

5

USSR

BLASHCHUK, V. YE., et al., Svarochnoye Proizvodstvo, No 1(471), Jan 74, pp 39-40

some decrease in strength at stresses exceeding the conditional limit of corrosion-fatigue strength. The AT3 alloy and its welded joints show practically the same durability at cyclic torsion. AT3 alloy is recommended for the production of welded experimental hydrolytic apparatus. Four figures, one table, eight bibliographic references.

2/2

USSR

UDC: 534.2

ZAGAN, V. I.

"Propagation of Sound in a Straight Tube of Constant Cross Section"

Vestn. Kiyev. politekhn. in-ta. Ser. radiotekhn. i elektroakust.
(Herald of the Kiev Polytechnical Institute, Radio Engineering and
Electroacoustics Series) No 9, 1972, pp 114-117 (from RZh--Fizika,
No 9, 1972, Abstract No 9Zh497)

Translation: The author considers the problem of sound propagation in a
straight tube of constant cross section with bent walls. Bergeron graphs are
used to analyze the system. Author's abstract

1/1

- 34 -

1/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--A FREQUENCY FERRODYNAMIC SYSTEM OF CONTROL AND REGULATION
INSTRUMENTS -U-
AUTHOR--(05)-DIDENKO, K.I., BRAUDE, V.A., GAFANOVICH, M.D., ZAGARIY, S.I.,
LEVIN, V.M.
COUNTRY OF INFO--USSR

SOURCE--A FREQUENCY FERRODYNAMIC SYSTEM OF CONTROL AND REGULATION
INSTRUMENTS. CHASTOTNO FERRODINAMICHESKAYA SISTEMA PROBOROV KONTROLYA I
DATE PUBLISHED-----70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., MECH., IND., CIVIL AND
MARINE ENGR
TOPIC TAGS--FREQUENCY CONTROL, FERROMAGNETIC STRUCTURE, ELECTRONIC
EQUIPMENT, DESIGN BUREAU, INDUSTRIAL AUTOMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1991/0576

STEP NO--UR/0000/70/000/000/0001/0222

CIRC ACCESSION NO--AM0110369

UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70
CIRC ACCESSION NO--AM0110369
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PREFACE 3. CHAPTER I THE
COMPOSITION AND STRUCTURE OF A COMPLEX OF FREQUENCY FERRODYNAMIC
EQUIPMENT 4. II UNIFIED NODES, UNITS AND ELEMENTS 14. III
PRIMARY MEASURING INSTRUMENTS AND COMPLEXES 100. IV SECONDARY
INSTRUMENTS AND MECHANISMS 169. V REGULATORS AND AUXILIARY
MECHANISMS 207. LITERATURE 221. EXAMINED ARE COMPOSITION,
STRUCTURE, PRINCIPLES OF DESIGN AND BASIC TECHNICAL CHARACTERISTICS OF A
COMPLEX OF EQUIPMENT DESIGNED AT THE SPECIAL CONSTRUCTION BUREAU OF
SYSTEMS OF AUTOMATIC CONTROL IN KHAR'KOV FOR THE CONSTRUCTION OF VARIOUS
AUTOMIZED SYSTEMS OF CONTROL AND REGULATION IN VARIOUS BRANCHES OF
INDUSTRY. THE BOOK IS FOR SPECIALISTS IN THE FIELD OF AUTOMATION OF
PRODUCTION DESIGNING SYSTEMS OF AUTOMATION IN THEIR INDUSTRIAL
OPERATION.

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--WATERPROOFING OF MATERIALS BY ORGANOSILICON COMPOUNDS. XVIII.
AGING OF FILM FORMING SOLUTIONS OF HYDROLYZED TETRAETHOXYSILANE -U-
AUTHOR-(04)-VORONKOV, M.G., PASHCHENKO, A.A., TISHCHENKO, V.T., ZAGATA, L.
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(3), 611-15
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, CHEMISTRY
TOPIC TAGS--WATERPROOFING, ORGANOSILICON COMPOUND, ORGANIC SILANE, ACID
CATALYSIS, HYDROLYSIS, HYDROGEN ION CONCENTRATION, METAL COATING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/1463 STEP NO--UR/0080/70/043/003/0611/0615
CIRC ACCESSION NO--AP0116900
UNCLASSIFIED

272 027

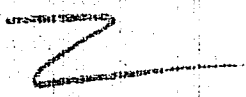
UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0116900

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INCREASES IN H SUB2 O CONCN. IN AQ. ME SUB2 CO AND AQ. DIOXANE SOLNS. OF SI(OET) SUB4 (I) RETARDED CONDENSATION REACTIONS AND INTENSIFIED THE ACID CATALYZED INITIAL HYDROLYSIS PROCESS WITH THE RESULT THAT THE MAX. IN THE ISOTHERMAL CURVES FOR THE VARIATION OF N SUBD PRIME20 WITH TIME WERE SHIFTED TO THE RIGHT. THE EFFECT OF CATALYTIC AMTS. OF ACIDS LASTED ONLY BRIEFLY WHEN HCL AND HNO SUB3 WERE USED AND FOR 300 DAYS WHEN H SUB3 PO SUB4 WAS USED BECAUSE SOLNS. CONTG. THE FORMER RAPIDLY APPROACHED PH 7 WHEREAS THOSE CONTG. THE LATTER REMAINED AT PH IS SMALLER THAN 7. ISOTHERMAL TIME VARIATIONS OF ALL OF THE PROPERTIES TESTED (D SUB20, N SUBD PRIME20, VISCOSITY, AND OPTICAL D.) EXHIBITED MAX. CORRESPONDING TO THE HIGHEST CONCNS. OF SIOH GROUPS, THE AMT. OF WHICH WERE REDUCED LATER BY CONDENSATION REACTIONS. METAL COATING PROPERTIES OF PARTIALLY HYDROLYZED I WERE BEST WHEN ME SUB2 CO SOLNS. CONTG. I, H SUB2 O, AND HNO SUB3 IN AMTS. OF 0.1-1.0, 2-3, AND 0.015-0.04 MOLE-L WERE USED.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--PREPARATION OF 2,DL,PHOSPHOGLYCERIC ACID, A SUBSTRATE OF THE ENZYME
ENOLASE -U-
AUTHOR--(02)-GEIDANS, M., ZAGATS, R. 
COUNTRY OF INFO--USSR
SOURCE--LATV. PSR ZINAT. AKAD. VESTIS, KIM. SER. 1970, (1), 117
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ORGANIC PHOSPHORUS COMPOUND, GLYCEROL, ORGANIC ACID, CHEMICAL
PURIFICATION, ION EXCHANGE RESIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0504 STEP NO--UR/0464/70/000/001/0117/0117
CIRC ACCESSION NO--AP0121178
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 014

CIRC ACCESSION NO--A0121178

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. 2,DL, PHOSPHOGLYCERIC ACID PREPD. ACCORDING TO THE METHOD OF KIESSLING (1953) WAS FURTHER PURIFIED BY A FILTRATION THROUGH A COLUMN OF DOWEX 50-X4 (NA PRIME POSITIVE), USING WATER AS ELUENT. THE PURITY OF THE RESULTING PREPN. WAS 70PERCENT.

FACILITY: INST. ORG. SIN., RIGA, USSR.

UNCLASSIFIED

UDC 621.316.542.001.5

USSR

SOLOV'YEV, E. P., Engineer, DOBRUSIN, A. I., Engineer, KERPELEV, S. G., Engineer,
GROMOV, YU. I., Engineer, ZAGAYKEVICH, B. D., Engineer

"Electrical Testing of the Material of Insulating Pull Rods for VVB-750m High-Voltage Breakers"

Moscow, Elektrotehnika, No 8, 1971, pp 46-47

Abstract: Results are presented from testing the electrical properties and moistureproofness of various fiberglass rods obtained by drawing. The superiority of the developed polyester epoxy fiberglass is demonstrated, and this material is recommended for the insulating pull rods of high voltage breakers. Graphs are presented showing the moisture absorption of the new material and the variation of its specific surface drag as functions of time spent in a wet chamber. Comparative data are presented for rods 12 mm in diameter and 50 mm long using PN-1 binder with GF-82GS protective coating and without the coating, fiberglass made of polyester epoxy binder without a coating and with GF-82GS and PFE-22 protective coatings and fiberglass using an epoxy binder manufactured in Poland and presently widely used in 35 kilovolt breakers. The specific surface drag of the Polish fiberglass dropped as much in 24 hours as that of the polyester epoxy fiberglass after a month. Measurements of the electric strengths of the materials after a month in a wet chamber produced the

1/2

USSR

SOLOV'YEV, E. P., et al., Elektrotehnika, No 8, 1971, pp 46-47

following data: for material without a coating 4 kv/cm and with the PKE-22 coating, 3.52 kv/cm.

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Acc. Nr.: AP0042971

Ref. Code: UR 014

Ussr

JPRS 58248
udc 621.311:656

ZAGAYNOV, N. A., Candidate of Technical Sciences

"All-Union Conference on the Use of Power Semiconductors on City Electric Transport System"

Moscow, Elektrichestvo, No 1, Jan 70, pp 89-91

Abstract: The All-Union Conference on the Use of Power Semiconductors in the Urban Electric Transport System held in Zaporosh'e was attended by 120 delegates from 31 cities, representing Gosplan SSSR, Ministry of Electrical Industry, Ministry of National Economy of the RSFSR and UK SSR, semiconductor producing factories, engineers and technical personnel, scientific and research institutions and others. The conference was mainly concerned with the use of power semiconductors on traction substations and on urban electric transport.

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19761108

18

AP0042971

In his opening report professor I. S. Yefremov, doctor of technical sciences, presented a technical-economical analysis of fundamental results and achievements in the field of scientific research and utilization of power semiconductor equipment on the urban transport system. He cited the advantages of silicon rectifiers over ionic rectifiers and presented data on their successful introduction into the national economy.

A. D. Rybakov reported extremely successful results of scientific investigations, conducted by the Moscow Power Engineering Institute under the leadership of professor I. S. Yefremov and presented experimental data on operation of silicon rectifiers on Moscow traction substations.

The report of G. I. Bezrukov was devoted to the experience and prospective use of controlled semiconductor converters and contained data on the first experimental and controlled converter on thyristors for traction substations.

The application of silicon rectifiers was discussed by N. A. Zagaynov, candidate of technical sciences. The author presented an evaluation of the transition from forced to natural

2/3
19761109

AP0042971.

cooling of silicon rectifiers. He also reported that an experimental unit with natural cooling of smaller specific weight and volume than one provided with a fan was constructed.

The report of G. V. Kosarev dealt with the development and investigation of a pulse control system with thyristors for rolling stock.

O. A. Kos'kin reported on the selection of parameters for the pulse control system on ZIU-5 trolleybus, while V. I. Stratiy presented the test data of an experimental trolleybus with a thyristor control of starting and braking resistances.

N. Ye. Yershov discussed the problems of contactless control circuits.

N. Ye. Nikol'skiy the senior scientific member of the Academy of Public Economy im. K.D. Pamfilov read a paper on the over-voltages produced in a system of converters.

The conference approved a program of further development and use of power semiconductor equipment on the electric transport

3/3

19761110

Ussr

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udc 621.311:656

ZAGAYNOV, N. A., Candidate of Technical Sciences

"All-Union Conference on the Use of Power Semiconductors on City Electric Transport System"

Moscow, Elektrichestvo, No 1, Jan 70, pp 89-91

Abstract: The All-Union Conference on the Use of Power Semiconductors in the Urban Electric Transport System held in Zaporosh'e was attended by 120 delegates from 31 cities, representing Gosplan SSSR, Ministry of Electrical Industry, Ministry of National Economy of the RSFSR and UK SSR, semiconductor producing factories, engineers and technical personnel, scientific and research institutions and others. The conference was mainly concerned with the use of power semiconductors on traction substations and on urban electric transport.

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USSR

ZAGAYNOV, N. A., et al., Elektrichestvo, No 1, Jan 70, pp 89-91

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USSR

ZAGAYNOV, N. A., et al., Elektrichestvo, No 1, Jan 70, pp 89-91
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N. Ye. Nikol'skiy the senior scientific member of the Academy of Public Economy im.K.D.Pamfilov read a paper on the over-voltages produced in a system of converters.

The conference approved a program of further development and use of power semiconductor equipment on the electric transport.

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USSR

UDC 547.26'118:541.49

MURATOVA, A. A., YARKOVA, E. G., PLEKHOV, V. P., ZAGETOVA, R. G., and
PUDOVNIK, A. N.

"Study of Complexes of Dialkylphosphinous Acids With Tin, Titanium, and
Zirconium Halides"

Abstract: The authors studied reactions of di-n-butylphosphinous, diphenyl-
phosphinous, dicyclohexylphosphinous, di-n-hexylphosphinous, di-n-octyl-
phosphinous acids with tetrachlorides of tin, titanium, and zirconium and
with tin tetrabromide. The obtained complexes had an $[R_2P(O)H]_2 \cdot MeX_4$
composition. Their infrared spectra were studied in the $400-4000 \text{ cm}^{-1}$
region. The results are shown in a table containing information on 21
complexes.

1/1

1/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--EFFECT OF HEAT TREATMENT ON THE SUSCEPTIBILITY OF GREEN PEA
PROTEINS TO PROTEOLYTIC ENZYMES -U-
AUTHOR--(02)-MARKH, A.T., ZAGIBALOV, A.F. 2

COUNTRY OF INFO--USSR

SOURCE--KONSERV. OVOSHCHESUSH. PROM, 1970, 25(3), 37-8

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HEAT EFFECT, PROTEIN, PLANT PHYSIOLOGY, ENZYME, FOOD CANNING,
FOOD PRESERVATION, FREEZING, LEGUME CROP

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605008/E02 STEP NO--UR/9084/70/025/003/0037/0038

CIRC ACCESSION NO--AP0139991

UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0139991
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AFTER 6 HR OF DISSOCN. OF FRESHLY
FROZEN PEAS, 106-21 MG-G PROTEIN WAS HYDROLYZED; THE AMT. WAS SMALLER
FOR CANNED PEAS. FACILITY: ODESS. TEKHNOL. INST. IM.
LOMONOSOVA, ODESSA, USSR.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--CHANGE IN THE PROTEINS OF GREEN PEAS DURING FREEZING AND FROZEN
STORAGE -U-
AUTHOR-(02)-MARKH, A.T., ZAGIBALOV, A.F.
COUNTRY OF INFO--USSR
SOURCE--RHOLOD. TEKH. 1970, 47(2), 47-50
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--PROTEIN, FREEZING, VEGETABLE CROP, FOOD STORAGE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/0765 STEP NO--UR/0066/70/047/002/0047/0050
CIRC ACCESSION NO--AP0137818
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

2/2 014

CIRC ACCESSION NO--AP0137818

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. BLANCHED AND UNBLANCHED GREEN PEAS OF 3 VARIETIES WERE FROZEN AT MINUS 196DEGREES IN LIQ. N₂ MINUS 120DEGREES IN A TURBO REFRIGERATOR, MINUS 65DEGREES IN A REFRIGERATION ASSEMBLY; AND AT MINUS 30DEGREES BY TUNNEL FREEZING. AFTER FREEZING, PEAS WERE PACKED IN POLYETHYLENE AND STORED AT MINUS 18DEGREES. THE FRACTIONAL COMPN. OF PROTEINS OF UNBLANCHED PEAS, AFTER FREEZING AT ANY OF ABOVE TEMPS., VARIED INSIGNIFICANTLY, AND DID NOT CHANGE DURING 6 MONTHS OF STORAGE. IN THE BLANCHED PEAS, 8.4-10.3PERCENT OF THE NONPROTEIN N WAS LOST. AFTER FREEZING, THE GLUTELIN CONTENT INCREASED 1.5-2.0 FOLD, AND THE SOLY. OF GLOBULIN AND ALBUMIN FRACTIONS DECREASED CONSIDERABLY. DURING THE STORAGE OF THE BLANCHED FROZEN PEAS, THE GLUTELIN CONTENT INCREASED, AND GLOBULIN AND ALBUMIN CONTENTS DECREASED CONSIDERABLY.

FACILITY: GDESS. TEKHNOL. INST. PISHCH. KHOLOD.

PROM., ODESSA, USSR.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--EXPERIMENTAL STUDY OF THE INFLUENCE EXERTED BY THE DOSAGE OF A
CHEMICAL ON THE INCIDENCE AND INTENSITY OF EXTRINSIC ALLERGY -U-
AUTHOR--(05)-ALEKSEYEVA, O.G., BARLOGOVA, S.G., DUYEVA, L.A., ZAGIDULIN,
SH.Z., RABEN, A.S.
COUNTRY OF INFO--USSR
SOURCE--GIGIYENA TRUDA I PROFESSIONAL'NYE ZABOLEVANIYA, 1970, NR 6, PP
19-23
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ALLERGIC DISEASE, SELECTIVE DRUG EFFECT, POISON EFFECT,
MEDICAL EXPERIMENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/0675 STEP NO--UR/0391/70/000/006/0019/0023
CIRC ACCESSION NO--AP0131280
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131280

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A DIRECT RELATION BETWEEN A SENSITIZING DOSAGE AND ALLERGIC EFFECT WAS BROUGHT INTO EVIDENCE FOLLOWING A STUDY OF EXTRINSIC ALLERGY TO 10 OCCUPATIONAL CHEMICAL ALLERGENS IN GUINEA PIGS. AS REGARDS THE MAJORITY OF ASSAY ALLERGENS THIS RELATIONSHIP DID NOT CONCERN THE AREA OF TOXIC DOSES, SINCE POISONING IMPEDES THE DEVELOPMENT OF EXTRINSIC ALLERGY. SOME WEAK ALLERGENS, HOWEVER, CAN PRODUCE AN INTENSIVE SENSITIZATION ALSO WHEN SUPERIMPOSED ON POISONING. A QUESTION IS RAISED AS TO THE PRACTICABILITY OF SETTING UP MAXIMUM PERMISSIBLE STANDARDS FOR CHEMICAL ALLERGENS BY REFERRING TO THEIR SPECIFIC EFFECT. FACILITY: INSTITUT GIGIYENY TRUDA I PROFZABOLEVANNIY AMN SSSR.

UNCLASSIFIED

1/2 010

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--FTOROPLAST, AN ANTIADHESION MATERIAL USED IN DEPARAFFINATION OF DIESEL FUEL BY AQUEOUS UREA SOLUTIONS -U-

AUTHOR--(02)-ZAGIDULLIN, R.H., KLIMENOK, B.V.

COUNTRY OF INFO--USSR

Z

SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (1), 42

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, PROPULSION AND FUELS

TOPIC TAGS--AQUEOUS SOLUTION, UREA, PETROLEUM DEPARAFFINATION, DIESEL FUEL, FURFURAL, PLASTIC/(U)F4 FTOROPLAST SHEET, (U)F4 FTOROPLAST TUBE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1529

STEP NO--UR/0318/70/000/001/0042/0042

CIRC ACCESSION NO--AP0118516

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118516

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STEEL COLUMNS IN WHICH DIESEL FUEL IS TREATED WITH UREA SOLN. AT 90DEGREES BECOME COVERED WITH GUMMY DEPOSITS. COATING THE WALLS WITH A FURFURAL RESIN DID NOT PRODUCE AN IMPROVEMENT. LINING THE WALLS WITH WOODEN LATHS TO WHICH FTOROPLAST F-4 SHEETS WERE NAILED, AND REPLACING THE STEEL PIPING WITH FTOROPLAST F-4 TUBES, GAVE SATISFACTORY PERFORMANCE FOR 2 YEARS.

UNCLASSIFIED

USSR

UDC 546.19 + 541.124.7

TSENTOVSKIY, V. M., GAMAYUROVA, V. S., ZAGIDULLINA, D. Sh., and
CHERNOKAL'SKIY, B. D., Kazan' Chemical Technological Institute Imeni
S. M. Kirov

"Ionization Constants of Arylarsonic Acids in Nonaqueous Media"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 12, Dec 72, pp 2702-
2705

Abstract: The pK of eight arylarsonic acids were determined in nonaqueous media -- dimethylformamide [DMFA] and dimethylsulfoxide [DMSO] by means of potentiometric titration. In both the DMFA and DMSO arylarsonic acids titrate as monobasic acids with the exception of nitrohydroxyphenylarsonic acid which acts as a dibasic acid in DMSO. Depending on the substituent in the phenyl ring, the acid strength diminishes in the following order: $\text{NO}_2 + \text{OH} > \text{NO}_2 > \text{H} > \text{CH}_3 > \text{CH}_3\text{O} > \text{NH}_2$. Ortho substituted nitro- and amino-phenylarsonic acids are weaker than their para substituted analogs. Analyzing the pK values in different media shows that the arylarsonic acids increase in strength going from DMFA to DMSO to water. In comparison to water, DMFA and DMSO exert a differentiating action on arylarsonic acids.

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Transportation

UDC: [656:061.24]:001.12

USSR

ZAGLYADIMOV, M. P.

"Directions of the Work of the Permanent Commission on the Scientific Problems of Transport Development, USSR Academy of Sciences"

Moscow, Izvestiya Akademii Nauk SSSR--Energetika i Transport, No. 4, 1971, pp 76-81

Abstract: The Permanent Commission for considering the problems of developing transportation in the Soviet Union was created in 1965, and is part of the Section on Physico-Technical and Mathematical Sciences of the Presidium of the USSR Academy of Sciences. The main problem now being handled by the Commission and which will remain under its control for some time in the future is the formation and development of a Uniform Transport System for the USSR. Analysis of the present state of transport has shown that while it is keeping up with the demands of the growing national economy, it is overloaded at peak periods; there must be a scientifically based long-term program for the development of transport as a single sys-

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USSR

ZAGLYADIMOV, M. P., Izvestiya Akademii Nauk SSSR - Energetika i Transport, No 4, 1971, pp 76-81.

tem, and a general plan for its development over a sufficiently long period. A problem of transport is fuel requirements; in this direction, considerable economies have been achieved by changing railroads to thermal and electrical systems, using diesels in marine and river transport. Further research in this direction, however, is required.

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UDC 546.185

USSR

RUDAUSKIY, V. P., and ZAGNIBEDA, D. M.

"Acid Chlorides of Halodiacylamidoarylphosphonic Acids"

Kiev, Khimicheskaya Tekhnologiya, No 3 (63), May-June 72, pp 60-61

Abstract: Acid chlorides of halodiacylamidoarylphosphonic acids (I) are obtained by hydrolysis of phenyldichlorophosphazohalocarboxyls with water, formic acid or glacial acetic acid. They are very reactive compounds, reacting energetically with alcohols, phenols, amines, and other compounds with active hydrogen or metal atoms. The best agent for above hydrolysis is formic acid, the reaction being carried out at 25-30°C in benzene. (I) is more stable than the parent compound. It has a sharp melting point, and is soluble in benzene, acetone, and dioxane, but insoluble in ether and petroleum ether.

1/1

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Organophosphorous Compounds

UDC 546.185

USSR

RUDAVS'KIY, V. P., and ZAGNIBIDA, D. M., Kiev Medical School No 1

"Phenyldichlorophosphoazohaloalkanes"

Kiev, Farmatsevtichnyi Zhurnal, Vol 26, No 3, May-June 71, pp 84-86

Abstract: The methods of preparation of phenyldichlorophosphoazohaloalkanes (I), phenyldichlorophosphoazo-alpha, alpha, beta, beta-tetrachloropropanes (II), and acid chlorides of N-phenylchlorophosphonyliminohalocarboxylic acids (III) are described.

Compounds I are prepared from phenyldichlorophosphoazohalocarbacyl and an equimolar amount of phosphorus pentachloride, heating the mixture to 80-90°. Compound I is a viscous liquid.

Compounds II are obtained from phenyldichlorophosphoazo-alpha, alpha, beta-trichloropropane and phenyldichlorophosphoazo-alpha-chloro-alpha, alpha-dichloropropionyl, and phosphorus pentachloride, heating the mixture to 60-90°. Compound II is a thick liquid.

Compounds III are formed from phenyldichlorophosphoazohaloalkane and
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USSR

RUDAVS'KIY, V. P., and ZAGNIBIDA, D. M., *Farmatsevtichniy Zhurnal*, Vol 26,
No 3, May-June 71, pp 84-86

anhydrous formic acid in benzene, initially with cooling, then with heating
to 50-60°. Compound III is a thick liquid.

The preparations are purified by recrystallization from a benzene-petroleum
ether solution.

2/2

- 12 -

UDC 547.464:632.954

USSR

RUDAUSKIY, V. P., LITOSHENKO, N. A., and ZAGNIBEDA, D. M.

"Some Derivatives of Trichloro- and bis-Trichlorophosphazohalocarbacyls"

Kiev, Khimicheskaya Tekhnologiya, No 1(55), Jan-Feb 71, pp 19-23

Abstract: Searching for novel herbicides, fungicides, and insecticides, a series of phosphorylated derivatives of halocarboxylic and halodicarboxylic acids was prepared. Reacting trichloro- and bis-trichlorophosphazocarbacyls when phenols, thiophenols, furfuraloximes, and acetophenoxime in the presence of triethylamine, or with sodium phenoxide, thiophenoxide or acetate gave a series of products of different degree of substitution depending on the ratio of the reagents taken. Reaction of trichlorophosphazohalocarbacyls with amines gave trianilidophosphazohalocarbacyls. Reactions of one, two, or three moles of phenol or thiophenol with trichlorophosphazohalocarbacyls gave monothiophenoxydichloro-, dithiophenoxychloro-, and triphenoxy(trithiophenoxy)phosphazohalocarbacyls respectively. Bis-trichlorophosphazohalocarbacyls react with phenols and thiophenols yielding bis-monophenoxy(thiophenoxy)-, dichloro-bis-diphenoxy(dithiophenoxy)chloro-, and bis-triphenoxy(trithiophenoxy)phosphazohalocarbacyls. Oximes in presence of triethylamines

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RUDAUSKIY, V. P., et al., Khimicheskaya Tekhnologiya, No 1(55), Jan-Feb 71,
PP 19-23

or sodium acetates, when allowed to react with bis-trichlorophosphazohalo-
carbacyls, form di-, tetra-, and hexasubstituted bis-trichlorophosphazo-
carbacyls.

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- 34 -

Vector Studies

UDC 576.895.4

USSR

KOCHKAREVA, A. V., ZACNIBORODOVA, Ye. N., ZHERNOVOV, I. V., ZAYTSEVA, V. I., SHILENKO, V. I., ZABEGALOVA, M. N., AVAKOV, S. M., TASHLIYEV, A. O., BEL'SKAYA, G. S., and VAZHEV, A. P., Republic Antiprague Station, Institute of Zoology, Academy of Sciences Turkmen SSR

"Regional Distribution of Ixodid Ticks in Turkmenia"

Ashkhabad, Izvestiya Akademii Nauk Turkmenskoy SSR, Seriya Biologicheskikh Nauk, No 5, 1971, pp 36-42

Abstract: The 31 species and subspecies of Ixodid ticks (of the total of 49 living in Turkmenia) gathered from 699 geographic points and included in the collection of the station are analyzed for the distribution of their natural habitats and their geological and botanic living conditions. *Hyalomma asiaticum asiaticum* proliferates in large numbers in all four regions (clay desert, sandy desert, cultivated river valleys, and southern mountains). *H. detritum* an. *anatolicum*, *H. an. excavatum*, and *H. pl. plumbeum* thrive mainly in cultivated areas. The most numerous species are *H. as. asiaticum* and *H. numidiana turanica* living in sandy desert and *Ornithodoros tartakovskyi* living in clay desert. *Ixodes redikorzevi*, *Haemaphysalis punctata*, *Rhipicephalus schulzei*, and *R. leporis* were recorded for the first time in the republic.

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UDC 911.3:616.981.452(575.4)

USSR

BURLACHENKO, T. A., PUNSKIY, Ye. Ye., ZHERNOVOV, I. V., and ZAGNIBORODOVA, Ye. N.

"Characteristics of the Plague Epizootic Among Rodents in Turkmenia (1964-1969)"

V sb. Probl. osobo opasn. infektsiy (Problems of Especially Dangerous Infections -- collection of Works), Saratov, No 4(14), 1970, pp 110-123 (from RZh-Meditsinskaya Geografiya, No 3, Mar 71, Abstract No 3-36.118) by B. Dobrokhotov.

Translation: The plague epizootic among rodents in various natural regions of Turkmenia was recorded annually for the last six years: in the western and northwestern part in 1964-1966, in the southwestern part in 1966-1968, in the northeastern part in 1965-1969, in the southeastern part in 1966-1968, in the northern part in 1966-1969, and in the eastern part in 1969. Territorial and biocenotic characteristics of the foci and the development of the epizootic in each natural region are described. Included are tables of isolation of plague cultures from mammalian and arthropod vectors. The main species of rodents participating in the epizootic is the great gerbil, involvement of redtailed midday gerbils and the yellow suslik led to an increase in the

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- 34 -

USSR

BURLACHENKO, T. A., et al., RZh-Meditsinskaya Geografiya, No 3, Mar 71,
Abstract No 3-36.118)

intensity of the epizootic and to its further spread. Practically all territorial regions of the southern deserts at the borders of Turkmenia are sections of continuous natural focal activity of plague and are not temporary foci. Sites of prolonged retention of plague bacteria in both epizootic and nonepizootic years are stations of rodent survival in which elementary plague foci may be found. Four maps of sites at which plague cultures have been isolated in Turkmenia from 1964 to 1969 are included.

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USSR

UDC 546.185

ZAGNYBIDA, D. H., and RUDAVS'KYY, V. P., Kiev Medical School No 1

"Synthesis of Haloidacylamidophosphoric Acids"

Kiev, Farmatsevychnyy Zhurnal, No 1, Jan-Feb 73, pp 32-34

Abstract: The article describes methods for the synthesis of haloidacylamidophosphoric acids and their physicochemical properties. Prolonged heating of haloidacylamidophosphoric acid dichlorides with water gives halocarboxylic acid amides, phosphoric acid and hydrogen chloride. The interaction of equivalent quantities of haloidacylamidophosphoric acid dichlorides and water (in acetone) gives haloidacylamidophosphoric acids. The latter can also be obtained by the action of an excess of anhydrous acetic acid or water on trichlorophosphazohalocarboxylic acids in a benzene solution, with haloidacylamidophosphoric acid dichlorides as the intermediate product. Haloidacylamidophosphoric acids decompose on heating in aqueous or alcoholic solutions. When heated above the melting point, they decompose into halocarboxylic acid nitriles and phosphoric acid.

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UDC: 681.612/613

USSR

ZAGOREL'SKIY, G. A., KRAS'KO, V. A.

"The Gezotayp D1"

Kiev, Mekhanizatsiya i Avtomatizatsiya Upravleniya, No 2, Mar-Apr 73, PP 65-67.

Abstract: Leningrad University has developed a device (the Gezotayp D1) for manual input of information. The method of keying the information with the D1 has certain advantages over ordinary typewriter keyboard input: shorter training time for touch operation; smaller area of keying field with identical alphabet length; larger number of keyed characters with identical number of finger movements; possibility of touch operation using one finger. The keyboard for the 32 characters of the Russian alphabet has 6 contact points, four in one row and one on each side of the central row. Each of the switch positions can be deflected in either of two directions. A schematic diagram of the device is presented. It is stated that trained operators can input information at 800-900 characters per minute using the Gezotayp D1.

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1/2 014

TITLE--ROTARY RING FURNACE PREPARATION OF LUMP SMOKELESS HOUSEHOLD FUEL
FROM CENTRAL ASIAN COALS -U-
AUTHOR--GRACHEV, G.I., ZAGORETS, A.M., MAKAROV, G.N., PEREVEZENTSEV, A.V.,
SYSKOV, K.I.
COUNTRY OF INFO--USSR

UNCLASSIFIED
PROCESSING DATE--11SEP70

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4

SOURCE--KHIM. TVERD. TOPL. 1970, (1), 78-85

DATE PUBLISHED-----70

SUBJECT AREAS--PROPULSION AND FUELS

TOPIC TAGS--COAL, PYROLYSIS, SOLID FUEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/2033

STEP NO--UR/0467/70/000/001/0078/0035

CIRC ACCESSION NO--AP0109965

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--11SEP70

2/2 014

CIRC ACCESSION NO--AP0109965
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE TITLE FUEL WAS PREPD. BY GRANULATION AND THERMAL TREATMENT OF MIXTS. OF 55-65 PARTS OF CENTRAL ASIAN NON CAKING COALS WITH 25-35PARTS OF SIFTINGS OF KARAGANDA COALS. THE MIXTS. ARE INTRODUCED INTO A ROTARY RING FURNACE AT 750DEGREES AND SLOWLY HEATED TO 1050DEGREES WHILE THE HEARTH REMAINED AT 540DEGREES. WITH THE TITLE FUEL THE EFFICIENCY OF HOUSEHOLD OVENS REACHED 80PERCENT WHILE WITH SIMILAR BRIQUETS NOT THERMALLY TREATED THE COEFF. WAS SMALLER THAN 65PERCENT.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--11SEP70
 TITLE--ROTARY RING FURNACE PREPARATION OF LUMP SMOKELESS HOUSEHOLD FUEL
 FROM CENTRAL ASIAN COALS -U-
 AUTHOR--GRACHEV, G.I., ZAGRETS, A.M., MAKAROV, G.N., PEREVEZENTSEV, A.V.,
 SYSKOV, K.I.
 COUNTRY OF INFO--USSR

SOURCE--KHIM. TVERD. TOPL. 1970, (1), 78-85
 DATE PUBLISHED-----70

SUBJECT AREAS--PROPULSION AND FUELS
 TOPIC TAGS--COAL, PYROLYSIS, SOLID FUEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAME--1990/2033

STEP NO--UR/0467/70/000/001/0078/0035

CIRC ACCESSION NO--AP0109965
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UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0109965

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE FUEL WAS PREPD. BY GRANULATION AND THERMAL TREATMENT OF MIXTS. OF 55-65 PARTS OF CENTRAL ASIAN NON CAKING COALS WITH 25-35PARTS OF SIFTINGS OF KARAGANDA COALS. THE MIXTS. ARE INTRODUCED INTO A ROTARY RING FURNACE AT 750DEGREES AND SLOWLY HEATED TO 1050DEGREES WHILE THE HEARTH REMAINED AT 540DEGREES. WITH THE TITLE FUEL THE EFFICIENCY OF HOUSEHOLD OVENS REACHED 80PERCENT WHILE WITH SIMILAR BRIQUETS NOT THERMALLY TREATED THE COEFF. WAS SMALLER THAN 65PERCENT.

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UNCLASSIFIED

UDC 541.15+547.241

USSR

ZAGORETS, P. A., SHOSTENKO, A. G., DODONOV, A. M., Moscow Institute
of Chemical Technology imeni D. I. Mendeleev

"Radiochemical Synthesis of Chloroethyldichlorophosphine From
 PCl_3 and Ethylene"

Moscow, Khimiya Vysokikh Energiy, Vol 5, No 6, Nov-Dec 71,
pp 556-557

Abstract: The authors synthesized chloroethyldichlorophosphine
by addition of phosphorus trichloride to ethylene under the action
of Co-60 gamma radiation. Elemental analysis and IR spectroscopy
were used to identify the reaction product. The kinetics of
chloroethyldichlorophosphine accumulation were studied at tem-
peratures of 100, 130, 150, 180 and 195° and absorbed dose rates
of $1.5 \cdot 10^{16}$, $2.5 \cdot 10^{16}$, $7.7 \cdot 10^{16}$ and $12.8 \cdot 10^{16}$ ev/ml. It was found
that the radiation yield of chloroethyldichlorophosphine increases
with use in temperature and a decrease in radiation dose rate.

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- 58 -

UDC 541.15 547.241

USSR

ZAGORETS, P. A., SHOSTENKO, A. G., DODONOV, A. M., Moscow Institute of Chemical Technology imeni D. I. Mendeleev

"Gamma-Initiated Synthesis of β -Chloroalkyldichlorophosphines"
Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 10, 1971,
pp 2171-2173

Abstract: A study was made of the products of addition reactions, initiated by gamma-irradiation from Co-60 source, of phosphorus trichloride with straight- and branched-chain olefins containing 4 to 8 carbons in a molecule. The reactions yielded 77 to 95 percent β -chloroalkyldichlorophosphines (I) which are important intermediate products, easily convertible into acids, esters, and amines, because they contain labile chlorine atoms. The maximum yield of (I) was obtained by irradiation, with 1-200 rad/sec. dose, of a mixture of liquid olefin and phosphorus trichloride in 1:4 molar ratio. Almost all preparations produced a mixture of two isomers of the 1:1 adduct with admixtures of the products of radical recombination and disproportionation reactions.

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USSR

ZAGORETS, P. A., et al, Zhurnal Obshchey Khimii, Vol 41, No 10,
1971, pp 2171-2173

A series of pure (I) were separated by vacuum distillation and were identified by elemental analysis and IR spectra. The tabulated analytical data show that one or another isomer of (I) can be obtained in predominant quantity by varying the reaction temperature in the 0-70° range. The elemental analysis data and some physical constants are tabulated for the series of (I) and IR spectra of three (I) compounds are shown. The experimental procedures are described in some detail.

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Acc. Nr.

AF0100239

Abstracting Service:
CHEMICAL ABST. 6-70

Ref. Code

UR0062

111856q Radiation-chemical telomerization of ethylene by methyl formate. Brvantsev, I. N.; Zagorets, P. A.; Romina, N. N.; Terent'ev, A. B.; Freidlina, R. ~~Khim. i Spets. Elementov. Soe. dn. Moscow USSR~~. ~~Khim. i Spets. Elementov. Soe. dn. 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) ($n = 1, 3, \text{ and } 5$), $HCO_2(CH_2)_nMe$ (II) ($n = 2, 4, \text{ or } 6$), a compd. of mol. formula $C_{10}H_{20}O_2$ and $C_8H_{16}CHEtCO_2Me$, whether initiated with $tert\text{-}Bu_2O_2$ 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 $tert\text{-}Bu_2O_2$ 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

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REEL/FRA
19841629

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1/2 028 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--RADIATION, CHEMICAL OXIDATION AND NITRATION OF AN ALIPHATIC DILUENT
IN TWO PHASE AQUEOUS, ORGANIC SYSTEMS -U-
AUTHOR--(03)-KERSULIS, V., YEGOROV, G.F., ZAGORETS, P.A.
COUNTRY OF INFO--USSR
SOURCE--KHIM. VYS. ENERG. 1970, 4(2), 172-3
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--OXIDATION, NITRATION, RADIOLYSIS, ELECTRON RADIATION, AMMONIUM
COMPOUND, NITRATE, BENZENE DERIVATIVE, CARBONYL COMPOUND, CARBOXYLIC
ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0760 STEP NO--UR/0456/70/004/002/0172/0173
CIRC ACCESSION NO--AP0119667
UNCLASSIFIED

PROCESSING DATE--23OCT70

UNCLASSIFIED

2/2 028

CIRC ACCESSION NO--AP0119667

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE RADIOLYSIS BY FAST ELECTRONS WAS STUDIED OF THE 0.2M SOLNS. OF ALKYLAMMONIUM NITRATES IN THE MIXT. CONTG. 70 WT. PERCENT N,C SUB8 H SUB18 AND 30 WT. PERCENT N,C SUB8 H SUB17 OH, AT A DOSE RATE SIMILAR TO 1.4 TIMES 10 PRIME18 EV-CM PRIME2,SEC. THE ALKYLAMMONIUM CATIONS WERE THOSE OF DINONYLANILINE, DIBENZYLDODECYLAMINE, AND BENZYLDINONYLAMINE, AND THE MAIN RADIOLYSIS PRODUCTS WERE CARBOXYLIC ACIDS, CARBONYL COMPS., AND 1,OCTYL NITRITE. NITROOCTANES, SEC,OCTANOLS, AND 1,OCTYLNITRATE WERE FORMED IN LOWER YIELDS. THE PRESENCE OF O SUB2 HAD AN INSIGNIFICANT EFFECT ON THE RADIOLYSIS YIELDS AND ITS ONLY IMPORTANT EFFECT WAS THE LOWERING OF THE RATIOS OF THE NITRITE YIELDS TO THOSE OF NITRATES.

INST. ELEKTROKHM., MOSCOW, USSR. FACILITY:

UNCLASSIFIED

Acc. Nr:

AP0049986

Abstracting Service:
CHEMICAL ABST. 5/70

Ref. Code:

4A 0456

95265p Radiolysis of alkylaromatic amines in two-phase aqueous-organic systems. Kersulis, V.; Egorov, G. F.; Zagorats, P. A. (Mosk. Khim.-Tekhnol. Inst. im. Mendeleeva, Moscow, USSR). *Khim. Vys. Energ.* 1970, 4(1), 91-2 (Russ).
 Solns. of 0.2M PhCH₂N(C₂H₅)₂ (I), C₁₇H₂₅N(CH₂Ph)₂ (II), or PhN(C₂H₅)₂ (III) in BuPh or n-C₈H₁₈ contg. 30 wt. % n-C₈H₁₇OH (IV), with and without an equal vol. of aq. 2M HNO₃, were irradiated (1.4 × 10¹⁸ eV ml⁻¹ sec⁻¹) by fast electrons (~5 MeV) in the presence or absence of O₂, and the products were analyzed. The presence of O₂ did not influence the rate of radiolysis. Decompn. yields in the absence of HNO₃ are (substance, -G-values in n-C₈H₁₈, -G-values in BuPh, given): I, 3.3, 3.6; II, 2.4, 3.1; III, 1.0, 2.9 (⁶⁰Co; 4 × 10¹⁸ eV ml⁻¹ sec⁻¹). In the presence of HNO₃, the resp. values are: I, 4.1, 2.6; II, 3.4, 2.6; III, 1.3, 96.
 J. Panchartek

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19801924

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USSR

UDC 547.759.3:543.422.25

NOVIKOVA, N. N., SILENKO, I. D., KUCHEROVA, N. F., and ZAGOREVSKIY, V. A., Institute of Pharmacology, USSR Academy of Medical Sciences, Moscow

"Indole Derivatives. XII. Cyclization of 1-R-2-(β -Aminoisobutyl)Indole With Cyclic Ketones"

Khimiya Geterotsiklicheskikh Soyedineniy, No 7, 1973, pp 942-944

Abstract: Experiments were conducted on the cyclization of 2-(β -aminoisobutyl)indole and 1-methyl-2-(β -aminoisobutyl)indole with several alicyclic and heterocyclic ketones in a mixture of absolute ethanol and benzene containing catalytic amounts of HCl. These reactions yielded imines or spirans of the 1,2,3,4-tetrahydro- γ -phenolic series.

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USSR

UDC 547.728.2*83.07

KUCHEROV, N. F., AKSANOVA, L. A., SHARKOVA, L. M., and ZAGOREVSKIY, Institute of Pharmacology, USSR Academy of Sciences, at Moscow

"Synthesis of Derivatives of a New Heterocyclic System of 1,2,3,4-Tetrahydro-benzofuro[3,2-c]pyridine"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 11, Nov 71, pp 1469-1472

Abstract: Even though 1,2,3,4-tetrahydro- γ -carboline and its derivatives have been the objects of pharmaceutical research for some years, their oxygenous analogs, the 1,2,3,4-tetrahydro[3,2-c]pyridines, have so far not been synthesized. Using the fairly new method of creating a benzofuran system by cyclization of aryl esters of the ketoximes, the authors synthesized a tricyclic system of thiopyrano[4,3-b]benzofuran. Melting points, empirical formulas, compositions and yields of nine oxime esters and seven of the above-mentioned pyridines were determined.

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- 59 -

008

UNCLASSIFIED

PROCESSING DATE--30OCT70
CARBULINE -U-

TITLE--3, METHYL, 9, BENZYL, 1, 2, 3, 4, TETRAHYDRO GAMMA
AUTHOR--(03)-KUCHEROVA, N.F., SHARKOVA, N.M., ZAGDREVSKIY, V.A.

COUNTRY OF INFO--USSR

SOURCE--USSR 261,386

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--13JAN70

SUBJECT AREAS--CHEMISTRY, MISSILE TECHNOLOGY

TOPIC TAGS--ORGANIC SYNTHESIS, CHEMICAL PATENT, BENZENE DERIVATIVE,
PHENOL, BENZYL CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1462

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128861

UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NU--AA0128861

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COMPD. IS PREPD. BY
TREATING A SUSPENSION OF AN ALKALI METAL HYDRIDE, E. G. NA HYDRIDE, WITH
A SOLN. OF 1,2,3,4-TETRAHYDRO-GAMMA-CARBOLINE IN HCONHE SUB2. BENZYL
CHLORIDE IS THEN ADDED TO THE REACTION MASS. FACILITY: INSTITUTE
OF PHARMACOLOGY AND CHEMOTHERAPY, ACADEMY OF MEDICAL SCIENCES, USSR.

UNCLASSIFIED

1/2 012

UNCLASSIFIED

PROCESSING DATE--09OCT70

TITLE--BENZOXAZINES AND RELATED COMPOUNDS. II. SYNTHESIS OF 2 SUBSTITUTED
4,4 DIALKYL 4H 1, 3 BENZOXANINES -U-

AUTHOR--(03)--LUPATINA, K.I., KLYUYEV, S.M., ZAGOREVSKIY, V.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SUEDIN. 1970, (1), 43-4

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, BENZENE DERIVATIVE, HETEROCYCLIC OXYGEN
COMPOUND, ORGANIC NITRILE COMPOUND, CHLORINATED ORGANIC COMPOUND,
AROMATIC ESTER, ORGANIC AZINE COMPOUND, MOLECULAR STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/0548

STEP NO--UR/0409/70/000/001/0043/0044

CIRC ACCESSION NO--AP0113439

UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0113439

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO A COOLED (0DEGREES) MIXT. OF 5.4 G O, HYDROXYPHENYLDIETHYLCARBINOL, AND 5.3 G ACYLNITRILE, WAS ADDED DROPWISE 5 ML 70PERCENT HCL0 SUB4 SO THAT THE REACTION MIXT. REMAINED AT 0-10DEGREES, AND THE MIXT. MADE ALK. WITH AQ. NH SUB3 AFTER 24 HR, TO GIVE 40PERCENT I (R PRIME1 EQUALS CH:CH SUB2), B SUB1 83-4DEGREES. SIMILARLY WERE PREPD. I ((R PRIME1, B.P.-MM, AND PERCENT YIELD GIVEN): CH SUB2 CL, 106-7DEGREES-1, 32; CH SUB2 PH, 116-17DEGREES-0.03, 57; P, CLC SUB6 H SUB4, 153-4-0.03, 46; CH SUB2 CD SUB2 ET, 109-10-0.06, 32; ME SUB2 COH, 118-19-4, 8.6; 6 PIPERIDINOHEXYL, 178-9-0.02, 41; 6, (4,4, DIETHYL, 4H, 1,3, BENZOXAZIN, 2, YL) HEXYL, 138.5-9.0DEGREES, 50; ME, 83-4DEGREES-4, 22. ATTEMPTS TO PREP. THE BENZOXAZINE FROM BETA PIPERIDINOPROPIONITRILE WERE UNSUCCESSFUL. FACILITY: INST. FARMAKOL. KHIMOTER., MOSCOW, USSR.

UNCLASSIFIED

172 008

UNCLASSIFIED

PROCESSING DATE--09OCT70

TITLE--OPENING OF THE BENZOXAZINE RING IN 2, SUBSTITUTED
4,4,DIETHYL,4H,1,3,BENZOXAZINES. -U-

AUTHOR--(03)--LOPATINA, K.I., KLYUYEV, S.M., ZAGOREYSKIY, M.A.

2

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (2), 279-80

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HYDROLYSIS, HETEROCYCLIC NITROGEN COMPOUND, BENZENE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1983/1193

STEP NO--UR/0409/70/000/002/0219/0280

CIRC ACCESSION NO--AP0094092

UNCLASSIFIED

2/2 008

CIRC ACCESSION NO--A00054092
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT. THE HYDROLYTIC OPENING OF THE BENZOXAZINE RING WAS READILY ACCOMPLISHED IN PRESENCE OF CU(II) SALT AND ACOH. THUS, EQUIMOL. SOLN. OF IA AND CU(II) SALT IN 70PERCENT ACOH WAS STIRRED 2 HR TO YIELD 40.7PERCENT IIA, M. 131020DEGREES. IB (0.02 MOLE) IN 20 ML ETOH WAS ADDED TO 0.02 MOLE CU(II) SALT, 0.01 MOLE ACONA IN 50 ML 70PERCENT ETOH ADDED, AND THE MIXT. STIRRED 2 HR TO GIVE 50PERCENT IIB, M. 119-20DEGREES.

UNCLASSIFIED

USSR

UDC 547.759.3'728.2'821.07

SHARKOVA, N. M., KUCHEROVA, N. F., and ZAGOREVSKIY, V. A., Institute of Pharmacology, Academy of Medical Sciences USSR, Moscow

"Indole Derivatives. XL. Synthesis of Novel Condensed Indole Systems"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 8, Aug 72, pp 1075-1078

Abstract: Fisher reaction of 2-methyl-5-hydrazinobenzofurane, m.p. 187-188°, 2,3-dimethyl-5-hydrazinobenzofurane, m.p. 179.5-180°, and 2-methyl-8-hydrazinobenzofuro[3,2-c]pyridine, m.p. 121-122° with methylethyl ketone, methylpropyl ketone, cyclohexanone, 1-methylpiperidone-4, and tetrahydropyrone-4 yielded a series of novel condensed indoles. Following compounds were actually synthesized: 2-methyl-6,7,8,10-tetrahydrofuro[3,2-e]thiopyrano[4,3-b]indole, m.p. 188-190°; 2-methyl-6H-7,8,9,10-tetrahydrofuro[2,3-c]carbazole, m.p. 142-143°; 2,7,8-trimethyl-6H-furo[3,2-e]indole, m.p. 132-134°; 2,9-dimethyl-6H-7,8,9,10-tetrahydrofuro[3,2-e]pyrido[4,3-b]indole, m.p. 213-215°; 1,2-dimethyl-6,7,8,10-tetrahydrofuro[3,2-e]thiopyrano[4,3-b]indole, m.p. 230-232°; 2,11-dimethyl-8H-1,2,3,4,9,10,11,12-octahydro-pyrido[3,4':4,5]furo[3,2-e]pyrido[4,3-b]indole, m.p. 255-257°; 2-methyl-1,2,3,4,9,10,11,12-octahydro-pyrido[3',4':4,5]furo[2,3-a]carbazole, m.p. 1/2

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USSR

SHARKOVA, N. M., et al., Khimiya Geterotsiklicheskikh Soyedineniy, No 8,
Aug 72, pp 1075-1078

242-244^o; 11-methyl-1,3,4,5,9,10,11,12-octahydropyrido[3',4':4,5]furo[3,2-e]
thiopyrano[4,3-b]indole, m.p. 250-252^o; and 1,2,9-trimethyl-3H-7,8,9,10-
tetrahydropyrido[3',4':4,5]furo[3,2-e]indole hydrochloride, m.p. 290-292^o.

2/2

USSR

UDC 547.759.3'853.5

BORISOVA, L. N., KUCHEROVA, N. F., KARTASHOVA, T. A., and ZAGOREVSKIY, V. A.,
Institute of Pharmacology, Academy of Medical Sciences USSR, Moscow

"Indole Derivatives. 39. Fischer Cyclization of 3-Methylpiperidone-4-aryl-
hydrazones"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 5, May 1972, pp 645-647

Abstract: Previous investigations have shown that Fischer cyclization of 3-substituted N-methylpiperidone-4-arylhydrazones follows an unusual course and results in the formation of 1,2,3,4-tetrahydropyrimido[3,4-a]indoles. The present study was initiated to determine the products formed by the condensation of 3-methylpiperidone-4 with arylhydrazines (containing -H, -CH₃, -OCH₃, or -COOC₂H₅ in the para position) in alcoholic HCl. On the basis of UV, IR, and PMR spectra the four products of the reactions were characterized as 5-methyl-1,2,3,4-tetrahydropyrimido[3,4-a]indole (I), 5,7-dimethyl-1,2,3,4-tetrahydropyrimido[3,4-a]indole (II), 5-methyl-7-methoxy-1,2,3,4-tetrahydropyrimido[3,4-a]indole (III), and 5-methyl-7-carbethoxy-1,2,3,4-tetrahydropyrimido[3,4-a]indole (IV). The structure of II was further confirmed through its conversion into 2,5,7-trimethyl-1,2,3,4-tetrahydropyrimido[3,4-a]indole via the intermediate 2-formyl-5,7-dimethyl-1,2,3,4-tetrahydropyrimido[3,4-a]indole. Furthermore, I, II, III, and IV may be dehydrogenated over palladium black to

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USSR

BORISOVA, L. N., et al., Khimiya Geterotsiklicheskikh Soyedineniy, No 5, 1972,
pp 645-647.

5-methylpyrimido[3,4-a]indole and 5,7-dimethylpyrimido[3,4-a]indole, i.e., forming a new heterocyclic system of pyrimido[3,4-a]indoles.

2/2

USSR

UDC [621.362:538.4]-16:537.56.001.2

ZAGORODNIKH, A.V., KHOKHLOV, L.K., SHISHKOV, YE.V.

"Concerning Vaporization Of An Ionizable Additive With Various Methods Of Introducing It Into The Loop Of A Magnetohydrodynamic Generator Based On The Products Of Combustion Of Natural Gas"

V sb. Teplotekhn.probl.pryamogo preobrazov.energii (Heat-Engineering Problems Of Direct Energy Conversion--Collection Of Works), Issue 2, Kiev, "Nauk.dumka," 1971, pp 60-66 (from RZh--Elektrotehnika i energetika, No 12, Dec 1971, Abstract No 12A180)

Translation: The following methods of introducing the additive (K_2CO_3) are considered: introduction of additive in an aqueous solution; introduction of powder-like additive; introduction of additive produced in the form of rods or slabs [plitka] into the combustion chamber through a packed window in the wall; introduction of additive through a plasmotron (e.g., using it in pressed form as one of the electrodes). Dependences are given by which it is possible to determine the effectiveness of the applicable method and also to choose a point of entry and the dispersion of the additive. 1 ill. 6 ref. [Osoboye konstruktorskoye byuro novogo oborudovaniya Ministerstva energetiki i elektostantsiy SSSR--Special Design Bureau For New Equipment, Ministry Of Power And Electric Power Plants Of The USSR] V.P. Bogatyrev.

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USSR

ZAGORODNIKOV, A. A.

UDC: 621.391.2

"Anisotropy of the Intensity of a Radar Signal Scattered by the Surface of the Sea"

Moscow, Radiotekhnika i Elektronika, Vol 16, No 1, Jan 71, pp 104-109

Abstract: The spectral theory of ocean waves is taken as a basis for analyzing the nature of anisotropy in the intensity of a radar signal scattered by the surface of the sea. The phenomenon is examined over the entire range of azimuth angles from zero to 180 degrees within the theory of resonance scattering of centimeter waves. It is found that the basic cause of anisotropy in the intensity of the radar signal is the anisotropy of the spatial spectrum of wind waves. With a change in the course angle of the antenna over a range of 0-180°, two unequal maxima and two identical minima are observed, which coincide with the corresponding values of the average slope of the sea wave profile. The inequality of the maxima located along the main direction of the wave course is due to the difference in the slopes of the windward and leeward sides of the sea waves. The presence of minima in intensity in the region of the crest line is attributed to the minimum value of slope of the sides of the sea waves in this direction. Thanks to anisotropy in radar signal intensity, the direction of the main course of waves can be determined by using precision radar.

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USSR

UDC 621.391.2:621.396.96

ZAGORODNIKOV, A.A.

"Dependence Of The Spectrum Of A Radar Signal Scattered By The Sea Surface On The Size Of The Irradiated Region And On The Roughness Of The Sea"

Radiotekhnika i elektronika, Vol XVII, No 3, March 1972, pp 477-487

Abstract: Relations are developed which make it possible to calculate the width of the Doppler spectrum of a radar signal scattered by the sea surface as a function of the dimensions of the irradiated area, the roughness of the sea, and the conditions of irradiation. It is shown that with radial dimensions of the irradiated area commensurate with or smaller than the average length of the sea waves, every statistical combination of the speeds of the surface layers of the sea is not included simultaneously. This leads to fluctuations of the width (dispersion) of the spectrum with a time approximately at a doubled frequency of the oscillations of the sea surface. As a result the signal becomes unsteady. 2 fig. 14 ref. Received by editors, 24 Sept 1970.

1/1

1/2 045 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--NONIMPACT SHOCK WAVES IN A MAGNETIZED PLASMA -U-

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

COUNTRY OF INFO--USSR

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

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

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

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--2000/1177

STEP NO--UR/0057/70/040/004/0717/0727

CIRC ACCESSION NO--AP0124831

UNCLASSIFIED

2/2 045

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--A0124831

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

UNCLASSIFIED

USSR

3
UDC 578.087.8+577.472(26)

GITEL'ZON, I. I., LEVIN, L. A., SHEVYRNOGOV, A. P., FILIMONOV, V. S., ARTEMKIN, A. S., UTYUSHEV, R. N., and ZAGORODNIY, Yu. A.

"Measurement of Bioluminescence at Great Depths"

Moscow, Doklady Akademii Nauk SSSR, Vol 191, No 3, 1970, pp 689-692

Abstract: The recording of bioluminescence appears to be the only convenient way at present of studying abyssal organisms directly in their habitat. To carry out such investigations, the Institute of Physics of the Siberian Department of the Academy of Sciences USSR developed a bathyphotometric device with autonomous power supply and recording of signals. Magnetic recording is used for the signals coming from the light receiver. The bathyphotometer consists of two hermetically sealed containers joined together. The larger one holds the light receiver, power supply, program control system, and recording apparatus, while the smaller one holds a flashing lamp with program control and power supply. Measurements made in December 1968, by the research vessel Vityaz' in the Sea of Japan at a depth of 7000-7200 m are briefly described.

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1/2 020 UNCLASSIFIED PROCESSING DATE—30OCT70
TITLE—EFFECT OF RADIAL AND LINEAR COMPRESSION ON SOME PROPERTIES OF HIGH
BULK CRIMPED YARN —U—
AUTHOR—(05)—SMIRNOV, L.S., ZAGORODNYAYA, S.S., POZDNIKINA, L.A., TSYBENKO,
L.I., NOSOVA, L.V.
COUNTRY OF INFO—USSR
SOURCE—LEGKA PROM. 1970, (1), 19-22
DATE PUBLISHED—70
SUBJECT AREAS—MATERIALS
TOPIC TAGS—CAPRONE, BREAKING STRENGTH, ELONGATION, COMPRESSIVE
STRESS/(U)GOFRON CAPRONE YARN
CONTROL MARKING—NO RESTRICTIONS
DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FRAME—2000/0880 STEP NO—UR/0518/70/000/001/0019/0022
CIRC ACCESSION NO—AP0124543
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124543

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INFLUENCE WAS STUDIED OF THE TITLE COMPRESSIONS, OCCURRING DURING THE YARN MANUF., UPON THE PROPERTIES OF THE HIGH BULK CRIMPED GOFRON, MADE FROM A SMOOTH KAPRON YARN (10 TEX) COMPRISING 12-39 ELEMENTAL FIBERS. THE COMPRESSION INDUCED FIBER DEFECTS AND CHANGES WERE CLASSIFIED, CHARACTERIZED, AND DISCUSSED. WITH AN INCREASE OF BOTH COMPRESSIONS THE LENGTH OF THE DEFECTIVE FIBER PART INCREASED AND ITS TOTAL MOL. ORIENTATION DECREASED. THE DEPENDENCE OF THE BREAKING STRENGTH OF A DEFECTIVE FIBER ON ITS ELONGATION WAS DETD. THE BREAKING STRENGTH INCREASED WITH INCREASING RADIAL AND LINEAR COMPRESSIONS, AND THE BREAKING ELONGATION OF GOFRON (CONTG. DEFECTIVE FIBERS), AS COMPARED WITH THAT OF THE PARENT YARN, INCREASED BY 2.6PERCENT.

UNCLASSIFIED

USSR

REMENTSOVA, M. N., SHIN, N. G., ISHCHANOVA, R. ZH., and ZAGORODSKAYA, N. N.,
Scientific Research Institute of Regional Pathology, Ministry of Health,
Kazakh SSR

"Use of Fluorescence Microscopy to Differentiate Brucella"

Alma-Ata, Adravookhraneniye Kazakhstana, No 4, 1971, pp 32-34

Abstract: Use of the method of fluorescent antibodies made it possible to differentiate Br. melitensis and Br. abortus among 130 cultures of Brucella isolated from farm animals and sick humans. However, Br. suis could not be identified by this technique. Comparison of the results of fluorescence microscopy with those obtained by the ordinary tests (e.g., hemagglutination) showed a coincidence in approximately 60% of the cases. Fluorescence microscopy is more sensitive than the other methods and the procedure is considerably quicker.

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USSR

UDC 669.71.004.2

ZAGORSKAYA, M. K., VULIKH, A. I., and KSENZENKO, V. I.

"Removal of Hydrogen Fluoride from Gases by the Use of Anion Exchangers"

Sb. nauchno. tr. NII tsvetn. met. (Collection of Scientific Works of the Scientific Research Institute of Nonferrous Metallurgy), 1970, No 31, pp 133-142 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 G229 by authors)

Translation: An investigation was made of the sorption of HF from mixtures with air by anion exchangers AV-17, AV-17P, EDE-10P, AN-2F, AN-21, and AN-1. Sorption takes place mainly through the complexing of HF with amino groups of the anion exchangers. The dynamic capacity of the anion exchangers in removing from ~ 1 to $5 \cdot 10^{-4}$ mg/l HF from gases ranges from 10 to 20 mmol. HF/g of matrix. In HF desorption by water from strongly basic and intermediate-base anion exchangers, solutions of $\sim 10\%$ HF are obtained. The method is recommended for use in purifying waste gases containing HF. Six illustrations. Two tables. Bibliography with 16 titles.

1/1

USSR

UDC: 51:330.115

ZAGORSKIY, V. M.

"An Automated System for Controlling an Enterprise With Discrete-Type Production"

V sb. Primeneniye vychisl. tekhn. v elektron. prom-sti (Use of Computer Technology in the Electronics Industry--collection of works), Moscow, 1971, pp 76-91 (from RZh-Kibernetika, No 9, Sep 71, Abstract No 9V531)

[No abstract]

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USSR

UDC: 621.375.4

ZAGORSKIY, Ye. T., LEVCHENKO, D. G.

"Analysis of the Instability of Transistorized Amplifiers With a Change in Supply Voltage"

Dokl. Vses. nauchno-tekhn. konferentsii po radiotekhn. izmereniyam. T. 3 (Reports of the All-Union Scientific and Technical Conference on Radio Engineering Measurements. Vol. 3), Novosibirsk, 1970, pp 97-101. (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12D116)

Translation: The paper gives a comparative analysis of voltage gain instability for amplifiers based on common emitter and common base circuits. Self-compensation conditions are considered. Four illustrations, bibliography of five titles. H. S.

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USSR

UDC: 621.375.4

ZAGORSKIY, Ya. T.

"Analysis of the Bias Circuit of Transistors With Dynamic Emitter Loading"

Dokl. Vses. nauchno-tekhn. konferentsii po radiotekhn. izmereniyam. T. 3 (Reports of the All-Union Scientific and Technical Conference on Radio Engineering Measurements. Vol. 3), Novosibirsk, 1970, pp 107-111 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1D95)

Translation: The author discusses the limitations imposed on the maximum value of the bias resistor in the base circuit of a transistor. The limitations are found by analyzing the instability of supply conditions. One illustration, bibliography of one title. N. 8.

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USSR

UDC 621.375.4:621.317

ZAGORSKIY, YA. T., LEVCHENKO, D. G., NOSOV, V. M.

Izmeritel'nyye usiliteli na tranzistorakh (Transistorized Measuring Amplifiers), Moscow, Energiya Press, 1971, 217 pp, ill., 62 k. (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4D120K)

Translation: Means of constructing high accuracy class measuring amplifiers are investigated. Primary attention is given to analysis and synthesis of complex amplifier systems containing dynamic loads, multiloop feedback, and so on. The dependence of the basic parameters of the transistorized measuring amplifiers on the temperature and feed voltage variation is investigated. A method is proposed for analyzing the instability of complex amplifying circuits made of transistors permitting determination of the parameters of the elements insuring autocompensation for instability. Examples of calculating a number of practical circuits are presented. The book is intended for scientific workers and engineers studying and developing amplifiers and also for postgraduates and students in the advanced courses of institutes of electrical engineering and radio engineering specialties.

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USSR

UDC 621.382.322

ZAGORSKIY, YA.T., LOGINOVA, T.I.

"Investigation Of Low-Frequency Amplifying Parameters Of Field-Effect Transistors"

Dokl. Vses. nauchno-tekhn. konferentsii po radiotekhn. izmereniyam. T. 3
(Proceedings Of The All-Union Scientific-Technical Conference On Radio Engineering Measurements. Vol. 3), Novosibirsk, 1970, pp 102-106 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No. 2B240)

Translation: The dependences of the h-parameters of field-effect transistors on the current of the source and the voltage source-drain are investigated. In order to assure open circuit conditions at the input, a dynamic load was applied, in the capacity of which the transistor was used. Standard dependences are presented. 11 ref. I.M.

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USSR

UDC 621.375.4.001

ZAGORSKIY, YA. T., LEVCHENKO, D. G.

"Method of Analyzing the Instability of Transistor Amplifying Circuits with Variable Parameters"

Tr. Sib. n.-i. in-t metrol. Works of the Siberian Scientific Research Institute of Metrology), 1970, vyp 5, pp 72-87 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9D100)

Translation: This article contains a discussion of an analysis method which, on the basis of graph theory, permits consideration of the cause-effect relations determining the operation of the amplifier in the presence of higher effects by construction of a structural schematic the nodes of which represent the variables, and the branches, the interrelations between them. The return current of the collector junction and the base-emitter voltage of the transistor are selected as the static parameters, and the h-parameters are selected as the dynamic parameters. The method permits quantitative analysis of instability and determination of the conditions of its auto-compensation. There are five illustrations, one table and a four-entry bibliography.

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USSR

UDC 621.375.4.001

ZAGORSKIY, YA. I., LEVCHENKO, D. G., SHNOYLOV, N. F.

"Analysis and Synthesis of Transistorized Amplifiers with the Help of Fitness Domains"

Tr. Sib. n.-i. in-t metrol. (Works of the Siberian Scientific Research Institute of Metrology), 1970, vyp. 5, pp 88-97 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9D98)

Translation: The tediousness of the existing methods of calculating transistorized amplifiers insuring reliability is noted. A method permitting calculation of the parameters of the elements of the device (in particular, the amplifier) so that when they vary within defined limits the defined parameters of the device vary only within the limits of the given tolerances is discussed. There are three illustrations and a six-entry bibliography.

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USSR

UDC 621.375.4

Z
GRINBERG, I. P., ZAGORSKIY, YA. T., LEVCHENKO, D. G.

"Methods of Analyzing the Instability of Transistor Amplifiers (Survey)"

Tr. Sib. n.-i in-t metrol. (Works of Siberian Scientific Research Institute of Metrology), 1970, vyp. 5, pp 62-71 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9D109)

Translation: A critical analysis of the existing methods of analysis are presented. Preference is given to the Nosev and Khaznov method (Radio-tekhnika, 1958, No 2) based on investigation of the operation of transistors in an amplifier using r-parameters of the T-type equivalent circuit and the dependence of the parameters on temperature, the p-n junction material and the power supply conditions. The advantages of the method of structural schematics are also demonstrated. There are three illustrations and a 27-entry bibliography

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1/2 016 UNCLASSIFIED / PROCESSING DATE--09JCT70
TITLE--RAPID METHOD FOR DETERMINING THE COLOR INDEX OF GRANULATED SUGAR
-U-
AUTHOR--(02)-ZAGURULKO, A.YA., KORUBEYNIKOVA, L.A.
COUNTRY OF INFO--USSR
SOURCE--SAKH. PRUH. 1970, 44(2), 37-41
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--FOOD ANALYSIS, LIGHT REFLECTION, COLORIMETRY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/0945 STEP NO--UR/0339/70/044/002/0037/0041
CIRC ACCESSION NO--AP0109102

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UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0109102

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A METHOD BASED ON REFLECTANCE MEASUREMENTS AT 758 AND 368 M MU IS DESCRIBED. THE MAX. RELATIVE ERROR IS PLUS OR MINUS 10PERCENT.

UNCLASSIFIED

USSR

UDC:620.179.16

ZAGORUL'KO, V. S.

"Ultrasonic Radiators for Defectoscopy of Tubing Using Normal Waves"

Defektoskopiya, No. 3, 1970, pp. 37-43

Abstract: The form of an ultrasonic radiator and curved lens surface is determined, using which normal or surface waves can be excited in cylindrical bodies, propagating around the circumference. Recommendations are given for the selection of an aperture angle and position of the focus of a cylindrical radiator when used for defectoscopy of cylindrical bodies. It is concluded that in order to excite a normal wave propagating circumferentially in a tube wall, the leading edge of the incident wave with flat cross section should have the shape of an evolvent of a circle concentric with the tube. The evolvent wave can be produced using an evolvent radiator or a flat radiator with a special lens, the curved surface of which satisfies an equation presented in this work. A normal wave in a tube wall can be excited using a radiator with cylindrical focusing.

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1/2 022 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--AUTOMATIC WELDING OF THIN SECTION ALUMINUM CONNECTING PIPES -U-
AUTHOR--(03)--ZAGORUYKO, B.G., KAZAKOV, YU.V., GANELIN, D.N.
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, SVAROCHNOYE PROIZVODSTVO, NO 3, 1970, PP 20-21
DATE PUBLISHED--70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--ALUMINUM ALLOY, PULSED VIBRATION ARC WELDING, ALLOY DESIGNATION, ARGON GAS WELDING, METAL TUBE, METAL PIPE, PIPE WELDING, AUTOMATIC WELDING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1311 STEP NO--UR/0135/70/000/003/0020/0021
CIRC ACCESSION NO--AP0123270
UNCLASSIFIED

2/2 022

CIRC ACCESSION NO--A0123270

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TECHNIQUE HAS BEEN DEVELOPED FOR MANUFACTURING CONNECTING PIPES FROM AMG6 ALUMINUM ALLOY WITH USE OF THE AUTOMATIC ARGON ARC PULSED WELDING INSTEAD OF A MANUAL ARGON ARC WELDING.

UNCLASSIFIED

USSR

VITYAYEV, Ye. Ye., GAVRILKO, B. P., ZAGORUYKO, N. G., SAMOKHVALOV, K. F.

"Requirements for Prediction Algorithms"

Vychisl. Sistemy [Computer Systems -- Collection of Works], No 50, Novosibirsk, 1972, pp 101-105 (translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V721 by the authors).

Translation: Certain requirements for algorithms for prediction of empirical regularities are formalized.

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USSR

ZAGORUYKO, N. G., SAMOKHVALOV, K. F.

"Recognition of Patterns as Empirical Prediction"

Matematika i Sotsiologiya [Mathematics and Sociology -- Collection of Works], Novosibirsk, 1972, pp 42-53 (Translated from Referativnyy Zhurnal, Kibernetika, No 1, 1973, Abstract No 1 V856).

Translation: The problem of recognition of patterns is looked upon as a problem of search for a method of successful prediction of future empirical results, based on study of the preliminary information available on the objects and phenomena contained in past experience (in the study sample).

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USSR

UDC 8.74

ZAGORUYKO, N. G.

"Recognition Methods and Application of Them"

Metody raspoznavaniya i ikh primeneniye (Recognition Methods and Application of Them), Moscow, Soviet Radio Press, 1972, 208 pp, ill., 72 k. (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V650K)

Translation: The problems of the recognition procedure are discussed in the first part. Algorithms are described for solving the basic types of recognition problems: development of decision making rules, estimation of the possibilities of the recognition devices, selection of the informative system of attributes, establishing the initial classification (the adaptation algorithm). A study was also made of more complex problems. The second part is devoted to the description of the applications of recognition methods. Examples of solving problems in communications engineering, medicine, geology, experimental physics and sociology are presented.

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USSR

UDC: 51:155.001.57:681.3.06

ZAGORUYKO, N. G.

"General Properties of Problems of Pattern Recognition"

V sb. Vychisl. sistemy (Computer Systems--collection of works), vyp. 44, Novosibirsk, "Nauka", 1971, pp 3-12 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V1003)

Translation: An attempt is made to find the common properties of different recognition problems in order to develop general-purpose algorithms for solving problems of pattern recognition. For this purpose, a particular model example is used to analyze the procedures to which the initial data are subjected in the process of solving different recognition problems. Bibliography of 14 titles. V. Mikheyev.

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USSR

UDC 620.194.2

KARPENKO, G. V., ZAGORUYKO, R. F. and BABEY, YU. I., Physics and Mechanics Institute, Academy of Sciences Ukrainian SSR, L'vov and the Novyy Rozdol Mining and Chemical Combine

"Effect of Heat Treatment on the Resistance of Steel Kh18N10T to Corrosion Cracking in a Sulfur Pulp"

L'vov Fiziko-Khimicheskaya Mekhanika Materialov, Vol 7, No 6, Nov-Dec 71, pp 73-75

Abstract: To study the resistance of stainless steel Kh18N10T to stress corrosion cracking, samples of the steel were subjected to the following heat treatment: heated to 1100°C and water quenched; annealed at 820°C for two hours and furnace cooled; normalized at 820°C for two hours and air cooled. The samples were then placed in the sulfur pulp under 45 kg/mm² of stress. An as-supplied sample was also tested (not heat treated). The tests showed that the as-supplied and quenched samples suffered severe corrosive attack and suffered brittle failure after 70 hours of testing. The annealed and normalized samples did not fracture even after 500 hours of testing. 3 figures, 3 bibliographical references.

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USSR

UDC 620.194:669.15

ZAGORUYKO, R. F., BABEY, Yu. I., KARPENKO, G. V., Physicomechanical Institute, Academy of Sciences, Ukrainian SSR, L'vov; Chemical Mining Combine, Novyy Rozdol

"The Influence of Rolling on the Resistance of Steel Kh18N10T to Corrosion Cracking in Sulfur Pulp"

Kiev, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 7, No 4, 1971, pp 107-108

Abstract: Parts of machines and mechanisms working under conditions of sulfur mining are made of stainless steels of the type Kh18N10T. Steels of this class at delivery are vulnerable to corrosive cracking in a sulfur pulp. The question of increasing the resistance of steel to corrosive cracking in such a medium has been insufficiently studied up to now, and is almost not at all reflected in the literature. An investigation is made in this article concerning the influence of the increasing the resistance of steel Kh18N10T to corrosive cracking under the indicated conditions by rolling with rollers in the state of delivery. Experiments showed that in pure sulfur the initial samples do not crack at all. The surface of the samples is covered with a dense film of grayish color. No signs of corrosive cracking of the surface

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ZAGORUYKO, R. F., et al, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 7, No 4, 1971, pp 107-108

layer nor of cracks are detected. In a sulfur pulp with a 30% aqueous solution of $MgCl_2$, the steel undergoes more intensive cracking than in 30% $MgCl_2$. The origination of cracks and their development in steel Kh18N10T in testing for corrosion cracking in sulfur pulp may be explained from the point of view of adsorption-electrochemical theory, where the essential part is played by adsorption, anode and cathode processes. During testing in sulfur pulp, hydrogen sulfide is formed in the medium, and the diffusion of hydrogen into the metal is entirely probable. Experiments have shown that rolling by rollers effectively increases the resistance of steel to corrosion cracking, the resistance being twice as great as samples that are ground. The increased resistance of the steel to corrosion cracking by rolling is caused by the favorable texture of the metal and the positive influence of the residual compression stresses in the surface layers of the samples. 4 figures. 2 references.

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1/3 025 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--A COMPARATIVE CYTOLOGICAL STUDY OF THE NASAL MUCOUS MEMBRANE
SECRETATA AND BLOOD IN DIFFERENT FORMS OF VASOMOTOR RHINITIS -U-
AUTHOR-(02)-ZAGORYANSKAYA, M.YE., SMOTROVA, I.A.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK OTORINOLARINGOLOGII, 1970, NR 1, PP 32-36
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--RESPIRATORY SYSTEM DISEASE, LEUKOCYTE, GLYCOGEN, BLOOD
CHEMISTRY, OTOLARYNGOLOGY, CELL PHYSIOLOGY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1980/0802 STEP NO--UR/0607/70/000/001/0032/0036
CIRC ACCESSION NO--AP0049024
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UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--A00049024

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS UNDERTOOK STUDIES OF THE GLYCOGEN CONTENT IN LEUKOCYTES OF NASAL MUCOUS MEMBRANE SECRETA, PERIPHERAL BLOOD AND BLOOD FROM THE INFERIOR NASAL CONCHAE IN 80 PATIENTS WITH VASOMOTOR RHINITIS. BESIDES, GLYCOGEN WAS DETERMINED IN THE EPITHELIUM OF NASAL MUCOUS MEMBRANE SECRETA. OUT OF 80 PATIENTS IN 48 THE AUTHORS DIAGNOSED ALLERGIC AND IN 32, NEUROVEGETATIVE FORM OF RHINITIS. IT WAS FOUND THAT IN THE EPITHELIUM AND LEUKOCYTES OF NASAL MUCOUS MEMBRANE SECRETA IN BOTH FORMS OF RHINITIS A LOW GLYCOGEN CONTENT PREVAILED. DETERMINATION OF GLYCOGEN IN LEUKOCYTES OF THE PERIPHERAL BLOOD AND BLOOD OF THE AFFECTED ORGAN REVEALED THAT ITS LEVEL SHARPLY RISES IN BOTH FORMS OF RHINITIS OF ALLERGIC AND OTHER GENESIS. THUS, OUT OF 48 PATIENTS WITH AN ALLERGIC FORM OF RHINITIS IN 46 CASES THERE WAS NOTED AN INTENSIVE AND IN 2, AN AVERAGE CONTENT OF GLYCOGEN; OUT OF 32 PATIENTS WITH A NEUROVEGETATIVE FORM, IN 22 AN INTENSIVE AND IN 10, AN AVERAGE GLYCOGEN CONTENT. A SIMILAR PICTURE IS SEEN IN BLOOD LEUKOCYTES FROM THE INFERIOR NASAL CONCHAE. ANALOGOUS INVESTIGATIONS WERE CARRIED OUT IN TWO CONTROL GROUPS: 1) IN 10 APPARENTLY HEALTHY PERSONS AND 2) IN 10 PATIENTS WITH CHRONIC SUPPURATIVE SINUSITIS AND CONCOMITANT CHRONIC CATARRHAL RHINITIS. IN PATIENTS OF BOTH GROUPS THERE WERE NO INDICATIONS OF ALLERGIC DISEASES. ONLY IN ONE PATIENT OF THE FIRST GROUP AN INTENSIVE GLYCOGEN CONTENT WAS NOTED. IN ALL PATIENTS OF THE SECOND GROUP AN AUGMENTED BLOOD GLYCOGEN CONTENT WAS SEEN.

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UNCLASSIFIED

PROCESSING DATE--23OCT70

GIRC ACCESSION NO--AP0049024

ABSTRACT/EXTRACT--THE AUTHORS ARRIVED AT THE CONCLUSION THAT AN INCREASED LEVEL OF GLYCOGEN IN BLOOD LEUKOCYTES MAY BE OBSERVED IN ANY FORM OF INFLAMMATION, INCLUDING ALLERGIC. HOWEVER, THE AUTHORS AT PRESENT REFRAIN FROM SUGGESTING THIS TEST AS A DIFFERENTIAL DIAGNOSIS SIGN OF ALLERGIC INFLAMMATION.

UNCLASSIFIED

USSR

UDC 541.183.24

ZAGRAI, Ya. M., DOVGUSHA, P. I. (Institute of Colloid Chemistry and the Chemistry of Water, UkrSSR Academy of Sciences)

"Exchange of Co^{2+} , Ni^{2+} , and Cu^{2+} Ions on the Sulfo-Polystyrene Cation Exchanger KU-2"

Kiev, Ukrainskii Khimicheskii Zhurnal, Vol 39, No 10, 1973, pp 1011-1014

Abstract: The equilibrium distribution of Co^{2+} , Ni^{2+} , and Cu^{2+} from aqueous solutions of their salts (chloride, sulfate, and acetate) was studied. It was shown that the water content of the ion exchanger, per mg-equivalent of exchanger, was a linear function of the composition. Concentration constants for the systems were calculated. The dependence of the concentration constants of the ion exchange equilibrium on the nature of the ions participating in the exchange and the nature of the compounds formed was shown.

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USSR

UDC 632.95

SEMEENOVA, L. N., IVANOV, R. N., CHUMAKOV, F. P., and ZAGRAITCHINAYA, V. A.

"Study of the Possibility of Combining Karatau Ammophos with Insecticides"

V sb. Khimiya tekhnol. mineral'n. udobr. (The Chemistry and Technology of Chemical Fertilizers -- collection of works), Tashkent, "Fan," 1971, pp 107-109 (from RZh-Khimiya, No 13, 10 Jul 72, Abstract No 131473 by T. A. Belyayeva)

Translation: Three component pesticide-fertilizer mixtures are obtained by "gamma" applying rogor (I) and γ -HCCH (mixture A) or rogor and chlorophos (II) (mixture B) to the surface of granulated ammophos by means of an GSKh-2 machine. There was no change in the concentration of I and γ -HCCH during storage of mixture A for two months. In mixture B II rapidly decomposes and I is slowly hydrolyzed. Addition of a 40% emulsion concentrate of I and commercial γ -HCCH improves the physicochemical and physicomachanical properties of chemical fertilizers (hygroscopicity, moisture capacity, caking capacity).

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1/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--TRIAMINO,S,HEPTAZINE -U-

AUTHOR--(05)-ZAGRANICHNYI, V.I., MOLEY, I.I., KARLIK, V.M., MOLEVA, V.P.,
MUSHKIN, YU.I.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,388
REFERENCE--UTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--03MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AMINE, ORGANIC AZINE, CHEMICAL PATENT, PYROLYSIS, ORGANIC
SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1565

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128960

UNCLASSIFIED

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CIRC ACCESSION NO--AA0128960

UNCLASSIFIED

PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TRIAMONO,S,HEPTAZINE IS PREPD. BY
PYROLYZING CYANURIC ACID AT 350-450DEGREES UNDER PRESSURE OF THE GASES
SEPG. IN THE REACTION.

UNCLASSIFIED

172 007

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--EFFECT OF BACKGROUND (SODIUM CHLORIDE CONCENTRATION) ON THE EXTENT OF EXCHANGE CAPACITY UTILIZATION IN KU-2 AND KB-4 CATION EXCHANGERS -U-
AUTHOR--(03)-ZAGRAI, YA.M., KOGANOVSKIY, A.M., YEREMENKO, A.G.

COUNTRY OF INFO--USSR

SOURCE--UKR. KHIM. ZH. 1970, 36(2), 161-3

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CATION EXCHANGE RESIN, SODIUM CHLORIDE, ZINC/(U)KUZ ION EXCHANGE RESIN, (U)KB4 ION EXCHANGE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1999/1848

STEP NO--UR/0073/70/036/002/0161/0163

CIRC ACCESSION NO--AP0123637

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UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0123637

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. TABLES AND GRAPHS ARE GIVEN FOR THE EXCHANGE OF ZN PRIME² POSITIVE WITH THE NA FORMS OF KU-2 AND KB-4 IN THE PRESENCE OF 0-180 G PER L. NA₂CO₃. THE VALUE OF THE LIMITING COEFF. OF DISTRIBUTION FALLS RAPIDLY WITH NA₂CO₃ CONCN. THE LIMITING COEFF. OF SELECTIVITY IS PRACTICALLY CONST. AS IS THE EXCHANGE CAPACITY OF THE RESIN.

FACILITY: INST. KOLLOID. KHIM. KHIM. VODY, KIEV, USSR.

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