

GRECHKIN, N. I.

USSR/Chemistry - Phosphoric Acid
Chemistry - Synthesis

Aug 1947

"Synthesis of Diphosphondialkyl Esters," B. A. Arbuzov, Corr Mem Acad Sci USSR;
N. I. Grechkin, Chem Inst, Kazan Br, Acad Sci USSR, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVII, No 4

Gives data collected during studies on synthesis of diphosphondialkyl esters, and,
in particular, triphosphonalkyl esters usually found in compounds such as $R_2Sn Hal_2$
or $RSnHal_3$ with complete phosphoric acid esters. Submitted, 14 May 1947.

FA 53T18

GRECHKIN, N. P.

10

Organophosphorus-tin compounds. III. Synthesis of compounds with phenyl radicals at the phosphorus atom. H. A. Atkuzov and N. P. Grechkin (Chem. Inst., Kazan Div. Acad. Sci. U.S.S.R.), *Zhur. Obshch. Khim.* (J. Gen. Chem.) 20, 107-115 (1950), cf. C.A. 42, 4322a. — $\text{PhP}(\text{OMe})_2$ (2.8 g.) and 4.7 g. Me_2SnI warmed to 80° reacted violently (max. temp. 240°) and yielded 3.4 g. $\text{PhP}(\text{OMe})_2(\text{SnMe}_2)$, m. $132-4^\circ$ (from EtOH). Similarly, 6.4 g. $\text{PhP}(\text{OEt})_2$ with 10.8 g. Et_2SnI preheated to 150° gave 1.6 g. insol. colorless $\text{PhP}(\text{OEt})_2(\text{SnEt}_2)$, m. $294-7^\circ$. $\text{PhP}(\text{OEt})_2$ (4.3 g.) and 9.5 g. Bu_2SnI at 185° gave 7.2% insol. $\text{PhP}(\text{OEt})_2(\text{SnBu}_2)$, m. $392-5^\circ$ (decomp.), although 80% EtI was evolved. Heating $\text{PhP}(\text{OMe})_2(\text{SnMe}_2)$ 30 min. with H_2O gave no change, but 15% HCl at room temp. yields Me_2SnCl rapidly, while 10% KOH in 3 hrs. yields Me_2SnOH , m. $117-20^\circ$. $\text{PhP}(\text{OMe})_2$ (5.1 g.) and 6 g. Me_2SnI gave after a violent reaction 3.7 g. $\text{Me}_2\text{Sn}[\text{P}(\text{O})(\text{OMe})\text{Ph}]_2$, decomp. $201-3^\circ$. Similarly 7 g. Et_2SnI and 6.5 g. $\text{PhP}(\text{OEt})_2$ after preheating to 150° gave 2.8 g. $\text{Et}_2\text{Sn}[\text{P}(\text{O})(\text{OEt})\text{Ph}]_2$, decomp. $206-30^\circ$, while 4.5 g. Et_2SnI and 5 g. $\text{PhP}(\text{OPr})_2$ gave, at 195° , 61.4% $\text{Et}_2\text{Sn}[\text{P}(\text{O})(\text{OPr})\text{Ph}]_2$, decomp. $246-8^\circ$. All these products are insol. in org. solvents; they are

stable to hot H_2O , but rapidly cleave in 15% HCl, yielding R_2SnCl_2 , while 10% NaOH yields R_2SnO . Cl in CHCl_3 also yields R_2SnCl_2 at room temp. Heating PhPCl_2 5 hrs. in a sealed tube to 300° gave 36% Ph_2PCl ; this with MeOH in the presence of Me_2NPh gave 50% Ph_2POMe , b.p. $152-5^\circ$, while EtOH gave 51% Ph_2POEt , b.p. $161-4^\circ$. Heating 7 g. Et_2SnI and 4.9 g. Ph_2POEt to 170° gave 5.1% $\text{Ph}_2\text{P}(\text{O})\text{SnEt}_2$, decomp. $346-8^\circ$, while the EtOH-Et₂O washings gave 1.4 g. Ph_2EiPO , m. $121-4^\circ$. Likewise, 5.1 g. Me_2SnI and 4 g. Ph_2POEt gave 9.8% $\text{Ph}_2\text{P}(\text{O})\text{SnMe}_2$, decomp. $305-8^\circ$, and 1.75 g. Ph_2EiPO , while 4.6 g. Et_2SnI heated with 3 g. Ph_2POMe to 190° gave Ph_2MePO , m. $108-10^\circ$, and 4.2 g. (91.5%) Et_2SnI . Me_2SnI (6 g.) and 6.9 g. Ph_2POEt heated to 140° gave 2.2 g. $\text{Me}_2\text{Sn}[\text{P}(\text{O})\text{Ph}]_2$, decomp. $372-5^\circ$, and 0.9 g. Ph_2EiPO , while 5.0 g. Et_2SnI and 6 g. Ph_2POEt gave 17.3% $\text{Et}_2\text{Sn}[\text{P}(\text{O})\text{Ph}]_2$, decomp. $331-3^\circ$, and Ph_2EiPO . These derivs. are stable to hot H_2O , while warm 15% HCl yields $\text{Ph}_2\text{PO}_2\text{H}$, m. $193-4^\circ$, and R_2SnCl_2 , and hot 20% NaOH similarly gives $\text{Ph}_2\text{PO}_2\text{H}$ and R_2SnO ; Cl also yields R_2SnCl_2 and presumably Ph_2POCl , for aq. treatment with water gives $\text{Ph}_2\text{PO}_2\text{H}$; the action of AcCl in refluxing C_6H_6 is similar, as R_2SnCl_2 and $\text{Ph}_2\text{PO}_2\text{H}$ are isolated.

G. M. Kosolapoff

232T34

USSR/Chemistry - Cancerogenic Compounds Sep 52

"Synthesis of 3,4-Benzopyrene and 3,4,6,7-Dibenzopyrene Derivatives Through Phenalene-9 and Benzanthrene," B. A. Arbuzov, N. P. Grechkin, Chem Inst Lment A. Ye. Arbuzov, Kazan' Affiliate, Acad Sci USSR

"Zhur Obshch Khim" Vol 22, No 9, pp 1692-1700

3,4,6,7-Dibenzopyrene and 1',2',3,4-naphtho-6,7-benzopyrene both possess strong blastomogenic action; this prompted the synthesis of derivs of 3,4,6,7-dibenzopyrene. By treating benzanthrene with organomagnesium compds contg methyl or methylene groups in the ortho position, the corresponding 4-substituted benzanthrones were prepared. Pyrolysis of the latter yielded derivs of 3,4,6,7-dibenzopyrene. In this manner, the following were prep'd for the 1st time: 3-methyl-3,4,6,7-dibenzopyrene, 1',3'-dimethyl-3,4,6,7-dibenzopyrene, 2'iso-propyl-3,4,6,7-dibenzopyrene, 3'-methyl-4',5-ethylene-3,4,6,7-dibenzopyrene, and 3,4,6,7-tribenzopyrene. In an analogous manner 3,4-benzopyrene and 1',2',3,4-naphthopyrene were prep'd by starting with phenalene-9 through 1-substituted phenalenes. The high cancerogenic activity of 3,4,6,7-dibenzopyrene and the lack of activity in 2',3'-naphtho-3,4-pyrene do not agree with the statement of A. Fulliman concerning the connection between cancerogenic activity and the presence of a specific "K" field in the mol of the cancerogenic substance which possesses an increased density of Pi electrons.

(CA 47 no 19: 99 r3 r3)

232T34

Organophosphorus compounds of ethylenimine

acidides
 priate chlorides with ethylenimine in the presence of Et₃N
 in C₆H₆ with cooling. 71.5% (MeO)₂P(O)N(CH₂CH₂)₂Cl, b₁₀
 114-15°, 1.2900, 1.4557; 82% di-Et ester, b₁₀
 123-6°, 1.1865, 1.4473; 72.5% di-Pr ester, b₁₀
 104-6°, 1.1297, 1.4478; 73% diiso-Pr ester, b₁₀
 148.5-50°, 1.0847, 1.4498; 74.5% di-Bu ester, b₁₀
 130.5-3°, 1.0761, 1.4458; 60.6% diiso-Bu ester, b₁₀
 152-3.5°, 1.0552, 1.4405. Cf. U.S. Pat. 2,054,768, C.A. 48, 12704c.
 G. M. Kosolapoff

RPN

Grachin, H.

Chem

Structure of organophosphorus-tin compounds. H. A. Arhuzov and N. P. Grechkin. *Bull. Acad. Sci. U.S.S.R. Div. Chem. Sci.* 1956, 423-32 (Rugt. translation). See C.A. 50, 16901h.

2

PM

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 956

Abstract: heated to 210° with one mole $(C_2H_5)_2SnCl_2$, $[C_6H_5)_2P(O)]_2Sn(C_2H_5)_2$ (IX) is obtained (mp 346-349°) together with $(C_6H_5)_3PO$. The formation of IX is apparently related to an intramolecular oxidation reaction of VIII; this, however, is unestablished. The hydrolysis of IX yields $(C_6H_5)_2POH$; the reaction is quantitative.

Card 2/2

GRECHKIN, N.P.

Phosphororganic ethylenimine derivatives. Report no.1. Interaction of ethylenimine with dialkylphosphoryl chlorides. Izv.AN SSSR.Otd.khim.nauk no.5:538-543 My '56. (MLRA 9:9)

1.Khimicheskiy institut imeni A.Ye.Arbutova Kazanskogo filiala AN SSSR.
(Phosphoryl chloride) (Ethylenimine)

GRECHKIN, N. P. (Chem. Inst. im. Acad. A. Ye. Arbuzov, Kazan Aff. AS USSR)

"Phosphororganic Derivatives of Ethylenimine" (Fosfororganicheskiye proizvodnyye etilenimina)

Chemistry and Uses of Organophosphorous Compounds
(Khimiya i primeneniye fosfororganicheskikh sovedneniy),
Trudy of First Conference, 8-10 December 1955, Kazan,
pp. Published by Kazan Affil. AS USSR, 1957

243-247

Distr: 483d/482c(3)/481j

Organophosphorus derivatives of ethylenimine II.
Addition of halogen derivatives of hydrocarbons and of
halogens to ethylenamides of dialkyl phosphates. N. P.
Grechkin (A. E. Arbuzov Chem. Inst., Kazan). *Izv. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1957, 1033-S; cf. C.A. 51, 1833a. — Heating in sealed tube 10 g. $(EtO)_2P(O)-$

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$N(CH_2CH_2)_2$ and 7.1 g. $PhCH_2Cl$ 4 hrs. at 135-45° and 2 hrs. at 185° gave 55% $(EtO)_2P(O)N(CH_2Ph)CH_2CH_2Cl$, b_p 151-1.5°, d_4 1.1621, n_D^{20} 1.5013, which hydrolyzed with HCl to $PhCH_2NHCH_2CH_2Cl$ HCl salt, m. 101-2°. Similar reaction with 9.9 g. $1-C_6H_5CH_2Cl$ in 4 hrs. at 165-85° gave 9.5 g. starting materials and 10 g. undistillable residue, which on hydrolysis with HCl gave $1-C_6H_5CH_2NHCH_2Cl$ HCl, m. 198-8°, evidently the expected $(EtO)_2P(O)N-(CH_2C_6H_5)CH_2CH_2Cl$ could not be distd. at 1 mm. Treat-

ing of 6.6 g. $(iso-BuO)_2P(O)N(CH_2CH_3)_2$ in 50 ml. CCl_4 with calcd. amt. (2 g.) Cl in 50 ml. CCl_4 at 0° and storing the mixt. overnight gave 67% $(iso-BuO)_2P(O)NClCH_2CH_3$, b_p 132-3°, d_4 1.1416, n_D^{20} 1.4539. Similarly were prepd.: $(EtO)_2P(O)NClCH_2CH_3$, 80%, b_p 99-100°, 1.2710, 1.4674; *di-iso-Pr ester*, 64%, b_p 101-2°, 1.1897, 1.4513; *di-n-Am ester*, 79%, b_p 148-50°, 1.1144, 1.4588; *di-n-hexyl ester*, 40%, b_p 160-2°, 1.0827, 1.4590. Addn. of 6.4 g. $(EtO)_2P$ to 9.7 g. $(EtO)_2P(O)NClCH_2CH_3$ at 35-60° (cooling with acetone-Dry Ice) gave 2 g. $EtP(O)(OEt)_2$ and 9.5 g. (74% pure) $ClCH_2CH_2NP(O)(OEt)_2$, b_p 133-5°, 1.2114, 1.4467. Heating 10.5 g. $(EtO)_2P(O)NClCH_2CH_3$ in sealed tube with 7.5

g. $(EtO)_2P(O)N(CH_2CH_3)_2$ 6 hrs. at 120-80° gave 8 g. starting materials and about 65% $ClCH_2CH_2NP(O)(OEt)_2$, a hydrazine deriv., b_p 109°, 1.1012, 1.4484. G. M. K.

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GRECHKIN, N. P.

5.3630
5.3831

S/020/60/133/03/08/013
B016/B068 82274

AUTHOR: Grechkin, N. P.

TITLE: Copolymerization¹ of the Diethyleneamides of Phosphorus
Acids¹ With Bifunctional Organic Compounds

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 3,
pp. 592 - 593

TEXT: In the introduction, the author refers to the N-phosphonium aminoethylation of organic compounds described by him in an earlier publication (Refs. 1-3): It was recently shown that the amides mentioned in the title react according to the mentioned reaction involving a cleavage of the two ethyleneimine rings. This induced the author to assume that the reaction mentioned in the title could lead to the formation of linear copolymers with phosphorus atoms in the chain (see Scheme). The author deduced the alternate succession of the atoms from the reaction of the monomer which had been studied earlier. The experiments of the author showed that the amides in question can actually be copolymerized with dicarboxylic acids, diamines, p-dichloromethyl aryls,

Card 1/3

4

Copolymerization of the Diethyleneamides of Phosphorus Acids With Bifunctional Organic Compounds S/020/60/133/03/08/013
B016/B068 82274

and other bifunctional compounds. When equimolar amounts of diethyleneamide of isopropyl thiophosphoric acid and sebacic acid are heated to 110 - 120°C, an exothermic reaction takes place which leads to the formation of a rubber-like substance with a high elasticity coefficient. In the course of a similar reaction, a solid transparent polymer having the color of strong tea is formed by copolymerization of the diethyleneamide of ethylphosphoric acid with benzidine (in molar ratios) and heating up to 125 - 130°C. This polymer (which was studied by means of a device designed by B. Ya. Teytel'baum and M. P. Dianov) showed a state of high elasticity between 150 and 220°C (Fig. 1). In the viscous state, filaments can be drawn from this polymer. Further experiments were carried out by the author which lead to the formation of polymer substances which are being studied at present. The capacity of the diethyleneamides of the phosphorus acids to add to the functional groups of organic compounds can be utilized to prepare grafted and crosslinked phosphorus-containing polymers. They can be used to obtain crosslinking of:

1) polyamide chains independently of the character of their end groups, and 2) polyester chains with carboxyles as end groups. In a similar way,

Card 2/3

Copolymerization of the Diethyleneamides of Phosphorus Acids With Bifunctional Organic Compounds S/020/60/133/03/08/013
B016/B068 82274

the monoethyleneamides of phosphorus acids can be used for grafting phosphonium groups to active end and side groups of polymer molecules, as was shown by relative experiments. Thus, a new method for the preparation of phosphorus-containing polymers by N-phosphonium aminoethylation was suggested by the author. There are 1 figure and 4 Soviet references.

ASSOCIATION: Khimicheskiy institut Kazanskogo filiala Akademii nauk SSSR
(Chemical Institute of the Kazan' Branch of the Academy of
Sciences, USSR)

PRESENTED: March 7, 1960, by A. Ye. Arbuzov, Academician

SUBMITTED: March 4, 1960

Card 3/3

87165

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2209, 1236, 1273

S/062/60/000/012/004/020
B013/B055

AUTHORS: Grechkin, N. P. and Shagidullin, R. R.

TITLE: Organophosphorus Compounds of Ethylenimine Derivatives.
Communication III. Addition of Acids to the Amides of
Phosphinic Acids With Ethylenimine

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1960, No. 12, pp. 2135-2139

TEXT: The present publication gives the results obtained in the N-diethylphosphonaminoethylation (the term used by the authors) of carboxylic acids. The authors apply this term to all reactions in which the amides of phosphinic acids with ethylenimine add to a number of compounds under cleavage of the ethylenimine ring, as shown in Refs. 1 and 2. By this reaction, addition products of diethyl phosphinic acid ethyleneamide and several carboxylic acids were obtained (Table). All the esters listed in the table were prepared similarly: equimolar amounts of diethyl phosphinic acid ethyleneamide and the acid were heated at 110-120°C in sealed tubes for 6-7 h. After distilling twice, the pure product separated. To establish the structure of the

X

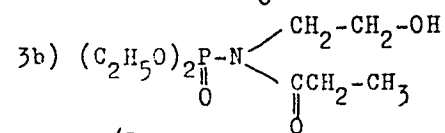
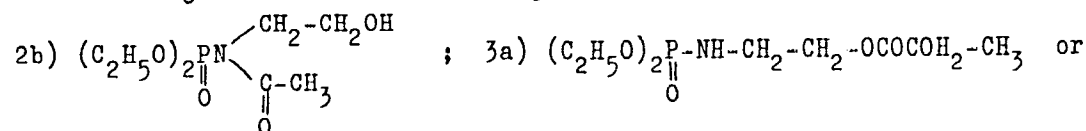
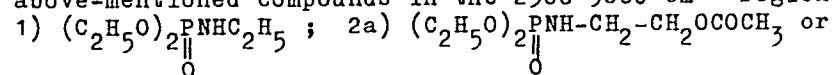
Card 1/3

87165

Organophosphorus Compounds of Ethylenimine Derivatives. Communication III. Addition of Acids to the Amides of Phosphinic Acids With Ethylenimine

S/062/60/000/012/004/020
B013/B055

compounds obtained, the authors evaluated the infrared absorption spectra of the reaction products of diethylphosphinic acid ethyleneamide and acetic- respectively propionic acid. Diethyl phosphinic acid ethyl amide was used as model substance. The spectra were run on a MKC-12 (IKS-12) spectrometer with adjustable slit width using a NaCl prism in the 700-2400 cm^{-1} region and a LiF prism in the 2300-3600 cm^{-1} region. The spectra of the three above-mentioned compounds in the 2300-3600 cm^{-1} region are shown in Fig. 1:



Card 2/3

87165

Organophosphorus Compounds of Ethylenimine
Derivatives. Communication III. Addition of
Acids to the Amides of Phosphinic Acids With
Ethylenimine

3/062/60/000/012/004/020
B013/B055

The infrared spectra indicate the presence of intermolecular hydrogen bonds between the nitrogen of the amide group and the oxygen atoms of the phosphine group (P=O) and the ether group (C=O). The structure of the substance obtained by the action of diethyl phosphonic acid on diethyl phosphinic acid ethylene amide is still unclear. The study is being continued. There are 1 figure, 1 table, and 6 references: 3 Soviet and 3 US.

ASSOCIATION: Khimicheskiy institut Kazanskogo filiala AN SSSR
(Chemical Institute of the Kazan' Branch of the AS USSR)

SUBMITTED: June 19, 1959

Card 3/3

SHAGIDULLIN, R.R., GRECHKIN, N.P.

"Oscillatory spectra of certain diethyleneamides of alkythiophosphoric acids."

Khimiya i Primeneniye Fosfororganicheskikh Soedineniy (Chemistry and application of organophosphorus compounds) A. YE. KIRKOV, Ed.
Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 112 pgs.

Collection of complete papers presented at the 1965 Kazan Conference on Chemistry of Organophosphorus Compounds.

S/058/63/000/001/056/120
A160/A101

AUTHORS: Shagidullin, R. R., Grechkin, N. P.

TITLE: Vibrational spectra of some diethylene amides of
alkylthiophosphoric acids

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 23, abstract ID156
(In collection: "Khimiya i primeneniye fosfororgan. soedineniy",
M., AN SSSR, 1962, 112 - 115)

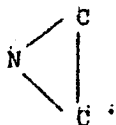
TEXT: The infrared absorption spectra and the Raman spectra of a number of
new diethylene amides of alkylthiophosphoric acids were investigated; it is shown
that the pulsation vibrations of the ethylenimine ring in the presence of phos-
phorus appear to be adequately characteristic by their frequency and intensity,
and that the corresponding lines and bands, which clearly appear in the infrared
spectra, may serve as a good analytic indication. In the region of 3060 cm^{-1} ,
vibrations of the C - N bonds at the ring are manifested. A strong infrared ab-
sorption was observed in the region of 930 cm^{-1} . It is identified with an asym-



Card 1/2

Vibrational spectra of...

metric vibration of the ring



8/058/63/000/001/056/129
A160/A101

Yu. Mazurenko



[Abstracter's note: Complete translation]

Card 2/2

GRECHKIN, N.P.; NURETDINOV, I.A.

Reactions of ethyleneamides of phosphorus acids with some
unsaturated acids and allylamine. Izv. AN SSSR Otd.khim.
nauk no.2:295-298 F '62. (MIRA 15:2)

1. Khimicheskij institut im. A.Ye.Arbusova Kazanskogo filiala
AN SSSR i Institut organicheskoy khimii AN SSSR, Kazan'.
(Phosphoric acid)
(Unsaturated compounds)

GRECHKIN, N.P.

Organophosphorus derivatives of azetidine. Izv.AN SSSR.Otd.khim.
nauk no.8:1495 Ag '62. (MIRA 15:8)

1. Khimicheskiy institut im. A.Ye.Arbuzova AN SSSR.
(Phosphorus organic compounds) (Azetidine)

GRECHKIN N.P.; GRISHINA, L.N.

Ethylene amides of glycolphosphorous acids. Dokl. AN SSSR 146
no.6:1333-1334 0 '62. (MIRA 15:10)

1. Khimicheskiy institut im. A.Ye. Arbuzova AN SSSR. Predstavleno
akademikom A.Ye. Arbuzovym.
(Phosphorous acid) (Rearrangements (Chemistry))

GRECHKIN, N.P.; NURETDINOV, I.A.

Organophosphoric derivatives of ethyleneimine. Report No.5:
Mono- and polyfunctional monomers. Izv.AN SSSR.Otd.khim.nauk
no.2:302-306 F '63. (MIRA 16:4)

1. Khimicheskiy institut im. A.Ye.Arbutova i Institut organicheskoy
khimii AN SSSR, Kazan'.

(Ethylene compounds)
(Phosphorus organic compounds)

NURETDINOV, I.A.; GRECHKIN, N.P.

Synthesis of some triamides of phosphorus acids. Izv. AN SSSR.
Ser. khim. no.10:1883-1885 0 '64. (MIRA 17:12)

1. Institut organicheskoy khimii AN SSSR, Kazan'.

GRECHKIN, N.P.; GRISHINA, L.N.

Properties of ethylenamides of glycolphosphorous acids. Izv.
AN SSSR Ser. khim. no.8:1502-1504 '65. (MIRA 18:9)

1. Khimicheskiy institut im. A.Ye. Arbuzova AN SSSR.

GRECHKIN, N.P.; SHAGIDULLIN, R.R.; GRISHINA, L.N.

Structure of the product of reaction between phosphite and ethanolamine. Dokl. AN SSSR 161 no.1:115-117 Mr '65. (MIRA 18:3)

1. Khimicheskiy institut im. A.Ye. Arbuzova AN SSSR, Kazan'.
Submitted July 31, 1964.

GRECHKIN, N.P.; NOVOTDENOV, I.A.

Ethylenimides of alkyl- and dialkylphosphorous acids. Izv.
AN SSSR. Ser. khim. no.6:1105-1106 '65.

(MIRA 18:6)

1. Institut organicheskoy khimii AN SSSR, Kazan' i Khimicheskiy
institut imeni Arbuzova AN SSSR.

GRECHKIN, N.P.; KHAMITOV, R.N.

Organophosphorus derivatives of azetidine. Phosphoric acid azetidides.
Dokl. AN SSSR 162 no.5:1063-1064 Je '65. (MIRA 18:7)

1. Khimicheskly institut im. A.Ye. Arbuzova AN SSSR. Submitted
December 7, 1964.

L 26367-66 EWT(m)/EWP(1) RM

ACC NR: AP6017365

SOURCE CODE: UR/0062/65/000/008/1502/1504

AUTHOR: Grechkin, N. P.; Grishina, L. N.

ORG: Chemical Institute im. A. Ye. Arbuzov, AN SSSR (Khimicheskiy institut AN SSSR)

TITLE: Properties of ethyleneamides of glycolphosphorous acids 1

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1965, 1502-1504

TOPIC TAGS: organic amide, organic phosphorus compound, organic imine compound, acetic acid

ABSTRACT: The reactions of glycolphosphorous acids with organic compounds possessing a labile hydrogen atom were studied. In an attempt to open the ethyleneimine ring in the amides of certain glycolphosphorous acids with various amines, in all cases a transamination reaction: liberation of free ethyleneimine and formation of a new amide of glycolphosphorous acid - was observed, indicating extremely low strength of the nitrogen-phosphorus bond. The yields of the new amides produced in transamination are low, evidently as a result of simultaneous ammonolysis of the aliphatic bonds. When the ethyleneamides of glycolphosphorous acids are treated with acetic acid, they are deaminated, forming the ethyleneamide of acetic acid and the free ethylene glycolphosphorous acids, the latter in rather high yields (60-70%). Orig. art. has: 2 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 18Dec64 / ORIG REF: 004 / OTH REF: 001

Card 1/1

UDC: 542.91+661.718.1

L 06529-67 EWT(m) EWP(j) RM

ACC NR: AP7000466

SOURCE CODE: UR/0062/66/000/00370839/0843

NURETDINOV, I. A., SHAGIDULLIN, R. R., SHAMONIN, Yu. Ya., GRECHKIN, N. P.,
Institute of Organic Chemistry, Academy of Sciences USSR, Kazan' (Institut
organicheskoy khimii AN SSSR)

21
B

"Amides of Phenylvinylphosphinic Acid" *q*

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 5, 1966, pp 839-843

Abstract: Amides of phenylvinylphosphinic acid were produced by reaction of the acid with the amine. The ethyleneimide of phenyl-beta-chloroethylphosphinic acid was produced by reaction of phenyl-beta-chloroethylphosphinic acid chloride with ethyleneimine in the presence of triethylamine as a hydrogen chloride acceptor, in an unsuccessful attempt to produce the ethyleneimide of phenyl-beta-ethyleneiminoethylphosphinic acid. The infrared spectra of the substances obtained were studied. The presence of $P_{p1}-d_{p1}$ conjugation in the systems considered was hypothesized on the basis of the frequencies of the P=O and C=C groups. The rate of inversion of nitrogen in ethyleneimides of phenylvinylphosphinic and phenyl-beta-chloroethylphosphinic acids is very high according to the proton magnetic resonance data. Orig. art. has: 2 figures and 2 tables.

[NPRS]

TOPIC TAGS: organic amide, vinyl compound, phosphinic acid

SUB CODE: 07 / SUBM DATE: 28 Dec 63 / ORIG REF: 004 / OTH REF: 003

Card 1/1 *eqh*

UDC: 543.422:542.951.1:661.718.1

ACC NR: AP7010722

SOURCE CODE: UR/0062/66/000/008/1466/1467

AUTHOR: Nuretdinov, I. A.; Grechkin, N. P.

ORG: Institute of Organic and Physical Chemistry, Academy of Sciences
USSR (Institut organicheskoy i fizicheskoy khimii AN SSSR)

TITLE: Interaction of monoethylenimides of acids of pentavalent
phosphorus with thioacetic acid

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1966, 1466-1467

TOPIC TAGS: IR spectrum, organic phosphorus compound, nonmetallic organic compound

SUB CODE: 07:

ABSTRACT: N-phosphorylated S-acetylmercaptoethylamines were prepared by reaction of monoethylenimides of acids of pentavalent phosphorus with thioacetic acid. The reaction proceeded readily without a catalyst, upon heating on a boiling water bath; sufficiently pure products were obtained in good yields, generally 75% or above. Seven new derivatives were prepared and characterized. Their structures were confirmed by their infrared spectra. Orig. art. has: 1 formula and 1 table.

JPRS: 40,351

Card 1/1

UDC: 542.951.1 + 546.185 + 547.299

ACC NR: AP7011831

SOURCE CODE: UR/0079/66/036/010/1862/1862

AUTHOR: Grechkin, N. P. Khamitov, R. N.

ORG: none

TITLE: New method of producing azetidides of dialkylphosphoric acids

SOURCE: Zhurnal obshchey khimii, v. 36, no. 10, 1966, 1862

TOPIC TAGS: chemistry technique, phosphoric acid, azetidine

SUB CODE: 07

ABSTRACT: Azetidine reacts readily with dialkylphosphites and carbon tetrachloride, to form azetidides of dialkylphosphoric acids. Azetidides of diethylphosphoric, di-n-propylphosphoric, and di-n-butylphosphoric acids were prepared in 77 to 85% yields by conducting the reaction in ether solution at temperatures from -5° to 15°. Their properties were identical with those prepared from the acid chlorides and by transamidation. The method is said to be convenient and gives high yields.

Refs: 40,351

Card 1/1

UDC: 547.26:118

0932 0427

YURILOV, N.M.; ZABOROVSKIY, T.P.; FILIPOVICH, P.I.; GRECHKIN, N.S.

Rapid execution of development workings at the No. 1/2 mine
of the Sakhalinugol' combine. Ugol' 40 no.8:20-22 4g '65.
(MIRA 18:8)

GRECHKIN, N.Z. (Yeniseysk).

Problems from the pages of the Polish journal "Matematika" on methods of teaching algebra. Mat. v shkole no.6:78-82 N-D '58.

(MIRA 11:12)

(Poland--Algebra--Study and teaching)

GRECHKIN, N.Z. (Yeniseysk)

Study of elementary accounting in schools of the Polish People's
Republic. Mat. v shkole no.2:74-76 Mr-Apr '59.

(MIRA 12:6)

(Poland--Accounting--Study and teaching)

YELEN'SKA, Lyudvika [Jelenska, Ludwika]. Primalno uchastie RUSETSKIY, A.M.; GRECHKIN, N.Z. [translator]; MOLCHANOV, M.P., red.; MAKHOVA, N.N., tekhn.red.

[Methodology of the teaching of arithmetic and geometry in elementary schools; teachers manual] Metodika arifmetiki i geometrii v pervye gody obucheniia; posobie dlia uchitelei nachal'noi shkoly. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1960. 175 p. Translated from the Polish.

(MIRA 13:11)

(Mathematics--Study and teaching)

1. GRECHKIN, P.S.
2. USSR (600)
4. Conveying Machinery
7. Hand truck for the apiary, Pchelovodstvo 30 no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

ACCESSION NR: AP3005630

S/0046/63/009/003/0379/0381

AUTHORS: Grachkin, V. I.; Nozdrev, V. F.

TITLE: Ultrasound velocity in the critical region of the ternary system benzene-methanol-toluene

SOURCE: Akusticheskiy zhurnal, v. 9, no. 3, 1963, 379-381

TOPIC TAGS: ternary system, benzene-methanol-toluene system, benzene, methanol, toluene, ultrasound, acoustics, ultrasound velocity, ternary systems acoustics, critical region

ABSTRACT: The velocity of ultrasound propagation in ternary liquids was studied in order to provide data missing in the literature. The liquids used in this investigation consisted of the previously studied binary benzene-methanol mixtures (V. F. Nozdrev, G. D. Tarantova. Skorost' zvuka v sisteme benzol-metilovy* y spirt v kriticheskoy oblasti. Akust. zh., 1961, 7, 4, 496-497) diluted with various amounts of toluene. The velocity of the ultrasonic wave propagation was determined optically. [Abstracter's note: hereafter the determinations are referred to by the authors as "acoustic."] In the critical range the behavior of the mixtures was

Card 1/4

ACCESSION NR: AP3005630

found to be analogous to the behavior of their separate components. Throughout the entire range of temperatures tested the ultrasound propagation velocities in the liquid phase exceeded the velocities in the saturated vapors. In both media the velocities decreased sharply near the critical point and increased rapidly beyond this point. The minimal velocities at the critical points were measured with a fair degree of accuracy. Using the data on the densities of the ternary mixture and on the ultrasound propagation velocities, the authors have calculated the coefficients of adiabatic compressibility for some of these mixtures. Figure 1 of the Enclosure shows the relation of these coefficients (β_s) to the temperatures and the compositions. The coefficients β_s for the ternary mixtures were found to exceed those for the separate components and for the binary mixtures. The acoustical method of investigation provided other data useful in practical and theoretical studies dealing with the physicochemical properties of complex mixtures. As an example, the authors present a table showing critical temperatures and pressures for all the mixtures investigated in this work. Orig. art. has: 2 graphs and 1 table.

ASSOCIATION: Moskovskiy oblastnoy pedagogicheskiy institut im. N. K. Krupskoy
(Moscow District Teachers Institute)
Card 2/4

ACCESSION NR: AP3005630

SUBMITTED: 08Apr63

SUB CODE: PH

DATE ACQ: 27Aug63

NO REF SOV: 003

ENCL: 02

OTHER: 000

Card 3/4

ACCESSION NR: AP3005630

ENCLOSURE: 01

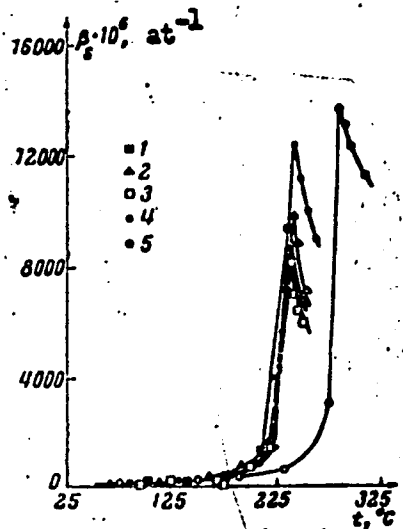


Fig. 1. Relation of the coefficient of compressibility to the mixture temperature and composition. The curves correspond to: 1) 40% of C_6H_6 in CH_3OH ; 2) 16.7% of C_6H_6 in CH_3OH ; 3) CH_3OH ; 4) 20% of C_7H_8 in the mixture containing 20% of C_6H_6 in CH_3OH ; 5) 80% of C_7H_8 in the mixture containing 40% of C_6H_6 in CH_3OH .

Fig. 1

Card 4/4

NOZDREV, V.F.; GRECHKIN, V.I.

Determination of the critical curves of ternary mixtures by the
ultra acoustic method. Zhur.fiz.khim. 38 no.11:2663-2664 N '64.
(MIRA 18:2)

1. Moskovskiy oblastnoy pedagogicheskiy institut.

GRECHKIN, V. P.

20916 Grechkin, V. P. Uzkotelyye elatki, povrezhdayushehiye osinu, i mery
bor'by s nimi. V sb: Issledovaniya po les. khoz-vu. M. - L., 1949, s. 251-64 -
Bibliogr: 17 nazu.

SO: LETCPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949

GRECHKIN, V.P.; BUKHOEYM, A.N., nauchnyy red.; KOGAN, M.I., prof., vedushchiy red.

[Studies on the biology of forest pests] Ocherki po biologii vreditel'ei lesa. Moskva, Izd-vo Mosk. ob-va ispytatelei prirody, 1951. 149 p. (Materialy k poznaniyu fauny i flory SSSR. Otdel zoologicheskii, no.31). (MIRA 11:3)

(Forest insects)

1. GRECHKIN, V.P.
2. USSR (600)
7. "Bacterial Canker of Poplars and the Part Played by Insects in its Spread",
Lesnoye Khozyaystvo, No 6, 1951, pp 69-71.

9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified

USSR / General and Specialized Zoology. Insects. P

Abs Jour: Ref Zhur-Biol., No 2, 1958, 6817.

Author : ~~Grechkin, V. P.~~
Inst : AS Tadzhik SSR.
Title : Cicades as Pests of Mountain Forest Cultures of
Central Asia.

Orig Pub: Dokl. AN TadzhSSR, 1956, No 18, 51-60.

Abstract: The emergence of the big white winged Cicade
(Paharia zevera) continues from May 20th up to
July. The female make cuts up to 8mm in length
in branches and small trunks 0.3-2 cm in width.
The cuts are divided into two, situated one above
another cavities in the wood; into each cavity
the insects deposit 20-34 eggs. The larvae emerge
in the middle of August, dig into the soil and
feed on the juice of roots, mostly of bushes.

Card 1/3

USSR / General and Specialized Zoology. Insects.
Abs Jour: Ref Zhur-Biol., No 2, 1958, 6817.

Abstract: Generation takes place, possibly once, within more than 4-5 years. The wing-variegated cicades (*Cicadatra querula*) develop in the same way. The females make cuts 5 mm in length on the stems of herbaceous plants, on the thick petioles of the trees' leaves, on branches and small trunks 1.5-8 mm in width; 10-16 eggs are deposited into each cut. The females deposit their eggs in the forest on special varieties of trees. The larvae feed indiscriminately on all trees. These cicades on the roots of herbaceous plants. These cicades have not more than one generation in 4 years. Thousands of this cicade variety inhabit separate branches and bushes, while of the white-winged cicada there are only a few dozen. The growth of the trees and bushes is checked by the damage of

Card 2/3

27

USSR / General and Specialized Zoology. Insects.

P

Abs Jour: Ref Zhur-Biol., No 2, 1958, 6817.

Abstract: the white winged cicade; branches and little trunks become curved, sometime they become thicker, dry out and break. The cuts open, forming wounds 5-10 cm in length. The damage to plantings by both varieties of cicades consisted mostly in growth checking. The chief methods of controlling the cicades were agrotechnical. -- A. P. Adrianov.

Card 3/3

GRECHKIN, V.P.

Some principal representatives of the insect pest fauna in the
mountain forests of Tajikistan [with English summary in insert].
Zool.shur. 35 no.10:1476-1493 0 '56. (MIRA 10:1)

1. 5-ya Moskovskaya aerofotoleostroitel'naya ekspeditsiya.
(Tajikistan--Forest insects)

GRACHKIN, V., inzh.; ZHOKHOV, P., inzh.

Larch spinner, a dangerous pest of conifer forests. Nauka i pered.
op. v sel'khoz. 9 no.7:45-47 JI '59. (MIRA 12:11)
(Coniferae--Diseases and pests)

DREMICHEV, I.D.; GRECHKIN, V.P.; KUROCHKIN, V.D., red.; SAVIN, B.V.,
red.-leksikograf; BUKOVSKAYA, N.A., tekhn.red.

[English-Russian dictionary of rocket weapons] Anglo-russkii
slovar' po reaktivnomu oruzhiu. Moskva, Voen.izd-vo M-va obor.
SSSR, 1960. 383 p. (MIRA 13:12)
(Rockets (Ordnance)--Dictionaries)
(English language--Dictionaries--Russian)

GRECHKIN, V.P.

Siberian silkworm (*Dendrolimus sibiricus* Tschetw.) as a forest
pest in Mongolia. Zool.shur. 39 no.1:84-96 Ja '60.
(MIRA 13:5)

1. 5th Moscow Air-Photo Forest Management Expedition.
(Mongolia--Moths) (Larch--Diseases and pests)

GRECHKIN, V. P.

E

Anglo-Russkiy slovar' po reaktivnomu oruzhiyu. Sost.
I.D. Dremichev (i) V.P. Grechkin. Moskva, Voenizdat,
1960.

383 p. tables.

"Ukazatel' Russkikh terminov" p. 266-380.

ZHOKHOV, Pavel Ivanovich; GRECHKIN, Vladimir Pavlovich; KOLOMIYETS, Nikolay Grigor'yevich; VYSOTSKAYA, Aleksandra Vladimirovna; LONSHCHAKOV, Sergey Stepanovich; VORONTSOV, A.I., red.; FUKS, Ye.A., red.izd-va; PARAKHINA, N.P., tekhn. red.

[Tent caterpillar, *Dendrolimus sibiricus*, and measures for its control] Sibirskii shelkopriiad i mery bor'by s nim. Pod obshchei red. N.G.Kolomiitsa i P.I.Zhokhova. Moskva, Goslesbumizdat, 1961. 139 p. (MIRA 15:4)
(Tent caterpillars)

GRECHKIN, V.P.

Large bark beetle *Ips subelongatus* Motsch. Zool. zhur. 41
no.4:552-559 Ap '62. (MIRA 15:4)

1. Fifth Moscow Air-Photo-Forest Manageing Expedition.
(Bark beetles)

GRECHKIN, Vladimir Pavlovich; VORONTSOV, Aleksey Ivanovich

[Pests and diseases of poplars and the measures for their control.] Vrediteli i bolezni topolei i mery bor'by s nimi. Moskva, Goslesbumizdat, 1962. 148 p. (MIRA 19:1)

L 22656-65 EPF(c)/EPR/EPA(s)-2/EWP(j)/EWT(m)/T Pc-4/Pr-4/Ps-4/Pt-10 RW/
ACCESSION NR: AT5002136 NW/MLK S/0000/64/000/000/0267/0272

AUTHOR: Kalabina, A. V.; Grochkin, Ye. F.; Bychkova, T. I.; Filippova, A. Kh.; Tyukavkina, N. A.; Yermakova, L. I.

TITLE: Synthesis of some new vinyl-aryl ethers and of their conversion products

SOURCE: AN SSSR. Institut neftekhimicheskogo sinteza. Sintez i svoystva monomerov
(The synthesis and properties of monomers). Moscow, Izd-vo Nauka, 1964, 267-272

TOPIC TAGS: vinyl aryl ether, aromatic ether, phenol derivative, diphenylpropane derivative, diphenolpropane divinyl ether, polyether synthesis, boron trifluoride

ABSTRACT: Studies on the synthesis of vinylaryl ethers were expanded by the preparation of new ethers from substituted phenols and of their conversion products to obtain highly reactive and readily polymerizing compounds. The compounds reacted to prepare vinylaryl ethers included nitro-, chloro-, bromo-, chloronitro-, and ketophenols and p, p-dihydroxydiphenylpropane; the reaction products were purified by steam distillation or recrystallization. Polymerization was mainly studied with diphenolpropane divinyl ether. Its homopolymer, obtained at 5C with boron trifluoride, contains an insoluble fraction of crosslinked polymer; its copolymerization with large amounts of vinylphenyl ether improves the thermal stability of the product markedly as compared with vinyl-

Card 1/2

L 22656-65
ACCESSION NR: AT5002136

2

phenyl ether homopolymer. Routes for producing di- and trichloroethyl-, and β -chloro- and β,β -dichloro- vinyl-aryl ethers are established. The reactions of vinylaryl ethers with phosphorus pentachloride produce esters and acid chlorides of β -aryloxyvinylphosphonic and thiophosphonic acids. Polymerization of ethyl β -phenoxyvinylphosphonate gives a non-combustible polymer which does not melt at 350 C. Orig. art. has: 1 formula and 3 tables.

ASSOCIATION: None

SUBMITTED: 30Jul64

ENCL 00

SUB CODE: 00, GC

NO REF SOV: 013

OTHER: 002

Card 2/2

L 34101-65 EPA(s)-2/ENT(m)/EPF(c)/EPR/ENF(A)/T Pe-4/Pr-4/Ps-4/Pt-10 W/EM

ACCESSION NR: AP5007435

S/0286/65/000/004/0062/0062

AUTHOR: Grechkin, Ye. F.; Kalabina, A. V.

TITLE: Preparative method for heat-resistant phosphorus-containing polymers.
Class 39, No. 168445

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 62

TOPIC TAGS: heat resistant polymer, polymer, phosphorus containing polymer, vinyl-phosphonic acid

ABSTRACT: An Author Certificate has been issued for a preparative method for heat-resistant phosphorus-containing polymers, involving the treatment of tetrachloro derivatives of β -substituted vinylphosphonic acids [sic] with proton donors at elevated temperature. In order to obtain modified polymers, water, acetic acid, or formic acid is used as the proton donor. [SM]

ASSOCIATION: none

SUBMITTED: 20Apr63

ENCL: 00

SUB CODE: OC, GC

NO REF SOV: 000

OTHER: 000

ATD PRESS: 3210

Card 1/1

GRECHKINA, A. K.

"Causes of Nontraumatic Death of Children." Dr Med Sci, Kiev Order of Labor Red Banner Medical Inst imeni Academician A. A. Bogomolets, Ministry of Health USSR, Kiev, 1954. (KL, No 5, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

POLIKARPOCHKIN, V.V.; KOROTAYEVA, I.Ye.; GRECHKINA, Ye.A.; GAFONTSEV, G.P.

Relationship between the liquid and solid phases of stray flux.
Geokhimiia no.2:198-210 F '65. (MIRA 18:6)

1. Institut geokhimi Sibirskogo otdeleniya AN SSSR, Irkutsk.

YERMAKOV, Konstantin Semenovich; TARASENKO, Nikolay Vasil'yevich;
LUTOV, Viktor Mikhaylovich; GRECHKIVSKIY, V.S., inzh., red.;
ROMANNIKOV, F., red.; KARZHAVINA, Ye., tekhn. red.

[New methods for chip breaking] Novoe v struzhkolomani. Li-
potsk, Lipetskoe knizhnoe izd-vo, 1960. 35 p.
(MIRA 15:3)

(Metal cutting)

GRECHKO, A. (g.Druzhkovka, Stalinskoy oblasti); KULIKOV, I., inzh.-konstruktor
(g.Druzhkovka, Stalinskoy oblasti)

Machine tools designed by operator Persianov. Izobr.1 rats. no.12:37
D '58. (MIRA 11:12)

1. Nachal'nik parosilovogo tsekha Toretskogo mashinostroitel'nogo
zavoda (for Grechko). 2. Toretskiy mashinostroitel'nyy zavod (for
Kulikov).

(Machine tools)

ACC NR: AN7006008

SOURCE CODE: UR/9003/67/000/046/0001/0001

AUTHOR: Grechko, A. (Marshal of Soviet Union)

ORG: none

TITLE: *Army of October*
[Marshal A. Grechko on the Soviet Armed Forces]

SOURCE: Izvestiya, no. 46, 23 Feb 67, p. 1, col. 1-4, p. 2, col. 1-7

TOPIC TAGS: military policy, military status

ABSTRACT: Marshal Grechko writes that the Soviet Armed Forces have everything for the reliable defense of the country. As regards the small new solid-fuel rockets on mobile launchers, they are virtually undetectable by air and space reconnaissance and are capable of destroying targets at great distances. There is no region in the ocean where the Soviet submarine rocket fleet could not function. The Soviet might does not reside only in such equipment and new weapons. There is no intention, of course, to minimize the significance of such means as do those who consider nuclear weapons as a paper tiger. To take such a viewpoint is to subject the defense of peace to the gravest danger. The Soviet military science is based on the fact that the outcome of war will not be decided by equipment alone, but also by the people who are armed with it. [NC]

SUB CODE: 15/ SUBM DATE: none/ ATD PRESS: 5115
Card 1/1 UDC:none

ACC NR: AN7006008

SOURCE CODE: UR/9003/67/000/046/0001/0001

AUTHOR: Grechko, A. (Marshal of Soviet Union)

ORG: none

TITLE: *Army of October*
[Marshal A. Grechko on the Soviet Armed Forces]

SOURCE: Izvestiya, no. 46, 23 Feb 67, p. 1, col. 1-4, p. 2, col. 1-7

TOPIC TAGS: military policy, military status

ABSTRACT: Marshal Grechko writes that the Soviet Armed Forces have everything for the reliable defense of the country. As regards the small new solid-fuel rockets on mobile launchers, they are virtually undetectable by air and space reconnaissance and are capable of destroying targets at great distances. There is no region in the ocean where the Soviet submarine rocket fleet could not function. The Soviet might does not reside only in such equipment and new weapons. There is no intention, of course, to minimize the significance of such means as do those who consider nuclear weapons as a paper tiger. To take such a viewpoint is to subject the defense of peace to the gravest danger. The Soviet military science is based on the fact that the outcome of war will not be decided by equipment alone, but also by the people who are armed with it. [NC]

SUB CODE: 15/ SUBM DATE: none/ ATD PRESS: 5115
Card 1/1 UDC:none

GRECHKO, A.A.
1950-07-19/1950-07-19

Efficiency in the Novoufa oil refinery. Neftianik 1 no.11:19-20
N '56. (MLRA 9:12)

1. Inzhener po izobretatel'stvu Novoufinskogo neftepererabatyva-
ushchego zavoda.
(Novoufa--Petroleum--Refining)

GRECHKO, A.A.

Improvement in design at the enlarged pressure-vacuum distillation
plant. Dokl.AN Arm.SSR 24 no.2:23-25 '57. (MIRA 10:4)

1.Inshener po izobretatel'stvu Novoufinskogo neftepererabatyvayushchego
savoda.

(Ufa--Petroleum--Refining)

GRECHKO, A.A., marshal Sovetskogo Soyuza.

On guard over the Soviet homeland. Voen. znan. 37 no. 2:1-2
F '61. (MIRA 14:1)

(Russia—Armed forces)

~~L 8326-66~~

ACC NR: AT5022181

SOURCE CODE: UR/0000/65/000/000/0003/0020

AUTHOR: Grechko, A. A. (Marshal of the Soviet Union, Commander-in-chief of the joint armed forces of the countries of the Warsaw Pact) 16

ORG: Joint Armed Forces of the Countries of the Warsaw Pact (Ob'yedinennyye vooruzhennyye sily stran Varshavskogo Dogovora) B+1

TITLE: The military alliance of fraternal peoples

SOURCE: V yedinom stroyu (In a united system). Moscow, Voenizdat M-va Obor. SSSR, 1965, 3-20

TOPIC TAGS: armed force organization, military personnel, political history, political personnel

ABSTRACT: The author discusses the origin and development of the armed forces of the countries of the Warsaw Pact. After World War II the ruling circles in the West, headed by the USA, became alarmed at the growing revolutionary movement of the people and adopted a reactionary stand in foreign policy, exemplified by the policies of "cold war" and "from a position of strength." The beginnings were laid by Churchill in his Fulton speech, and the practical results were the Truman Doctrine, the Marshall Plan, and NATO, SEATO, and CENTO. US military bases were built on the territories of many countries with the aim of attacking the socialist countries. American troops occupied the Chinese island of Taiwan, and the USA launched an aggressive war against the Korean people. The imperialists split up

Card 1/2

L 8326-66

ACC NR: AX5022181

0

Germany and organized the revenge-seeking West German state which started hastily rebuilding its war potential. West Germany became a member of the aggressive NATO block, as a result of which the peace-loving countries of Europe grouped together into a defense pact which was signed in Warsaw. The aggressive policies of the NATO block and the defensive role of the Warsaw Pact countries are discussed. The composition, strength, and aims of the entire socialist camp are presented. This includes 14 countries with 25% of the territory, 35% of the population, and 38% of the industrial output of the world. Recent aggressive acts of US imperialists include the attempt to strangle the liberation struggle of the people of South Vietnam, expansion of military intervention in Laos, and direct aggression against the Democratic Republic of Vietnam, which is the advance post of the socialist camp in Southeast Asia. Brief historical sketches of countries of the Warsaw Pact are given. The assistance extended by the Soviet Union to the cause of socialism is noted, including the active aid given to the revolutionary struggle in China in the 1920's, Soviet volunteers piloting aircraft together with their Chinese brothers against the Japanese, and the liberation of many lands in World War II. The role of other countries in these struggles is noted. Orig. art. has: 1 figure.

SUB CODE: MS, GO / SUBM DATE: 15Apr65

jw

Card 2/2

GRECHKO D.
ZHUKOV, N.; GRECHKO, D.

Help for the lagging in the law of competition. Mast. ugl. 7 no.1:
3-4 Ja '58. (MIRA 11:2)

1. Nachal'nik shakhty No.3 "Severo-Gundorovskaya" kombinata Shakht-antratsit (Zhukov).
2. Predsedatel' shakhtnogo komiteta shakhty No.3 "Severo-Gundorovskaya" kombinata Shakhtantratsit (for Grechko).
(Coal mines and mining)

GRECHKO, D.I.

Improve the standardization prodecures in the Altay Territory.
Standartizatsiia 26 no.1:61-62 Ja '62. (MIRA 15:1)
(Altay Territory--Standardization)

GRECHKO, D.I.; KOZHEVNIKOVA, G.I., inzh.-konstruktor

Standardization of accompanying documents. Standartizatsiia
29 no.6:48-49 Je '65. (MIRA 18:12)

1. Nachal'nik otdela standartizatsii i normalizatsii Altayskogo
motornogo zavoda (for Grechko). 2. Otdel standartizatsii i
normalizatsii Altayskogo motornogo zavoda (for Kozhevnikova).

8(0)

SOV/112-59-4-7373

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 4, p 132 (USSR)

AUTHOR: Konokotin, G. S., and Grechko, F. M.

TITLE: Microthermometers

PERIODICAL: Nauchno-tekhn. byul. N.-i. in-ta mekhaniz. rybn. prom-sti VNIRO, 1957, Nr 3-4, pp 18-23

ABSTRACT: Electric thermometers with type MT-54 thermistors have been developed for measuring the temperature of fish kept in stock, processed, or transported. Injection needles of 0.8 and 1.5 mm diameter with built-in thermistors are used for measuring the temperature inside the fish body. The fish surface temperature is measured by a contact method. An unbalanced DC bridge for two ranges (from -50° to -20°C and from -20° to $+20^{\circ}\text{C}$) is used as a measuring device.

M.A.K.

Card 1/1

GRECHKO, F.M.

SHLIMOVICH, B.M.; inzhener; GRECHKO, F.M., inzhener.

Semiconductive controlling and measuring instruments. Nauka i pered.
op.v sel'khoz.7 no.1:26-28 Ja '57. (MLRA 10:2)
(Measuring instruments)

GRECHKO, F. M., Konokotin, S.G.

"Semiconductor-Thermo-Telemasuring Devices. (20 pages, 1957), Zavodskaya
Laboratoriya, 1957, Vol. 23, Nr. 9, pp 1143-1143 (USSR).

Grechko, F.M.

KONOKOTIN, G.S.; GRECHKO, F.M.; MILLER, B.N., spetsred.; LEVITSKAYA, G.N.,
red.; UKRAINTSEVA, D.V., tekhn.red.

[New semiconductor devices for temperature measurements in the
fishing industry] Novye poluprovodnikovye termoizmeritel'nye
pribory dlia rybnoi promyshlennosti. Moskva, Vses.nauchno-issle-
dovatel'skii in-t morskogo rybnogo khoz. i okeanografii, 1959.

17 p.

(MIRA 13:9)

(Thermometers)

(Fisheries--Equipment and supplies)

GRECHKO, G.S. [Hrechko, H.S.], red.

[Possibilities for increasing corn yield; an account of the efficient workers of the collective and state farms in Kharkov and Sumy Province] Rezervy zbil'shennia vrozhanu kukurudzy; rozpovid i peredovykiv kolhospiv i radhospiv Kharkivs'koi ta Sums'koi oblastei. Kharkiv, Kharkivs'ke knyzhkove vyd-vo, 1962. 50 p. (MIRA 17:11)

KLOCHKO, Petr Dmitriyevich; GRECHKO, G.S. [Hrechko, H.S.], red.;
LYMANOVA, M.I. [Lymanova, M.I.], tekhn. red.

[Fattening cattle on a specialized farm] Vidhodivlia khudoby v spetsializovannomu hospodarstvi. Kharkiv, Kharkivs'ke knyzhkove vyd-vo, 1963. 24 p. (MIRA 17:1)

KAMYSHAN, Aleksandr Pavlovich [Komyshan, O.P.]; GRECHKO, G.S.
Hrechko, H.S.], red.; LIMANOVA, M.I. [Lymanova, M.I.],
tekh. red.

[Wide-spread sowing of certified potatoes] Sutsil'ni sortovi
posivy kartopli. Kharkiv, Kharkivs'ke knyzhkove vyd-vo, 1963. 19 p.
(MIRA 17:1)

1. Direktor sovkhoza "Berezivka", Kharkovskogo tresta
ovoshchno-molochnykh sovkhov (for Kamyshan).

FORTUSHNYY, Vladimir Anisimovich; NOVIKOV, Vladimir Mitrofanovich;
KALUGIN, Leonid Konstantinovich; GRECHKO, G.S.[Hrechko,H.S.],
red.

[Prophylaxis of diseases in young farm animals; aid to veter-
inary specialists and stockbreeders] Profilaktyka khvorob
molodniaka sil's'kohospodars'kykh tvaryn; na dopomohu vete-
rynarnym spetsialistam i pratsivnykam tvarynnytstva. Kharkiv,
Kharkivs'ke knyzhkove vyd-vo, 1964. 74 p. (MIRA 18:2)

GRECHKO, G.S. [Hrechko, H.S.], red.

[Large crops every year; the stories of the efficient
workers on collective and state farms in Kharkov Province]
Vysoki vrozhal shchoroku; rozpovidi peredovyktiv kolhospiv
i radhospiv Kharkivshchyny. Kharkiv, Kharkivs'ke knyzhkove
vyd-vo, 1962. 82 p. (MIRA 18:1)

GRECHKO, G.V.

LUGOVOY, V.S.: LEVITOV, V.I.: VOLYNKIN, V.G.: GRECHKO, G.V.: APOSTOLATOV, G.A.

Experimental basis of electrotechnical research on the "Greater
Maryn" project. Izv. AN Kir.SSR no.4:69-88 '57. (MLRA 10:7)
(Maryn river--Hydroelectric power stations)

LUGOVOY, V.S.; APOSTOLATOV, G.A.; VOLYNKIN, V.G.; GRECHKO, G.V.;
ZHUKOV, N.N.

Factors to be considered in calculating and designing electric power
transmission lines in Kirghizistan. Izv. AN Kir. SSR. Ser. est. 1
tekh. nauk 1 no. 4:3-32 '59. (MIRA 14:4)
(Kirghizistan--Electric lines)

GRECHKO, I.V.

COUNTRY : USSR
CATEGORY : Plant diseases. Diseases of cultivated plants
ABS. JOUR. : RZhBiol., No. 21 1958, No. 05202
AUTHOR : Grachev, V. I., Grechko, I.V.
INST. : All-Union Scientific Research Institute of Plant Pathology
TITLE : Duration of Stay of Agents of Ustiloid Blister of Corn
ORIG. PUB. : Izv. Ser. 3-1. In-ta kasheniyevoastva, ser. 1 Ser. 1
et., 1958, No. 2, 115-116
ABSTRACT : Spores of Ustilago zeae, falling onto the soil which is
moist, may germinate immediately since they do not need
a quiescent period. Extension of the germination up to
75 days is determined by external conditions. Gas spores,
conidia, and other asexual reproduction arising
upon germination of the spores are subject, in the
soil, to degeneration, which excludes the possibility
of saprophytic growth of the fungus and accumulation of
infection in the soil. The primary source of infection
CARD: 1/2

5

S/181/62/004/001/025/052
B102/B104

AUTHORS: Grechko, L. G., and Ovander, L. N.

TITLE: Peculiarities of Raman scattering in piezoelectric crystals

PERIODICAL: Fizika tverdogo tela, v. 4, no. 1, 1962, 157 - 162

TEXT: A paper by H. Poulet (Ann. de Phys., 10, 908, 1955) is discussed in detail. On the basis of the theory of polarizability, Poulet has studied anomalies in Raman scattering and described the dependence of Raman scattering on the wave vectors when longitudinal and transverse oscillations occur in the crystal. In the present paper, it is shown that the effects considered by Poulet may be due to intermolecular interactions. The authors do not apply the theory of polarizability whose applicability has not yet been verified for crystals, but consider Raman scattering to be a polariton decay. They restrict themselves to cubic crystals and triply degenerate oscillations. The contribution of intermolecular interaction to Raman scattering is investigated, and expressions are derived for the degree of depolarization and for the dependence of the scattering intensity on the scattering angle for

Card 1/4

Peculiarities of Raman scattering...

S/181/62/004/001/025/052
B102/B104

in second-quantization representation and transformed to

$$H_B = \frac{1}{\sqrt{N}} \sum_{\substack{m, l, i, j \\ \mu_1, \mu_2, \mu_3}} \Gamma_{ij}(\mathbf{k}_2 - \mathbf{k}_1) (2m | x_i | 2l) \times \\ \times (1r | y_j | 0) u_{m\mu_1}^{(2)*}(\mathbf{k}_1) u_{l\mu_2}^{(2)}(\mathbf{k}_2) u_{r\mu_3}^{(1)*}(\mathbf{k}_2 - \mathbf{k}_1) \times \\ \times B_{\mu_1}^{(2)*}(\mathbf{k}_1) B_{\mu_2}^{(2)}(\mathbf{k}_2) B_{\mu_3}^{(1)}(\mathbf{k}_2 - \mathbf{k}_1), \quad (4)$$

$$\Gamma_{ij}(\mathbf{k}) = \sum_j D_{ij}^{00} e^{-i\mathbf{k}\mathbf{R}_j}, \quad (5)$$

$$\Gamma_{ij}(\mathbf{s}) = \frac{4\pi p}{3\sigma^3} [-\delta_{ij} + 3s_i s_j], \quad (6)$$

$\vec{s} = \vec{k}/|\vec{k}|$, $B_{\mu}^{(l)}$ are Bose operators. H_B can thus be expressed by production and annihilation operators $\{\xi_{\mathbf{q}}^+, \xi_{\mathbf{q}}^-\}$ using

$$B_{\mu}^{(l)}(\mathbf{k}) = \sum_{\mathbf{p}} [\xi_{\mathbf{p}}^+(\mathbf{k}) u_{\mu\mathbf{p}}^{(l)}(\mathbf{k}) + \xi_{\mathbf{p}}^+(-\mathbf{k}) v_{\mu\mathbf{p}}^{(l)}(-\mathbf{k})], \quad (7)$$

Card 3/4

GRECHKO, L.V.; VILENSKIY, Yu.B.

Contact fog in multilayer color films. Zhur. nauch. i prikl. fot.
i kin. 6 no. 3:225-226 My '61. (MIRA 14:5)

1. Filial Vsesoyuznogo nauchno-issledovatel'skogo kinofotoinstituta,
Shostka.

(Color photography--Films)

BOGOLYUBSKIY, V.A.; SHCHUMELYAK, G.P.; GRECHKO, L.V.; VILENSKIY, Yu.B.

Investigating the non-diffusing reducing agents for multilayer
color films. Usp. nauch. fot. 8:61-66 '62. (MIRA 17:7)

S/058/63/000/003/044/104
A062/A101

AUTHORS: Bogolyubov, V. A., Shumelyak, G. P., Grechko, L. V., Vilenskiy, Yu. B.

TITLE: Investigation of non-diffusing reducers for color multilayer films

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1963, 86, abstract 3D583
("Uspekhi nauchn. fotogr.", 1962, no. 8, 61 - 66)

TEXT: Non-diffusing reducers are employed in color films for removing two effects of the interaction between emulsion layers: 1) the non-selective formation of dyes due to the diffusion of intermediate products of oxidation of the developing substance from the layers, that contain dye forming elements with a low reaction capacity, into the neighboring layers, and 2) the formation of a higher fog on the contact boundary of emulsion layers with the filter layer of colloid Ag (contact fog). There are described the results of the investigation of non-diffusing reducers - derivatives of hydroquinone. It is shown that with an increase of the number of carbon atoms in the alkyl substitution agents the diffusion stability and the antifog action increase from 2,5-dibutylhydroquinone to 2,5-dioctylhydroquinone, and then somewhat decrease because of the bad solu-

Card 1/2

Investigation of non-diffusing reducers for...

S/058/63/000/003/044/104
A062/A101

bility of the dialkylhydroquinones. The same law was observed in a number of 2,5-bis-(dialkylaminomethyl)-hydroquinones; however the application of some dialkylhydroquinones and 2,5-bis-(dialkylaminomethyl)-hydroquinones was limited by the formation of dyed compounds in their photographic processing. There was studied the formation of dyed compounds from 2,5-dialkylhydroquinones and 2,5-bis-(dialkylaminomethyl)-hydroquinones and the purple component 1-(4-phenoxy-3-sulphophenyl)-3-octadecylpyrazolone-5. It is established that the formation reaction of the dyed compound takes place at the Ag bleaching stage of the image by potassium ferriocyanide. When treating a film, that contains a non-diffusing reducing agent, by potassium ferriocyanide, oxidation of the film to the corresponding quinone takes place. There are described the chemical structure and spectral properties of some dyes which are formed at the interaction of that quinone with the dye forming components.

D. Balabukha

[Abstracter's note: Complete translation]

Card 2/2

MAKHROVSKIY, V.G.; GRECHKO, M.F.

Investigating particular methods in evaluating the smoothness
of surfaces. Trudy VNIIM no.12:122-132 '51. (MIRA 11:6)
(Surfaces(Technology)--Standards)

GRECHKO, M.F.

Investigation of the PIU-1-type interferometer. Trudy VNIIM no.18:
48-55 '52. (MIRA 11:6)

(Interferometer)

GRECHKO, M.F.; SMIRNOVA, L.I.; STRAKUM, G.I.; SHAROVA, Ye.Ye.

Standard device for measuring angles. Trudy inst.Kom.stand., ser 1
izm.prib no.47:127-138 '61. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii
im. D.I.Mendeleyeva.

(Goniometers)

GRECHKO, M.K.

KILINSKIY, I.M.; VILENSKIY, Yu.B.; GRECHKO, M.K.

Relation between the total resolving power and the resolving power
of the individual layers in multilayer color film. Zhur.nauch.i
prikl.fot.i kin. 1 no:5:359-361 S-0 '56. (MLRA 9:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy kino-fotoinstitut i
fabrika kinoplenki no.3:359-361 S-0 '56. (MLRA 9:11)
(Color photography)

L 6915-65 EWT(m)/EMP(j) Pc-4 SSD/AEDC(a)/ASD(a)-5/AFWL/ZSD(ga)/ESD(t)/
RAEM(t) RM
ACCESSION NR: AR4039918 S/0058/64/000/004/D115/D116

AUTHORS: Sy*tnik, Z. P.; Lyubich, M. S.; Abdullayev, A. A.; Lifshits,
E. B.; Grechko, M. K.; Vilenskiy, Yu. B.

58

SOURCE: Ref. zh. Fiz., Abs. 4D892

TITLE: Research in the series of merocyanines of azolones. IX.
Alpha-ethoxythiadimethinemerocyanins with different substitutes at
the cyclic nitrogen atoms

CITED SOURCE: Kinotekhnika. Nauchno-tekhn. sb., vy*p. 4, 1963, 54-63

TOPIC TAGS: photosensitivity, photographic emulsion, color film,
organic sensitizer, diffusion

TRANSLATION: The dye α -ethoxythiadimethinemerocyanin, used as an
optical sensitizer for the green-sensitive emulsion of negative
color film, has a shortcoming in that it diffuses relatively easily

Card 1/2

L 6915-65

ACCESSION NR: AR4039918

in the neighboring layers of multilayer films. To replace it by a dye free of this shortcoming, the authors have synthesized and tested the dyes thia- and α -ethoxythiadimethinemerocyanin and derivatives of thiazoleidinthion (2)-on(4) with different substitutes at the cyclic nitrogen atoms, and investigated their photographic properties. It is established that replacement of the ethyl group at one or both nitrogen atoms of the hetero-remainders by the n-butyl group, or replacement of the same group in the 3-position of rodianine residue by the phenyl group, greatly reduces the tendency of the dyes to diffusion, without appreciably influencing their color, character of sensitization spectrum, and effective action. A. Kartuzhanskiy.

SUB CODE: OP, ES

ENCL: 00

Card 2/2

L 13004-65 EWT(m)/EWP(b) JD/JG
ACCESSION NR: AR4039917

S/0058/64/000/004/D112/D112

SOURCE: Ref. zh. Fiz., Abs. 4D871

AUTHORS: Grechko, M. K.; Natanson, S. V.; Al'perovich, M. A.

TITLE: Optical sensitization of ²⁾silver iodide bromide emulsion with dyes having different tendencies to polymerization

CITED SOURCE: Kinotekhnika. Nauchno-tekhn. sb., vy*p. 4, 1963, 92-102

TOPIC TAGS: photosensitivity, silver halide recording material, photographic emulsion, polymerization, optical stabilizer

TRANSLATION: The absorption and efficiency of certain optical stabilizers (OS) of the carbocyanine class, having different tendencies to formation of polymer aggregates in the adsorbed state, were investigated in four negative AgBr(I) emulsions, differing in

Card 1/2

L 13004-65

ACCESSION NR: AR4039917

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their preparation conditions and in the microcrystal dimensions. In the absence of the stabilizing salt, the spectra of the OS which did not polymerize at all or which formed only J-aggregates varied little from one emulsion to the other; to the contrary, the effect of the OS which formed several types of aggregates depended essentially on the type of emulsion. The stabilizing salt exerted a considerable influence on the sensitizing action of the OS, and this influence differed in character for different emulsions sensitized by the same OS. An increase in sensitivity was frequently observed here, sometimes without a change in the absorption of the adsorption OS layer, and sometimes with redistribution of different states, the degree of this redistribution being dependent on the type of emulsion. Bibliography, 31 titles. A. Kartuzhanskiy.

SUB CODE: OP, ES

ENCL: 00

Card 2/2

S/077/63/008/002/006/009
A066/A126

AUTHOR: Grechko, M.K.

TITLE: The effect of potassium thiocyanate on the formation of various J-states in the adsorption layer of meso-ethyl thiocarbocyanine ethylate

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, v. 8, no. 2, 1963, 137 - 139

TEXT: * It has been found that in the case of 3,3',9-triethyl thiocarbocyanine two J-states are formed on the surface of microcrystals in emulsion II (cf. Table). According to a previous paper of the author (M.K. Grechko et al., Zh. nauchn. i prikl. fotogr. i kinematogr., 1962, 7, 142), bands with peaks at 615 and 640 m μ correspond to these states. The present paper deals with the properties of the emulsion that give rise to the development of two polymers in the adsorption layer of meso-ethyl thiocarbocyanine ethylate. Special attention was devoted to the influence exerted by variations in the size of microcrystals of emulsion II (without chemical ripening) and of their modifications produced by

Card 1/2

S/077/63/008/002/006/009
A066/A126

The effect of potassium thiocyanate on

slight amounts of ammonia (0.044 mole/l) on the tendency to aggregation on the surface of silver halide. The two J-states, which increase the red sensitivity of the adsorption layer considerably, are attributed to the presence of thiocyanate in the emulsion. There are 2 figures and 1 table.

ASSOCIATION: Filial NIKFI Shostka (Branch of NIKFI, Shostka)

SUBMITTED: June 11, 1962

Table: Properties of four emulsions. 1 - Number of emulsion; 2 - C_{NH_3} , mole/l; 3 - mean crystal size, μ^2 ; 4 - dispersion, μ^2 ; 5 - C_{AgI} , mole%; 6 - C_{Ag} , g/l of emulsion; 7 - emulsion after second ripening.

Эмульсия ①	② C_{NH_3} , моль/л	③ Средний раз- мер кристал- лов, μ^2	④ Диспер- сия, μ^2	⑤ C_{AgI} , мол. %	⑥ C_{Ag} , г/л эмульсия	ρ	⑦ pH	
							эмульсия после вто- рого созревания	пBr
I	0,70	1,337	0,58	3,1	40	2,5	6,9	2,5
II	0,044	1,881	2,39	0,7	64	1,6	7,2	3,5
III	0,44	0,505	0,3	1,3	24	5,0	7,0	3,3
IV	0	0,346	0,5	7,7	17	5,4	7,2	3,3

Card 2/2