Begin

#661

Reshoot

PIONTKOVSKIY, I.A., prof., VOLODINA, I.A.

Some disturbances in higher nervous activity in rats from mothers irradiated with gamma rays (Co^{60}) during pregnancy. Trudy Inst. vys. nerv. deiat. Ser.patofiziol. 4:183-208 '58 (MIRA 11:12)

1. Zaveduyushchiy laboratoriyey radiobiologii Instituta vysshey nervnoy deyatel'nosti AN SSSR.
(GAMMA RAYS--PHYSIOLOGICAL EFFECT)
(NERVOUS SYSTEM)

VOLODINA, I. A.

"Considerable Disturbances of Nerve Activity."

report presented at the Conference on Influence of Ionizing Radiation upon the Higher Developed Parts of the Central Nerve System, Inst. of Higher Nervous Activity, AS USSR, 6-10 May 1958.

5.2620
~~5 (2)~~

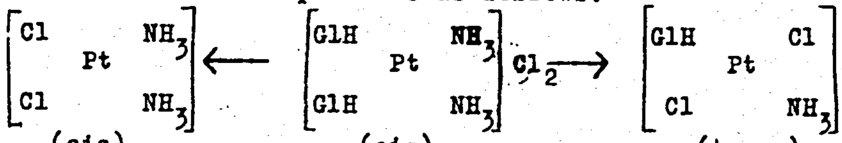
68105
SOV/78-5-1-7/45

AUTHORS: Volshteyn, L. M., Volodina, I. O.

TITLE: New Data on the Complex Compounds of Bivalent Platinum With Glycocoll

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 1, pp 35 - 38 (USSR)

ABSTRACT: The cleavage of mixed tetrammine cis-$[Pt(GlH)_2(NH_3)_2]Cl_2$ under the action of HCl has not yet been investigated (GlH = glycocoll, Gl = glycocoll ion). The authors prepared cis-$[Pt(GlH)_2(NH_3)_2]Cl_2$ (already described by A. A. Grinberg and B. V. Ptitsyn (Ref 3)) from cis-$[PtGl_2]$. The first-mentioned compound was cleft with HCl. This reaction proceeds as follows:



$$\begin{bmatrix} Cl & & NH_3 \\ & Pt & \\ Cl & & NH_3 \end{bmatrix} \longleftarrow \begin{bmatrix} GlH & & NH_3 \\ & Pt & \\ GlH & & NH_3 \end{bmatrix} Cl_2 \longrightarrow \begin{bmatrix} GlH & & Cl \\ & Pt & \\ Cl & & NH_3 \end{bmatrix}$$

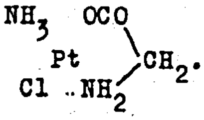
(cis) (cis) (trans)

yield: about 41% yield: about 59%

Card 1/2

68105

New Data on the Complex Compounds of Bivalent Platinum With Glycocoll SOV/78-5-1-7/45

Titration of the resulting trans-$[Pt(GlH)NH_3Cl_2]$ with KOH yielded the soluble salt $K[PtGlNH_3Cl_2]$. If the solution of this salt is allowed to stand for 24 hours, the nonelectrolyte $PtGlNH_3Cl$ is precipitated which has the cyclic structure . A comparison of the Pt(II) complexes investigated earlier with α-aminobutyric acid and ε-aminocaproic acid shows that Pt and amino acid can be more easily separated in the case of α-amino acids than in the case of ε-amino acids. There are 14 references, 12 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut im. F. E. Dzerzhinskogo (Dnepropetrovsk Institute of Chemical Technology imeni F. E. Dzerzhinskiy)

SUBMITTED: September 1, 1958

Card 2/2

VOLSHTEYN, L.M.; VOLODINA, I.O.

Tetraalanine complexes of bivalent platinum. Zhur.neorg.khim. 7 no.2:252-257 F '62. (MIRA 15:3)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni Dzerzhinskogo.
(Platinum compounds) (Alanine)

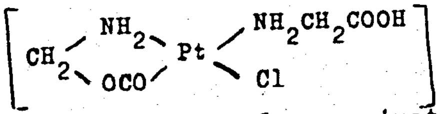
S/078/60/005/009/022/040/XX
B017/B058

AUTHORS: Volshteyn, L. M. and Volodina, I. O.

TITLE: Complex Compounds of Bivalent Platinum With Clycocoll

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 9, pp. 1948 - 1953

TEXT: The action of HCl on cis-$[Pt(NH_2CH_2CO_2H)_2]$ proceeds gradually. Splitting of the glycocoll ring under the formation of $[PtGl(GlH)Cl]$ (Gl = glycocoll radical) occurs in the first stage. This compound reacts further with HCl under the formation of $[Pt(GlH)_2Cl_2]$. The compound



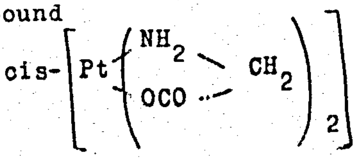
was synthetized with a yield of approximately 70%. Ammonia splits the

Card 1/3

Complex Compounds of Bivalent
Platinum With Glycocoll

S/078/60/005/009/022/040/XX
B017/B058

glycocoll ring of the compound



$$\text{cis-}\left[Pt\left(\begin{array}{l}NH_2 \\ OCO\end{array} > CH_2\right)_2\right],$$

and a NH_3 group takes the place of the carboxyl group. The preparation of $[PtGl_2(NH_3)_2]$ is described in detail. This compound crystallizes prismatically, and is dissolved in water at 25°C up to about 1.7%. It is a non-electrolyte. It can easily be solved in acid under the formation of an electrolyte of the form $[Pt(GlH)_2(NH_3)_2]X_2$, and by neutralization with alcali liquors it can be retransformed into the non-electrolyte $[PtGl_2(NH_3)_2]$. An attempt to prepare pure $[PtGl_2NH_3]$ with only one split glycocoll ring failed. There are 1 figure, 1 table, and 2 Soviet references.

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Complex Compounds of Bivalent
Platinum With Glycocoll

S/078/60/005/009/022/040/XX
B017/B058

ASSOCIATION: Dnepropetrovskiy khimiko - tekhnologicheskiy institut im. F. E. Dzerzhinskogo (Dnepropetrovsk Institute of Chemical Technology imeni F. E. Dzerzhinskiy)

SUBMITTED: June 16, 1959

Card 3/3

VOLSHTEYN, L.M.; VOLODINA, I.O.

New data on complexes of divalent platinum with glycocol. Zhur. neorg.khim. 5 no.1:35-38 Ja '60. (MIRA 13:5)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut im. F.E.Dzerzhinskogo.
(Platinum compounds) (Glycine)

5.2620

68987
S/020/60/131/02/026/071
B011/B005

AUTHORS: Volshteyn, L. M., Volodina, I. O.

TITLE: The Cis-isomer of the Inner Complex Salt of Bivalent Platinum With α-Alanine

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 2, pp 309-311 (USSR)

ABSTRACT: The compound H_2PtGl_4 (GlH = glycocoll), on heating with water, is nearly quantitatively transformed into the cis-isomer of the inner complex salt (4) (Ref 3). In contrast to glycocoll, this does not apply to AnH (alanine) in which case only the trans-isomer of $[PtAn_2]$ is formed (Ref 4). Among the 3 simplest members of the homologous series of α-amino acids only the cis-isomer of the inner complex salt of AnH remained unknown. Now the authors tried its synthesis. When acid is added to the $K_2[PtAn_4]$ solution, H_2PtAn_4 does not precipitate. This compound must, however, be present in the solution, and can be transformed into cis-$[PtAn_2]$ on heating. The cooling of the solution produced an abundant white precipitate. It was pure cis-$[PtAn_2]$ with a 30% yield. Its properties differ considerably from those of trans-$[PtAn_2]$. The solubility of the cis-isomer in water is about 14 times higher than that of the trans-isomer. On addition of concentrated HCl to the 4

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68987

The Cis-isomer of the Inner Complex Salt of Bivalent Platinum With α-Alanine

S/020/60/131/02/026/071
B011/B005

cis-isomer the original precipitate disappears at once and completely. A bright yellow solution forms. On the other hand, the trans-isomer with HCl becomes slightly yellowish but does not pass over into the solution. The cis-dichloride forms with an 80% yield. The alanine rings in the inner complex salts are ruptured by the action of HCl. Both dichlorides (trans- and cis-) are dibasic acids. The cis-dichloride is much better soluble in water than the trans-isomer. Both are poorly soluble in concentrated HCl. The trans-dichloride is better soluble in ether. Both isomers behave differently to thiourea and other reagents. Thus, both isomers $[PtA_2]$ (AH - monobasic amino acids) were obtained for all three simplest α-amino acids. The compound H_2PtAn_4 from which the authors have probably produced the cis-isomer was also obtained in a small quantity, and will be described later on. A. A. Grinberg and B. V. Ptitsyn are mentioned. There are 6 Soviet references.

4

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut im. F. E. Dzerzhinskogo (Dnepropetrovsk Institute of Chemical Technology imeni F. E. Dzerzhinskiy)

Card 2/3

68987
S/020/60/131/02/026/071
B011/B005

The Cis-isomer of the Inner Complex Salt of
Bivalent Platinum With α-Alanine

4

PRESENTED: November 21, 1959, by A. A. Grinberg, Academician

SUBMITTED: November 19, 1959

Card 3/3

VOLSHTEYN, L.M.; VOLODINA, I.O.

Complex compounds of divalent platinum with glycocoll. Zhur. neorg.khim. 5 no.9:1948-1953 S '60. (MIRA 13:11)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni F.E. Dzerzhinskogo.

(Platinum compounds) (Glycine)

VOISHTEYN, L.M.; VOLODINA, I.O.

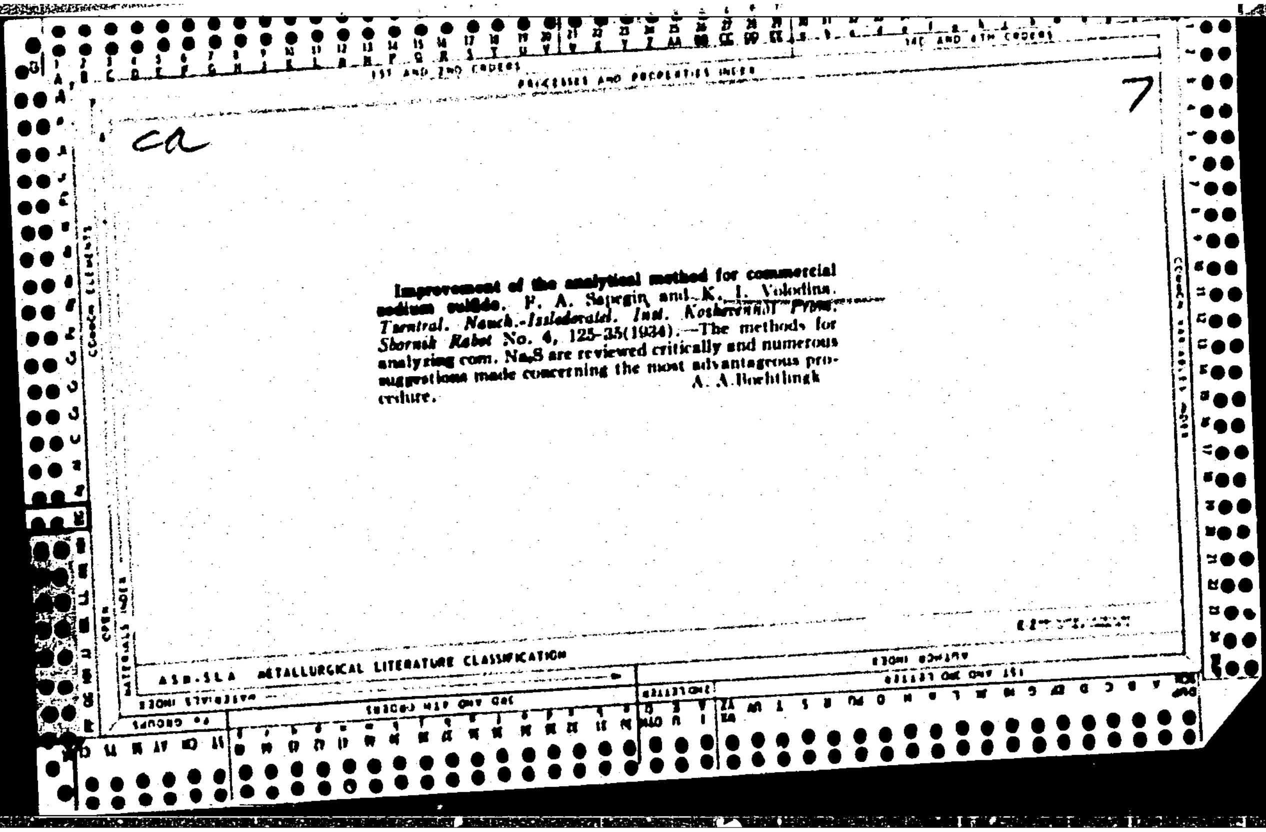
Isomerization of inner complex salts of bivalent platinum with amino acids. Zhur.neorg.khim. 7 no.12:2685-2688 D '62.
(MIRA 16:2)

1. Novosibirskiy gosudarstvennyy universitet i Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni F.E.Dzerzhinskogo.
(Platinum compounds) (Isomerization) (Amino acids)

ANDRIASYAN, G.K.; PETYUSHKIN, A.F.; TRUSHKIN, A.M.; VOLODINA, K.D.; TIKHONOV, A.S.

Treating patients with skin diseases with highly concentrated Matsesta baths under polyclinical conditions. Vest.derm.i ven. 35 no.1:49-52 Ja '61. (MIRA 14:3)

1. Iz kurortnoy polikliniki No.2 (glavnyy vrach L.I. Kuznetsova) Kurortnogo upravleniya Sochi - Matsesta Ministerstva zdravookhraneniya RSFSR.
(SKIN—DISEASES) (MATSESTA—MINERAL WATERS, SULFUROUS)



ca

7

Improvement of the analytical method for commercial sodium sulfide. F. A. Sapegin and K. I. Volodina. *Tsentral. Nauch.-Issledovatel. Inst. Koshevennoi Prom. Sbornik Rabot* No. 4, 125-35(1934).—The methods for analyzing com. Na_2S are reviewed critically and numerous suggestions made concerning the most advantageous procedure. A. A. Boehtlingk

VOLODINA, K.N.; LIMBAKH, Yu.I.; NAKHAMKIN, S.A.

Determining statistical properties of seismic signals. Vop. din. teor. raspr. seism. voln no.4:181-193 '62. (MIRA 15:10)
(Seismometry)

VOLODINA, K.N.; LIMBAKH, Yu.I.; NAKHAMKIN, S.A.

Correlation properties of seismic vibrations. Vop. din. teor. raspr. seism. voln no.6:185-200 '62. (MIRA 16:7)
(Seismometry)

VOLODINA, K.V.

"Loss of Moisture by Man through Perspiration During Rest and During Physical Labor Under Various Microclimatic Conditions." Cand Med Sci, Kiev Order of Labor Red Banner Medical Inst imeni Bogomol'yets, A.A., Kiev, 1955. (KL, No 14, Apr 55)

SO: Sum.No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

VOLODINA, L. A., and ANDREYEV, V. I.

"Effect of Air Preheating on Flame Stabilization by Bluff Bodies in an Open Flow."

(Study of Combustion Processes; Collection of Articles on Work Done by the Power Instituteimeni G. M. Krzhizhanovskogo AS USSR) Moscow Izd-vo AN SSSR, 1958. 123 p.

VOLODINA, L.A., aspirantka; YAVORSKIY, B.M., prof.

Optical method for evaluating the take-in of dyes by textile fabrics. Tekst. prom. 24 no.9:55-60 S '64.

(MIRA 17:11)

1. Kafedra fiziki Moskovskogo tekstil'nogo instituta (for Volodina).
2. Zaveduyushchiy kafedroy fiziki Moskovskogo tekstil'nogo instituta (for Yavorskiy).

SOV/137-59-2-2241

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 2, p 3 (USSR)

AUTHORS: Volodina, L. A., Andreyev, V. I.

TITLE: Effect of Preheating of Air on the Process of Stabilization of a Flame by Bluff Bodies in an Open Flow (Vliyaniye podogreva vozdukha na protsess stabilizatsii plameni telami plokho obtekayemoy formy v otkrytom potoke)

PERIODICAL: V sb.: Issled. protsessov goreniya. Moscow, AN SSSR, 1958 pp 36-38

ABSTRACT: The effect of preheating on the stabilization of a methane-air flame was studied on a stainless-steel burner 18 mm in diam. The air was preheated; the temperature of the mixture could be raised to 400°C. The outflow velocity of the mixture from the burner varied within the 20 - 200 m/sec range. Stainless steel cones 5.7 and 9 mm in diam and with a 70° apex angle served as flameholders. The velocity and composition of the mixture at which separation of the flame takes place were determined in the experiments. Preheating of air appreciably broadens the range of stabilization of the flame jet in relation to the air-excess coefficient and the velocity of the mixture. The

Card 1/2

SOV/137-59-2-2241

Effect of Preheating of Air on the Process of Stabilization of a Flame (cont.)

effect of preheating is the most substantial in the range of lean mixtures. An increase in the diameter of the stabilizer at any given flow temperature broadens the range of stabilization.

G. G.

Card 2/2

11.7430
11.7200

81480
S/112/59/000/014/008/085
A052/A001

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 14, pp.18-19
28650

AUTHORS: Volodina, L. A., Andreyev, V. I.

TITLE: The Effect of Air Preheating on the Process of Flame Stabilization by Poorly Streamlined Bodies in the Open Flow

PERIODICAL: V sb.: Issled. protsessov goreniya, Moscow, AN SSSR, 1958, pp.36-38

TEXT: The effect of air preheating on the stabilization limits of methane-air flame was studied. The investigation was carried out on a round burner made of stainless steel 18 mm in diameter at outflow speeds of 20-200 m/sec. The air was preheated enabling to raise the temperature of mixture at the stabilizer up to 400°C. Tapers 5, 7, and 9 mm in diameter placed on the edge of the burner were used as stabilizers. In the first series of experiments the effect of air preheating at a taper 7 mm in diameter was investigated; in the second series of experiments the effect of the size of the taper on the stabilization limits with respect to the air excess ratio and the speed of the mixture

Card 1/2

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S/112/59/000/014/008/085
A052/A001

The Effect of Air Preheating on the Process of Flame Stabilization by Poorly Streamlined Bodies in the Open Flow

was investigated. For poor mixtures the effect of preheating is much more essential than for the rich ones. An increase in the diameter of a stabilizer at the same temperature of the flow leads to a widening of stabilization limits.

A. D. A.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

VOLODINA, L.A.; KLYUCHAREV, S.V.; DMITRIYEV, S.A.; YAVORSKIY, B.M.

Spectrophotometric analysis of the selectivity of direct dyes by staple fabrics. Izv.vys. ucheb. zav.; tekh. tekst. prom. no.6:124-129 '63 (MIRA 17:8)

1. Moskovskiy tekstil'nyy institut, shelkootdelochnaya fabrika imeni Ya.M. Sverdlova.

VOLODINA, L. A.; RYAZANTSEV, Yu. S.; YAVORSKIY, B. M.

"The diffusion of straight dyes into fiber."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Moscow Textile Inst.

VOLODINA, L.A.; YAVORSKIY, B.M.

Determining dye concentration on dyed fabrics by the reflection spectrum. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.4:97-104 '64. (MIRA 17:12)

1. Moskovskiy tekstil'nyy institut.

VOLODINA, L.A.

Seed germination of Polygonum coriarium. Sbor. nauch. rab. TSBS no.2:211-213 '61. (MIRA 15:7)
(Polygonum) (Germination)

VOLODINA, L.A. [Valodzina, L.A.]

Heat treatment of seed corn for planting in peat soils. Vestsi AN BSSR. Ser. biial. nav. no.3:37-40 '59. (MIRA 12:12)
(Corn (Maize)) (Plants, Effect of temperature on)
(Seeds)

ACC NR: AP7005520 (A) SOURCE CODE: UR/0342/66/000/011/0072/0072

AUTHOR: Volodina, L. A. (Docent); Gaydukov, V. I. (Aspirant); Yavorskiy, B. M. (Professor)

ORG: [Volodina; Gaydukov] MTI

TITLE: Applying neutral light filters to improve precise measurement of reflection coefficients for dyed fabrics

SOURCE: Tekstil'naya promyshlennost', no. 11, 1966, 72

TOPIC TAGS: light reflection coefficient, transmission coefficient, glass optic property, spectrophotometer, textile, optic filter / SF-10 spectrophotometer, NS-6 filter, NS-7 filter, NS-9 filter

ABSTRACT: In measuring reflection coefficients by spectrophotometer or photometer, a glass neutral filter placed in the path of the calibrating beam will increase the reflection coefficient by $\frac{1}{T_\lambda}$ (T_λ is the transmission coefficient). The true values of the reflection coefficients in this case will be $R_{\lambda\ \mathrm{true}} = R_{\lambda\ \mathrm{meas}} T_\lambda$, where $R_{\lambda\ \mathrm{meas}}$ is the value of the reflection coefficients with the introduction of the light filter. Such a filter was used in an SF-10 spectrophotometer with polarized light in examining dyed fabrics, and was found to double the minimum and maximum

Card 1/2 UDC: 677.064.535.345.6.001.5

ACC NR: AP7005520

reflection coefficients, probably due to the relation of dye molecules to fiber axes in the fabric. A table gives percentages of error in determining reflection coefficients by three filters NS-6, NS-7 and NS-9. Orig. art. has: 3 formulas, 1 table, and 1 figure.

SUB CODE: 11, 14,20/ SUBM DATE: none

Card 2/2

VOLODINA, L. F.

124-58-9-10687

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 173 (USSR)

AUTHOR: Volodina, L. F.

TITLE: A Method for the Measurement of Large Deformations by Means of Wire Resistance Strain Gages (Sposob izmereniya bol'shikh deformatsiy datchikami provolochnogo soprotivleniya)

PERIODICAL: V kn.: Eksperim. metody issledovaniya mashin. Moscow, Izd-vo AN SSSR, 1954, pp 70-80

ABSTRACT: Bibliographic entry

1. Materials--Deformation 2. Strain gages--Applications

Card 1/1

USCOMM-DC-55519

VOLODINA, L. N.

4903. NIKITIN, N, N., POLYAK, G. B. i VOLODINA, L. N. Sbornik arigmeticheskikh zadach i
uprazhneniy. Dlya 4-go klassa nach. shkoly. 4-ye IZD., S 10-go rus. nukus-samarkand,
karakalpakgiz, 1955. 155 s. s Ill. 21sm. 3.000 EKZ. 1r. 55k. V per.—Na karakalpak. yaz.—
(54-57829) 511(076)

SO: Knizhnaya Letopis', Vol. 1, 1955

VOLODINA, L. N.

4901-02. NIKITIN, N. N., POLYAK, G. B. i VOLODINA, L. N. Sbornik arigmeticheskikh zadach i uprazhneniy. 9-ye IZD., s 10-go Rus. Alma-Ata, Kazuchpedgiz, 1955. 21sm. V per.--na pereplete avt. ne ukazany.--na kazakh. yaz. 511(076)
Dlya 3-go klassa nach. shkoly. 176 s. s Ill 51.000 EKZ. 1r. 25k.--(54-58256)
Dlya 4-go klassa nach. shkoly. 156 s. s Ill. 35.000 EKZ. 1r. 25k.--(54-58320)

SO: Knizhnaya Letopis', Vol. 1, 1955

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.; 55 Volodina, L. N. 55

TITLE: A method for producing bis-(triorganosilyl)-phosphinates. 7,55 Class 12, 22 B No. 172787 16

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

VOLODINA, L.M.

5965 VOLODINA, L. M. Sbornik arifmeticheskikh zadach and uprazhn eniy. dlya perbogo lkassa nach. shkol'. Izd. G Ye. makhachkala, daguchpedgiz, 1954, 14ss. s ill. 21sm. 5.000 okz. 1r. 15k. V per.- na dargin. yaz. (54-58322) 511(076)

SO: Knizhnaya Letopis', vol. 1, 1955

VOLODINA, L. N.

4900. NIKITIN, N. N., POLYAK, G. B., i VOLODINA, L. N. Sbornik arifmeticheskikh zadach i uprazhneniy. Dlya pervogo klassa nach. Shkoly. Izd. 3-ye, s 10-go (RUS.) Makhachkala, daguchpedgiz, 1955. 148s. s Ill. 21sm. 10.000 EKZ. 1r. 20k. V per.--na avar. yaz.-- (54-56030) 511(076)

SO: Knizhnaya Letopis', Vol. 1, 1955

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

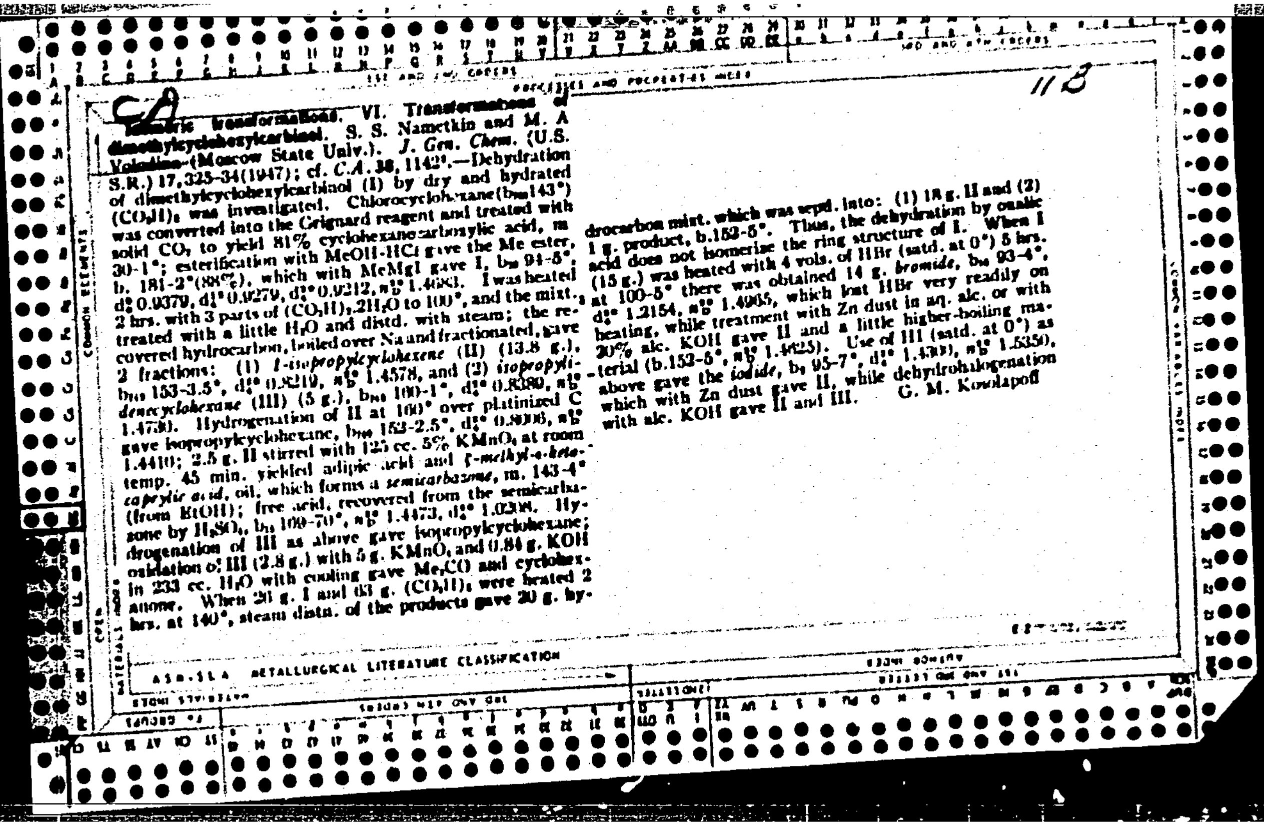
Card 1/1 vmb UDC: 546.287 + 547.26'118

0923 1912

VOLODINA, M. A.

"Investigations in the domain of polyarylmethane compounds. I. On the colour of the derivatives of diphenylmethane and triphenylmethane having the nitro- and the donor groups in different nuclei.". Izmailsky, V. A., Surkov, D. K., and Volodina, M. A. (p. 834)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1943, Volume 13, no. 11-12.



CA

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Isomeric transformations. VI. Transformations of dimethylcyclohexylcarbinol. S. S. Nametkin and M. A Volodina (Moscow State Univ.). *J. Gen. Chem.* (U.S.S.R.) 17, 325-34(1947); cf. *C.A.* 38, 1142⁹.—Dehydration of dimethylcyclohexylcarbinol (I) by dry and hydrated (CO$_2$H)$_2$ was investigated. Chlorocyclohexane (b$_{760}$ 143°) was converted into the Grignard reagent and treated with solid CO$_2$ to yield 81% cyclohexanecarboxylic acid, m. 30-1°; esterification with MeOH-HCl gave the Me ester, b. 181-2° (88%), which with MeMgI gave I, b$_{18}$ 94-5°, d$_4^0$ 0.9379, d$_4^{15}$ 0.9279, d$_4^{20}$ 0.9212, n$_D^{20}$ 1.4683. I was heated 2 hrs. with 3 parts of (CO$_2$H)$_2$.2H$_2$O to 100°, and the mixt. treated with a little H$_2$O and distd. with steam; the recovered hydrocarbon, boiled over Na and fractionated, gave 2 fractions: (1) *1-isopropylcyclohexene* (II) (13.8 g.), b$_{760}$ 153-3.5°, d$_4^{20}$ 0.8219, n$_D^{20}$ 1.4578, and (2) *isopropylidenecyclohexane* (III) (5 g.), b$_{760}$ 160-1°, d$_4^{20}$ 0.8380, n$_D^{20}$ 1.4730. Hydrogenation of II at 160° over platinized C gave isopropylcyclohexane, b$_{760}$ 153-2.5°, d$_4^{20}$ 0.8008, n$_D^{20}$ 1.4410; 2.5 g. II stirred with 125 cc. 5% KMnO$_4$ at room temp. 45 min. yielded adipic acid and *ζ-methyl-ε-ketocaprylic acid*, oil, which forms a *semicarbazone*, m. 143-4° (from EtOH); free acid, recovered from the semicarbazone by H$_2$SO$_4$, b$_3$ 169-70°, n$_D^{20}$ 1.4473, d$_4^{20}$ 1.0208. Hydrogenation of III as above gave isopropylcyclohexane; oxidation of III (2.8 g.) with 5 g. KMnO$_4$ and 0.84 g. KOH in 233 cc. H$_2$O with cooling gave Me$_2$CO and cyclohexanone. When 20 g. I and 63 g. (CO$_2$H)$_2$ were heated 2 hrs. at 140°, steam distn. of the products gave 20 g. hydrocarbon mixt. which was sepd. into: (1) 18 g. II and (2) 1 g. product, b.152-5°. Thus, the dehydration by oxalic acid does not isomerize the ring structure of I. When I (15 g.) was heated with 4 vols. of HBr (satd. at 0°) 5 hrs. at 100-5° there was obtained 14 g. *bromide*, b$_{14}$ 93-4°, d$_4^{20}$ 1.2154, n$_D^{20}$ 1.4935, which lost HBr very readily on heating, while treatment with Zn dust in aq. alc. or with 20% alc. KOH gave II and a little higher-boiling material (b.152-5°, n$_D^{20}$ 1.4625). Use of III (satd. at 0°) as above gave the *iodide*, b$_4$ 95-7°, d$_4^{20}$ 1.4303, n$_D^{20}$ 1.5350, which with Zn dust gave II, while dehydrohalogenation with alc. KOH gave II and III. G. M. Kosolapoff

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

VOLODINA, M. A.

USSR/Chemistry - Carbinol, Dimethylcyclchexl-
Chemistry - Oxalic acid

Feb 1947

"Investigations in the Field of Isomeric Transforations: VI, Some Transformations of Dimethylcyclohexylcarbinol," S. S. Nametkin, M. A. Volodina, 10 pp

"Zhur Obshch Khim" Vol XVII, No 2

Study of the dehydration of dimethylcyclohexylcarbinol under the influence of hydrous and anhydrous oxalic acid.

PA 15T50

VOLODINA, M. A.,

USSR/Chemistry - Dehydration
Menthol

Nov 48

"Studies in the Field of Isomeric Conversions: VII, Dehydration of Diphenylcyclopentylcarbionl and Dephenylcyclohexylcarbinol," S. S. Nametkin, M. A. Volodina, Chem Lab, Moscow State U, 4 pp

"Zhur Obshch Khim" Vol XVIII, No 11

Dehydration of diphenylcyclopentylcarbinol and diphenylcyclohexylcarbinol under the influence of oxalic acid gave diphenylcycloamylidenemethane and diphenylcyclohexyidenemethane, i.e., without isomerization of the rings. Submitted 19 Jan 48.

PA 67/49T15

VOLODINA, M. A.

S.S. Nemetkin and M.A. Volodina, Investigations in the region of isomeric transformations. VII. On dehydration of diphenyl-cyclo-pentyl-carbinol and diphenyl-cyclo-hexyl-carbinol. p. 2033.

The dehydration of diphenyl-cyclo-pentyl-carbinol and diphenyl-cyclo-hexyl-carbinol under the influence of oxalic acid proceeds analogous to the dehydration of diphenyl-cyclobutyl-carbinol with formation of the normal reaction products, diphenyl-cyclo-pentylidene-methane and diphenyl-cyclo-hexylidene-methane, that is, without the isomerization of the cycle.

The Chemical Laboratory of the
Moscow State University.
January 19, 1948

SO: Journal of General Chemistry (USSR) 28, (80) No. 11, 1948

VOLODINA, M. A. 176T19

USSR/Chemistry - Isomerization Feb 51

"Research in the Field of Isomeric Conversions. VIII. Conversion of Dimethyl-Cyclopentyl-Carbinol," S. S. Nametkin, M. A. Volodina, Chem Lab, Moscow State U

"Zhur Obshch Khim" Vol XXI, No 2, pp 331-339

Dehydration of dimethyl-cyclopentyl-carbinol with oxalic acid yielded: 1-isopropyl-cyclopentent-1, 1,2-dimethyl-cyclohexene-1, and isopropylidene-cyclopentane1. Action of fuming HBr on above carbinol yielded stable 1,1-dimethyl-2-bromo-cyclohexane and unstable dimethyl-cyclopentyl-bromomethane. Latter decomposed into HBr, isopropylidene-cyclopentane, and 1-isopropyl-cyclopentene-1. Submitted 5 Dec 48.

PA 176T19

1. TERENT'EV, A. P., VOLODINA, M. A., PANTELEIMONOV, L. A., STECHKINA, I. N.

2. USSR (600)

4. Chemistry - Study and Teaching

7. Results of entrance examinations in chemistry, Khim. v. shkole, no. 1, 1953.

9. **Monthly List of Russian Accessions**, Library of Congress, May 1953, Unclassified.

Chemical Abst.
Vol. 48 No. 6
Mar. 25, 1954
Organic Chemistry

Voloding (M. V. Lomonosov State Univ., Moscow). Doklady Akad. Nauk S.S.S.R. 88, 845-8(1953).—$AcCH_2CH_2CH_2OH$, obtained by condensation of $AcCHNaCO_2Et$ with ethylene oxide, followed by decarboxylation, b. 114-16°, n_D^{20} 1.4305, d_{20} 1.0068. This [illegible] g. and [illegible] g. $HCONH_2$ heated with 2 g. Ni catal. at [illegible] finally to [illegible] when the CO_2 evolution [illegible], refluxed with [illegible]0 ml. concd. HCl 3 hrs., made alk. and [illegible] with Et_2O gave [illegible] 5 g. 2-methylpyrrolidine [illegible] picrate m. [illegible] This passed [illegible] at 290-300° gave [illegible] methylpyrrole [illegible] d_{20} [illegible]0438. [illegible] g. Na [illegible] $AcCH_2CO_2Et$ was added with cooling [illegible] the mixt. let stand overnight [illegible] AcOH, salted out, extd. with Et_2O [illegible] yielding 3-aceto-4-valerolactone, which was [illegible] with 7% HCl, yielding 65.5% $AcCH_2CH_2CH(OH)Me$, b. 60-1°, n_D^{20} 1.43[illegible], d_{20} 0.9534; the yield is raised to 72% if the lactone is not isolated and the whole mixt. is heated with 7% HCl. The alc. (11.6 g.) heated with 30 g. $HCONH_2$ and 2 g. Ni catalyst 14 hrs. to 110-20°, finally to 160-5° then refluxed with HCl gave 4.2 g. 2,5-dimethylpyrrolidine, b_{760} 110-12°, n_D^{20} 1.4217, d_{20} 0.8144; picrate, m. 117-18°. A similar reaction with HCONHPh at 120-60° gave after the hydrolytic step as above, 10% 1-phenyl-2,5-dimethylpyrrolidine, b. 122-4°, which, passed over Pd-asbestos at 400°, gave 20% 1-phenyl-2,5-dimethylpyrrole, m. 62-3°. Similarly HCONHPh and $AcCH_2CH_2CH_2OH$ heated with a Ni catalyst and treated as above gave 42% 1-phenyl-2-methylpyrrolidine, b. 120-2°, n_D^{20} 1.5670, d_{20} 0.9976 (picrate, m. 108-8.5°), which over Pd-asbestos at 350-80° gave 45% 1-phenyl-2-methylpyrrole, b. 112.5-13°, n_D^{20} 1.5775, d_{20} 1.0318. Similarly 2,5-dimethylpyrrolidine over Pd at 300° gave 66% 2,5-dimethylpyrrole, b. 170-2°, n_D^{20} 1.5036, d_{20} 0.9344. G. M. Kosolapoff

VOLODINA, M.A.

20-5-33/60

AUTHOR	TERENT'YEV, A.P., corresponding member of the Academy, VOLODINA, M.A., PODLESOVA, N.L., and GOLUBEVA, N.Ye.
TITLE	The Synthesis of Pyrrholes, Pyrrholines and Pyrrholidines from γ-ketoalcohols. (Sintez pirrolov, pirrolinov i pirrolidinov iz γ-ketoalkogoley.- Russian)
PERIODICAL	Doklady Akademii Nauk SSSR 1957, Vol 114 Nr 5, pp 1036-1039 (U.S.S.R.)
ABSTRACT	In a previous paper the authors showed that the hydroamination reaction of γ-ketoalcohols by formamide or by its N-substituents leads to the formation of a nitrogeneous heterocycle. Pyrrholidine bases were obtained as reaction products. With regard to the formation of a 5-membered nitrogeneous heterocycle from γ-ketoalcohols (I,II) one can also imagine that water is separated from the alcohol- and ammonia- (or amine-) molecule over a dehydrating catalyst. The product of such a conversion must be a corresponding Δ^2-pyrrholine (IV). It may well be possible that one of the reaction products represents a homologue of 4,5-dihydro furan (III). The authors made it their object to study the relationship between the

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20-5-33/60

The Synthesis of Pyrrholes, Pyrrholines and Pyrrholidines from γ-ketoalcohols.

γ-ketoalcohols and the dehydrating catalysts, in order to find a way of synthesis of the comparatively little investigated and not easily accessible Δ^2-pyrrholines, as well as of their dehydrogenation products of pyrrholes. They have hitherto not been described. As objects of the investigation served γ acetopropy-(I) and secondary γ-acetobutyl- (II) alcohol. It was revealed that the transformation of the former in an ammonium stream at 450°C on aluminumoxide and Pd on asbestos (in an analogous way Ni/Al_2O_3) resulted in the formation of α-methyl pyrrholidine (V), α-methylpyrrhole (VI) with a 10-20% yield and a small amount of α-Methyl-Δ^2-pyrrholidine (IV). It seems that the last one is the primary reaction product; under contact conditions it undergoes disproportionation according to the type of irreversible catalysis by Zelinskiy yielding V and VI. The formation of α-methylpyrrhole can be brought about by dehydrogenation of the mentioned substance under the influence of Pd, as well as under that of aluminumoxide itself. An examination of the reaction over aluminumoxide without Ni and Pd revealed that α-methyl Δ^2-pyrrholine represents the chief product (45 %);

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α-methylpyrrhole develops under these conditions in very small amounts. Thus aluminum oxyde exerts practically no influence upon the dehydregenation of IV in this case. The most favourable conditions for the formation of α-methyl-Δ^2 pyrrholing from γ-acetoprophylalcohol are thus given at 310-320°C, using the γ-oxide of aluminum as a catalyst. After satisfactory conditions for the synthesis of the above mentioned pyrrholene had been found, the authors decided to use the γ-ketoalcohols (I,II) in a synthesis of the interesting and little investigated compounds of Δ^2-pyrrholine bases. Some homologues of these substances are known as photosensibilators. The authers succeeded in demonstrating that a formation of Δ^2-pyrrholine bases with a yield of 25-55 % takes place, when ketoalcohols (I and II) are passed through in an ammonia or amine stream, or in a mixture with an aromatic amine, over aluminumoxide at 310-320° C. At lower temperatures (280-290 C) they contain a considerable admixture of corresponding 4,5-

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20-5-33/60

The Synthesis of Pyrrholes, Pyrrholines and Pyrrholidines from γ-ketoalcohols.

dihydro furans (III). The study of the reaction mechanism is no direct object of this paper and has to be further investigated. A detailed elaboration of reaction conditions (other dehydrating catalysts, activation of aluminumoxyde) will make it possible to increase the yield of pyrrholine bases to some extent. The thus obtained Δ^2-pyrrholines readily form haloidalkylates. The position of double bonds cannot yet be considered as firmly established, but these compounds most probably represent Δ^2pyrrholines.
(2 Tables, 7 Slavic references)

ASSOCIATION: "M.V. LOMONOSOV" Moscow State University.
(Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova)
PRESENTED BY: -
SUBMITTED: 12.2.57
AVAILABLE: Library of Congress.

CARD 4/4

VOLODINA, M.A.; KUDRYASHOVA, V.A.; TERENT'YEV, A.P.

Synthesis of pyrrolidines, pyrrolines, and pyrroles. Part 13: synthesis of pyrroline derivatives based on β-chlorovinyl aldehydes. Zhur. ob. khim. 34 no.9:3130-3131 S '64.

(MIRA 17:11)

ARTEMOV, D.M.; RUDENKO, P.A.; BOYARIN, B.Ya.; KURTSEV, V.V.; VOLODINA, M.A.; KRIVOVAYA, V.I.; KOROLEV, I.V.; BUDNIKOVA, Z.M.; METAL'NIKOVA, A.L.; AFANAS'YEV, S.P., red.; GUDKOVA, N., red.; YAKOVLEVA, Ye., tekhn. red.

[Economy of Moscow Province; a statistical manual] Narodnoe khoziaistvo Moskovskoi oblasti; statisticheskii sbornik. [Moskva] Mosk. rabochii, 1958. 270 p. (MIRA 11:9)

1. Moscow (Province). Oblastnoye statisticheskoye upravleniye.
2. Nachal'nik Moskovskogo oblastnogo statisticheskogo upravleniya (for Afanas'yev).

(Moscow Province--Economic conditions--Statistics)

VOLODINA, M. A.

79-1-46/63

AUTHORS: Terent'yev, A. P., Volodina, M. A., Mishina, V. G.

TITLE: The Synthesis of Pyrrolidine Bases From γ-Ketoalcohols (Sintez pirrolidinovykh osnovaniy iz γ-ketoalkogoley)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol.28, Nr 1, pp.223-226 (USSR)

ABSTRACT: The authors earlier showed that on heating of γ-acetopropyl and secondary γ-acetobutyl alcohol with formamide and N-phenylformamide in the presence of a nickel catalyst an amination and reduction of the carbonyl group takes place, where the closing of the cycle takes place at the expense of the NH_2- and OH-group (both in position 1, 4). The reaction products were the corresponding pyrrolidine bases: γ-methylpyrrolidine, 2,5-dimethylpyrrolidine, N-phenyl-2-methylpyrrolidine and N-phenyl-2,5-dimethylpyrrolidine. In the present report these syntheses are more exactly described and their applicability is shown. By further investigating the hydroamination reaction of γ-acetopropyl and secondary γ-acetobutyl alcohol the authors used various N-substituted formami-

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The Synthesis of Pyrrolidine Bases From γ-Ketoalcohols 79-1-46/63

des (N-methylformamides, N-ethyl-, N-p-tolyl, N-o-tolyl, N-p-anisyl-, N-o-anisylformamide). In all cases the corresponding pyrrolidine bases (formulae (I) to (XII)) resulted. The N-substituted formamides were produced by mixing amines with formic acid. The nickel catalyst in all cases lowered the reaction temperature , but remained without an essential influence upon the yield of pyrrolidine bases (20-50%). In comparison with an earlier datum the yield of γ-methylpyrrolidine could be increased to 30 %. In all cases the hydroamination of secondary γ-acetobutyl alcohol gives a smaller yield of pyrrolidine bases (at maximum 30 %). The last fact gives rise to the thought that the presence of the substituents in position 2,5 on the one hand disturbs the closing of the cycle, but on the other hand also makes it unstable under the reaction conditions. This assumption was supported by some investigations of Yu. R. Yur'ev. There are 7 references 4 of which are Slavic.

ASSOCIATION: **Moscow State University** (Moskovskiy gosudarstvenny universitet)
SUBMITTED: December 30, 1956
AVAILABLE: Library of Congress
Card 2/2 1. Chemistry 2. Prolines 3. Hydrolysis

AUTHORS: Terent'yev, A. P., Volodina, M. A., Mishina, V. G. SOV/79-28-6-17/63

TITLE: Synthesis and Properties of Pyrrolidine Bases (Sintez i svoystva pirrolidinovykh osnovaniy) IV. 2-Methyl-N-β-Aminoethylpyrrolidine and Some of Its Conversions (IV. 2-Metil--N-β-aminoetilpirrolidin i nekotoryye yego prevrashcheniya)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 6, pp. 1516-1520 (USSR)

ABSTRACT: In earlier publications (Refs 1 - 3) the authors showed that γ-ketoalcohols can serve as accessible initial material for pyrrolidine and pyrroline bases especially since some of the compounds obtained show physiologic activity. This caused the authors to investigate the synthesis of 2-methyl-N-β--aminoethylpyrrolidine as well as its properties. On the action of γ-acetopropylalcohol (I) on N,N'-ethylene formamide besides 2,2-dimethyl-N-N'-dipyrrolidine-ethane (III) the 2-methyl-N-β-aminoethylpyrrolidine (II) (60 % yield) was obtained. It shows a high physiologic activity (see scheme 1). The conversion of compound (II) with furfurole yielded 2-

Card 1/3

Synthesis and Properties of Pyrrolidine Bases. IV. 2-Methyl-N-β-Aminoethylpyrrolidine and Some of Its Conversions SOV/79-28-6-17/63

-methyl-N-β-furfurylideneaminoethylpyrrolidine (IV) which by reduction with magnesium in methylalcohol was converted to compound (V). This product by a treatment with benzylchloride and 2-methyl-β-chloroethylpyrrolidine lead to the following tertiary amines: N-2-furfuryl-N-benzyl-β-(2-methyl-pyrrolidyl-1)-ethylamine (VI) and N-2-furfuryl-N-(2-methyl-pyrrolidyl-1-ethyl)-β-(2-methylpyrrolidyl-1)ethylamine (VII). On the action of phenyl isocyanate on (V) the N-phenyl-N'-2-(2-methyl-N-pyrrolidyl)-ethyl-N'-furfurylthiourea (XII) was obtained. The conversion of ethylene- and propylene oxide on (II) supplied amino alcohols (VIII) and (IX) which again were converted to their corresponding β-chloroalkylamines (X) and (XI). All conversions carried out are mentioned in scheme 2. There are 8 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: April 6, 1957

Card 2/3

Synthesis and Properties of Pyrrolidine Bases. IV. 2-Methyl-N-β-Aminoethylpyrrolidine and Some of Its Conversions SOV/79-28-6-17/63

1. Cyclic compounds--Synthesis

Card 3/3

5(3)

SOV/156-59-1-33/54

AUTHORS: Terent'yev, A. P., Rode, V. V., Volodina, M. A.

TITLE: The Dithiocarbamates of Certain Nitrogenous Heterocyclic Compounds (Ditiokarbamaty nekotorykh azotsoderzhashchikh geterotsiklicheskikh soyedineniy). Intracomplex Copper Dithiocarbamates (Vnutrikompleksnyye mednyye ditiokarbamaty)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 1, pp 129 - 133 (USSR)

ABSTRACT: The problem of the structure of the dithiocarbamates is still in dispute. The authors synthesized and investigated several dithiocarbamates of the homologues of pyrrolidine, piperidine, and their derivatives, as well as of the products of their dehydration. Sodium salts are formed only if the nitrogenous heterocyclic compound is saturated. Copper salts, however, were obtained from all of the compounds investigated. The spectra of all the copper compounds produced, as well as the spectra of certain sodium compounds were photographed. In the sodium compounds, both spectrum and numerous properties point to an ion structure. The resulting sodium salts of the

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The Dithiocarbamates of Certain Nitrogenous Heterocyclic SOV/156-59-1-33/54
Compounds. Intracomplex Copper Dithiocarbamates

dithiocarbamic acid of saturated heterocyclic compounds are white crystalline substances that solve well in water and alcohol, but are insoluble in organic solvents such as ether, benzene, chloroform, carbon tetrachloride, and ethyl acetate. Sodium dithiocarbamates were obtained from : 2-methyl-pyrrolidine, 2,5-dimethyl-pyrrolidine, 2,2-pentamethylene-pyrrolidine, piperidine, 3,3-dimethyl-2 isopropyl-piperidine, 3,4-diphenyl-piperidine. (The spectral absorption maxima, decomposition temperatures, and yields are presented in tables and diagrams). All of the copper compounds are water-insoluble, difficultly soluble in alcohol, but solve well in the above-mentioned organic solvents. They are blackish-brown, as are their solutions in the organic solvents, the solutions being occasionally even more intensively colored. The copper dithiocarbamates show good stability. They were not affected by acetic or hydrochloric acids. Nitric acid decomposes them after prolonged standing or on heating. The spectra of the copper compounds show certain governing rules according to the individual ring substituents. The double bonds in the nitrogenous heterocyclic ring are also spectrally

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The Dithiocarbamates of Certain Nitrogenous Heterocyclic Compounds. Intracomplex Copper Dithiocarbamates SOV/156-59-1-33/54

characterized. Copper dithio-carbamates were obtained from : 2-methyl-pyrrolidine, 2,5-dimethyl-pyrrolidine, 2,2-pentamethylene-pyrrolidine, piperidine, 3,3-dimethyl-2-isopropyl-piperidine, 3,4-diphenyl-piperidine, 2-methyl-Δ^2-pyrroline, 2,5-dimethyl-Δ^2-pyrroline, 2,3,5-trimethyl-Δ^2-pyrroline, 3,3-dimethyl-2-isopropyl-Δ^4-pyrroline, pyrrole, 2-methyl-pyrrole, 2,4-dimethyl-pyrrole, 2,4-dimethyl-3,5-dicarbethoxy-pyrrole. (Absorption maxima, decomposition temperatures, copper content, and yields are presented in tables and diagrams). As the spectral absorption maxima are situated at 420 - 440 mμ, one will have to conclude to an intracomplex structure. There are 2 figures, 2 tables, and 20 references, 4 of which are Soviet.

Card 3/4

The Dithiocarbamates of Certain Nitrogenous Heterocyclic Compounds. Intracomplex Copper Dithiocarbamates SOV/156-59-1-33/54

ASSOCIATION: Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Chair of Organic Chemistry of Moscow State University imeni M. V. Lomonosov)

SUBMITTED: June 16, 1958

Card 4/4

SOV/79-29-1-66/74

AUTHORS: Terent'yev, A. P., Volodina, M. A., Vasina, L. G.

TITLE: Synthesis and Properties of Pyrrolidine Bases (Sintez i svoystva pirrolidinovykh osnovaniy). V. Ethyl Ether of 5-Methyl Prolinol and Its N-Substituted Homologs (V. Etilovyy efir 5-metilprolinola i yego N-zameshchennyye gomologi)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 314-317 (USSR)

ABSTRACT: The authors continued their investigations (Refs 1,2) and hydroaminated α-ethoxy-methyl-γ-acetopropyl alcohol (I) in order to obtain the synthesis of the derivatives of 5-methyl prolinol and its N-substituted homologs as some of them are of considerable physiological activity (Ref 5). This paper describes the synthesis of ethyl ether of 5-methyl propinol and its N-substituted homologs (II) carried out by hydroamination of α-ethoxy-methyl-γ-acetopropyl alcohol with formamide and its N-substituted products (Scheme 1). Compound (I) was obtained according to scheme 2. Compound (III) was synthesized from epichlorohydrin in the presence of anhydrous $SnCl_4$ or $BF_3 \cdot O(C_2H_5)_2$. Lactone (V) was decarboxylated according to

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SOV/79-29-1-66/74

Synthesis and Properties of Pyrrolidine Bases. V. Ethyl Ether of 5-Methyl Prolinol and Its N-Substituted Homologs

Vanderwerf (Ref 6) with diluted hydrochloric acid. In connection with the hydroamination of γ-keto alcohol either the formyl derivative of the amine was used or the amine together with formic acid. The addition of a nickel catalyst does not increase the yield, permits, however, a considerable reduction of the reaction temperature. The presence of two asymmetrical centers in the synthesized pyrrolidine bases rendered the separation of the individual products more difficult. In most cases the picrates and picrolonates of pyrrolidines were separated only as not crystallizable oils. Thus, the ethyl ethers of 5-methyl prolinol (IIa), 1,5-dimethyl prolinol (IIb), 1-ethyl-5-methyl prolinol (IIv), and 1-butyl-5 methyl prolinol (IIg) were synthesized in a yield of 40 - 50%. Contrary to expectations, the molecular refraction of the pyrrolidines obtained is smaller than that theoretically calculated. There are 8 references, 5 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

Card 2/3

SOV/79-29-2-28/71

AUTHORS: Terent'yev, A. P., Volodina, M. A., Mishina, V. G.

TITLE: Synthesis and Properties of Pyrrolidine Bases (Sintez i svoystva pirrolidinovykh osnovaniy). VI. 2-Methyl-N-ω-aminohexyl Pyrrolidine and Some of Its Transformations (VI. 2-Metil-N-ω-aminogeksilpirrolidin i nekotoryye yego prevrashcheniya)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 494-497 (USSR)

ABSTRACT: In continuation of their investigations (Ref 1) the authors carried out the analogous reaction of γ-acetopropyl alcohol with hexamethylene diamine. The present paper describes the synthesis of 2-methyl-N-ω-aminohexyl pyrrolidine and some of its transformations. Unlike 2-methyl-N-β-aminoethyl pyrrolidine, 2-methyl-2-ω-aminohexyl pyrrolidine was synthesized heating the mixture of γ-acetopropyl alcohol, hexamethylene diamine and formic acid, and not by reaction of γ-acetopropyl alcohol with preliminarily prepared formyl derivative of hexamethylene diamine. Besides the chief reaction product (II), 2-methyl-N-ω-aminohexyl pyrrolidine (70% yield), also the compound (III) (25%) was formed (Scheme 1). Investigations of some derivatives of the pyrrolidine bases obtained (II, III)

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SOV/79-29-2-28/71

Synthesis and Properties of Pyrrolidine Bases. VI. 2-Methyl-N-ω-aminohexyl Pyrrolidine and Some of Its Transformations

pointed to a remarkable physiological activity. For this reason, some transformations of 2-methyl-N-ω-aminohexyl-pyrrolidine (II) were carried out, i.e. the compounds (IV-XIII) were synthesized. Scheme 2 served as an illustration of all the transformations specified. There are 5 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: December 20, 1957

Card 2/2

5 (3)

AUTHORS: Terent'yev, A. P., Volodina, M. A., Mishina, V. G., Komissarov, I. V. SOV/79-29-7-44/83

TITLE: Synthesis and Properties of Pyrrolidine Bases (Sintez i svoystva pirrolidinovykh osnovaniy). VII. Some Esters of 2-Methyl-N-β-oxyethylpyrrolidine (VII. Nekotoryye slozhnyye efiry 2-metil-N-β-oksietilpirrolidina)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2307 - 2310 (USSR)

ABSTRACT: The authors continued their investigation of the hydroamination of γ-keto alcohols (Refs 1,2), and in the present work they investigated the reaction of γ-acetopropyl alcohols (I) with ethanol amine in the presence of formic acid, using purified commercial γ-acetopropyl alcohol. 2-Methyl-N-β-oxyethylpyrrolidine (II) was obtained as final product in a 56% yield. As well as this synthesis some reactions of compound (II) were described. (II) on treatment with thionyl chloride yielded 2-methyl-N-β-chloroethylpyrrolidine hydrochloride (III), which was converted into the free base (IV). Reaction of (IV) with a number of aromatic acids gave the corresponding esters (V), which were separated as hydrochlorides. Esters of the following

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Synthesis and Properties of Pyrrolidine Bases. SOV/79-29-7-44/83
VII. Some Esters of 2-Methyl-N-β-oxyethylpyrrolidine

acids were obtained in this manner: 2-methyl-N-β-oxyethylpyrrolidinebenzoic acid (Va), o-nitrobenzoic acid (Vb), p-bromobenzoic acid (Vv), p-phenylacetic acid (Vg), cinnamic acid (Vd), and salicylic acid (Ve). The hydrochlorides of these esters, with the exception of (Vg), were tested pharmacologically. They had a hypotensive effect on dogs (lowering the normal arterial blood pressure by 13-45% for 5-33 min). The introduction of substituents into the o- and p-position of the benzene ring had no substantial effect on the hypotensive activity. The pharmacological properties of the esters were tested at the Chair of Pharmacology of the Minskiy meditsinskiy institut (Minsk Institute of Medicine). There are 1 table and 10 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: June 16, 1958

Card 2/2

TERENT'YEV, A.P.; VOLODINA, M.A.; KUDYRASHOVA, V.A.

Structure of Schiff's bases of N-arylpyrrolines. Dokl. AN SSSR 164 no.1:115-118 S '65. (MIRA 18:9)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
2. Chlen-korrespondent AN SSSR (for Terent'yev).

VOLODINA, M.A.; KIRYUSHKINA, G.V.; TERENT'YEV, A.P.

Synthesis of cycloalkano-2,3-pyrolidines and steric course of Leikart's reaction. Dokl. AN SSSR 162 no.1:90-93 My '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet. 2. Chlen-korrespondent AN SSSR (for Terent'yev).

TERENT'YEV, A.P.; VOLODINA, M.A.; KIKOT', B.S.; MISHINA, V.G.; KOMISSAROV, I.V.

Synthesis and properties of pyrrolidine bases. Part 10: Synthesis of α-amino-ω-pyrrolidyl alkanes and α,ω-bispyrrolidyl alkanes, derivatives of heptane, octane, nonane, decane. Zhur.ob.khim. 34 no.1:209-213 Ja '64. (MIRA 17:3)

VOLODINA, M.A.; TERENT'YEV, A.P.; KUDRYASHOVA, V.A.; MISHINA, V.G.

Syntheses based on γ-ketols. Part 2: α-(2-Chloroethyl-β-chlorocrotonaldehyde and its transformations. Zhur.ob.khim. 34 no.2:473-477 F '64. (MIRA 17:3)

VOLODINA, M.A.; TERENT'YEV, A.P.; ROSHCHUPKINA, L.G.; MISHINA, V.G.

Syntheses based on γ-ketols. Part 1: α-(2-Acetoxyethyl)-β-chlorocronaldehyde and its transformations. Zhur.ob.khim. 34 no.2:469-473 F '64.
(MIRA 17:3)

VOLODINA, M.A., dotsent

Chemistry knowledge level of students entering Moscow University.
Khim. v shkole 17 no.3:24-28 My-Je '62. (MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet.
(Chemistry—Study and teaching)

VOLODINA, M.A.; MISHINA, V.G.; TERENT'YEV, A.P.; KIRYUSHKINA, G.V.

Synthesis and properties of pyrrolidines and pyrroles. Part 9: Cyclopentano- and cyclohexanopyrroles. Zhur.ob.khim. 32 no.6:1922-1925 Je '62. (MIRA 15:6)
(Pyrrole) (Cyclohexane) (Cyclopentane)

TERENT'YEV, A.P.; VOLODINA, M.A.; KIRYUSHKINA, G.V.

Synthesis and properties of pyrrolidines and pyrroles. Part 11: Cyclopentano-2,3-pyrrolidines. Zhur.ob.khim. 32 no.6:1925-1927 Je '62. (MIRA 15:6)

(Pyrrolidine) (Cyclopentane)

TERENT'YEV, A.P.; VOLODINA, M.A.; VOLOD'KIN, A.A.; MISHINA, V.G.;
KOMISSAROV, I.V.

Aminopropanediol derivatives. Part 2: Compounds of the type 1,3-[R'R" $NCH_2CH(OH)CH_2O]_2C_6H_4$. Zhur. ob. khim. 32 no.1:174-177 Ja '62.
(MIRA 15:2)

(Resorcinol) (Amines)

VOLODINA, Mariya

Beautiful dreams. Rabotnitsa. 40 no.6:2 of cover-2 Je '62.
(MIRA 16:3)

1. Dispetcher Yedinoy energeticheskoy sistemy Yevropeyskoy chasti SSSR.

(Moscow--Electric power distribution)

USSR/Farm Animals. Small Horned Cattle Q-3

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 49985

Author : Volodina, M.I.
Inst : Vologda Dairy Institute.
Title : The Content of "Raw" Cellulose in the Diet of High-Yield Cows.

Orig Pub : Tr. Vologodsk. molochn. in-ta, 1956, vyp. 14, 97-104

Abstract : By feeding high-yield cows according to methods worked out by the Vologda Experimental Station of Animal Husbandry, it was established that raw cellulose content (in percents of dry substance) contained in the cow rations should amount to 25-31 percent before and during the period when there is no yield, as well as during the interlactation period. During the period of lactation this percentage should drop to 16-22 percent if the daily milk yield is above 20 kg. Such diet assures normal digestion and sufficiently high digestibility of nutrient substances contained in rations. -- F.M. Kazantzev

Card : 1/1

VOLODINA, M.N.; MISHINA, V.G.; PRONINA, Ye.A.; TERENT'YEV, A.P.

Synthesis and properties of pyrrolidines and pyrroles. Part 12: 5-Phenylcyclopentane-2,3-pyrroles and 5-phenylcyclohexane-2,3-pyrroles. Zhur. ob. khim. 33 no.10:3295-3297 O '63.
(MIRA 16:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

88523

S/179/60/000/006/017/036
E191/E135

11.9200

AUTHORS: Volodina, M.V., Dem'yanov, Yu.A., Kellin, S.S., and Chereshneva, N.V. (Moscow)

TITLE: Investigation of the Surface Temperature of a Wall Beyond a Moving Shock Wave

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1960, No. 6, pp. 112-116

TEXT: An analytical and experimental investigation of the surface temperature of a wall beyond a shock wave moving at constant velocity is reported. The temperature of the gas at the wall was taken to be equal to the wall surface temperature as found from the heat balance equation (ignoring heat radiation). To find the convective heat flow, the equations of the non-stationary boundary layer of a compressible gas were solved for the case of a plate when the velocity of the flow beyond the shock wave is constant. The heat flow into the wall is found from the equation of heat conductivity. It has been shown before that the boundary layer in the region beyond the shock wave becomes

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Investigation of the Surface Temperature of a Wall Beyond a Moving Shock Wave

stationary assuming the wall temperature to be constant. Owing to the large range of temperature variation in the boundary layer, the deviations of the viscosity from the usually assumed value inversely proportional to the density must be taken into account, as well as the change of the Prandtl number with temperature and the phenomenon of diffusion. Under the conditions discussed below, diffusion makes no significant contribution to the heat flow because the Prandtl number is near unity and the concentration gradient in the boundary layer near the wall is small. The equations of the boundary layer are formulated in non-dimensional form (following Crocco) and the boundary conditions stated. The solution by the method of successive approximations is written down. The expressions for the convective heat flow are given in terms of functions which are tabulated in the present and other papers. The increase in temperature at the instant of the passing shock wave is given (and illustrated in Figs 2 and 3) in non-dimensional form as a function

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Investigation of the Surface Temperature of a Wall Beyond a Moving Shock Wave

of the velocity of the shock wave. A power law is assumed for the viscosity. The results are compared with those of H. Mirels (Ref.4) and shown to agree well. A film type resistance thermometer was used to measure the wall temperature (a nickel or tin dioxide film deposited on molybdenum glass). The film had a thickness measured in fractions of a micron and an initial resistance between 10 and 1000 ohms. Cathode ray oscilloscope records were taken and typical records are reproduced. Computed and measured results differ by about 10-15%.
There are 6 figures, 2 tables and 6 references: 3 Soviet and 3 English.

SUBMITTED: May 26, 1960

Card 3/3

VOLODINA, N.A.; SHIDLOVSKIY, A.A.; VOSKRESENSKIY, A.A.

Heats of formation of alkali metal chlorates. Zhur. fiz. khim. 38 no.6:1703-1705 Je '64. (MIRA 18:3)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.

ACCESSION NR: AP4041764

to a great extent on the amount of heat which is liberated in the decomposition of chlorates. Cesium chlorate was the subject of this investigation. The iodometric assay of cesium chlorate was 98.5 %. The heat of the solution of cesium chlorate in water was determined in an isothermal calorimeter. The temperature measurements were accurate to ± 0.002 C. The calorimeter was electrically calibrated and the time was measured with an accuracy of ± 0.5 %. The determined standard heat of the solution of cesium chlorate in water was ΔH_{298} = 11.8 kcal/mole and the calculated heat of formation of crystalline $CsClO_3$ is -94.6 kcal/mole. The tabulation of the heats of formation of alkali metal chlorates indicates that the difference in heats of formation of salts with the same cation are not strictly constant (10.3 ± 1.3 kcal/mole) and it slowly decreases from Na to Cs. Orig. art. has: 3 tables.

ASSOCIATION: Moskovskiy institut khimicheskogo mashinostroyeniya (Moscow Institute of Machine Building for Chemical Industry)

SUBMITTED: 25Nov63 ENCL: 00

SUB CODE: IC, TD NO REF SOV: 006 OTHER: 001

Card 2/2

L 22958-66 EWP(j)/EWT(m)/ETC(m)-6/T RM/WW/JWD

ACC NR: AP6012842 SOURCE CODE: UR/0080/66/039/004/0754/0758

AUTHOR: Shidlovskiy, A. A.; Volodina, N. A.

66
B

ORG: none

TITLE: Study of the combustion 11 of potassium chlorate 11 -iditol mixtures with catalytic additives

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 4, 1966, 754-758

TOPIC TAGS: solid propellant, burning velocity, combustion catalyst

ABSTRACT: The burning velocities and combustion temperatures of $KClO_4$-phenol formaldehyde resin mixtures 15 containing MnO_2, $KMnO_4$, Cr_2O_3, $CoCl_2 \cdot 6H_2O$, Co_2O_3, and CoO as additives were determined. The burning velocity 11 vs. resin concentration curves showed that the burning velocity and combustion temperature are maximum at a resin concentration of 14—18%. The addition of Cr_2O_3, MnO_2, and $CoCl_2 \cdot 6H_2O$ had the strongest catalytic effect among the additives tested. They considerably increased the burning velocity and permitted a low caloric mixture containing only 0.8—4% resin to burn at atmospheric pressure. The strongest catalytic effect was experienced when the additives were present in concentrations ranging from 3 to 5%. A stoichiometric

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L 22958-66

ACC NR: AP6012842

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mixture of $NaClO_4$-resin burned considerably slower than a stoichiometric $KClO_4$-resin mixture. This is attributed to the lower melting point of $NaClO_4$. Orig. art. has: 2 figures and 1 table. [PV]

SUB CODE: 21/ SUBM DATE: 04May64/ ORIG REF: 002/ OTH REF: 003
ATD PRESS: 4237

Card 2/2

ALEKSANDROVSKIY, B.P.; VOLODINA, N.G.; YEMCHENKO, A.A.; IZABOLINSKAYA, R.M.; KOGOSOVA, L.S.; LOSEV, V.A.; MAYTULINA, S.P.; NIKOLAYETS, V.P.; OMEL'YANENKO, N.N.; RICHENKO, S.G.; CHERKASSKIY, L.P.; YUSHKEVICH, M.S.; YASHCHENKO, T.T.

Basic pathophysiological peculiarity of the vital activity of person with one lung and the functional disorders attendant on it. Pat., klin. i terap. tub. no.8:4-11 '58. (MIRA 13:7)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta tuberkuleza im. akad. F.G. Yanovskogo.

(LUNGS--SURGERY) (METABOLISM)

USSR/Human and Animal Physiology (Normal and Pathological) T
Respiration.

Abs Jour : Ref Zhur Biol., No 6, 1959, 26664

Author : Volodina, N.G.

Inst : Ukrainian Scientific Research Institute of Tuberculosis.

Title : Peculiarities of Electrocardiographic Tracings in Patients With Long-Established Pneumothorax.

Orig Pub : Materialy po obmenu nauchn. inform. Ukr. n.-i. in-t tuberkuleza, 1958, vyp. 8, 175-178

Abstract : No abstract.

Card 1/1

ALEKSANDROVSKIY, B.P.; VOLODINA, N.G.; GOREV, V.P.; YEMCHENKO, A.A.;
IZABOLINSKAYA, H.M.; KOGOSOVA, L.S.; LOSEV, V.A.; MAYTULINA, S.P.;
NIKOLAYETS, V.P.; OMEL'YANENKO, N.N.; RICHENKO, S.G.; CHERKASSKIY,
L.P.; YUSHKEVICH, M.S.; YASHCHENKO, T.T.

Compensation of the principal functions of the organism within 3-4 years after pneumonectomy. Probl. tub. 38 no.2:47-53 '60. (MIRA 13:11)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - kandidat meditsinskikh nauk A.S.Mamolat).
(LUNGS—SURGERY)

VOLODINA, N.G., nauchnyy sotrudnik

Peculiarities of electrocardiographic curves in patients with long-standing pneumothorax. Pat.,klin.i terap.tub. no.8:175-178 '58. (MIRA 13:7)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta tuberkuleza imeni akademika F.G. Yanovskogo.
(PNEUMOTHORAX) (ELECTROCARDIOGRAPHY)

VOLODINA, N.I.

ANOSOV, Pavel Petrovich, 1797-1851; VOLODINA, N.I., redaktor; BARDIN, I.P., akademik, redaktor; GUDTSOV, N.T., akademik, redaktor; SAMARIN, A.M., redaktor; STARK, B.V., redaktor; PROKOSHKIN, D.A., doktor tekhnicheskikh nauk, redaktor; VISHNYAKOV, D.Ya., doktor tekhnicheskikh nauk, redaktor; DAVIDENKOV, V.A., doktor tekhnicheskikh nauk, redaktor; RASTEGAYEV, M.V., kandidat tekhnicheskikh nauk, redaktor; SOROKIN, Yu.N., kandidat tekhnicheskikh nauk, redaktor; MURZIN, I.I., inzhener, redaktor; ASTAF'YEVA, G.A., tekhnicheskiy redaktor

[Collected works] Sobranie sochinenii. Moskva, Izd-vo Akademii nauk SSSR, 1954. 204 p. (MLRA 7:10)

1. Chlen-korrespondent AN SSSR (for Samarin, Stark) (Metallurgy)

VERESHCHAGIN,L.F., doktor fiziko-matematicheskikh nauk; ZHAVORONKOV,N.M., redaktor; VOLODINA,N.I., redaktor; POLYAKOVA,T.V., tekhnicheskiy redaktor

[High pressure in the technology of the future] Vysokie davleniia v tekhnike budushchego Moskva, Izd-vo Akademii nauk SSSR, 1956. 35 p. (MIRA 9:3)

1. Chlen-korrespondent AN SSSR (for Zhavoronkov)
(Pressure (Physics))

KEDROV, B.; CHENTSOVA, T.[deceased] KUZNETSOV, I.V., redaktor; VOLODINA, N.I., redaktor; SHCHERBAKOV, A.V., tekhnicheskiy redaktor

[Brauner, an associate of Mendeleev's; on the centenary of the birth of Bohuslav Brauner] Brauner-spodvizhnik Mendeleeva; k stoletiiu so dnia rozhdeniia Boguslava Braunera. Moskva, Izd-vo Akademii nauk SSSR, 1955. 124 p. (MLRA 8:11)

(Brauner, Bohuslav, 1855-1935)
(Mendeleev, Dmitrii Ivanovich, 1834-1907)

VOLODINA, N.N.

Improved procedure for drying green brick in recirculating chamber driers. N. N. Volodina. *Sbornik Trudov Respub. Nauch.-Issledovatel. Inst. Mestnykh Stroitel. Material.* 1953, No. 4, 47-68; *Referat. Zhur., Khim.* 1955, No. 863.—The outlined improved drying procedure greatly reduced the culls and the time of drying, thereby greatly increasing the output of the driers. M. Hosch

VOLODINA, N.N., kand. tekhn. nauk; SOLV'YEVA, M.K., arkhitektor;
SHELUTINSKIY, A.P., inzh.

Using large ceramic blocks for apartment houses walls and roofs.
Sbor. trud. ROSNIIMS no.27:113-120 '63. (MIRA 17:1)

VOLODINA, N.N., kand.tekhn.nauk

Developing the technology of large efficient ceramic blocks.
Sbor.trud.ROSNIIMS no.19:51-65 '61. (MIRA 16:1)
(Ceramics) (Building blocks)

SOCHIKVKO, L.F.; VOLODINA, N.V.; POLETAYEVA, V.M.

Use of a flow oxyhemometer of the Po-01 type in artificial circulation. Vest.khir. 87 no.11:38-40 N '61. (MIRA 15:11)

1. Iz samostoyatel'nogo konstruktorskogo tekhnologicheskogo byuro biologicheskogo i fiziologicheskogo priborostroyeniya (Leningrad). Adres avtorov: Leningrad, Savirovskaya ul., 37, "Biofizpribor."
(BLOOD—OXYGEN CONTENT) (BLOOD—CIRCULATION, ARTIFICIAL)

MENTSOV, V.S., starshiy prepodavatel'; VOLODINA, N.Ya.; VASIL'YEV, S.S.,
doktor khim. nauk, prof.

Kinetics of the gluing of shoe materials by means of high-frequency currents. Nauch. trudy MTILP no.24:69-73 '62. (MIRA 16:7)

1. Kafedra fiziki Moskovskogo tekhnologicheskogo instituta legkoy promyshlennosti.

(Gluing) (Induction heating)
(Shoe manufacture)