and leads to higher yields. A further advantage of this method is that it is possible to use also arylsilanes. This is impossible in the case of H_2SO_4 because of the disarylating effect of this acid (Ref 15). It is easy to control the course of the reactions (1) and (4) according to the amount of hydrogen separated. Its rate can be easily controlled by the amount of the catalyst and the temperature of the medium. The mentioned reactions take place with solvents (benzene, toluene, petroleum ether etc) and without solvents (Ref 16). There are 1 table and 16 references, 3 of which are Soviet.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences, USSR)

PRESENTED: December 7, 1958, by A. N. Nesmeyanov, Academician

SUBMITTED: November 4, 1958

ORLOV, N. F., Cand Chem Sci — (diss) "Synthesis of triorganosiloxy-derivatives of elements of the III, IV and V Groups from triorganosilanols and hexaalkyldisiloxanes," Leningrad, 1960, 18 pp (Leningrad State Univ im A. A. Zhdanov)

(KL, 36-60, 113)

ORLOV N F

PHASE I BOOK EXPLOITATION SOV/5035

Vsesoyuznoye soveshchaniye po steklobraznomu sostoyaniyu. 3d, Leningrad, 1959.

Steklobraznoye sostoyaniye; trudy Tret'yego vsesoyuznogo soveshchaniya Leningrad, 16-20 noyabrya 1959 (Vitreous State; Transactions of the Third All-Union Conference on the Vitreous State, Held in Leningrad on November 16-20, 1959) Moscow, Izd-vo AN SSSR, 1960. 534 p. Errata slip inserted. 3,200 copies printed. (Series: Ita: Trudy)

Sponsoring Agencies: Institut khimii silikatov Akademii nauk SSSR. Vsesoyuznoye khimicheskoye obshchestvo imeni D.I. Mendeleyeva and Gosudarstvennyy ordena Lenina opticheskiy institut imeni S.I. Vavilova.

Editorial Board: A.I. Avgustinik, V.P. Barzakovskiy, M.A. Bezborodov, O.K. Botvinkin, V.V.Vargin, A.G. Vlasov, K.S. Yevstrop'yev, A.A. Lebedev, M.A. Matveyev, V.S. Molchanov, R.L. Myuller, Ye.A. Poray-Koshits, Chairman, N.A. Toropov, V.A. Florinskaya, A.K. Yakhkind; Ed. of Publishing House: I.V. Suvorov; Tech. Ed.: V.T. Bochever.

PURPOSE: This book is intended for researchers in the science and technology of glasses.

COVERAGE: The book contains the reports and discussions of the Third All-Union Conference on the Vitreous State, held in Leningrad on November 16-19, 1959.
They deal with the methods and results of studying the structure of glasses, the relation between the structure and properties of glasses, the nature of the chemical bond and glass structure, and the crystallochemistry of glass. Fused silica, mechanism of vitrification, optical properties and glass structure, and the electrical properties of glasses are also discussed. A number of the reports deal with the dependence of glass properties on composition, the tinting of glasses and radiation effects, and mechanical, technical, and chemical properties of glasses. Other papers treat glass semiconductors and soda borosilicate glasses. The Conference was attended by more than 300 delegates from Soviet and East German scientific organizations. Among the participants in the discussions were N.V. Solomin, Ye. V. Kuvshinskiy, Yu.A. Gastev, V.P. Pryanishnikov, Yu. Ya. Gotlib, O.P. Mchedlov-Petrosyan, G.P. Mikhaylov, S.M. Petrov, A.N. Lazarev, D.I. Levin, A.V. Shatilov, N.T. Ploshchinskiy, A.Ya. Kuznetsov, E.V. Degtyareva, O.V. Byurganovskaya, A.A. Kalenov, M.M. Skornyakov, P.Ya. Bokin, E.K. Keller, Ya.A. Kuznetsov, V.P. Pozdnev, R.S. Shevelevich, Z.G. Pinsker, and O.S. Molchanova.
The final session of the Conference was addressed by Professor I.I. Kitaygorodskiy, Honored Scientist and Engineer, Doctor of Technical Sciences. The following institutes were cited for their contribution to the development of glass science and technology Gosudarstvennyy opticheskiy institut (State Optical Institute), Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry, AS USSR), Fizicheskiy institut AN SSSR (Physics Institute AS USSR), Fiziko-tekhnicheskiy institut AN SSSR (Physicotechnical Institute AS USSR), Institut fiziki AN BSSR, Minsk (Institute of Physics, Academy of Sciences, Belorusskaya SSR, Minsk), Laboratory of Physical Chemistry of Silicates of the Institut obshchey i neorganicheskoy khimii AN BSSR, Minsk (Institute of General and Inorganic Chemistry, Academy of Sciences, Belorusskaya SSR, Minsk), Institut vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High Molecular Compounds, AS USSR), Gosudarstvennyy institut stekla (State Institute for Glass), Gosudarstvennyy institut steklovolokna (State Institute for Glass Fibers), Gosudarstvennyy institut elektrotekhnicheskogo stekla (State Institute for Electrical Glass), Sibirskiy fiziko-technicheskiy institut, Tomsk (Siberian Physicotechnical Institute, Tomsk), Leningradskiy gosudarstvennyy universitet (Leningrad State University), Moskovskiy khimiko-tekhnologicheskiy institut (Moscow Institute of Chemical Technology), Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet), Belorusskiy politekhnicheskiy institut Minsk (Belorussian Polytechnic Institute, Minsk), Novocherkasskiy politekhnicheskiy institut (Novocherkassk Polytechnic Institute), and Sverdlovskiy politekhnicheskiy institut (Sverdlovsk Polytechnic Institute). The Conference was sponsored by the Institute of Silicate Chemistry AS USSR (Acting Director - A.P. Gotlib), the Vsesoyuznoye khimicheskoye obshchestvo im. D.I. Mendeleyeva (All-Union Chemical Society imeni D.I. Mendeleyev), and the Gosudarstvennyy ordena Lenina opticheskiy institut imeni S.I. Vavilova (State "Order of Lenin" Optical Institute imeni S.I. Vavilov).
The 15 resolutions of the Conference include recommendations to organize a Center for the purpose of coordinating the research on glass, to publish a new periodical under the title "Fizika i khimiya stekla" (Physics and Chemistry of Glass), and to join the International Committee on Glass. The Conference thanks A.A. Lebedev, Academician, Professor, and Chairman of the Organizational Committee, Ye.A. Poray Koshits, Doctor of Physics and Mathematics, Member of the Organizational Committee, and R.L. Myuller, Doctor of Chemical Sciences, Member of the Organizational Committee. The editorial board thanks I.V. Bartenev, M.V. Vol'kenshteyn, I.I. Demkina, D.P. Dobychin, S.K. Dubrovo, V.A. Ioffe, and B.T. Kolomiyets. References accompany individual reports.

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ORLOV, N. F.

AUTHOR: Syritskaya, Z. M.

S/072/60/000/03/021/023
B003/B000

TITLE: 3rd All-Union Conference on the Vitreous State

PERIODICAL: Steklo i keramika, 1960, Nr 3, pp 43-46 (USSR)

ABSTRACT: The 3rd All-Union Conference on the Vitreous State was held in Leningrad at the end of 1959. It was organized by the Institut khimii silikatov AN SSSR (Institute of the Chemistry of Silicates AS USSR), Vsesoyuznoye khimicheskoye obshchestvo imeni D. I. Mendeleyeva (All-Union Chemical Society imeni D. I. Mendeleyev) and Gosudarstvennyy opticheskiy institut imeni S. I. Vavilova (State Optical Institute imeni S. I. Vavilov). More than 100 reports on the structure of glass, investigation methods of the vitreous state, the mechanism of vitrification and physicochemical and technical properties of glasses were delivered. The Conference was opened by Academician A. A. Lebedev. . . . .

At the 7th meeting, 6 reports dealt with glasses as semi-conductors, 9 with the coloring of glasses and the influence of radiation and 4 reports with technical properties of glasses. . . .
. . . . . V. V. Vargin and T. I. Veynberg, "Coloring of Glasses in Connection With Their Structure". N. V. Vlasova, Ye. I. Galant, A. A. Kefeli, "Absorption Spectrum of the Co^{2+} Ion as Indicator for The Coordination of Boron and Aluminum in Glasses". V. P. Pryanilov and N. V. Borbash reported on the change of the spectral absorption of glasses of simple composition under the influence of gamma rays. G. O. Karapetyan reported on the influence of the structure of glasses on spectral and chemical properties of the Cer-ions. N. F. Orlov reported on the role of the admixtures and the crystalline state of the lattice in the coloring of quartz glass by gamma radiation. L. M. Blyumen and R. L. Shuster reported on the physicochemical nature of pore formation in silicate melts (foam glass, ceramite). Ye. V. Yermolayeva reported on physico-chemical investigations of melts of refractory oxides in a state of equilibrium. I. F. Ponomarev, "The Importance of the Vitreous Phase in the Formation of the Ceramic Body and the Cement Clinker". V. A. Presnov reported on the physico-

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chemical fundamentals of the fusing of glass and metal. The 8th meeting dealt with physical chemistry and mechanical properties of glass. K. S. Yevstrop'yev, G. M. Bartenev and S. K. Dubrovo made comprehensive reports. A. A. Appen reported on the fundamental structural parameters which determine the properties of the glass. A. V. Gladkov, V. A. Batobyl'skaya, V. V. Tarasov reported on research results of the polymeric structure of inorganic glasses. L. I. Demkina reported on peculiarities of the expansion of oxides in silicate glasses. V. G. Slavyanskiy reported on the subject: "The Energy of Covalent Bonds in Glass and Their Role in the Process of the Viscous Flux". Z. M. Syritskaya reported on physico-chemical properties of alumophosphate glasses. Yu. A. Shmidt reported on the dependence of the properties of alkali silicate glasses on the composition. S. N. Shcheglova reported on: "Investigation of the Dependence of the Optical Properties of Phosphate Glasses on the Composition". A. K. Yakhkind reported on the subject: "The Periodic System and the Optical Constants of Glass". M. S. Aslanova reported on: "Mechanical Properties of Glass Fibers". G. M. Bartenev, A. S. Yeremeyeva made a report on the mechanical properties of inorganic glasses in the anomalous interval and on their structure. Ya. I. Koslovskaya reported on the elastic properties of glasses and on the influence of the composition of the glasses on their mechanical

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properties. A. T. Abramyan reported on the subject: "Leaching of Molten Glasslike Basalts by Aqueous Solutions of Acids and the State of the Oxides in the Structure of Glass Basalts". S. M. Brekhovskikh and V. N. Sesorova reported on synthesis and investigation of hafnium silicate glasses. S. K. Dubrovo reported on physico-chemical properties of gallium silicate glasses. V. A. Dubrovskiy and T. S. Dubrovskaya reported on the surface film forming on calcium-sodium glass in the acidic, neutral and basic medium. The following persons reported at the final meeting: V. F. Kokorina on the influence of the alkaline earth oxides on the chemical stability of glasses in a humid atmosphere; L. Ya. Mazelev on vitrification and properties of borate glasses; B. P. Nikol'skiy, Ye. A. Materova and V. V. Moiseyev on the reaction of electrode glasses with solutions. Doctor Vogel and Roetger spoke as guests from Eastern Germany. Academician N. V. Belov, M. A. Bezborodov, I. I. Kitaygorodskiy, and B. K. Keler also spoke at the final meeting.

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38

87122

S/062/60/000/009/003/[illegible]
B023/B064

15.2220

AUTHORS: Orlov, N. F., Dolgov, B. N., and Voronkov, M. G.

TITLE: Tris(triorganosilyl)borate

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 9, pp. 1607-1609

TEXT: In their development of new methods of synthesizing silicon elemental organic compounds, the authors aimed at completing the previous methods of producing triorganosilyl esters of boric acid - tris(triorganosilyl)borate by new methods. Three new methods were developed. They distinguish themselves from the older ones by high yields (80-95%). The first two are based on the reactions of triorganosilanoles with boric anhydride or boric acid:

$$3R_3SiOH + B(OH)_3 \longrightarrow (R_3SiO)_3B + 3H_2O \quad (1)$$

$$6R_3SiOH + B_2O_3 \longrightarrow 2(R_3SiO)_3B + 3H_2O \quad (2)$$

The third method of synthesis is based on the interaction between triorganosilanes and boric acid in the presence of colloidal nickel:

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87122

Tris(triorganosilyl)borate

S/062/60/000/009/009/011
B023/B064

$$3R_3SiH + B(OH)_3 \longrightarrow (R_3SiO)_3B + 3H_2 \qquad (3).$$

The reactions (1) and (2) are based on an uninterrupted azeotropic distilling off of water from the mixture of triorganosilanoles with boric acid or with boric anhydride, containing an inert solvent (benzene) Tris(triorganosilyl)borate was produced according to scheme (3) by heating mixtures of triorganosilane and boric acid in the presence of colloidal nickel, forming in the interaction of nickel chloride with triorganosilane. 6 tris(triorganosilyl)borates were obtained by the three methods of synthesis. 4 of the compounds have hitherto been unknown. There are 1 table and 21 references: 8 Soviet, 6 US, 3 British, 1 German, and 3 Japanese.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences USSR)

SUBMITTED: May 4, 1959

Card 2/2

82296

S/079/60/030/007/010/020
B001/B063

5.3700B

AUTHORS: Orlov, N. F., Voronkov, M. G.

TITLE: Tris(triorganosilyl)phosphates

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 7, pp. 2223-2229

TEXT: The present paper describes new syntheses of tris(triorganosilyl) phosphates on the basis of triorganosilanols, hexaorganodisiloxanes, or triorganosilanes. It was found that these phosphates are formed with a yield of 50% by a reaction of phosphoric anhydride with triorganosilanols according to the following scheme:

$12R_3SiOH + P_4O_{10} \longrightarrow 4(R_3SiO)_3PO + 6H_2O$ (1).

A side reaction, $6R_3SiOSiR_3 + P_4O_{10} \longrightarrow 4(R_3SiO)_3PO$ (2), is to be assumed because of the comparatively high tendency of triorganosilanols to intermolecular condensation with water separation, which is accompanied by the formation of hexaalkyldisiloxanes, with P_4O_{10} acting as a catalyst (Ref. 18). The mechanism of this reaction is illustrated by Scheme (3).

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Tris(triorganosilyl)phosphates

Another synthesis of tris(triorganosilyl)phosphates (yield of 90%), worked out by the authors, is based on a reaction of triorganosilanols with orthophosphoric acid: $3R_3SiOH + H_3PO_4 \rightleftarrows (R_3SiO)_3PO + 3H_2O$ (4) in which the water must be distilled off (Ref. 22). A mechanism of this reaction is suggested in Scheme (5). An attempt to synthesize tris(triethylsilyl) phosphate according to Scheme (7) was unsuccessful, whereas orthophosphoric acid could be reacted with hexaalkyl disiloxanes according to Scheme (8). The mechanism of this reaction is shown in Scheme (9). A new interesting synthesis of tris(trialkylsilyl)phosphates with colloidal nickel acting as a catalyst is shown in reaction (10) in which a side reaction occurs, so that a yield of only 60% is obtained. All tris(triorganosilyl)phosphates obtained are only stable in dry air, whereas moist air splits the SiOP bond. The synthesized products are tabulated. A mechanism of the catalytic action of colloidal nickel is also suggested. There are 1 table and 26 references: 13 Soviet, 7 US, 1 Italian, 3 German, and 2 British.

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82296

Tris(triorganosilyl)phosphates

S/079/60/030/007/010/020
B001/B063

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences USSR)

SUBMITTED: July 11, 1959

IX

Card 3/3

S/661/61/000/006/026/081
D205/D302

AUTHORS: Orlov, N. F., Dolgov, B. N. and Voronkov, M. G.

TITLE: Synthesis of triorganosyloxy-derivatives of boron, titanium, phosphorous and vanadium, from triorgano-silanols and hexaalkyl disiloxanes. Reaction of hexaalkyl disiloxanes with aluminum and titanium halides

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedineniy; trudy konferentsii, no. 6, Doklady, diskussii resheniye. II Vses. Konfer. po khimii i prakt. prim. kremneorg. soyed., Len., 1958. Leningrad, Izd-vo AN SSSR, 1961, 123-126

TEXT: The field of elemental-silico-organic compounds is of practical interest because of the possibility of synthesis of compounds which are similar to inorganic compounds in their thermal stability while being soluble in organic solvents. The syntheses proposed give better yields than those previously described in literature. As to the application of the synthesized compounds, the silico-

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Card

ORLOV, N. F

SOV/6034

PHASE I BOOK EXPLOITATION

Konferentsiya po khimii i primeneniyu fosfororganicheskikh soyedineniy. 2d.
Kazan', 1959.

Khimiya i primeneniye fosfororganicheskikh soyedineniy; trudy (Chemistry and Use of Organophosphorus Compounds; Conference Transactions) Moscow, Izd-vo AN SSSR, 1962. 630 p. Errata slip inserted. 2800 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Kazanskiy filial.

Resp. Ed.: A. Ye. Arbuzov, Academician; Ed. of Publishing House: L. S. Povarov; Tech. Ed.: S. G. Tikhomirova.

PURPOSE: This collection of conference transactions is intended for chemists, process engineers, physiologists, pharmacists, physicians, veterinarians, and agricultural scientists.

COVERAGE: The transactions include the full texts of most of the scientific papers presented at the Second Conference on the Chemistry and Use of

- SECTION

Card 1/14

...ific Research Institute of Plastics, ... for the Industrial Use of Organophosphorus

Card 2/14

Chemistry and the Use of Organophosphorus (Cont.) SOV/6034

The preparation and uses of organophosphorus compounds are discussed, and prospects for obtaining new high-molecular organophosphorus compounds are outlined. Gefter recommends 1) the preparation of new organophosphorus polymers based on oxides of unsaturated tertiary phosphines, 2) the utilization of thermal stability and good mechanical properties of known organophosphorus compounds as a basis for creating new heterochain phosphorus-containing compounds, and 3) application of the latest methods currently used in the chemistry of high-molecular compounds to organophosphorus polymers.

Orlov, N. F., and M. G. Voronkov [Institut khimii silikatov (Institute of Silicate Chemistry, Leningrad)]. New Methods of Synthesis of Triorganosilyl Esters of Orthophosphoric and Alkylphosphonic Acids 212

New methods have been developed for the synthesis of tris-(triorganosilyl)-phosphates $(R_3SiO)_3PO$, bis-(triorganosilyl)methylphosphonates $CH_3(R_3SiO)_2PO$, and organophosphorussilicon polymers based on H_3PO_4 and $CH_3PO(OH)_2$. One method is based on the interaction of

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S/051/62/012/002/016/020
E202/E192

AUTHORS: Byurganovskaya, G.V., and Orlov, N.F.

TITLE: Formation of colour centres in quartz and sodium silicate glasses under the action of gamma radiation

PERIODICAL: Optika i spektroskopiya, v.12, no.2, 1962, 278-284

TEXT: The relations between the absorption bands of quartz glasses and sodium silicate glasses, and the amount of gamma irradiation, were studied together with the effect of traces of cerium, antimony, arsenic, manganese, iron and lead on the properties of these bands. A large number of industrial and experimental glasses were used in the studies of colour centres. The glasses were melted preferably in an oxy-fuel burner. The irradiation was started at ambient temperature. Co^{60}, at 9×10^3 roentgen/hour was used as a gamma source. The spectral absorption of the glasses was measured on a СФ-4 (SF-4) spectrophotometer and expressed as optical density. Quartz glasses showed three characteristic spectral absorption curves. The first, exhibited by glasses melted in reducing conditions or containing large admixtures of elements of Group I and III, had three groups of

strong bands with centroids at 540, 300 and 200-210 mμ. The second, represented by optical quality quartz glasses, had a weak absorption band with a maximum in the visible spectrum, discernible only after a large dose of irradiation (1×10^7 - 1×10^8 roentgen). The third, characteristic of high purity quartz glasses, had only one shortwave UV absorption band with a maximum at 200-210 mμ. The formation of colour centres for all quartz glasses was the same, i.e. requiring doses within the ranges of $(4\text{-}8) \times 10^4$ and $(2\text{-}4) \times 10^6$ roentgen. The silica glasses studied were based on $Na_2O.4SiO_2$ and $Na_2O.3SiO_2$, with the additives of oxides of the above listed elements within 0.1-0.2% w/w. The rate of formation and quantity of colour centres in these glasses were found to be influenced by the additives. All colour centres due to irradiation were of one type only. The anomalies in the relations between the optical absorption and the irradiating dose in glasses containing Fe_2O_3 were not fully explained, but were thought to be due to the traces of contaminants or due to the conditions of melting.

There are 8 figures. SUBMITTED: January 21, 1961

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S/079/62/032/002/008/011
D204/D303

5.3700

AUTHORS: Orlov, N.F. and Voronkov, M.G.

TITLE: Silico-organic esters of methyl phosphinic acid (MPA)

PERIODICAL: Zhurnal obshchey khimii, v.32, no. 2, 1962, 608-612

TEXT: This is a description of the methods of synthesis of the hitherto unknown bis (triorganosilyl) methyl phosphinates, based on interaction of $CH_3P(O)(OH)_2$ with: (1) Triorganosilanols $CH_3P(O)[OSiEt_3]_2$ was prepared in 68% yield from Et_3SiOH (2 moles) and MPA (1 mole), by heating for 2 hrs, removing continuously the water formed. (2) Triorganosilanes $CH_3P(O)[OSiEt_2Me]_2$, $CH_3P(O)[OSiEt_3]_2$, $CH_3P(O)[OSiMe(n\text{-}Pr)_2]_2$, $CH_3P(O)[OSiMe(Ph)_2]_2$ and $CH_3P(O)[OSiEt(Ph)_2]_2$ were synthesized from the corresponding trisubstituted silanes and MPA in the molar ratio of 2 4 1, in presence of colloidal Ni, in 70-90% yields, by heating for [illegible] hr at 130°C. (3) Triorganoalkoxysilanes $CH_3P(O)[OSiEt_3]_2$ and $CH_3P(O)$

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S/079/62/032/002/008/011
D204/D303

Silico-organic esters of ...

$[OSi(Ph)_3]_2$ were obtained from Et_3SiOMe and $(Ph)_3SiOEt$ taken in the molar ratio of silane MPA equal to 2.4:1 and 2:1 respectively, at 60 and 70% yields. The reaction of MPA and tetraethyl disiloxane (1:1 ratio) was catalyzed by colloidal Ni and yielded

$$\left(\begin{array}{ccc} Et & Et & CH_3 \\ | & | & | \\ -Si- & O - Si & - O - P - O - \\ | & | & || \\ Et & Et & O \end{array} \right)_n ,$$

whilst another polymer

$$\left(\begin{array}{cc} CH_3 & CH_3 \\ | & | \\ -O-P-O & Si \\ || & | \\ O & CH_3 \end{array} \right)_n$$

was obtained from an equimolar mixture of MPA and dimethyl diethoxysilane. All the phosphonates with the exception of crystalline $CH_3P(O)[OSi(Ph)_3]_2$, were colorless, high-boiling liquids, readily hydrolyzed by water. The polymers were pale yellow oils. Experimental details are given and physical constants of

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the products are tabulated. There are 1 table and 17 references: 11 Soviet-bloc and 6 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: R.O. Sauer, J.Am.Chem.Soc., 66, 1707, (1944); W.H. Keeber and H.W. Post, J.Org.Ch., 21, 509, (1958); Canadian Pat. 496,623 (1953); Ch.A., 47, 4128, (1953).

ASSOCIATION Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences, USSR)

SUBMITTED March 2, 1961

Card 3/3

S/079/62/032/002/009/011
D204/D303

AUTHORS: Orlov, N.F., Bogatkin, R.A., Sergeyeva, Z.I., and Voronkov, M.G.

TITLE: Interaction of triorganosilanes with carboxylic acids in the presence of colloidal nickel

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 2, 1962, 650-651

TEXT: A short note on the reactions of triethyl silane with carboxylic acid, using colloidal Ni as a catalyst. Monocarboxylic acids reacted giving the corresponding triorganosilyl esthers, in 50-85% yield. Esters of general formula $Et_3SiOCO(CH_2)_n OCOSiEt_3$ were synthesized in 60-80% yields from simple dicarboxylic acids. Colloidal Ni promoted hydrogenation as well as dehydrocondensation, as was shown by the reactions of Et_3SiH with halogenated and unsaturated acids. Monochloracetic acid yielded either $Et_3SiOCOCH_2Cl$ or ($Et_3SiOCOCH_3$ + Et_3SiCl), depending on the molar ratio of the reagents. Unsaturated acids yield hydrogenated

Card 1/2

ORLOV, N.F.; BOGATKIN, R.A.; SERGEYEVA, Z.I.; VORONKOV, M.G.

Interaction of hydroxysilanes with saturated acids in the presence of colloidal nickel. Zhur.ob.khim. 32 no.8:2561-2566 Ag '62. (MIRA 15:9)

(Silane) (Acids, Organic)

ORLOV, N.F.; BOGATKIN, R.A.; SERGEYEVA, Z.I.; VORONKOV, M.G.

Nickel catalyst in the reactions of organosilane hydrides with organic acids. Zhur.ob.khim. 33 no.6:1934-1938 Je '63. (MIRA 16:7)

1. Leningradskiy gosudarstvennyy universitet i Institut khimii silikatov AN SSSR.
(Silane) (Acids, Organic) (Nickel catalysts)

L 34860-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T/EWA(c) Pc-4/Pr-4/Ps-4/Pt-10 WW/RM
ACCESSION NR: AP5008143 S/0286/65/000/005/0022/0022

AUTHOR: Minsker, Ye. I.; Solovey, G. G.; Borisov, M. F.; Orlov, N. F.

TITLE: A method of preparing polyaluminodiorganosiloxanes. Class 12, No. 168689

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 22

TOPIC TAGS: elastomer, polymer, aluminum containing polymer, polysiloxane

ABSTRACT: This Author Certificate introduces an improved preparative method for aluminum-containing polysiloxanes utilizing dihydroxypolydiorganosiloxanes and methylpropylsiloxy-bis-(β-chloroalkoxy)-aluminum and triphenylsiloxydiisopropoxy-aluminum as starting materials. This results in a product with improved thermal stability. [VS]

ASSOCIATION: none

SUBMITTED: 29Dec63 ENCL: 00 SUB CODE: OC,GC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3211

Card 1/1

L 35556-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AP5008146 S/0286/65/000/005/0023/0023

AUTHORS: Orlov, N. F.; Mileshkevich, V. P.; Gefter, Ye. L.

TITLE: A method for obtaining triorganosilanol esters of oximethylphosphinic acid. Class 12, No. 168695

SOURCE: Byulleten' Izobreteniy i tovarnykh znakov, no. 5, 1965, 23

TOPIC TAGS: ester, triorganosilanol, hydroxymethylphosphinic acid, triorganoalkoxysilane

ABSTRACT: This Author Certificate presents a method for obtaining triorganosilanol esters of hydroximethylphosphinic acid. The latter is heated to 100-230C and is subjected to interaction with triorganoalkoxysilanes.

ASSOCIATION: none

SUBMITTED: 13Jan64 ENCL: 00 SUB CODE: OC

NO REF SOV: 000 OTHER: 000

Card 1/1

L 65102-65 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5021973 UR/0286/65/000/014/0024/0024
547.419.1.5.07

AUTHOR: Orlov, N. F.; Mileshkevich, V. P.; Vaynburg, V. M.

TITLE: A method for producing organosilicon esters of chlorinated α- or β-organophosphonic acids. Class 12, No. 172788

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 24

TOPIC TAGS: chlorinated organic compound, organic phosphorus compound, silane esterification, phosphonic acid

ABSTRACT: This Author's Certificate introduces a method for producing organosilicon esters of chlorinated α- or β-organophosphonic acids containing a radial of the RCHCl(CH$_2$) type at the phosphorus atom. Organophosphonyl chlorides are reacted

L 65101-65 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5021972 UR/0286/65/000/014/0024/0024
547.419.1.5.07

AUTHOR: Orlov, N. F.; Volodina, L. N.

TITLE: A method for producing bis-(triorganosilyl)-phosphinates. Class 12, No. 172787

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 24

TOPIC TAGS: organosilicon compound, organic phosphorus compound, silane, phosphorus acid

ABSTRACT: This Author's Certificate introduces a method for producing bis-(triorganosilyl)-phosphinates by interacting monofunctional silanes with phosphorous acid in the presence of heat. A wider selection of raw materials is provided by using triorganoacetoxysilanes.

ASSOCIATION: none

SUBMITTED: 19Jun64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 000 OTHER: 000

Card 1/1 MLR

L 65103-65 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5021974 UR/0286/65/000/014/0025/0025
547.419.5.1.07

AUTHOR: Orlov, N. F.; Mileshkevich, V. P.

TITLE: A method for producing dialkyl-(triorganosilylmethoxymethyl)-phosphinates. Class 12, No. 172789

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 25

TOPIC TAGS: chlorinated aliphatic compound, alkylphosphine, organosodium compound, silane, organosilicon compound

ABSTRACT: This Author's Certificate introduces a method for producing dialkyl-(triorganosilylmethoxymethyl)-phosphinates. Dialkyl-(sodium hydroxymethyl)-phosphinates are interacted with chloromethyltriorganosilanes with the application of heat in an organic solvent.

ASSOCIATION: none

SUBMITTED: 24Jun64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 000 OTHER: 000

Card 1/1

L 2948-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5024970 UR/0286/65/000/016/0033/0033
547.419.1.07

AUTHOR: Orlov, N. F.; Mileshkevich, V. P.; Andronov, Ye. S.

TITLE: Preparation of organosilicon derivatives of hydroxyalkylphosphonic acids. Class 12, No. 173761

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 33

TOPIC TAGS: organosilicon compound, phosphonic acid, phosphonate

ABSTRACT: An Author Certificate has been issued for a preparative method for organosilicon hydroxyalkylphosphonic acid derivatives involving the reaction of phosphonic acid derivatives with alkylchlorosilanes in organic solvents. The method provides for the use of dialkyl(sodiooxymethyl)phosphonates as the phosphonic acid derivatives. [BO]

ASSOCIATION: none

SUBMITTED: 10Jul64 ENCL: 00 SUB CODE: OC,GC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4108

Card 1/1 DP

L 11136-66 EWT(m)/EWP(j) RM

ACC NR: AP6002513 SOURCE CODE: UR/0286/65/000/023/0018/0018

44 55 44 55

INVENTOR: Orlov, N. F.; Kaufman, B. L.

ORG: none

TITLE: Preparation of organosilicon esters of acetophosphonic acid. Class 12, No. 176585

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 18

TOPIC TAGS: organosilicon phosphinates, synthetic material

ABSTRACT: An Author Certificate has been issued for a preparative method for organosilicon esters of acetophosphinic acid [sic]. The method involves heating of trierganoacetoxysilanes with phosphorus trichloride in an inert gas. [BO]

SUB CODE: 07, 11/ SUBM DATE: 14Oct64/ ATD PRESS: 4173

UDC: 547.419.5.07
547.419.1.07

Card 1/1

L 42422-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM S/0079/65/035/003/0590/0591

ACCESSION NR: AP5008842

AUTHOR: Orlov, N. F.; Mileshkevich, V. P.; Gefter, Ye. L.

TITLE: The reaction of hydroxymethylphosphinic acid with triorganoalkoxysilanes

SOURCE: Zhurnal obshchey khimii, v. 35, no. 3, 1965, 590-591

TOPIC TAGS: silicon organic compound, organic synthesis, methylol group, phosphinic acid

ABSTRACT: The reaction of organoalkosysilanes with hydroxymethylphosphinic acid, $HOCH_2P(O)(OH)_2$ is studied. It was found experimentally that alcohol and acid group reactions with triorganoalkoxysilanes take place at comparable rates and the main reaction product is a triorganosilyl ester of hydroxymethylphosphinic acid, which is formed with 45-55% yield as follows:

$$3R_3SiOR' + HOCH_2P(O)(OH)_2 \rightarrow R_3SiOCH_2P(O)(OSiR_3) + 3R'OH$$

The reaction is carried out by heating a mixture of triorganoalkoxysilane with hydroxymethylphosphinic acid in a molar ratio of 3:1. The alcohol formed during [illegible] and the reaction product is then isolated. The

L 42422-65
ACCESSION NR: AP5008842

alcohol yield is 75-100% of the theoretical yield. The reaction takes 6-8 hours. The authors give the properties and analytical data for the synthesized compounds.

ASSOCIATION: Leningradskiy institut tekstil'noy promyshlennosti im. S. M. Kirova (Leningrad Institute of the Textile Industry)

SUBMITTED: 09Oct64 ENCL: 00 SUB CODE: OC

NO REF SOV: 002 OTHER: 000

Card 2/2

ORLOV, N.F., MIL[illegible]h V.F., GEFTE[illegible]

[illegible]ynthesis of bis ([illegible]) phosphinates by the reaction of organo[illegible] and hydr[illegible] hydroxymethylphosphinic acid. Zhur. ob. khim. [illegible] no.7 2312-1[illegible] [illegible]

1. Leningradskiy institut tekstil'noy i legkoy promysh[illegible] im. S.M. Kirova.

L 1814-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5024002 UR/0020/65/164/002/0344/0346

AUTHOR: Orlov, N. F.; Mileshkevich, V. P.

TITLE: Dialkyl triorganosilylmethoxymethylphosphonates and their stability toward hydrolysis

SOURCE: AN SSSR. Doklady, v. 164, no. 2, 1965, 344-346

TOPIC TAGS: polymer, silicon containing polymer, phosphorus containing polymer, phosphonic acid, phosphonic ester

ABSTRACT: Previous work had shown that silicon- and phosphorus-containing organic compounds, although of promise in various practical applications, suffer from insufficient stability toward hydrolysis. The only class of compounds in which hydrolysis does not produce scission into silicon- and phosphorus-bearing fragments is Si-$(CH_2)_n$-P. This work deals with the synthesis of esters of trialkylsilylmethoxymethylphosphonic acids

$$(RO)_2P(O)CH_2ONa + ClCH_2SiR'R_2'' \longrightarrow (RO)_2P(O)CH_2OCH_2SiR'R_2'' + NaCl,$$

Card 1/2

L 1814-66
ACCESSION NR: AP5024002

3

where R = alkyl, R' = alkyl, R" = alkyl or alkoxyl. When R" = alkoxyl, the reaction is completed in 5—7 hr. The starting reagents are taken in equimolar ratios, the yields are 50—55%. The colorless, liquid products can be distilled under vacuum without decomposition. On boiling for 20 hr with 18% hydrochloric acid, they are converted to the corresponding phosphonic acids in 85—90% yield. Compounds containing alkoxy groups at the Si atom undergo hydrolysis with appreciable breakup of the molecular skeleton and formation of polymeric materials. The results obtained suggest that the structure P-C-O-C-Si is considerably more stable toward hydrolysis than Si-O-P, Si-C-O-P, Si-C-O-P(S), and approaches Si-$(CH_2)_n$-P with respect to hydrolytic stability. Orig. art. has: 1 table. [VS]

ASSOCIATION: Leningradskiy institut tekstil'noy i legkoy promyshlennosti im. S. M. Kirova (Leningrad Institute of the Textile and Light Industry)

SUBMITTED: 16Mar65 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 003 OTHER: 005 ATD PRESS: 4111

Card 2/2

ORLOV, N.F.; MILESHKEVICH, V.I.; ANDRONOV, Ye S.

Synthesis of dialkyliminophosphonomethoxyorganosilanes and their thermal decomposition. Zhur.obshch.khim. 35 no.12:2193-2197 D '65. (MIRA 19:1)

1. Leningradskiy institut tekstil'noy i legkoy promyshlennosti imeni S.M.Kirova. Submitted March 31, 1965.

L 28360-66 EPF(n)-2/EWT(1)/EWT(m)/EWP(e) GG/WH

ACC NR: AP6012855 SOURCE CODE: UR/0368/66/004/004/0323/0326

53
52
B

AUTHOR: Orlov, N. F.; Lebo, N. A.

ORG: none

TITLE: Absorption centers produced at low temperatures in certain glasses of simple composition

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 4, 1966, 323-326

TOPIC TAGS: borate glass, silicate glass, glass property, gamma radiation, color center, radioluminescence, absorption spectrum

ABSTRACT: To obtain more information on the nature of the color centers and radioluminescence in irradiated glass, the authors investigated the effect of γ rays from Co^{60} at liquid-nitrogen temperature on various glasses. The experiment was carried out in a dismountable glass Dewar with side windows of quartz glass, immune to discoloring by γ rays. The γ-ray dose intensity was 4100 r/hr. The induced absorption spectra of the glasses were measured at the same temperature by determining the difference between the optical densities of the irradiated and non-irradiated glasses. The results show that the spectra of both glasses change noticeably at low temperature. In the sodium-silicate and non-alkali sodium-borosilicate glass, a strong increase was observed in the band near 640 nm. In the case of potassium-silicate glass, a new band was observed at 820 nm. In the case of sodium-borate glass and alkali sodium-borosilicate glass the intensity of the 240 nm band increased. All these

UDC: 661.11: 639.16

Card 1/2

L 32200-66 EWT(m)/T/EWP(j) IJP(c) WW/RM

ACC NR: AP6007119 SOURCE CODE: UR/0079/66/036/002/0347/0350

45
44
B

AUTHOR: Orlov, N. F.; Voronkov, M. G.

ORG: Leningrad Institute of Textiles and Light Industry im. S. M. Kirov(Leningradskiy institut tekstil'noy i legkoy promyshlennosti); Institute of Organic Synthesis, AN LatSSR(Institut organicheskogo sinteza AN LatSSR)

TITLE: Tris(triorganylsilyl) antimonites

SOURCE: Zhurnal obshchey khimii, v. 36, no. 2, 1966, 347-350

TOPIC TAGS: antimony compound, organic synthetic process, silicon compound

ABSTRACT: A study by N. F. Orlov and M. G. Voronkov contains data on two new methods for the synthesis of tris(trialkylsilyl) antimonites. The first method (A), which is simple and economical, consists of reacting a trialkylsilanol with antimony trioxide on heating:

$$6R_3SiOH + Sb_2O_3 \rightleftarrows 2Sb(OSiR_3) + 3H_2O.$$

The water formed is removed by azeotropic distillation with an inert solvent, e. g., benzene, toluene, etc. The yield reaches 70% of the theoretical. Previously, the authors used a similar method to prepare tri-

Card 1/3 UDC: 546.287+546.863

silanol derivatives of some other trivalent elements or groups: boron, phosphorus, or vanadyl.

The method is similar to that used in the preparation of trialkyl antimonites, $Sb(OR)_3$, by reacting Sb_2O_3 with alcohols. The higher reactivity of trialkylsilanols, as compared with alcohols, can be explained by their higher acidity caused by the $p_\pi - d_\pi$ interactions between silicon and oxygen atoms.

The second method (B) suggested is the silanolysis of trialkyl antimonites:

$$3R_3SiOH + (R'O)_3Sb \rightleftarrows (R_3SiO)_3Sb + 3R'OH.$$

On heating of the mixture the alcohol formed is stripped off. It is advisable to add the silanols in small quantities, e.g., dropwise, especially in benzene solution, in order to prevent silanol condensation, thereby increasing the yield of the desired product.

The presence of sodium in catalytic amounts accelerates the reaction; however, the reaction proceeds readily even without any catalyst.

Tris(trialkylsilyl) antimonites are either colorless liquids or crystals with a weak silanol odor. They are stable on storage in dry air, but

L 32200-66

ACC NR: AP6007119

hydrolyze in humid air. Hydrolytic stability of tris(trialkylsilyl) antimonites increases with increasing length of the organic radical, and is higher than that of the trialkyl antimonites.

The properties of the five compounds synthesized (four of them for the first time) are given in Table 1.

Table 1. Tris(trialkylsilyl) antimonites

Compound	Preparative method	Yield %	bp °C (p in mm Hg)	d_4^{20}	n_D^{20}	MR_D Found	MR_D Calculated	Found % Sb	Found % Si	Formula	Calculated % Sb	Calculated % Si
$[(CH_3)_3SiO]_3Sb$	B	67.0	80° (3)	1.1448	1.4374	89.17	89.13	31.25, 31.71	21.52, 21.29	$C_9H_{27}O_3SbSi_3$	31.27	21.64
$[(CH_3)_2C_2H_5SiO]_3Sb$	B	90.0	132 (6)	1.1318	1.4508	102.59	102.06	28.25, 28.33	—	$C_{12}H_{33}O_3SbSi_3$	28.22	—
$[CH_3(C_2H_5)_2SiO]_3Sb$	A	61.5	150 (3.5)	1.1132	1.4588	116.23	116.19	25.75, 25.64	17.60, 17.44	$C_{15}H_{39}O_3SbSi_3$	25.72	17.80
$[(C_2H_5)_3SiO]_3Sb$	A	63.0	170 (3)	1.1041	1.4675	129.69	129.72	23.83, 23.89	16.01, 16.01	$C_{18}H_{45}O_3SbSi_3$	23.61	16.34
	B	90.5	203 (30)	1.1038	1.4681	129.04	129.72	—	16.08, 16.14	$C_{18}H_{45}O_3SbSi_3$	23.61	16.34
$[(C_6H_5)_3SiO]_3Sb$	B		mp 214° (benzene)			—	—	12.68, 12.18	8.39, 8.39	$C_{54}H_{45}O_3SbSi_3$	12.84	8.89

The refraction increment for the Sb-O bond, absent in the literature according to the authors, was computed to be equal to 5.25 ± 0.05 cm^3. Orig. art. has: 1 table.

FSB: v.2, no.57

SUB CODE: 07 / SUBM DATE: 05Jan65 / ORIG REF: 010 / OTH REF: 002

Card 3/3

L 32718-66 EWP(j)/EWT(m) RM

ACC NR: AP6021414 SOURCE CODE: UR/0413/66/000/011/0019/0019

INVENTOR: Orlov, M. F.; Kaufman, B. L.

ORG: none

TITLE: Preparative method for organic organosilicon esters of acetylphosphonic acid. Class 12, No. 182146 [announced by Leningrad Institute of the Textile and Light Industry im. S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 19

TOPIC TAGS: organosilicon ester, acetylphosphonic acid

ABSTRACT: An Author Certificate has been issued for a preparative method of organic organosilicon esters of acetylphosphonic acid. The method involves heating of alkyl(aryl)dichlorophosphites with triorganoacetoxysilanes. [BO]

SUB CODE: 07 / SUBM DATE: 03Apr65/ ATD PRESS: 5025

Card 1/1 UDC: 547.419.5'419.1.07

L 31797-66 EWT(m)/EWP(j) RM

ACC NR: AP6021688 SOURCE CODE: UR/0079/66/036/003/0518/0521

50

AUTHOR: Orlov, N. F.; Mileshkevich, V. P.

B

ORG: Leningrad Institute of the Textile and Light Industry im. S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)

TITLE: Synthesis and certain properties of organosilicon esters of hydroxymethylphosphinic acid

SOURCE: Zhurnal obshchey khimii, v. 36, no. 3, 1966, 518-521

TOPIC TAGS: chemical synthesis, phosphinic acid, ester, organosilicon compound, silane, hydroxyl group, chemical bonding, heterogeneous catalysis, acetic anhydride, chemical reaction, reaction mechanism

ABSTRACT: A method for producing bis(triorganosilyl)hydroxymethylphosphinates not previously described in the literature was developed. The reaction of triorganoalkoxysilanes with hydroxymethylphosphinic acid in a 2:1 ratio is conducted under mild conditions, distilling off the alcohol under vacuum while heating the reaction mixture to a temperature not higher than 50-60°. The formation of such products is direct evidence that the hydroxyl bonded to the phosphorus through the carbon atom in the hydroxymethylphosphinic acid molecule is less reactive than the acid hydroxyls toward alkoxysilanes. The reaction of bis(trialkylsilyl)hydroxymethylphosphinates with trialkylsilane

Card 1/2 UDC: 547.281.1+546.185

L 31797-66
ACC NR: AP6021688

hydrides in the presence of a colloidal nickel catalyst and with acetic anhydride in the presence of catalytic amounts of sulfuric acid results in the formation of esters of trialkylsiloxymethylphosphinic or acetoxymethylphosphinic acids, respectively. Orig. art. has: 1 table. [JPRS]

SUB CODE: 07 / SUBM DATE: 02Mar65 / ORIG REF: 006 / OTH REF: 005

Card 2/2

L 14641-66 EWT(m)/EWP(j)/T/ETC(m)-6 WW/RM

ACC NR: AP6004093 SOURCE CODE: UR/0020/66/166/002/0378/0380

AUTHOR: Orlov, N. F.; Viktorov, O. F.; Yelkina, N. S.

ORG: Leningrad Institute of the Textile and Light Industry im. S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)

TITLE: Synthesis of dialkyl glycidyloxymethylphosphonates

SOURCE: AN SSSR. Doklady, v. 166, no. 2, 1966, 378-380

TOPIC TAGS: polymer, phosphonate ester, catalysis, plasticizer

ABSTRACT: Epoxidic organophosphorus compounds are of practical interest as plasticizers, fire-resistance imparting additives, poly(vinyl chloride) stabilizers, etc. This work reports the preparation of new dialkyl glycidyloxymethylphosphonates from epichlorohydrine and dialkyl sodiooxymethylphosphonates according to the following reaction:

$$(RO)_2P(O)CH_2ONa + ClCH_2CHCH_2 \rightarrow (RO)_2P(O)CH_2OCH_2CHCH_2 + NaCl$$

R = C_2H_5; C_3H_7; iso-C_3H_7; C_4H_9.

The best yields are obtained by using excess epichlorohydrine in the presence of

Card 1/2 UDC: 547.419+547.631.1.07

L 14641-66
ACC NR: AP6004093

quaternary ammonium catalysts. It was shown that acidic catalysts such as boron trifluoride etherate promote polymerization of the obtained glycidyloxymethylphosphonates; this is accompanied by cleavage of the epoxide ring. Orig. art. has: 1 table. [VS]

SUB CODE: 11,07/ SUBM DATE: 28Apr65/ ORIG REF: 006/ OTH REF: 001/ ATD PRESS: 4198

Card 2/2 HC

L 40967-66 EWP(e)/EWT(m) WH

ACC NR: AP6023365 SOURCE CODE: UR/0237/66/000/007/0006/0011

47

AUTHOR: Orlov, N. F. B

ORG: none

TITLE: Radioluminescence in nonorganic glasses

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 7, 1965, 6-11

TOPIC TAGS: optic glass, radioluminescence, phosphorescence, impurity center, nuclear radiation, Cerenkov radiation, Cerenkov effect, radiation dosimetry, cerium

ABSTRACT: General questions concerning luminescence in nonorganic glasses excited by nuclear and other types of radiation are discussed. Radioluminescence of glass in high energy fields is considered in the following terms: a) luminescence of active centers and particular types of structural formations initially present in the glass; b) luminescence of impurity centers and certain types of trap centers, generated by the interaction of radiation with the material; c) luminescence due to radicals created in the process of irradiation; d) Cerenkov effect. Type a) luminescence is observed in lead and cerium glasses. Since only trivalent cerium is capable of luminescence, the brightness of luminescence in optic glasses, normally containing tetravalent cerium, is low. Due to high concentration of lead in flint glasses the extinction is very pronounced, reducing the specific intensity of luminescence. Other activators, e. g., titanium and

UDC: 666.11.01 : 535.37

Card 1/2

L 40967-66

ACC NR: AP6023365 O

antimony, present in glass as impurities, do not exhibit measurable amounts of luminescence. Absorption zones present in quartz glass are an example of structural formations capable of luminescence. Type b) luminescence is due to impurity elements not initially contained in the glass, but generated due to the interaction of nuclear particles with the material. The magnitude of this effect is determined by the properties of radiation and the initial concentration of appropriate elements. This effect is utilized in radiation dosimetry. Type c) luminescence results from radicals created due to the ionizing effects of radiation and the breakup of the molecular bonds. Type d) luminescence due to the Cerenkov effect is more pronounced in heavy flint glass, than in crown glass. This effect is not temperature dependent. The contribution of type b) luminescence is negligible, compared to the other three types. The effects of temperature, phosphorescence, effects of glass darkening (due to irradiation), and glass structure on radioluminescence are also discussed. The spectral output curves for luminescence of various types of glass are given. Orig. art. has: 4 figures, 1 table. [14]

SUB CODE: 20,11/ SUBM DATE: 27May65/ ORIG REF: 002 / ATD PRESS: 5056

Card 2/2 MLP

L 40809-66 EWT(m)/T/EWP(j) IJP(c) WW/RM

ACC NR: AP6025590 SOURCE CODE: UR/0413/66/000/013/0020/0020

32
B

AUTHORS: Orlov, N. F.; Mileshkevich, V. P.

ORG: none

TITLE: Preparative method for silicon-containing hydroxymethylphosphonates. Class 12, No. 183207

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 20

TOPIC TAGS: [illegible] phosphonic acid, organosilicon compound

ABSTRACT: This Author Certificate presents a method for preparing silicon-containing (hydroxymethyl)phosphonates. (Hydroxymethyl)phosphonic acid is reacted with organo(alkoxy)silanes at 40—800C. [04]

SUB CODE: 07/ SUBM DATE: 28Dec64/ ATD PRESS: 5059

Card 1/1

L 05182-67 EWT(m)/EWP(j) RM

ACC NR: AP7000742 SOURCE CODE: UR/0079/66/036/005/0920/0923

ORLOV, N. F., VOLODINA, L. N., Leningrad Institute of the Textile and Light Industry S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)

"Bis(triorganylsilyl)phosphites"

30 B

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 5, 1966, pp 920-923

Abstract: Two new methods were developed for synthesizing bis(triorganylsilyl) phosphites, based on the reaction of phosphorous acid with hexaalkyldisiloxanes and triorganylacetoxysilanes. 5-Bis(triorganylsilyl)-phosphites were synthesized; among them bis(dimethylethylsilyl) phosphite and bis(dimethylphenylsilyl) phosphite were prepared for the first time. The bis(triorganylsilyl)phosphites are colorless liquids with a weak silanol odor, stable in dry air and readily hydrolyzed by water to form the original phosphorous acid and triorganylsilanols. The latter are usually dehydrated to form hexaorganyldisiloxanes.

Orig. art. has: 2 formulas and 1 table. [JPRS: 37,023]

TOPIC TAGS: siloxane, organic phosphorus compound

SUB CODE: 07 / SUBM DATE: 21Apr65 / ORIG REF: 007 / OTH REF: 001

Card 1/1 vmb

UDC: 546.287 + 547.26'118

0923 1912

L 04850-67 EWP(j)/EWT(m) RM

ACC NR: AP7000237 SOURCE CODE: UR/0079/66/036/004/0699/0704

AUTHOR: Orlov, N. F.; Mileshkevich, V. P.

ORG: Leningrad Institute of the Textile and Light Industry im. S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)

TITLE: Reaction of Hydroxymethylphosphinic Acid with Trialkylacetoxysilanes. Synthesis of Esters of Acetoxymethylphosphinic Acid

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 4, 1966, pp 699-704

Abstract: Two new methods of producing esters of acetoxymethylphosphinic acid were developed, based on the reaction of hydroxymethylphosphinic acid with trialkylacetoxysilanes and acetic anhydride, as well as that of esters of trialkoxysilyloxymethylphosphinic acids with acetic anhydride in the presence of catalytic amounts of sulfuric acid. The reactivity of various silicon-containing derivatives of hydroxymethylphosphinic acid with acetic anhydride was studied, and a scheme of the mechanism of their interaction was proposed. Under the same conditions, the Si-O-C group is quantitatively cleaved, the Si-O-P group is cleaved by only 25.35%, while the C-O-P group remains inert.

Orig. art. has: 2 formulas and 1 table. [JPRS: 37,177]

TOPIC TAGS: organic synthetic process, silane esterification, phosphinic acid

Card 1/1 SUB CODE: 07 / SUBM DATE: 21Mar65 / ORIG REF: 008 / OTH REF: 004

UDC: 547.281.1+546.185

0923 0774

L 06502-67 EWP(j)/EWT(m) RM
ACC NR: AP7000475 SOURCE CODE: UR/0079/66/036/006/1075/1078

ORLOV, N. F., MILESHKEVICH, V. P., VAYNBURG, V. M., Leningrad Institute of the Textile and Light Industry im. S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)

"Synthesis of Organosilicon Esters of Alpha- and Beta-Chloroalkyl(aryl)-phosphinic Acids. Interaction of Bis(trialkylsilyl)chloromethyl-phosphinates with Sodium Triethylsilanolate"

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 6, 1966, pp 1075-1078

Abstract: A method was developed for producing new bis(trialkylsilyl) esters of chloromethyl-, beta-chloroethyl-, and alpha-chlorobenzylphosphinic acids. They were synthesized by the reaction of dichlorides of the corresponding chloroalkylphosphinic acids with trialkylacetoxysilanes under conditions of continuous distillation of the acetylchloride formed. In the reaction of sodium triethylsilanolate with bis(trialkylsilyl)chloromethylphosphinates, hexaalkyldisiloxanes and sodium salts of trialkylsilyl esters of chloromethyl-phosphinic acid were formed. The reaction mechanism deduced indicates a substantial sensitivity of the P-O-Si group to the action of nucleophilic agents. Orig. art. has: 1 formula and 1 table. [JPRS: 37,023]

TOPIC TAGS: organosilicon compound, ester, organic synthetic process, phosphinic acid

SUB CODE: 07 / SUBM DATE: 06Feb65 / ORIG REF: 003 / OTH REF: 004

Card 1/1 mfe

547.419
0923 1186

L 05184-67 EWT(m)/EWP(j) RM

ACC NR: AP7000740 SOURCE CODE: UR/0079/66/036/005/0892/0895

ORLOV, N. F., MILESHKEVICH, V. P., Leningrad Institute of the Textile and Light Industry imeni S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)

Interaction of Hydroxymethylphosphinic Acid with Trialkylsilane Hydrides"

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 5, 1966, pp 892-895

Abstract: In a previous communication the authors reported on the synthesis of bis(triorganosilyl) triorganosiloxymethylphosphinates by the reaction of hydroxymethylphosphinic acid with triorganosilane hydrides in the presence of a colloidal nickel catalyst. In a further study of the side reactions, it was found that the reaction of hydroxymethylphosphinic acid with trialkylsilane hydrides results in the formation not only of bis(trialkylsilyl)trialkylsiloxymethylphosphinates, but also O-trialkylsilyl-O-[bis(trialkylsilyl)phosphonemethyl]trialkylsiloxymethylphosphinates, a new class of compounds. A reaction mechanism is proposed. [JPRS: 37,023]

TOPIC TAGS: silane, phosphinic acid, organic synthetic process

SUB CODE: 07 / SUBM DATE: 28Jan65 / ORIG REF: 009 / OTH REF: 001

Card 1/1 vmb UDC: 547.245 + 547.241

TOPIC TAGS: phosphorous acid, silane

SUB CODE: 07 / SUBM DATE: 20Dec65 / ORIG REF: 003

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

Card 1/1 mlc UDC: 547.245 + 547.241

ACC NR: AP6035688 (A,N) SOURCE CODE: UR/0413/66/000/019/0032/0032

INVENTOR: Orlov, N. F.; Viktorov, O. F.

ORG: none

TITLE: Preparation of dialkyl-1-(3-chloro-2-hydroxphropyl) hydroxmethyl phosphinates. Class 12, No. 186474 [announced by Leningrad Institute of the Textile and Light Industry im. S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 32

TOPIC TAGS: ~~organic~~ phosphorus compound, phosphinic acid, ester

ABSTRACT: In the proposed method, dialkyl-1-(3-chloro-2-hydroxypropyl)-hydroxymethyl phosphinates are obtained by the reaction of HCl with dialkylglycidylhydroxymethyl phosphinates.

[PS]
[WA-50; CBE No. 14]

SUB CODE: 07/ SUBM DATE: 23Nov65

Card 1/1 UDC: 547.26'118.07

ACC NR: AP7002970 (A) SOURCE CODE: UR/0413/66/000/024/0050/0050

INVENTOR: Orlov, N. F.; Vol'f, L. A.; Androsova, M. V.; Kirilenko, Yu. K.

ORG: none

TITLE: Preparative method for poly(vinyl alcohol)-based fireproof fibers, films or fabrics. Class 29, No. 189515

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 50

TOPIC TAGS: polyvinyl alcohol, fire resistant material, polymer

ABSTRACT: An Author Certificate has been issued for a method of preparing poly(vinyl alcohol)-based fireproof fibers, films or fabrics. The method involves treatment of dehydrated fibers, films or fabrics with dialkyl hydrogen phosphites.

SUB CODE: 11/ SUBM DATE: 12Jul65/ ATD PRESS: 5112

Card 1/1 UDC: 677.494.744.72:66.093.6

ORLOV, N.G.

The ESh-25/100-type walking excavator. Biul.tekh.-ekon.inform. no.12:37-39 '59. (MIRA 13:4)
(Excavating machinery)

ORLOV, N.G., inzh.

New development in the technology of manufacturing welded rails.
Zhel.dor.transp. 44 no.7:45-48 Jl '62. (MIRA 15:8)
(Railroads--Rails)

GLAZMAN, M.G.; ORLOV, N.G., kandidat meditsinskikh nauk, glavnyy vrach.

Study of stable strains of staphylococci; author's abstract. Zhur.mikrobiol.epid.i immun. no.2:53-54 F '53. (MLRA 6:5)

1. Bol'nitsa imeni Baumana. (Staphylococcus)

ORLOV, N.G., kandidat meditsinskikh nauk

Work organization of district general practitioners in a consolidated city hospital. Sov.zdrav. 15 no.5:33-37 S-O '56. (MLRA 10:1)

1. Glavnyy vrach Ob"yedinennoy bol'nitsy imeni N.E.Baumana v Moskve.
(HOSPITAL ADMINISTRATION
in Russia, work organiz. of GP's in consolidated city hospital)

ORLOV, N. G.

How functions the United Bauman's Hospital in Moscow. Cesk. zdravot. 5 no.1:1-6 Jan 57.

1. Kandidat lekarskych ved, reditel Baumanovy nemocnice v Moskve.
(HOSPITALS
United Bauman's Hosp., Moscow (Cz))

ORLOV, N.G.

Information service in municipal hospitals and polyclinics. Med. sestra 16 no.5:7-10 My '57. (MLRA 10:7)

1. Iz Gorodskoy bol'nitsy imeni Baumana, Moskva.
(HOSPITALS--MANAGEMENT AND REGULATION)

ORLOV, N.G., kand.med.nauk (Moskva)

Organizing epidemic control work in a polyclinic servicing a specific area. Zdrav.Ros.Feder. 2 no.2:19-21 F '58. (MIRA 11:3)
(COMMUNICABLE DISEASES)

ORLOV, N.G.

Two-stage treatment of patients in hospitals. Zdrav.Ros.Feder. 2 no.7:3-12 Jl'58 (MIRA 11:7)

1. Glavnyy vrach bol'nitsy im. Baumana, Moskva.
(HOSPITALS)

ORLOV, N.G. (Moskva)

Experience in expert temporary disability evaluation in the polyclinic. Sov. zdrav. 19 no. 4:38-42 '60. (MIRA 13:10)

1. Iz bol'nitsy imeni Baumana.
(DISABILITY EVALUATION)

/

ORLOV, N.G.

Daily dispensary. Zdrav. Ros. Feder. 5 no.5:3-5 My '61.
(MIRA 14:5)

1.Glavnyy vrach bol'nitsy imeni N.E.Baumana, Moskva.
(MOSCOWS--HOSPITALS--OUTPATIENT SERVICES)

ORLOV, N.G. (Moskva)

Eliminating lines in registering at the polyclinic. Sov. zdrav. 2(
no.9:30-34. '61. (MIRA 14:12)

1. Glavnyy vrach bol'nitsy imeni Baumana.
(MEDICAL CARE)

ORLOV, N.G. (Moskva)

Reorganization of the work of a polyclinic under new conditions. Sov. zdrav. 20 no.12:52-56 '61. (MIRA 15:6)

1. Glavnyy vrach Bol'nitsy imeni N.E. Baumana.
(HOSPITALS--ADMINISTRATION)

ORLOV, N.G.

A day clinic for peptic ulcer patients. Sov.zdrav. 21 no.8:10-13 '62. (MIRA 15:11)

1. Glavnyy vrach bol'nitsy imeni N.E.Baumana, Moskva.
(PEPTIC ULCER) (HOSPITALS--OUTPATIENT SERVICES)

URT'YEV, Viktor Petrovich; LUR'YE, Vitol'd Samar'yevich; ISAYEV, Al'bert Semenovich; ORLOV, Nikolay Il'ich; TSYPLUKHIN, Petr Gavrilovich; SOKOLOV, A.N., red.; SHILLING, V.A., red.izd-va; BELOGUROVA, I.A., tekhn. red.

[Vacuum arc furnace]Dugovaia vakuumnaia pech'. Leningrad, 1962. 25 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Liteinoe proizvodstvo, no.5) (MIRA 16:2)

(Electric furnaces) (Vacuum metallurgy)

ORLOV, N. I.

86-11-26/31

AUTHOR: Orlov, N. I., Col

TITLE: The Practice Bomb Should be Modified (Prakticheskuyu bombu sleduyet modernizirovat')

PERIODICAL: Vestnik Vozdushnogo Flota, 1957, Nr 11, p. 84 (USSR)

ABSTRACT: The author states that the practice bomb used at the present time for training navigators is inadequate, because with the aid of those optical devices and radar with which the bombing grounds are equipped, it is not always possible to obtain the precise fixes of the impacts of practice bombs. The author suggests that the present practice bomb be modified, or a new bomb designed. The author gives some details concerning the design of such a bomb.

AVAILABLE: Library of Congress

Card 1/1

25025

S/057/61/031/007/006/021
B108/B209

9,4120

AUTHORS: Golant, V. Ye., Orlov, N. I., Pakhomov, L. P.

TITLE: Production of a high-density plasma by a hot-cathode discharge in a magnetic field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 7, 1961, 797-801

TEXT: The authors present the results of an investigation of a hot-cathode discharge in a magnetic field. In such a discharge with a current density of over 3 a/cm^2 in an inhomogeneous magnetic field ($H/H_c > 3 \div 5$; H-magnetic field strength in the region under examination, H_c - magnetic field strength near the cathode) a plasma concentration of over 10^{14} cm^{-3} may be attained theoretically. It was the aim of the present investigation to determine the concentration of charged particles in such a plasma. The emitting area on the loop- or ring-shaped cathode was 1.5 cm^2, its temperature over 2000°C. The distance between the tungsten anode and cathode was 25 cm. The measurements were made in both a homogeneous and an inhomogeneous mag-

Card 1/3

ORLOV, N. I.

Magnetic ore deposits and snow cover. Priroda 52 no.1:114 '63.
(MIRA 16:1)

1. Institut geografii AN SSSR, Moskva.

(Kursk Magnetic Anomaly—Snow)

Orlov, N.I. (Moskva)

Snowstorms. Priroda 52 no.2:127-128 '63. (MIRA 16:2)
(Blizzards)

ORLOV, N.I., glavnyy veterinarnyy vrach Bugul'minskogo rayona, Tatarskoy ASSR; KARMYSHECHKIN, V.P.

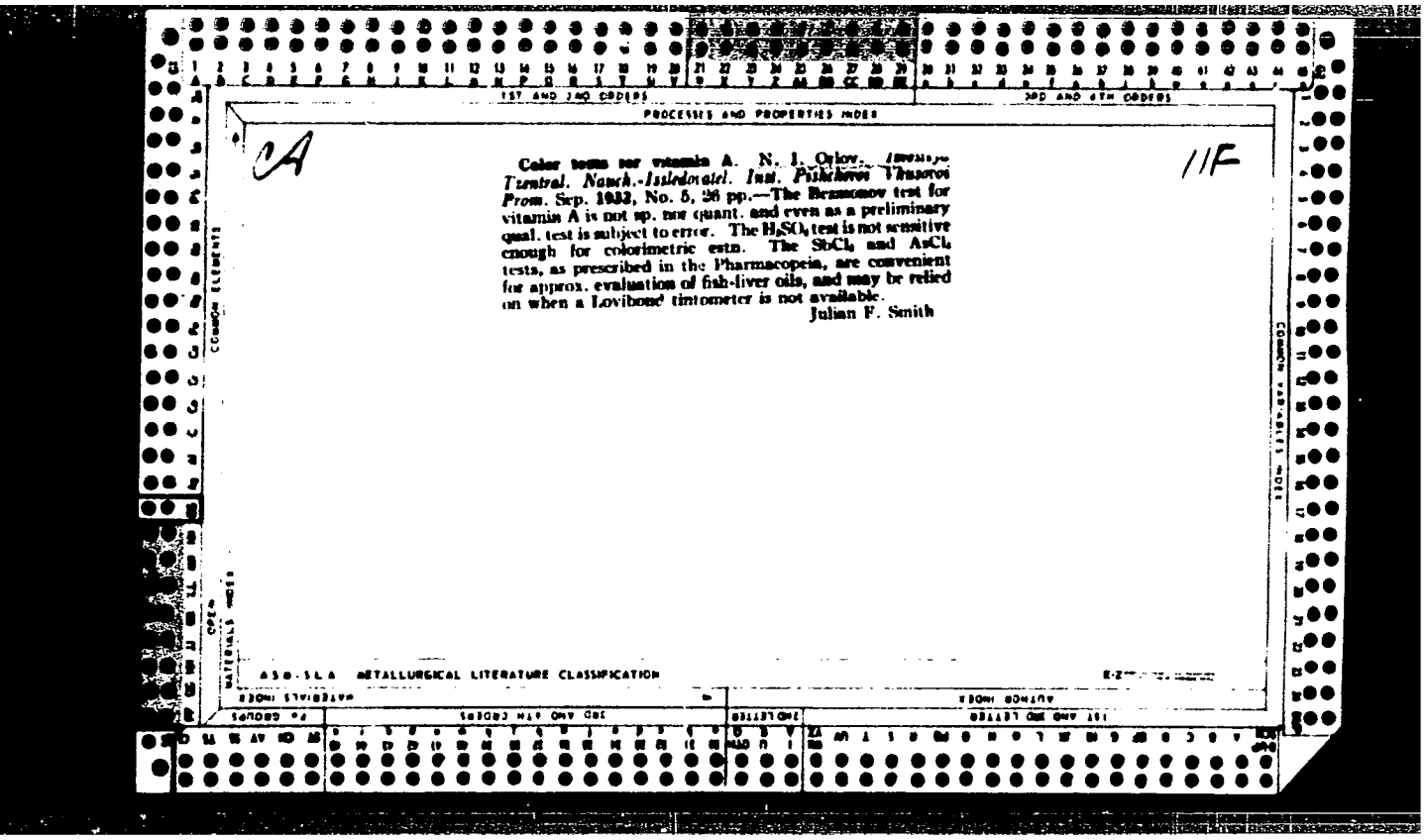
Prophylactic effect of hemosporikin. Veterinariia 30 no.11:58 N '53. (MLRA 6:11)

1. Glavnyy fel'dsher tsentral'nogo zoovetuchastka, Bugul'minskogo rayona (for Karmyshechkin).

GROYSMAN, B.A., ORLOV, I.I.

Actinomycosis of the mammary gland. Zdravookhranenie 4 no.3: 57 My-Je '61. (MIRA 16:7)

1. Iz khirurgicheskogo otdeleniya (zav. M.K. Voynova) rayonnoy bol'nitsy g. Orgeyeva (glavnyy vrach M.A. Bagmanyan).
(ACTINOMYCOSIS) (MAMMARY GLANDS)



PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

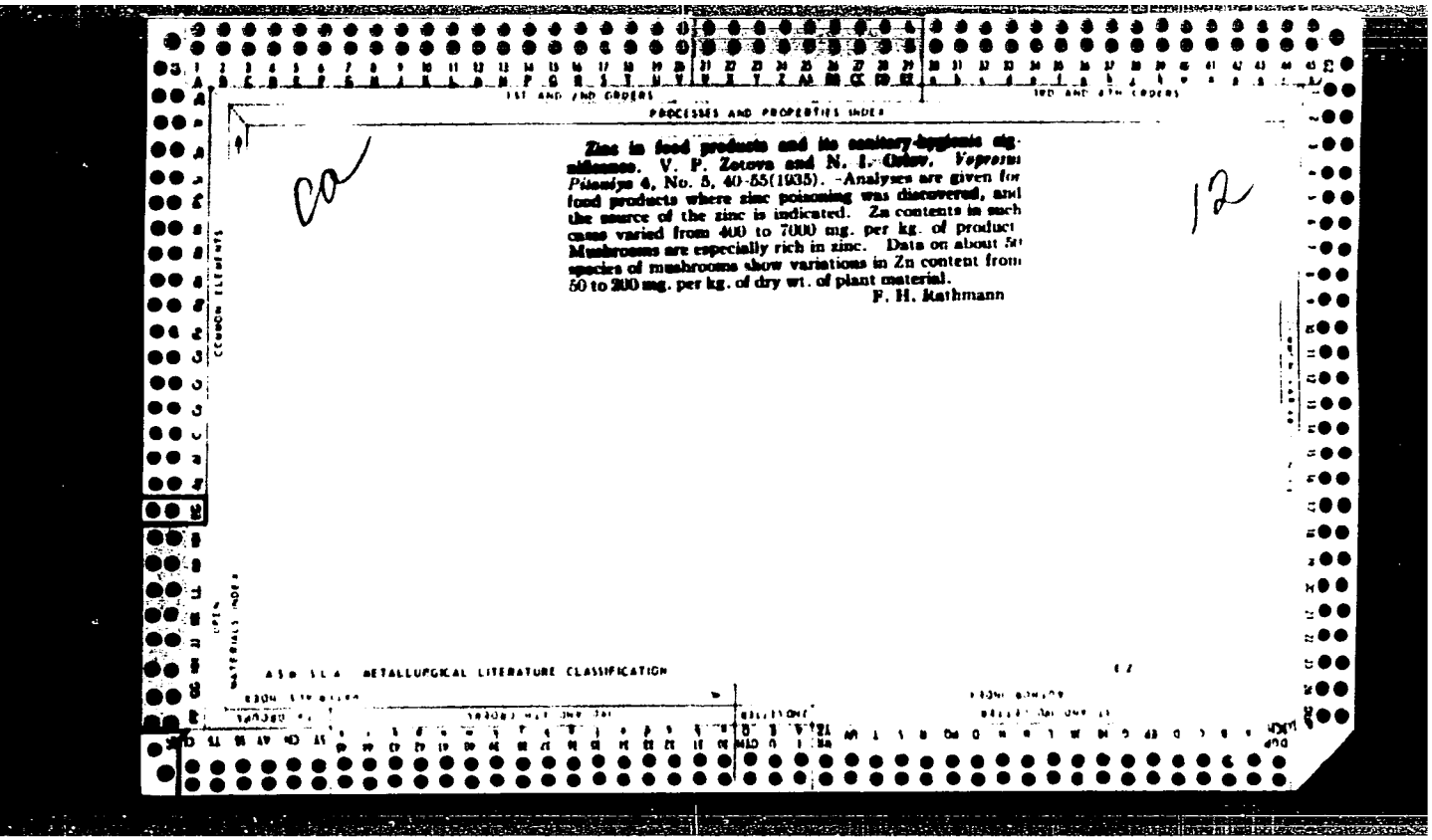
5A

11F

Color tests for vitamin A. N. I. Orlov. *Tsentral. Nauch.-Issledovatel. Inst. Pishchevoi Promysl.* Sep. 1952, No. 5, 26 pp.—The Rezanov test for vitamin A is not sp. nor quant. and even as a preliminary qual. test is subject to error. The H_2SO_4 test is not sensitive enough for colorimetric estn. The $SbCl_3$ and $AsCl_3$ tests, as prescribed in the Pharmacopeia, are convenient for approx. evaluation of fish-liver oils, and may be relied on when a Lovibond tintometer is not available.

Julian F. Smith

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

Zinc in food products and its sanitary-hygienic significance. V. P. Zotova and N. I. Galev. *Voprosy Pitaniya* 4, No. 5, 40-55(1935). -Analyses are given for food products where zinc poisoning was discovered, and the source of the zinc is indicated. Zn contents in such cases varied from 400 to 7000 mg. per kg. of product. Mushrooms are especially rich in zinc. Data on about 50 species of mushrooms show variations in Zn content from 50 to 200 mg. per kg. of dry wt. of plant material.

F. H. Rathmann

A S M S L A METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

C 4

12

Vitamin content (B_1 and PP) in fresh and processed mushrooms. N. I. Orlov, I. P. Svetlov, and E. A. Srib-nev. *Gigiena i Sanit.* 11, No. 4, 19-23(1946). In the 9 species of mushrooms analyzed the vitamin B_1 content was equal to that of baker's yeast. Of all foods except liver mushrooms contain the most Zn; a definite relation was established between Zn and the vitamin content in different species and different parts of the same mushroom. The vitamin contents of dried mushrooms and of salted (pickled) mushroom were lower than those of fresh mushrooms. Contents of vitamin PP were similar to those of yeast and liver.

Boris Gatoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ORLOV, N.I., professor

Problems in the hygiene of nutrition at the Thirteenth Congress of Hygienists, Epidemiologists, Microbiologists and Specialists in Infectious Diseases [with summary in English]. Gig. i san. 22 no.3:7-12 Mr '57. (MLRA 10:6)
(NUTRITION)

ORLOV, N. I., Doc. Med. Sci.

Dissertation: "Fungi, Mushroom Poisonings and Their Prophylaxis." Central Inst. for Advanced Training of Physicians." 6 May 47.

SO: Vechernyaya Moskva, May 1947 (Project #17836)

ORLOV, N. I.

20636 Orlov, N.I. K pyatidesyatiletyu zasluzhennogo deyateya nauki Kazakhskoy respubliki, doktora biologicheskikh nauk, professora Tselishcheva Arkadiya Andreyevicha. Izvestiya Akad. nauk Kazakh SSR. No. 44, Seriya parazitol., vyp. 6, 1948, s. 1-2

SO: LETOPIS ZHURNAL'NYKH STATEY - Vol. 28, Moskva, 1949

ORLOV, N. I.

20637 Orlov, N.I. Spetsifichnost i patogennost prosteyshikh v svete problemy vzaimootnosheniy parazita i knozyaina. Izvestiya Akad. nauk Kazakh. SSR, No. 44, Weriya parazitol., vyp. 6, 1948, s. 3-18.-Rezyume na Kazakh. yaz.

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

ORLOV, N.I. Nov 52

USSR/Medicine - Food Poisoning

"Review of Monograph Food Poisoning and Its Prophylaxis," by N.I. Orlov, Library of the Practicing Physician, Medgiz, 1952, 119 pp, 25,000 copies," (Yu. A. Kozlov, reviewer)

Gig i San, No 11, pp 60, 61

Lauds the clear and concise style of the author and the up-to-date presentation of information on food poisoning of bacterial and nonbacterial origin. Objects to the brief treatment of Salmonella organisms and of their pathogenicity in producing toxic infections. Considers that too little space is allocated to a discussion of Sonne Dysentery bacilli as Originators of toxic food infections, and does not quite agree with the author's treatment of the symtomatology and pathogenesis of toxic infections caused by Sonne bacilli.

Source #264T35

Translation No 449, 23 Aug 53

OHLOV, Nikolay Ivanovich.

Edible and poisonous mushrooms; mushroom poisoning and its prophylaxis. Moskva, Medgiz, 1953. 269 p. Biblioteka prakticheskogo vracha (53-40396)

RA1242.M907

ORLOV, N. I.

AID P - 2168

Subject : USSR/Medicine

Card 1/2 Pub. 37 - 10/22

Authors : Belostotskaya, Ye. M., Beryushev, K. G., Kands. of Med. Sci., Orlov, N. I., Dr. of Med. Sci., Fcngauz, M. I., Kand. of Med. Sci., and Cherkinskiy, S. N., Doc. of Med. Sci.

Title : From the practical work of the Scientific Research Sanitary Institute im. Erisman in the introduction of physiological methods in investigations of hygiene

Periodical : Gig. i san., 4, 40-43, Ap 1955

Abstract : The purpose of this article is to explain the work of the Institute in the light of I. P. Pavlov's theories and his analytical approach to observed phenomena. The reactions of the organism are studied in relation to the changes in its environment, climatic, atmospheric, industrial conditions, etc. The article is illustrated by many examples, observations of human beings and tests performed on animals. 10 Russian references (1951-1954).

AID P - 2168

Gig. i san., 4, 40-43, Ap 1955

Card 2/2 Pub. 37 - 10/22

Institution : Scientific Research Sanitary Institute im. Erisman

Submitted : My 10, 1954

ORLOV, M.I., professor

Mushrooms. Zdorov'e 3 no.8:9 Ag '57. (MLRA 10:9)
(MUSHROOMS)

ORLOV, N.I. (Moskva)

Sanitary control and examination of food products before the Revolution; 1891-1917. Vop.pit. 16 no.6:70-73 N-D '57.
(MIRA 11:3)
(NUTRITION,
sanit. control in pre-revolutionary Russia (Rus))

ORLOV, N.I., prof.

Achievements in some areas of food hygiene in the U.S.S.R. during the last 40 years. Gig. i san. 22 no.10:57-66 O '57. (MIRA 10:12)
(FOOD
hygiene, in food indust. & prep., hist. in Russia)

ORLOV, Nikolay Ivanovich

[Mushrooms] O gribakh. Moskva, Institut sanitarnogo prosveshcheniia, 1958. 109 p. (MIRA 11:11)

(Mushrooms)

ORLOV, N.I., prof.

"Food hygiene." Gig. i san. 23 no.8:86-87 Ag '58 (MIRA 11:9)
(FOOD HANDLING)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLOV, N. I., MOLCHANOVA, O. F.

"Modern Problems of Hygiene of Nutrition. Corresponding-member of the Acad Med Sci USSR."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

ORLOV, N.I., Prof. (Moskva)

Decisions of the 21st Congress of the CPSU on the problems of nutritional hygiene. Gig. i san. 24 no.4:3-7 Ap '59. (MIRA 12:7)

(FOOD, hyg. in Russia (Rus))

ORLOV, N.I., prof. (Moskva)

Fifth International Congress on Nutrition in Washington. Gig. i san. 26 no.4:86-91 Ap '61. (MIRA 15:5)
(NUTRITION—CONGRESSES)

SHILLER-VOLKOVA, N.N.; KOLCHINA, T.P.; NEVSKAYA, Ye.A.; ORLOV, N.I.; TROITSKAYA, I.P.; FEDOROVA, F.A.; MYASNIKOVA, O.F.

Experience in the use of cytologic methods in preventive examinations of women. Akush. i gin. 40 no.4:71-74 Jl-Ag '64. (MIRA 18:4)

1. Gosudarstvennyy onkologicheskiy institut imeni Gertsena (dir. - prof. A.N.Nevskov), Moskva i Rodil'nyy dom No.6 (glavnyy vrach I.V. Pavlova), Moskva.

ORLOV, N.I.

Checking inspection weighing platforms on railroads. Zav.lab. no.6:771-772 '65. (MIRA 18:8)

ORLOV, N.K., (Kiyev); CHEREPENKO, A.Ye., (Kiyev)

On the possibility of eliminating circular hauls on the road.
Zhel. dor. transp. 38 no.8:45-48 Ag '56. (MLRA 9:10)

1. Zamestitel' nachal'nika Yugo-Zapadnoy dorogi (for Orlov)
2. Nachal'nik sektora finansovogo otdela (for Cherepenko).
(Railroads--Management)

ORLOV, N.K., inzh.; CHERNENKO, A.Ye., inzh.

Opportunities for reducing car rerouting on the Southwestern railroad. Zhel. dor. transp. 40 no.3:36-39 Mr '58. (MIRA 11:4)
(Russia, Southern--Railroads--Traffic)

ORLOV, N.L.

[Results of the rough draft method of laying out ships] Opyt eskiznogo metoda razmetki sudovykh konstruktsii. [Leningrad] Gos.izd-vo sudostroit. lit-ry, 1953. 46 p. (MLRA 7:6)
(Shipbuilding)

POKRYSHCHENKO, Valentin Fedorovich; KRAVCHENKO, Yevgeniy Ivanovich; ORLOV, N.L., plazovyy razmetchik, retsenzent; SHAKHOV, A.I., inzh., retsenzent; KUZ'MENKO, V.L., nauchnyy red.; SOSIPARTROV, O.A., red.; FRUMKIN, P.S., tekhn. red.

[Manual of a mold loftsman] Spravochnik rabochego-plazovshchika. Leningrad, Sudpromgiz, 1961. 200 p. (MIRA 15:3)

(Shipbuilding)

ZEFIROV, Igor' Vasil'yevich; NIKONOV, Sergey Nikolayevich; PANKRATOV, Vladimir Petrovich; ORLOV, N.L., rabochiy-razmetchik, retsenzent; RIMMER, A.I., inzh, retsenzent; SHAKHOV, A.I., inzh., nauchn. red.; LISOK, E.I., red.

[Laying off in shipbuilding] Sudovaia razmetka. Leningrad, Sudostroenie, 1965. 411 p. (MIRA 18:8)

ZGIRSKIY, Ch.I.; GUTMAN, I.M., inzhener, retsenzent; ORLOV, N.M., dotsent; STUDNITSYN, B.P., redaktor; DUGINA, N.A., tekhnicheskiy redaktor.

[Repair of tractor parts] Vosstanovlenie detalei traktorov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry, 1954. 119 p. (MLRA 8:4)
(Tractors)

YERAKHTIN, Dmitriy Dmitriyevich, dots., kand. tekhn. nauk; GOKHMAN, Shlema Moiseyevich, kand. tekhn. nauk; DVINYANINOV, Vistor Nikolayevich, st. prepodavatel'; ZAYTSEV, Pavel Alekseyevich, inzh.; LOPATIN, Anton Venediktovich, dots.; ORLOV, Nikolay Mikhaylovich, inzh.; STRATANOVICH, Nikolay Nikolayevich, inzh.; STRIGANOV, Nikolay Ignat'yevich, inzh.; TIKHONOV, Nikolay Prokop'yevich, dots., kand. tekhn. nauk; RAYKHLIN, Zaliman Tanfilovich, st. prepodavatel'; BELOV, Aleksandr Yemel'novich, dots.; RESHETNIKOV, N.S., dotsent, retsenzent; BABUSHKIN, I.N., red.; PITERMAN, Ye.L., red.izd-va; PARAKHINA, N.L., tekhn. red.

[Repair of lumbering and forestry machinery] Remong lesozagotovitel'nykh i lesokhoziaistvennykh mashin. By D.D.Erakhtin i dr. Moskva, Goslesbumizdat, 1961. 436 p. (MIRA 15:2)

1. Kafedra remonta Moskovskogo lesotekhnicheskogo instituta (for Reshetnikov).
(Forests and forestry—Equipment and supplies)
(Lumbering—Machinery)