

BOYARTNOV, V.S. (Gor'kiy); NEYMARK, Yu.I. (Gor'kiy)

Vibration of a shaft in ball bearing. Izv. AN SSSR. Mekh. no.3:
49-59 My-Je '65. (MIRA 18:7)

Card 1/2

I 54607-65

ACCESSION NR: AP5006255

ber of nonholonomic constraints. This property is the determining condition for the presence of null roots in the characteristic equation. The authors formulate a theorem concerning the asymptotic stability of the manifold of the states of equilibrium. The discussion is illustrated by several examples: the motion of a solid body parallel to an inclined plane, and the motion of an axially symmetrical body bounded from below by a spherical surface which can roll without slippage in a spherical bowl of different radius. Orig. art. has: 4 figures, 22 formulas.

Card 2/2

GOL'DBERG, V.N.; NEYMARK, Yu.I. (Gor'kiy)

Correct formulation of a nonlinear mixed problem for a wave
function on a plane. Mat. Sbor. 67 no.1:16-54 My '65.

(MIRA 18:5)

NEYMARK, Ye.I.; SHIL'NIKOV, I.I.

A case of generation of periodic motions. Izv. vuzov ser. fiz.-mat. nauki no. 12: 1261-1264, 1965. 4 p. 11A 171.

1. Issledovatel'skiy fiziko-tekhnicheskii institut pri Gorkovskom gosudarstvennom universitete im. N.I. Lobachevskogo. Submitted July 28, 1964.

L 20691-66 EWP(d)/T/EWP(1) IJP(e)

ACC NR: AP6008515

SOURCE CODE: UR/0280/66/000/001/0017/0026

AUTHOR: Keymark, Yu. I. (Gor'kiy); Strongin, R. G. (Gor'kiy) 1-3
10

ORG: none

TITLE: Approach to the problem of searching for the extremum of a function on the basis of the principle of maximum information

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 1, 1966, 17-26

TOPIC TAGS: automatic control, information theory, minimax problem, function extremum searching

ABSTRACT: A new approach to the problem of searching for the extremum of a function is proposed, using the concepts of information theory. It is assumed that the real function $\varphi(x)$ whose extremum is sought is defined on the set X and belongs to the class of functions Φ in which the a priori distribution $f(\varphi)$ of probabilities $\psi(x)$ that function $\varphi(x)$ has an extremum at the point $x \in X$ is given. Using these facts, the entropy $H(x)$ of the location is introduced. When the additional information I concerning the function $\varphi(x)$ is obtained, the conditional entropy $H(x/I)$ is introduced and the amount of information

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L 20691-66

ACC NR: AP6008515

$$G(x/\Pi) = H(x) - H(x/\Pi) \geq 0 \quad (1)$$

concerning the location of the extremum is derived. Assuming that there is a set Σ of possibilities of obtaining information concerning the function $\varphi(x)$ the search for the extremum consists of a sequence of steps, every one of which utilizes a certain possibility $\sigma \in \Sigma$. Utilization of possibilities σ is coupled with certain losses, therefore, the concept of the "cost" of searching in the form of a real function $T_k = T_k(\sigma_1, \dots, \sigma_k, I_k)$ is introduced. The totality of rules determining which possibility must be utilized at each step of the search is called the search strategy S . The problem of determining effectively the strategy S which corresponds to a relatively small cost of search is considered. The proposed method consists in determining on the $(k + 1)$ -th step a possibility $\sigma \in \Sigma$ which ensures the maximum mathematical expectation of the obtainable information concerning the extremum of $\varphi(x)$ per unit cost of search. Such choice of possibilities is called the principle of maximum information and the corresponding strategy S is called the maximum strategy. Search for optimal strategies by means of electronic computers is presented for models in which classes of functions ϕ_1 and ϕ_2 consist of functions with one minimum and which are described by first- and second-order difference equations, respectively. The choice of optimal strategies

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ACC NR: AP6008515

is also analyzed for the class of functions described by first-order difference equations with random parameters. The search for the extremum of the function $\varphi(x)$ in the presence of noise is also considered. The effectiveness of the method presented here is compared with the minimax method of I. Kiefer. Orig. art. has: 2 numbered equations, 6 figures, and 4 tables. [LK]

SUB CODE: 0912 SUBM DATE: 04Oct65/ ORIG REF: 004/ OTH REF: 004
ATD PRESS: 4223

Card 3/3 BK

L 17011-66 EWT(d)/T IJP(c)

ACC NR: AP6004554

SOURCE CODE: UR/0103/66/000/001/0113/0118

AUTHOR: Neymark, Yu. I. (Gor'kiy); Strongin, R. G. (Gor'kiy)

ORG: none

TITLE: Search for the extremum of a function by the principle of maximum information

SOURCE: Avtomatika i telemekhanika, no. 1, 1966, 113-118

TOPIC TAGS: automatic control, extremal control, optimal strategy, function extremum

ABSTRACT: The authors analyze a procedure for determining the extremum of a real function $\varphi(x)$ defined on the set x and pertaining to a class of functions Φ in which the a priori distribution $f(\varphi)$ of probabilities that the extremum of function $\varphi(x)$ is at the point $x \in X$ is given. When some additional information I concerning the function $\varphi(x)$ is obtained, then the a priori distribution $f(\varphi)$ is replaced by the a posteriori distribution $f(\varphi/I)$. The entropy $H(x)$ and conditional entropy $H(x/I)$ are considered as the measures of information concerning the location of the extremum. Assuming that there is a set Σ of possibilities σ for obtaining the information concerning function $\varphi(x)$, the process of seeking the extremum consists

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UDC: 621.391.133:519.8

L 17011-66

ACC NR: AP6004554

of a sequence of steps, a certain possibility being used at each step. A set of rules determining which possibility $\sigma \in \Sigma$ is to be utilized at every step is called the strategy S. The search for the extremum is carried out in such a manner that the mathematical expectation of the information obtained at every step concerning the location of the extremum is maximum. The strategy for selecting the possibilities satisfying this requirement is called the optimal strategy. As an illustration of the method, an example is presented in which the set X is taken as the n discrete points of the number axis and the class of functions Φ consists of all possible solutions of a first-order difference equation with random coefficients and random initial conditions. The optimal strategies S_{opt} were determined with the aid of a computer. Orig. art. has: 1 formula.

[LK]

SUB CODE: 01/ SUBM DATE: 12Apr65/ OTH REF: 002/ , ATD PRESS: 4207

Card 212 M JS

L 25994-66 EWT(d)/EWP(1) IJP(c)

ACC NR: AP6012542

SOURCE CODE: UR/0040/66/030/002/0236/0242

AUTHORS: Neymark, Yu. I. (Gor'kiy); Fufayev, N. A. (Gor'kiy)

ORG: none

TITLE: Stability of steady motions of ¹⁶holonomic and nonholonomic systems

SOURCE: Prikladnaya matematika i mekhanika, v. 30, no. 2, 1966, 236-242

TOPIC TAGS: motion stability, pendulum mechanics, coordinate system,
perturbation,

ABSTRACT: It is shown that dynamic systems with a manifold of steady motions possess a number of singularities. Some results of a theoretical study are illustrated by an example of a plane pendulum. A system with incomplete dissipation of mechanical energy whose motion is described by

$$\left(\frac{d}{dt} \frac{\partial L}{\partial \dot{q}_j} + \sum_{i=1}^m h_i q_i = \frac{\partial L}{\partial q_j}, \quad \frac{d}{dt} \frac{\partial L}{\partial \omega_k} = 0 \quad \begin{matrix} (j=1, 2, \dots, n) \\ (k=1, \dots, n-m) \end{matrix} \right)$$

is considered. In the case of holonomic as well as nonholonomic systems, the steady motions form a manifold of a certain dimensionality $q > 0$. In the case of a holonomic system, $q > n - m$. The singularities of the system are expressed by the presence

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L 25994-66

ACC NR: AP6012542

of zero roots of the eigenequation in the possibility of bifurcations of a new type, which do not hold for the isolated state of equilibrium, and also by the peculiarity of the behavior of the system with continuously acting small perturbations. Orig. art. has: 23 formulas, 1 diagram, and 1 graph.

SUB CODE: 20,12/

SUBM DATE: 09Apr65/

ORIG REF: 006/

OTH REF: 002

Card 2/2

ACC NR: AP6032847

(A)

SOURCE CODE: UR/0020/66/170/003/0533/0536

AUTHORS: Neymark, Yu. I.; Fufayev, N. A.

ORG: Scientific Research Institute of Applied Mathematics and Cybernetics at Gor'kiy State University imeni N. I. Lobachevskiy (Nauchno-issledovatel'skiy institut prikladnoy matematiki i kibernetiki pri Gor'kovskom gosudarstvennom universitete)

TITLE: On the problem of track stability of vehicles on pneumatic tires

SOURCE: AN SSSR. Doklady, v. 170, no. 3, 1966, 533-536

TOPIC TAGS: stability criterion, potential energy, kinetic energy, motor vehicle, aircraft tire

ABSTRACT: Using the various theorems first derived by M. V. Keldysh, an analysis is made of oscillations of a vehicle with pneumatic tires. The equations of motion for a vehicle with m -pneumatic tires are written for small departures from a straight line motion, along the OY-axis, with a constant speed V . The vibration of the tires (without slipping) is given by the two equations

$$z_i + \xi_i + V\theta_i + V\varphi_i = 0; \quad \theta_i + \varphi_i - \alpha_i V\xi_i + \beta_i V\varphi_i + \gamma_i V\chi_i = 0,$$

$$i = (1, 2, \dots, m),$$

and the kinetic energy of the system is given by

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UDC: 531

ACC NR: AP6032847

$$\frac{d}{dt} \frac{\partial T}{\partial \dot{q}_j} - \frac{\partial T}{\partial q_j} = Q_j + \sum_{i=1}^m \left(\frac{\partial U}{\partial \xi_i} \frac{\partial \xi_i}{\partial q_j} - \frac{\partial U}{\partial \chi_i} \frac{\partial \chi_i}{\partial q_j} + \frac{\partial U}{\partial \varphi_i} \frac{\partial \varphi_i}{\partial q_j} \right)$$

$$(j = 1, 2, \dots, n).$$

These equations are then simplified by using the assumption of very large speed V . This leads to the result

$$\ddot{x}_i + \frac{1}{\beta_i} \dot{\theta}_i = - \frac{\alpha_i}{\beta_i} V \xi_i + \frac{\gamma_i}{\beta_i} V \chi_i - V \theta_i.$$

Three more equations are derived by taking the derivative of the potential energy U , with respect to the three coordinates ξ_i , χ_i , φ_i . These equations are then designated as generalized lead-angle hypotheses. As an example, the vibration of an airplane chassis with three pneumatic wheels is discussed. This paper was presented by Academician A. Yu. Ishlinskiy on 23 December 1965. Orig. art. has: 15 equations.

SUB CODE: 13 / SUBM DATE: 23Dec65/ ORIG REF: 008/ OTH REF: 006

Card 2/2

ACC NR: AP6036752

SOURCE CODE: UR/0020/66/001/0044/0047

AUTHORS: Neymark, Yu. I.; Fishman, L. Z.

ORG: Scientific Research Institute of Applied Mathematics and Cybernetics at Gor'kiy State University imeni N. I. Lobachevskiy (Nauchno-issledovatel'skiy institut prikladnoy matematiki kibernetiki pri Gor'kovskom gosudarstvennom universitete)

TITLE: On the overall behavior of phase trajectories of quasilinear differential equations with lagging arguments

SOURCE: AN SSSR. Doklady, v. 171, no. 1, 1966, 44-47

TOPIC TAGS: ordinary differential equation, partial differential equation, nonlinear equation

ABSTRACT: The overall behavior of phase trajectories is studied in a dynamic system described by the quasilinear differential equations with lagging arguments given by

$$\dot{x} = A_0 x + A_1 x(t - \tau_1) + \dots + A_m x(t - \tau_m) + \mu f(t; x(t), x(t - \tau_1), \dots, x(t - \tau_m)),$$

where x is an n -dimensional vector, the A_i are constant matrices, the τ_i are constant lag times, and μ is a small parameter. For the special case when $A_1 = A_2 = \dots = A_m = 0$, the equation above satisfies the equation

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UDC: 517.9

ACC NR: AP6036752

$$z(t) = e^{\lambda(t-t_0)} \varphi(0) + \mu \int_0^t e^{\lambda(t-v)} f(v, z(v), \dots, z(v-\tau_m)) dv.$$

It is then shown that for small μ , the system described by the first equation leads to a set of 2-nd order independent equations obtained by averaging over the equation

$$\dot{\xi}_k = p_k \xi_k + \mu \psi(p_k) f(t, \sum \xi_k(t) + \eta(t), \dots, \sum \xi_k(t-\tau_m) + \eta(t-\tau_m))$$

(k = 1, 2, ..., s).

where $\eta(t) = 0$, and the quantity $\xi_k(t-\tau_j)$ is substituted by $e^{-p_k \tau_j} \xi_k(t)$. This paper was presented by Academician I. G. Petrovskiy on 21 January 1966. Orig. art. has: 14 equations.

SUB CODE: 12/ SUBM DATE: 15Jan66/ ORIG REF: 009/ OTH REF: 001

NEIDMAIER, Karl Frantsevich.

Forging, stamping and equipment of black-smith shops Moskva, Gos. nauch.-tekhn. izd-vo
lit-ry po cherno i tsvetnoi metallurgii, 1945. 403 p. (49-56726)

TS225. N4

NEYMER, it.

A scientific basis is needed for improving the administrative apparatus. Sots.trud 4 no.7:126-127 J1 '60. (MIRA 13:8)

1. Nachal'nik planovogo otdela Aktyubinskogo khimicheskogo kombinata im. S.M.Kirova.
(Aktubinsk--Chemical industries)

NEYMER, Yu.L.

In defense of the branch principle. NTI no.1:11-12 '65.

(MIRA 18:6)

KHAMRABAYEV, I. Ya.; ... , ... , ... : N. IM ... , I. Ya.

Distribution of rare and minor elements in certain igneous rock
massifs of western Kazakhstan. In: Vses. min. ob- ... : 151
13-39-143. (MIRA 17/10)

DEMIDYUK, P.; CHERNETSKIY, G.; NEYMS, A.

In the struggle for the title of enterprise, shop, brigade,
and shock worker of communist labor. Muk.-elev. prom.
28 no.7:22-24 JI '62. (MIRA 15:9)

1. Umanskaya realizatsionnaya baza Cherkasskoy oblasti (for
Demidyuk, Chernetskiy). 2. Nizhnetagil'skiy mel'nichnyy
Kombinat (for Neyms).

(Grain handling)

DANCHEV, V.I.; KORNILOV, A.M.; NEYMYSHEV, M.V.; OL'KHA, V.V.;
PROSHLYAKOV, B.K.; STRELYANOV, N.P.; SYTMIKOV, M.P.

Uranium mineralization in carbonate sedimentary rocks.
Geol.rud.mestorozh. no.6:27-38 N-D '59. (MIRA 13:7)
(Uranium ores)

NEYMYSHEV, M.V.

Sinter formations of water iron oxides from mine waters in
the Sary-Biya (northern Fergana). Zap. Kir. otd. Vses. min.
ob-va no.5:97-100 '65.

(MIRA 13:7)

5(3)

SOV/79-29-5-18/75

AUTHORS:

Petrov, K. A., Keymysheva, A. A., Smirnov, Ye. V.

TITLE:

Anhydrides of Phosphono Isobutyric Acid. 3 (Angidridy fosfonizomaslyanoy kisloty. 3)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 5, pp 1491 - 1494 (USSR)

ABSTRACT:

In the present paper acid monochlorides of phosphono isobutyric acid esters as well as inner cyclic phosphono-carboxylic anhydrides were described. The synthesis of P-acid-monochlorides was carried out by interaction of phosphorus pentachloride with phosphono isobutyric acid esters. The yields of acid chlorides are satisfactory if the reaction takes place in an inert solvent, at 60 - 70° and at a molar ratio of the reactants of 1:1. With excess phosphorus pentachloride and at higher temperature a mixture of P-acid monochlorides and P-acid dichlorides was formed from which it was impossible to isolate the P-acid monochloride by fractional distillation. According to the abovementioned method acid chlorides of the dimethyl-, diethyl- and ethylbutyl esters of the phosphono isobutyric acid were obtained. Acid chlorides of diesters of the phosphono isobutyric acid are

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Anhydrides of Phosphono Isobutyric Acid. 3

SOV, 79-29-5-1-170

colorless liquids which can be distilled at low pressure only. They hydrolyze comparatively easily with water. Their thermal stability increases with an increasing number of carbon atoms in the ester group. During the reaction of the trimethyl ester of the phosphono isobutyric acid with PCl_5 at 70° in addition to the acid chloride another substance is separated with the melting point of $101 - 102^\circ$. It contains no chlorine and differs from the initial ester by its constants. These compounds can be formed because of an intramolecular separation of methyl chloride from the acid chloride of the dimethyl ester of the phosphono isobutyric acid. The acid chloride of the diethyl ester of the phosphono isobutyric ester also decomposes on continuous heating up to $150-170^\circ$ and ethyl chloride and an inner anhydride of the P-ethyl ester of the phosphono isobutyric acid are formed. The inner anhydrides of P-phosphono isobutyrate readily hydrolyze with water and yield two-basic acids the titration of which consumes exactly 2 equivalents of alkali. The P-methyl-phosphono isobutyric acid methyl-ester was separated in the form of a silvery salt. On alkylation of this salt with methyl iodide the authors obtained trimethyl esters of the phosphono isobutyric acid.

SUBMITTED:
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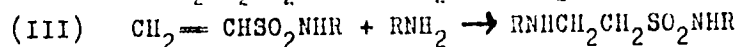
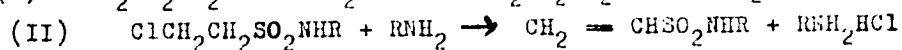
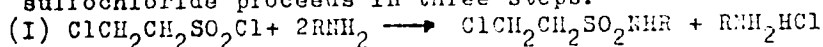
March 20, 1958

5(3)

SOV/79-29-5-19/75

AUTHORS: Petrov, K. A., Neymysheva, A. A.TITLE: Reaction of Aliphatic Amines With β -Chloro-Ethane-Sulfochloride
(Reaktsiya alifaticheskikh aminov s β -khloretansul'fokhloridom)PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 5,
pp 1494 - 1496 (USSR)

ABSTRACT: In the present paper the conditions were investigated under which by the action of dimethyl- and diethyl amine upon β -chloro-ethane-sulfochloride vinyl-sulfodialkyl-amides and dialkyl-amino-ethane-sulfodialkyl-amides are formed. The yields are about 50%. The reaction was carried out in ether or chloroform at different temperatures (from -10 up to +60°) and at a molar ratio of sulfochloride : amine = 1:3. In all cases identical products were obtained. Probably the reaction of amines with β -chloro ethane-sulfochloride proceeds in three steps:



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Reaction of Aliphatic Amines With β -Chloro-Ethane-Sulfochloride

SOV/79-29-5-12/75

From data published and the results obtained in this study it may be concluded that the reactions (I) and (II) proceed with a high rate. The reaction rate of (III) depends on the character of the amine. Dialkyl-amino-ethane-sulfodialkyl-amides were also obtained by the addition of dialkyl amines to vinyl-sulfodialkyl-amides at room temperature. There are 5 references, 1 of which is Soviet.

SUBMITTED: March 20, 1958

Card 2/2

Combination of Dialkyl Phosphorous Acids With the
Alkyl Isothiocyanates

SOV/79-29-6-10/72

phosphono-thioformic acid can only be distilled after washing the reaction mass with water. The reaction of the phosphites with isothiocyanates was carried out with methyl and allyl-isothiocyanates. In the latter case the addition took place both at the C=C and at the N=C bond. In the first case the esters of the γ -isothiocyanate propyl phosphinic acid must be formed, in the second the esters of the allyl-amido-phosphono-thioformic acid (Scheme 2). The latter esters are determined by hydrolysis of the reaction products with hydrochloric acid, in which connection phosphoric acid is obtained, as was expected, which was separated in the form of the trianiline salt. The alkyl-amido-phosphono-thioformates are viscous, yellow liquids with a strong unpleasant odor, which are easily soluble in organic solvents. When heated with hydrochloric acid (1 : 1) they are hydrolyzed to give ortho-phosphoric acid. The constants of the compounds synthesized are given in the table. There are 1 table and 6 references, 3 of which are Soviet.

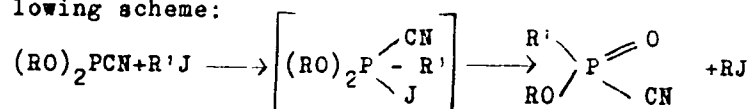
Card 2/3

AUTHORS: Petrov, K. A.; Gatsenko, L. G., SOV/79-29-6-12/72
 Neymysheva, A. A.

TITLE: Esters of the Alkyl-cyano-phosphinic Acids (Efiry alkiltstan-fosfinovykh kislot)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 6, pp 1827 - 1831 (USSR)

ABSTRACT: In addition to the authors' papers (Ref 1) the influence exercised by the alkyl halides upon the dialkyl-cyano-phosphites was investigated in this paper. The authors assumed that this reaction takes place according to the rearrangement of Arbuzov, and esters of the alkyl cyano-phosphinic acids were to be expected which was confirmed experimentally according to the following scheme:



n.-propyl-methyl-cyano-phosphinate was thus formed under pressure at 160° within 8-10 hours from di-n.-propyl-cyano-phosphite with the 3-4 fold quantity of methyl iodide, the structure of

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Esters of the Alkyl-cyano-phosphinic Acids

SOV/79-29-6-12/72

which was confirmed by the analysis (80% yield). Chlorine, when reacting with it in the presence of an equimolar quantity of PCl_3 , yields methyl-phosphinic acid-dichloride the constants of which are in agreement with the data published (Ref 2) (Scheme 2). The synthesis suggested of the alkyl-cyano-phosphinates is of general character. These esters are colorless liquids, soluble in organic solvents and hydrolyze readily with water and alkali lyes. The dialkyl-cyano-phosphites used as initial products were obtained by substitution of the CN-group for the chlorine in the dialkyl-chloro-phosphites by means of silver cyanide in ether on heating. Alkyl-cyano-phosphites are liquids of unpleasant phosphine odor, soluble in organic solvents, which form solid complex salts with cuprous chloride. There are 3 references, 1 of which is Soviet.

SUBMITTED: March 20, 1958

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5(3)

AUTHORS: Petrov, K. A., Neymysheva, A. A. SOV/79-29-7-15/83

TITLE: Carbylaminoaldehydes (Karbilamingalogenidy). I. Aliphatic Carbylaminochlorides (I. Alifaticheskiye karbilaminkhlordiy)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2165-2168 (USSR)

ABSTRACT: According to references 1,2,3, only β -chloroethyl and trichloro methyl carbylaminochloride are known among the little investigated aliphatic carbylaminochlorides, which, however, are also little investigated. In the present paper the hitherto unknown methyl carbylaminochloride and the intermediate products obtained by an improved method in the synthesis of trichloro methyl carbylaminochloride as well as some properties of aliphatic carbylaminochlorides are described. Methyl carbylaminochloride was obtained by the chlorination of methyl isothiocyanate in ether at 0°. The authors used its characteristic property, i.e. to free iodine from acidified solutions of potassium iodide, (1 mol : 1 mol), for a quantitative determination of methyl-, ethyl-, and β -chloro ethyl carbylaminochloride. This process is shown by a scheme. Aromatic carbylaminochlorides in this case separate no iodine,

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Carbylaminohalides. I. Aliphatic Carbylaminochlorides SOV/79-29-7-15/83

in contrast to aliphatic carbylaminochlorides. In this respect trichloro methyl carbylaminochloride occupies an intermediate position between aliphatic and aromatic compounds. In contrast to aromatic carbylaminochlorides, methyl- and trichloromethyl carbylaminochloride do not react with H_2S ; with sodium and copper sulphides in solutions they react only at higher temperatures (above 100°). In the action of aniline on trichloro methyl carbylaminochloride always a complete substitution of chlorine atoms takes place. From the reaction products probably the guanidine derivatives (I) and (II) with equal empirical formulas were obtained, however, they were not further investigated. The syntheses of trichloro methyl mercaptan described in publications (Refs 3, 4) are very complicated and produce low yields. By modifying Milton's synthesis (Ref 4) it was possible to increase considerably the yield, i.e. by reducing the amount and concentration of nitric acid as well as by longer heating of the reaction mass (see experimental part). There are 8 references.

SUBMITTED: March 20, 1958

Card 2/2

5(3)

AUTHORS:

Petrov, K. A., Neymysheva, A. A.

SOV/79-29-7-16/83

TITLE:

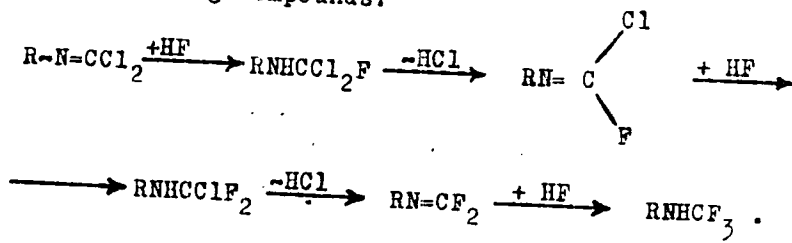
Carbylaminoalides (Karbilingalogenidy). II. Synthesis of Secondary Amines With a Trifluoromethyl Group (II. Sintez vtorichnykh aminov s trifortmetil'noy gruppy)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2169-2173 (USSR)

ABSTRACT:

This synthesis was carried out by the authors by reaction of hydrogen fluoride with carbylaminochlorides. Secondary amines with a trifluoro methyl group on the nitrogen are formed as a consequence of the subsequent affiliations of HF to carbylaminoalides and the separation of hydrogen chlorine from the corresponding compounds:



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Carbylaminochlorides. II. Synthesis of Secondary Amines SOV/79-29-7-16/83
With a Trifluoromethyl Group

Carbylaminochlorides react rigorously with HF at low temperature; in this connection, according to the reaction conditions, secondary amines or polymers of carbylaminochlorides are formed. The reaction of hydrogen fluorides with phenyl, p-tolyl-, β -chloroethyl-, and trichloromethyl carbylaminochloride led to the following compounds: phenyl trifluoromethylamine (68,5 %), p-tolyltrifluoromethylamine (70 %), hexafluorodimethylamine (85 %), and acid fluoride of β -chloroethylcarbamic acid. In the reaction of aniline with phenyl trifluoromethylamine only one fluorine atom is replaced by the aniline residue, and only by the action of water diphenyl urea is formed (Scheme 2). The ease with which hexafluorodimethylamine is formed in the reaction of HF with trichloromethylcarbylaminochloride is explained by scheme 3. In the energetic reaction of β -chloroethyl carbylaminochloride with HF at low temperature, without solvent and with an excess of HF, difficultly separable polymers of β -chloroethyl carbylaminochlorides are formed. In the action of aniline on acid fluoride phenyl- β -chloroethyl urea is formed. The hydrolysis of

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Carbylaminoaldehydes. II. Synthesis of Secondary Amines SOV/79-23-7-16/83
With a Trifluoromethyl Group

hexafluorodimethylamine is illustrated by scheme 4.
There are 5 references, none of which is Soviet.

SUBMITTED: March 25, 1958

Card 3/3

5(3)

AUTHORS:

Petrov, K. A., Neymysheva, A. A.

SOV/79-27-8-55/81

TITLE:

Carbylamine Halides . III. A New Method of Synthesizing Carbyl-
amino-fluorides

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2695-2698 (USSR)

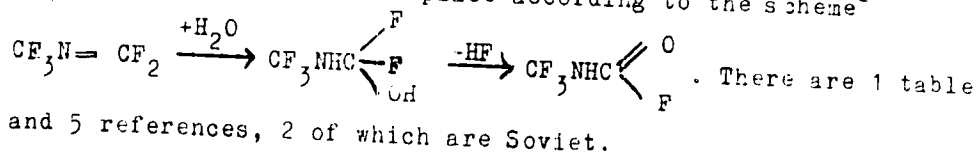
ABSTRACT:

The syntheses of carbylamino-fluorides according to R. N. Haszeldine (Ref 2) and others are of limited value since they only yield perfluoro-alkyl-carbylamino-fluorides, and cannot be applied to the synthesis of carbylamino-fluorides which contain a non-fluorinated radical which is directly bound to the nitrogen. The carbylamino-fluorides already known are listed in the table. In the present paper, a new method of synthesizing the carbylamino-fluorides is described which is based on the splitting-off of hydrogen fluoride from secondary amines containing a trifluoro-methyl group. Such amines can be synthesized (Ref 3) by reaction of the carbylamino-chlorides with hydrogen fluoride. Phenyl-trifluoro-methylamine and hexafluoro-dimethylamine were dehydrofluorinated. On heating the former with potassium fluoride up to 140-150° without a solvent for 4-5 hours, the phenyl-carbylamino-fluoride is formed. It boils at 49° (12 mm Hg), and is rather well preserved in a closed container, also without a sta-

Cara 1/2

Carbylamine Halides. III. A New Method of Synthesizing Carbylamino-fluorides SOV/79-29-8-55/81

bilizer. On heating with quinoline, no hydrogen fluoride is split off. By passing the hexafluoro-dimethylamine vapors three times through a glass tube filled with granulated KF (9 mm diameter) at 140-150°, trifluoro-methyl-carbylamino-fluoride is obtained (70% yield) in addition to a product of unknown nature (Experimental Part). Attempts to obtain carbylamino-fluorides by substitution of fluorine for chlorine in carbylamine chlorides by means of different metal fluorides, were unsuccessful. The trifluoro-methyl-carbylamino-fluoride boils at -32-33°, reacts vigorously with amines, hydrolyzes with water to form CO₂, F⁻ and NH₄⁺. This hydrolysis takes place according to the scheme



SUBMITTED: March 25, 1958

Card 2/2

5(3)

SOV/79-29-9-46/76

AUTHORS: Petrov, K. A., Weynysheva, A. A.

TITLE: Synthesis of the Derivatives of Phosphorosulfonic Acids

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 3026-3030
(USSR)

ABSTRACT: Apart from a patent describing the synthesis of trimethyl phosphonosulfonates by reacting trialkyl phosphites with sulfones (Ref 1), the phosphonosulfonic acids are only little investigated. In the present paper the synthesis of similar compounds is made by the addition of dialkyl phosphites to the derivatives of vinyl sulfonic acid. Esters, dialkylamides and the fluoride of vinyl sulfonic acid were used for the reaction with phosphites; however, not in all cases derivatives of ethylene phosphonosulfonic acid resulted. The dialkyl phosphites add the dialkyl amides of vinyl sulfonic acid in the presence of sodium alcoholate in heating to 110° within 6 hours, and esters of dialkylamides of ethylene phosphonosulfonic acid are formed in yields of 60-70%. Unlike dialkylamides the fluoride of vinyl sulfonic acid adds the dialkyl phosphites in the absence of sodium alcoholates. In this connection the introduction of fluorine considerably intensifies the activity of

Card 1/3

SOV/79-29-9-46/76

Synthesis of the Derivatives of Phosphonosulfonic Acids

the double bond. The reaction takes place at 110° according to the scheme $(RO)_2POH + CH_2=CHSO_2F \rightarrow RO_2P(=O)(CH_2CH_2SO_2F)$. In the

action of di-(β-chloropropyl)-disulphide on sodium diethyl phosphate, diethyl-S-β-chloropropylphosphate (Scheme 2) resulted instead of the expected compound. Di-(β-chloropropyl)-disulphide reacts with triethyl phosphite under the formation of triethyl thiophosphate. The synthesized S-dialkylamides and S-acid fluorides of the diesters of ethylene phosphonosulfonic acid have hitherto not been described in publications. In the reaction of KF with chlorosubstituted compounds especially with such having a mobile chlorine atom a substitution of the chlorine atom by fluorine takes place at the beginning in a dehydrochlorination and the following fluoride is formed: $CH_2ClCH_2R + KF \rightarrow CH_2FCH_2R + KCl$. Hydrogen fluoride is separated by KF and thus compounds with a double bond are formed. $CH_2FCH_2R + KF \rightarrow CH_2=CHR + KF.HF$. Thus in this case a dehydrofluorination takes place instead of dehydrochlorination as was

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Synthesis of the Derivatives of Phosphonosulfonic Acids SOV/79-29-9-46/76

hitherto assumed. There are 5 references, 1 of which is Soviet.

SUBMITTED: July 31, 1958

Card 3/3

5(3)

SOV/79-29-9-47/76

AUTHORS:

Petrov, K. A., Neyzlyshera, A. A.

TITLE:

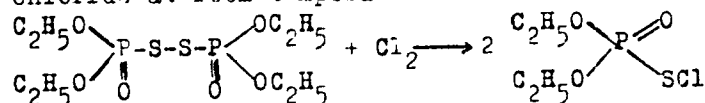
S- Chlorodiethyl Thiophosphate

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 3030-3032
(USSR)

ABSTRACT:

The present paper deals with the synthesis of S-chlorodiethyl thiophosphate and its properties. It is made by cleaving tetraethyl bithiophosphate (Ref 1) with chlorine or sulphuryl chloride at room temperature.



S-chlorodiethyl thiophosphate is unstable, it loses the chlorine rather rapidly and passes into an undistillable liquid. It shows strong similarity with sulphene chlorides with respect to its chemical properties and its reactivity. Thus it separates iodine from acidified potassium iodide solutions and passes into disulphide (Scheme 2). It adds to ethylene and cyclohexene and reacts with diazomethane under the formation of

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SOV/79-29-9-47/76

S-Chlorodiethyl Thiophosphate

O,O-diethyl-S-β-chloroethyl phosphate and similar compounds. Like the sulphene chlorides (Ref 3) it reacts with dialkyl phosphites. The reaction with diethyl phosphite yields tetraethyl thiopyrophosphate (Scheme 3). The assumed structure of tetraethyl thiopyrophosphate agrees with the data of the preceding paper, where it was shown that sulphene chlorides which have the same functional S-Cl-group as S-chlorodiethyl thiophosphate react with acid and neutral phosphates under the formation of thioesters of phosphoric acid i.e. thiol phosphates (Ref 3). Opinions diverge concerning the above thiopyrophosphate. Thus tetraethyl thiopyrophosphate which is obtained by the reaction with H₂S with diethyl chlorophosphate and pyridine is ascribed to a² thiol structure (Ref 5). It is ascribed the same structure if it forms due to the action of sulfur dichloride on diethyl phosphite (Refs 6,7). According to G. Schrader it has a thion-structure (Ref 8) (Scheme 4). A. Ye. and B. A. Arbuzov assume also that tetraethyl thiopyrophosphate synthesized by different methods has a thion structure because - in spite of the different method of production - it shows the same constants. There are 9 references, 4 of which are Soviet.

Card 2/3

87534
S/079/60/030/012/019/027
B001/B064

53630

AUTHORS: Petrov, K. A., Maklyayev, F. L., Neymysheva, A. A., and Bliznyuk, N. K.

TITLE: Synthesis of N-Chloro Phosphamides

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 12, pp. 4060 - 4064

TEXT: The authors synthesized various N-chloro phosphamides and developed a general method. The initial phosphamides were obtained by reacting the amine with the corresponding acid chlorides in ether or chloroform (Refs.2-4). Table 1 lists the constants of the hitherto unknown initial phosphamides. The substitution of chlorine for the hydrogen atoms in the alkyl amide group of phosphamide took place under the action of an excessive alkaline solution of sodium hydrochlorite upon the chloroform solution of the respective phosphamide. The dichloro amides were obtained by chlorination of phosphamide with gaseous chlorine in the presence of sodium acetate or zinc oxide in carbon tetrachloride. The N-chloro phosphamides are obtained by extracting the reaction mass

Card 1/3

Synthesis of N-Chloro Phosphamides

87534
S/079/60/030/012/019/027
B001/B064

with chloroform or CCl_4 , by drying the extracted product, and thorough removal of the solvent at room temperature in vacuum (without subsequent distillation). The diphenyl amido phosphate which is insoluble in water and CCl_4 , was chlorinated with gaseous chlorine in a mixture of CCl_4 and water (1 : 2) in the presence of an excess of sodium acetate. All N-chloro phosphamides have a strong odor, yellowish liquids, soluble in organic solvents (some of them in water). Under the action of a chloroform solution of N-chloro phosphamide upon a potassium iodide solution in acetic acid medium, iodine is quantitatively separated, which is titrated with hyposulfite; thus, it is possible to determine active chlorine. N-chloro phosphamides (derivatives of methyl phosphinic acid) proved to be the least stable. They decompose already after 24 h, the content of active chlorine being reduced by 1-2%. N-chloro methyl-amido diphenyl phosphate in which the chlorine content did not change during 25 days, proved to be the most stable. The content of active chlorine in N-dichloro dimethyl diamido phenyl phosphate was reduced by 3% within 30 days. The constants of the N-chloro phosphamides are given in Table 2. V. I. Viryukin (1956), V. M. Grigor'yev (1957), and O. A. Pan'shin (1957)

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Synthesis of N-Chloro Phosphamides

87534
S/079/60/030/012/019/027
B001/B064

took part in the experiments. There are 2 tables and 4 references:
1 Soviet, 1 US, 1 British, and 1 German.

SUBMITTED: February 15, 1960

X

Card 3/3

89515

53630

S/079/61/031/002/008/019
B118/B208

AUTHORS: Petrov, K. A., Neymysheva, A. A., Fomenko, M. G.,
Chernushevich, L. M., and Kuntsevich, A. D.

TITLE: Reaction of N-chloroimides of carboxylic acids with trialkyl-,
halogen-, and cyano phosphites

PERIODICAL: Zhurnal obshchey khimii, v. 31, no. 2, 1961, 516-522

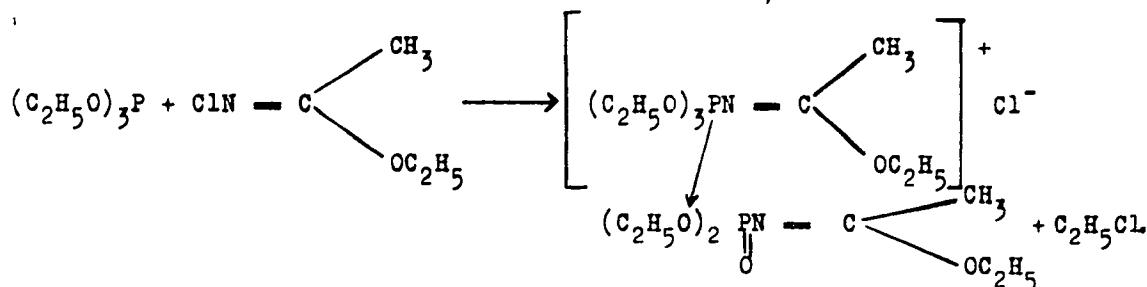
TEXT: The authors studied the reaction of N-chloroimides of esters of acetic
and carboxylic acids with trialkyl-, halogen-, and cyano phosphites. Con-
trary to the vigorously reacting sulfene chlorides, chloroamines, and alkyl
hypochlorites, the reaction of N-chloroethyl acetamide with triethyl
phosphite proceeds smoothly and with little heat evolution. Separation of
ethyl chloride occurs only on prolonged heating at 60-70°C. This reaction
probably takes place in two stages: ✓

Card 1/4

89515

S/079/61/031/002/008/019
B118/B208

Reaction of N-chloroimides ...



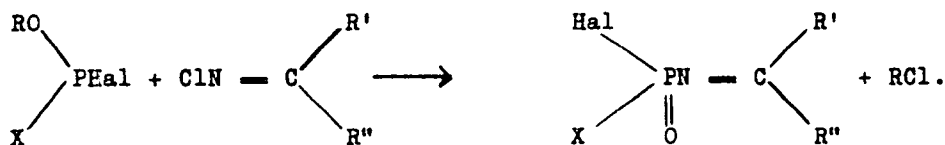
The free phosphonium compound was not obtained. Chloroimides of carboxylic acid esters react more vigorously with phosphites; main products are the esters of dialkoxy-methylenamide of phosphoric acid. The chloroamides react with dialkyl chloro and dialkyl fluoro phosphites, alkyl dichloro and alkyl difluoro phosphites in a similar manner, giving the corresponding halogen amidophosphates in yields of between 27.5 and 70.5%

Card 2/4

89515

S/079/61/031/002/008/019
B118/B208

Reaction of N-chloroimides ...



Dialkyl fluoro phosphites give with chloroimides rather stable phosphonium compounds. Prolonged heating of the phosphonium compounds reduces the yield of fluoro phosphates; the reaction mixture was, therefore, distilled in vacuum after heating for 1-2 hr at 40-50°C. The fluoro amidophosphates are thermostable and are slowly hydrolyzed with water. When treating difluoro amidophosphates with aqueous alkali lyes at low temperatures, only one fluorine atom is hydrolyzed. On the action of a calculated quantity of sodium alcoholate in the solvent, only one fluorine atom is substituted by the alkoxy radical. Chloro amidophosphates are not thermostable, contrary to fluoro amidophosphates, distill only in high vacuum, and are easily hydrolyzable even at room temperature. When treating chloro amidophosphates with potassium cyanate in water at 5°C, the cyano group is substituted for chlorine, in addition to hydrolysis; in this way, the ethyl ester of

X

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S/079/61/031/002/008/019
B118/B208

X

Reaction of N-chloroimides ...

diethoxy-methylenamide of cyano phosphoric acid results in a 20% yield. By reacting chloroimides with cyano phosphites, cyano amidophosphates are obtained according to Arbuzov's rearrangement (Ref. 2) in yields between 30 and 50%. Dialkoxymethylenamides of dicyano phosphoric acid are unstable and decompose with separation of gaseous products. There are 1 table and 4 references: 2 Soviet-bloc.

SUBMITTED: February 15, 1960

Card 4/4

PETROV, K.A.; NEYMYSHEVA, A.A.; DOTSEV, G.V.; VARICH, A.G.

Reactions of sulfenyl chlorides and N-chloramines with phosphorus trichloride, dichlorophosphines, and red phosphorus. Zhur. ob. khim. 31 no.4:1366-1371 Ap '61. (MIRA 14:4)

(Chloramine) (Sulfenyl chloride)
(Phosphorus organic compounds)

BYSTROV, V.F.; NEYMSHEVA, A.A.; STEPANYANTS, A.U.; KNUNYANTS, I.L.,
akademik

Additive relations for chemical shifts in magnetic resonance
spectra on F nuclei of fluophosphates and fluophosphonates.
Dokl. AN SSSR 156 no. 3:637-640 '64. (MIRA 17:5)

1. Minstitut khimicheskoy fiziki AN SSSR i Voyennaya akademiya
khimicheskoy zashchity.

NEFYMSHEVA, A.A., kand. khimicheskikh nauk

Letter to the editors. Zhur. VHKO 10 no.3:348-349 '65.
(MIRA 18:9)

L 31795-66

EWT(m)/EWP(j) RM

ACC NR: AP6021685

SOURCE CODE: UR/0079/66/036/003/0500/0506

AUTHOR: Keylyzhova, A. A.; Savchuk, V. I.; Knuryants, I. L.

ORG: none

TITLE: S-alkylthiophosphonic acids and their derivatives. I. Influence of induction and conjugation on the dissociation constants of the acids

SOURCE: Zhurnal obshchey khimii, v. 36, no. 3, 1966, 500-506

TOPIC TAGS: phosphonic acid, nonmetallic organic derivative, conjugate bond system, dissociation constant, substituent, organic sulfur compound, chlorinated organic compound

ABSTRACT: A series of thioesters of alkylthiophosphonic and arylthiophosphonic acids were produced for the first time by the action of water on benzene solutions of the corresponding thiolchlorophosphates. Acid thioesters of alkyl- and arylthiophosphonic acids are thermally unstable compounds, in contrast to their oxygen analogs; S-alkylalkyl- and S-alkylarylthiophosphonic acids are stronger acids than their oxygen analogs. The dissociation constants of the acids were determined and were found to depend not only on the inductive influence of substituents, but also on the ability of the atoms or groups of atoms bonded to the phosphorus to participate in conjugation with the vacant 3d-level of the phosphorus atom. The influences of induction and conjugation upon the dissociation constants of the acids are discussed. Orig. art. has: 6 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 19Apr65 / ORIG REF: 005 / OTH REF: 007

Card 1/1

UDC: 547.419.1+543.257.1

L 06501-67 EWP(j)/EWT(m) RM

ACC NR: AP7000476

SOURCE CODE: UR/0079/66/036/006/1090/1098

NEYMYSHEVA, A. A., KNUNYANIS, I. L.

"Nucleophilic Substitution in the Series of Derivatives of Phosphorus Acids.
I. Kinetics of the Hydrolysis of Chlorides of Dialkylphosphinic Acids" ²⁸

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 6, 1966, pp 1090-1098

Abstract: To explain the increase in the reactivity of organophosphorus compounds with decreasing filling of the d-level of the phosphorus atom due to displacement of the p-electrons of the oxygen atom of the alkoxy-group, as well as the influence of other factors, particularly the steric factors, upon the reactivity of organophosphorus compounds, the authors studied the kinetics of the hydrolysis of a number of chlorides of phosphinic acids and chlorophosphonates. It was found that in addition to the inductive influence and effect of conjugation of atoms or groups of atoms bonded to the phosphorus, a great role in the reactivity of halides of phosphorus acids is played by the steric factor. The reactivity of chlorides of dialkylphosphinic acids varies by three orders of magnitude on account of the change in the entropy factor with a negligible change in the activation energy. Additive ratios of the influence of substituents in the series of phosphinoyl chlorides are observed only in those cases when the significance of steric hindrance is small. Investigations of an extensive number of examples indicated that the influence of substituents

Card 1/2

UDC: 546.18 + 543.878

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1187

L 06501-67

ACC NR: AP7000476

has little effect upon the free energy change. The reactivity of dialkylphosphinoyl chlorides can be described by a Hammett-type equation, considering the additive and crossed factors of influence of the steric factor and hyperconjugation of the alpha-C-H bonds of the substituents with the 3d-orbitals of phosphorus. The sigma constants for alkyl groups, calculated from the rate constants of the hydrolysis of phosphinoyl chlorides, cannot be transferred to the reactivity of chlorophosphonates. The reactivity of chlorophosphonates is determined chiefly by the structure of the hydrocarbon radical bonded directly to the phosphorus atom and depends less upon the structure of the alkoxy radical (an exception being the methoxy group). Orig. art. has: 1 figure, 2 formulas and 6 tables. [JPRS: 37,023]

ORG: none

TOPIC TAGS: alkylphosphine, hydrolysis, chemical kinetics

SUB CODE: 07 / SUBM DATE: 19Apr65 / ORIG REF: 007 / OTH REF: 006

Card 2/2

I 06514-67 EWT(m)/EWP(j) RM
ACC NR: AP7000478

SOURCE CODE: UR/0079/66/036/006/1105/1113

LOSHADKIN, N. A., MARKOV, S. M., POLEKHIN, A. M., NEYMYSHEVA, A. A., MAKLYAYEV,
F. L., KNUNYANIS, I. L.

"Nucleophilic Substitution at the Tetrahedral Phosphorus Atom. III. Relation-
ship between the Structure and Reactivity of Phosphorus-Containing Compounds.
Role of the Vacant 3d-Orbitals of the Phosphorus Atom"

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 6, 1966, pp 1105-1113

Abstract: A study of the alkaline hydrolysis of nitrophenol esters and halides of phosphorus acids indicated that the free energy change is less sensitive to changes in the influence of substituents bonded to the phosphorus atom than the activation energy and steric factor. The effects of changes in the structure of the substituent were investigated: effect of replacement of the oxygen atom in the P=O group by a sulfur atom; effect of the structure of alkyl groups bonded to the phosphorus atom; effect of replacement of an alkyl group bonded to the phosphorus atom by an alkoxy group; effect of structure of the alkoxy group. The standard deviations of the rate constant of hydrolysis, activation energy, and steric factor calculated indicated a significant difference of these quantities, depending upon the structure of the organophosphorus compound. The introduction of substituents capable of participating in $p_{pi}-d_{pi}$ conjugation (RO group) next to the phosphorus atom leads to a relatively

Card 1/2

UDC: 547.18:541.63 + 543.878

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L 06514-67

ACC NR: AF7000478

small, but significant increase in the energy and entropy of activation. The presence of a compensation dependence of the change in the activation energy and entropy of alkaline hydrolysis of nitrophenyl esters and fluorides of phosphorus acids was demonstrated. Orig. art. has: 3 figures and 3 tables. [JPRS: 37,023]

ORG: none

TOPIC TAGS: activation energy, organic phosphorus compound, hydrolysis

SUB CODE: 07 / SUBM DATE: 27Jul64 / ORIG REF: 017 / OTH REF: 019

Card 2/2 LS

MEYLOVA, V.F.; BOBYLEV, P.G., red.; VESKOVA, Ye.I., tekhn.red.

[Experience in fattening swine on collective farms in Chernigov Province] Opyt otkorma svinet v kolkhozakh Chernigovskoi oblasti. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1957. 147 p. (Biblioteka po svinovodstvu, no.1) (MIRA 11:4)
(Chernigov Province--Swine)

NEYFERT, K.V.; GOLOVACHEVSKIY, Yu.A.; SHEVCHENKO, D.N.; SMYSLOV, N.I.

Use of a partially packed absorber with atomized sprayers
in the production of tower acid. Khim. prom. no.5:390-392
My '63. (MIRA 16:8)

MORDKOVICH, B.I.; NEYPERT, K.V.; GROMOV, A.P.; SANDRAK, Ya.R.; ANSO, Ya.Ya.

Lowering nitrogen oxide losses in tower sulfuric acid systems
by means of automatic control. Khim.prom. no.12:832-837 D '61.
(MIRA 15:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut udobreniy i
insektofungitsidov i Khimicheskiy kombinat Maardu.
(Sulfuric acid industry—Equipment and supplies)
(Nitrogen oxide)

MEYPERE, Yu.N.

In the Chechen-Ingush A.S.S.R. the importance of plant protection
is underestimated. Zashch.rast.ot vred. 1 bol. 4 no.1:17 Ja-
F '59. (MIRA 12:2)
(Chechen-Ingush A.S.S.R.--Plants, Protection of)

PETUKHOV, A.F.; NEYPERT, Yu.N.

Put an end to the formal attitude towards an important matter.

Zashch.rast.ot vred.i bol. 4 no.3:16-17 My-Je '59.

(MIRA 13:4)

1. Zaveduyushchiy Velikolukskim punktom sluzhby ucheta i prognozov
(for Petukhov). 2. Korrespondent zhurnala "Zashchita rasteniy ot
vreditel'ey i bolezney" (for Neypert).

(Pskov Province--Plants, Protection of)

NEYPERT, Yu.N. (Odessa)

Self-propelling sprayer. Zashch. rast. ot vred. i bol. 4
no.5:37 S-0 '59. (MIRA 16:1)

(Spraying and dusting equipment)

NEYPERT, Yu.M.

Efficient organizer. Zashch. rast. ot vred. i bol. 5 no.4:17-18 Ap
'60. (MIRA 13:9)

(Khmel'nitskiy Province--Plant protection)
(Voikovskaia, Ekaterina sidorovna)

NEYPERT, Yu.N.

After the reorganization. Zashch. rast. ot vred. i bol. 7 no.1:13-14
'62. (MIRA 15:6)
(Brest Province--Plants, Protection of)

NEYPERT, Yu.N.; FROLYAKINA, Ye.A.

Seminar on plant protection at the Exhibition of Achievements
of the National Economy of the U.S.S.R. Zashch. rast. ot
vred. i bol. 7 no.2:57-59 F '62. (MIRA 15:12)
(Plants, Protection of--Congresses)

NIKULINA, N.K.; LUK'YANENKO, N.M.; NEYPERT, Yu.N.

In Tatarstan. Zashch.rast.ot vred.i bol. 7 no.625-8 Je '62.

(MIRA 15:12)

1. Glavnyy agronom Ministerstva proizvodstva i zagotovok sel'skokhozyaystvennykh produktov RSFSR (for Nikulina).
2. Sekretar' partiynoy organizatsii Ministerstva proizvodstva i zagotovok sel'skokhozyaystvennykh produktov Tatarskoy ASSR (for Luk'yanenko).
3. Korrespondent zhurnalal "Zashchita rasteniy ot vreditel'ey i bolezney" (for Neypert).

(Tatar A.S.S.R.—Plants, Protection of)

NEYPERT, Yu.N.

In the zone of the activity of the Ul'yanovka Regional Administration.
Zashch, rast. ot vred. i bol. 7 no.8:10-12 Ag '62. (MIRA 15:12)
(Ul'yanovka region—Plants, Protection of)

NEYPERT, Yu.N.

Closer to the needs of production. Zashch. rast. ot vred. i bol.
8 no.6:8-10 Je '63. (MIRA 16:8)

(Kalinin Province--Plants, Protection of--Research)

NEYPERT, Yu.N.

Aid of the "Sel'khoztekhnika" machinery operators. Zashch. rast. ot
vred. i bol. 8 no.12:30-32 D '63. (MIRA 17:3)

1. Drogobychskoye proizvodstvennoye upravleniye, L'vovskoy obl.

NYPERT, Yu.N.

This is available to every laboratory of the school. rest. of vrad.
1 vol. 3 no. 1762 (1962). (MIRA 1746,

NEPERT, Yu.N. (Kiyev-Svyatoshenskiy rayon, Kiyevskoy oblasti)

Machinery should be used. Zashch. rast. ot vred. 1 bol. 9

no.8:12 '64.

(MIRA 17:12)

NEYPERT, Yu.

All-Union seminar at the Exhibition of Achievements of the
National Economy of the U.S.S.R. Zashch. rast. ot vred. 1 bol.
10 no.1:57-58 '65. (MIRA 18:3)

TSYGANKOV, A.; KOTOV, E., agronom po zashchite rasteniy; NEYPERT, Yu.

Model plant protection farms. Zashch. rast. ot vred. i bol. 10
no.3:11-15 '65. (MIRA 1965)

1. Nachal'nik Bryanskoy stantsii zashchity rasteniy (for Tsygankov).
2. Sovkhoz "Mar'inskiy", Brasovskogo rayona (for Kotov).

NEYPERT, Yu.

Let's tighten the control over the use of poisons.
Zashch. rast. ot vred. i bol. 10 no.8:5-6 '65.

(MIRA 18:11)

NEYPERT, Yu.

Let's put chemistry in skillful hands. Zashch. rast. ot vred.
1 vol. 10 no.9:2-3 '65. (MIRA 18:11)

NEYPOKOYEVA, T.L.; YAKOVLEV, A.M.

Letters to the editor. Med. sestra 22 no.6:61-63 Je'63.

(MIRA 16:9)

(NURSES AND NURSING—PERIODICALS)

I 33190-66 EWT(1)/EWT(m)/EWP(i)/AII LJP(c) JD/AT

ACC NR: AR6016169

SOURCE CODE: UR/0058/65/000/011/DO03/DO03

AUTHORS: Druzhinin, V. V.; Kurushin, Yu. N.; Men', A. N.; Neysh, V. Ye.; Nikiforov, A. Ye.; Cherepanov, V. I.

TITLE: Contribution to the theory of energy spectra of ²¹paramagnetic ions in certain oxides

SOURCE: Ref. zh. Fizika, Abs. 11D16 ³⁷
B

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 514-519

TOPIC TAGS: paramagnetic ion, spectrum, ION ENERGY

ABSTRACT: Calculations are presented of the energy spectrum of a paramagnetic ion in a crystal with spinel structure in the approximation of the average intracrystal-line field. It is shown that allowance for the field due to the second and farther neighbors can exert an appreciable influence on the interpretation of the spectra of such ions. Quantitative calculation results are presented for Cr³⁺ in MgAl₂O₄ and experimental data on this ion. [Translation of abstract]

SUB CODE: 20

Card 1/1 MC

MEYSHIL'D, V.G.; PANOVKIN, B.N., inzh.; KOKURIN, Yu.L., kand.fiziko-matem.
nauk, otv.red.; NOVICHKOVA, N.D., tekhn.red.

[Radio astronomy; annotated bibliographical index of Russian and
foreign literature, 1932-1958] Radioastronomiia; annotirovannyi
bibliograficheskiï ukazatel' otechestvennoi i inostranoi litera-
tury 1932-1958 gg. Moskva, 1960. 215 p. (MIRA 13:7)

1. Akademiya nauk SSSR. Sektor seti spetsial'nykh bibliotek.
2. Glavnyy bibliograf Biblioteki Fizicheskogo instituta im.
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TITLE: Special Procedures in Manufacturing Housings of Rotary Furnaces and Tube Mills for Cement Works (Osobennosti tekhnologii izgotovleniya korpusov vrashchayuschihsya pechey i trubnykh mel'nits dlya tsementnykh zavodov)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, nr 6, pp 61-63 (USSR)

ABSTRACT: Procedures used in the Siberian heavy engineering plant, "Sibtyazhmash" for welding up the cylindrical housings of rotary kilns and tube mills with diameters of 2.5 and 3.6 m and lengths of up to 75 m using automatic submerged welding equipment are described. The tailoring of sheet is conceived to reduce the number of ring seams. Details of manipulation and the construction of a special machine for cutting the faces are mentioned. There are 2 figures.

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