AND 48PERCENT UNIDENTIFIED PRODUCTS; WITH ALBR SUB3 THE PRODUCTS WERE 33PERCENT STARTING MATERIAL, 23PERCENT 1-METHYLADAMANTANE, 15PERCENT 1,3-DI-ME ANALOG, 20PERCENT 1,3,5-TRI-ME ANALOG, 7PERCEMT 1,3,5,7-TETRA-ME ANALOG, AND 2PERCENT UNIDENTIFIED MATERIALS. FACILITY: INST. NEFTEKHIM. SIN. IM. TOPCHIEVA, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

Marine and Shipbuilding

USSR F 629.123.56-181.2

SOKOLOV, D. G., RODIONOV, N. N. FRID, Ye. G.

"Plan For the First Soviet 150,000 Ton Deadweight Tanker"

Moscow, Sudostroyeniye, No. 4, 1970, pp 14-17.

Abstract: In order to increase the capacity of the Soviet merchant fleet for transportation of petroleum products, a 150,000 ton deadweight tanker has been planned. Planning-research work was performed during 1968-1969, including computerized studies using the Minsk-22 computer. The result is a plan for a 150,000 ton tanker, this deadweight being considered a good compromise between the desire for maximum possible weight to achieve greater economy and the necessity to limit size (and therefore weight) for reasons of maneuverability. The ship will be similar in design to such supertankers as the Tokyo Maru and Bergenhaven. It will use a 30,000 hp steam turbine power plant with intermediate steam superheating. This design was compared with two variations of diesel power, and found to be more economically effective. In order to improve maneuverability, two transverse passages, one each in bow and stern, are provided, through which water can be pumped to help turn the ship. The 8 meter diameter screw will have the variable pitch feature. Extensive space is provided in the crew living quarters for study, sports and recreation of the 34-36 man crew. The

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

SOKOLOV, D. G., et al., Sudostroyeniye, No 4, 1970, pp 14-17

superstructure is designed to be usable without major design alteration in tankers of 100,000 to 300,000 tons deadweight. The basic dimensions of the tanker are to be as follows: length between perpendiculars 272 m, width 45.0 m, draft 17.0 m, side height 24.4 m, filling factor 0.830.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

Materials

USSR UDC 666.593.5

ISAYEVA, V. F., LIFSHITS, YU. A., ERIDBERG, I. D., KHRUSTALEVA, V. V., CHERKUDINOV, A. S.

"A Ceramic Material"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 22, 1970, Soviet Patent No 275192, Class No 21, filed 31 Mar 69, p 46

Abstract: This Author's Certificate introduces a ceramic material based on silicons and titanates. As a distinguishing feature of the patent, a material with low dielectric dissipation factor in the SHF range is produced by using a sinter of forsterite and magnesium orthotitanate as the initial components of the charge, with forsterite making up as much as 50 percent of the total weight of the components.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 621.396.677.71

GARB, KH.L., KAZIMYANETS, V.N., FRIDBERG, P.SH.

"Radiation From A Narrow Transverse Slot On The Surface Of A Circular Cylinder"

Radiotekhnika i Elektronika, Moscow, Vol XVII, No 12, Dec 1972, pp 2504-2510

Abstract: The paper (which uses the international system of units) considers an endless circular cylinder with an ideally conducting surface of zero thickness in which there is a narrow ($\alpha \sim 1$) transverse slot. A "dimensionless" voltage on it satisfies a known integral-differential equation which is solved by the method offered in a previous work by P.Sh. Fridberg [Dokl.AN SSSR, 1970, 194, 1; Radiotekhnika i Elektronika, 1971, 16, 9, 1578]. A matrix of the scattering of the system is found. Numerical results are presented for the case of excitation of a waveguide by a H_{11} wave. A problem concerning deviation of the sinusoidal distribution of voltage from the actual is considered. The authors thank S. Gurevich and S. Khoziosk for conducting the numerical calculations on the GE-400 machine. 4 fig. 11 ref. Received by editors, 6 December 1971.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

Cytology

USSR UDC 612.411+612.419:578.085.23

FRIDENSHTEYN, A. Ya., CHAYLAKHYAN, R. K., and LALYKINA, K. S., Laboratory of Immunomorphology, Institute of Epidemiology and Microbiology, Academy of Medical Sciences USSR, Moscow

"Fibroblast-Like Cells in Cultures of Hemopoietic Tissue of Guinea Pigs"

Leningrad, Tsitologiya, Vol 12, No 9, Sep 70, pp 1147-1155

Abstract: Discrete colonies of fibroblast-like cells formed in mololayer cultures of bone marrow and spleen cells of guinea pigs toward the 10th day after explantation. The number of colonies increased linearly with the number of explanted cells. On cultivation of a mixture of equal amounts of spleen cells from males and females, it was found using X and Y chromosomes as markers that every colony constituted an individual clone. Notwithstanding the similar morphological characteristics of fibroblast-like cells in bone marrow and spleen cultures, their potency during implantation was different. Culturing in vivo in diffusion chambers showed that fibroblast-like cells from monolayer bone cultures 25-30 days old formed bone when the density of cells in the diffusion chambers was high enough. On the other hand cells from spleen cultures were incapable of forming bone spontaneously under similar conditions. However, when

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

FRIDENSHTEYN, A. Ya., et al, Tsitologiya, Vol 12, No 9, Sep 70, pp 1147-1155

spleen cells were cultured in the chambers with transitional epithelial cells, which acted as inducers of osteogenesis, bone was formed by fibroblast-like cells from the spleen cultures.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

Acc. Nr: AP0051929 F Ref. Code: UR0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i Meditsiny, 1970, Vol 69, Nr 2, pp 94-98

CLONE-FORMATION IN MONOLAYERED CULTURES OF THE BONE MARROW AND THE SPLEEN

R. K. Chaylakhyan, A. Ya. Fridenshteyn, A. V. Vasilyev

H. F. Gamaleya Institute of Epidemiology and Microbiology, Academy of Medical Sciences of the USSR, Moscow

In monolayered curtures of the bone marrow and the spleen of guinea pig beginning from the 10th day discrete foci of fibroblast-like cells arose. Two methods were used to elucidate the nature of these foci. Investigation was made of the number of foci per cells fixed to the slide. A chromosome analysis was also carried out on total preparations of the cultures containing a mixture of equal numbers of the spleen cells of males and females.

These investigations indicate that the foci are cell clones, which are in accordance with a linear growth of the number of foci depending on the number of cultured cells.

REEL/FRAME
19820412

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 547.341

FRIDLAND, S. V., TSIVUNIN, V. S., FRIDLAND, D. V., KAMAY, G. KH. (DECEASED), Kazan' Chemical-Technological Institute imeni S. M. Kirov, Kazan, Ministry of Higher and Secondary Specialized Education RSFSR

"Reactions of α-Haloesters With Phosphorus Pentachloride"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70, pp 1993-1995

Abstract: Reaction of α-chloroethylbutyl ether with PCl_5 is exothermic, leading to a white complex which upon treatment with SO_2 gives butoxyvinylphosphonic acid dichloride. When PCl_5 reacts with α-chloromethylalkylethers, no phosphorylated products are obtained: only chlorinated ethers. Reaction of α-chloroethylvinyl ether with PCl_5 yields 2-chloro-2-(1-chloroethoxy)-ethylphosphonic acid dichloride (I), which can be obtained, however, only when distillation of the product is carried out at 6 mm pressure or below; at higher temperatures hydrogen chloride is split off. One molecule of HCl is also split off upon treatment with one mole of

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

FRIDLAND, S. V., et al, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70, pp 1993-1995

triethylamine. Chlorine atoms in (I) are quite labile and can easily be replaced by ethoxy groups when reacted with sodium ethoxide. V. KATAYEVA also participated in the experiments.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 577.341

FRIDLAND, S. V., and MALKOV, Yu. K., Kazan' Chemical-Technological Institute imeni S. M. Kirov

"Reaction of Phosphorus Pentachloride With Vinyl Ethers in Presence of Phosphorus Oxychloride"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 10, Oct 73, pp 2169-2172

Abstract: It was shown that heating a crystalline addition product obtained from the reaction of phosphorus pentachloride, phosphorus oxychloride and simple vinyl esters leads to the synthesis of α-chloro-β-alkoxyvinylphosphonic acid dichloride. A formula has been proposed for the crystalline complex obtained in the reaction of PCl_5 and phosphorus oxychloride with simple vinyl esters: $[C_4H_9OCH{=}CH_2 \cdot PCl_5 \cdot POCl_3]$. α-Chloro-β-butoxyvinylphosphonic acid dichloride was synthesized by chlorination of β-butoxyvinylphosphonic acid dichloride. A series of α-chloro-β-butoxyvinylphosphonic acid esters was synthesized.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

UDC 547.341

FRIDLAND, S. V., and CHIRKUNOVA, S. K., Kazan' Chemical-Technological Institute Imeni S. M. Kirov

"Problem of the Bromination of Alkoxyvinylphosphonates"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 6, Jun 73, pp 1407-1408

Abstract: Bromination of diethyl ester of β-ethoxyvinylphosphonic acid was carried out in CCl_4 at room temperature. After 2 hrs the mixture was distilled twice to yield ethyl bromide in the forerun and ethylbromoacetate in the main body. The phosphorus containing component remained in the nonvolatile residue.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

UDC 547.341.07

USSR

FRIDLAND, S. V., DMITRIYEVA, N. V., VIGALYUK, I. V., ZYKOVA, T. V., and SALAKHUTDINOV, R. A.

"Phosphorylation of Olefins With Phosphorus Trichloride in Presence of Perchloryl Fluoride"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 7, Jul 73, pp 1494-1497

Abstract: The reaction of phosphorus trichloride with phenylacetylene, styrene, vinyl ethers, vinyl formate, and hexene-1 was studied in presence of perchloryl fluoride. Only hexene-1 yielded identifiable products: 2-chlorohexylphosphonic acid fluoridechloride and 2-chlorohexylphosphonic acid dichloride.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 547.341

FRIDLAND, S. V., CHIRKUNOVA, S. K., and ZYKOVA, T. V.

"Interaction of Phosphorus Pentachloride with Some 1,3-dioxolanes. V"

Leningrad, Zhurnal Obshchey Khimii, Vol XLIII (CV), No 1, 1973, pp 51-54

Abstract: A study was made of the interaction of phosphorus pentachloride with 2-methyl-4-chloromethyl-1,3-dioxolane in which a 2-step process of the reaction was discovered. A series of esters of β-(bischloromethylmethoxy)-vinylphosphonic acid and β-(α-chloromethylvinyloxy)vinylphosphonic acid were synthesized. The esters obtained were subjected to alkaline dehydroxy-chloridation which was achieved by an alcohol solution of alkali. In the infrared spectra of the dehydroxychlorided esters, two bands were observed in the absorption band of the valence oscillations of the C=C bonds at 1610 and 1621 cm^{-1}.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR

VIGALOK, I. V., FRIDLAND, S. V., DMITRIYEVA, N. V., LINKEVICH, N. S.

"Method of Production of Mixed Alkeno Phosphoric Acid Chlorides and Fluorides"

Otkrytiya Izobreteniya Promyshlennye Obraztsy Tovarnyye Znaki, No 5, 1972, Patent No 355182.

Translation: 1. Method of production of mixed alkeno phosphoric acid chlorides and fluorides with the general formula

$$R-CHClCH=CHP\begin{matrix}\diagup Cl\\ \diagdown F\end{matrix}\atop \| \atop O$$

where R is alkyl, differing in that the corresponding olefin is interacted with phosphorus trichloride and perchloryl fluoride with subsequent separation of the end product by known methods.

2. Method according to Claim 1, differing in that the process is conducted at a temperature of not over 20°C.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

UDC 547.341

USSR

FRIDLAND, S. V., DALMATOVA, L. K., and CHIRKUNOVA, S. K., Kazan' Chemical-Technological Institute Imeni S. M. Kirov

"Reaction of Phosphorus Pentachloride With Some 1,3-Dioxolanes. IV. Bromination of the Reaction Products"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 9, Sep 72, pp 1916-1919

Abstract: Bromination of β-(β-chloroethoxy)-β-ethylvinylphosphonic acid, β-(β-chloroisopropyloxy)isopropenylphosphonic acid, and β-(β-chloroethoxy)-isopropenylphosphonic acid dichlorides was investigated. It was shown that the reaction takes place only with compounds which have a hydrogen atom in α-position to the dichlorophosphoryl group.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 547.341.07

FRIDLAND, S. V., DMITRIYEVA, N. V., VIGALOK, I. V., ZYKOVA, T. V., and SALAKHUTDINOV, R. A.

"Phosphorylation of Olefines With Phosphorus Trichloride in Presence of Perchloryl Fluoride. I. Phosphorylation of Cyclohexene"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 3, Mar 73, pp 572-577

Abstract: It has been shown that the reaction of phosphorus trichloride with cyclohexene in presence of perchloryl fluoride yields the fluorochloro- and dichloroanhydrides of 2-chlorocyclohexylphosphonic acid (I). The fluorochloro anhydride is a new compound with following properties: b.p. 72°/0.1 mm, d_4^{20} 1.3693, n_D^{20} 1.5050. By means of alcohol esterification a series of esterfluoroanhydrides of (I) has been obtained. Dehydrochlorination of fluorochloro and of the dichloro anhydrides of (I) yields fluorochloro and dichloro anhydrides of cyclohexen-1-yl phosphonic acid which can be then converted to a series of esters. It has been shown that bromination of the chloro anhydride of 2-chlorocyclohexylfluorophosphonic acid occurs with a substitution of the hydrogen.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 547.341

FRIDLAND, S. V., and GORIN, Ya. A., Kazan' Chemical-Technological Institute Imeni S. M. Kirov

"Reaction of Phosphorus Pentachloride With Compound Esters"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 4, Apr 73, p 949

Abstract: Phosphorus pentachloride reacted with ethyl and phenylacetates yielding β-(ethoxy)-β-chlorovinylphosphonic acid dichloride b.p. 120-124°/ 10 mm, d_4^{20} 1.7234, n_D^{20} 1.5200, and β(phenyloxy)-β-chlorovinylphosphonic acid dichloride, b.p. 145-146°/ 0.1 mm, d_4^{20} d_4^{20} 1.5120, n_D^{20} 1.5770.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6

USSR UDC 547.341

FRIDLAND, S. V., CHIRKUNOVA, S. K., and MALKOV, Yu. K., Kazan' Chemical-Technological Institute Imeni S. M. Kirov

"Reaction of Phosphorus Pentachloride With 1,3-Dioxolanes. VI."

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 2, Feb 73, pp 279-280

Abstract: It was shown that upon heating the crystalline complex obtained from the reaction of phosphorus pentachloride with 2-methyl-1,3-dioxolane yields the dichloride of α-chloro-β-(β-choroethoxy)vinylphosphonic acid. A formula was proposed for above crystalline complex: $[ClC_2H_4OC(Cl)HCH_3 \cdot PCl_5 \cdot POCl_3]$. Decomposition of this complex with H_2S yields the β-(β-chloroethoxy)vinylthiophosphonic acid dichloride.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200820010-6"