

POLIKARPOV, G.G.; ZESSENKO, A.Ya.

Prospects of using the concept "buildup factor" in marine
radiocology. Report No. 1. Okeanologia 5 no.6:1099-1107
'65. (MIRA 19:1)

1. Submitted November 16, 1964.

ZESENKO, A.Ya.; POLIKARPOV, G.G.

Coefficients of the accumulation and distribution of ruthenium-106 in organs and tissues of marine mollusks. Radiobiologia 5 no.2:320-322 '65. (MIRA 18:12)

1. Institut biologii yuzhnykh morey imeni Kovalevskogo AN UkrSSR, Sevastopol'.

ACC NR: AP7013714

SOURCE CODE: UR/0213/65/005/006/1099/1107

AUTHOR: Polikarpov, G. G.; Zesenko, A. Ya.

ORG: Institute of the Biology of Southern Seas im. A. O. Kovalevskiy, AN UkrSSR, Sevastopol' (Institut biologii yuzhnykh morey AN UkrSSR)

TITLE: Prospects for application of the concept "Accumulation Factor" in marine radioecology. Communication I

SOURCE: Okeanologiya, v. 5, no. 6, 1965, 1099-1107

TOPIC TAGS: animal physiology, biologic ecology, chemical composition, radio nuclide

SUB CODE: 06

ABSTRACT:

This is a review of recent literature in the field of radioecology concerning the accumulation factors of many radioactive and stable nuclides in marine organisms. Particular attention, however, is given to the determination of new relationships between the accumulation factors and various parameters characterizing the accumulation and distribution of chemical elements (radio nuclides) in marine organisms, their organs and tissues. A method for computing

Card 1/2

UDC: 551.464.679:557.47(26)

0933 2101

ACC NR: AP7013714

the concentration and content of a chemical element in organs and tissues is described. The authors thank D. S. Parchevskaya for discussions of the article and for valuable advice. [JPRS: 34,593]

Card 2/2

ZETEL', F. Z.

Zetel', F. Z. "Condition of the pulse in foot-bottom arteries of healthy people (on the value as a symptom of the absence of pulse for obliterating endarteritis)," Trudy Gospit. khirurg. kliniki (SverdL. gos. med. un-t). Vol. IV, 1949, p. 319-24

SO: U - 3850, 16 June 53 (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949)

15-57-3-3477

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3,
p 146 (USSR)

AUTHORS: Kakhadze, I. R., Tsagareli, A. L., Nutzubidze, K. Sh.,
Zesashvili, V. I.

TITLE: The Geologic Structure of the Belt of Jurassic Coal-
Bearing Rocks of the Northern Caucasus Between the Malka
and Bol'shoy Zelenchuk Rivers (Geologicheskoye
stroyeniye polosy yurskikh uglenosnykh otlozheniy
Severnogo Kavkaza mezhduraznitsami Malkoy i Bol'shim
Zelenchukom)

PERIODICAL: Tr. Labor. geol. uglya AN SSSR, 1956, Nr 6, pp 340-349

ABSTRACT: The oldest member of the Jurassic sequence is a coal-
bearing series of Liassic rocks, which lies with marked
unconformity on a slightly undulating surface of red
Paleozoic granites and late Precambrian crystalline
schists. It attains a thickness of 600 to 700 m in
the middle and western parts of the investigated belt,
and decreases to zero by depositional and erosional

Card 1/3

15-57-3-3477

The Geologic Structure of the Belt (Cont.)

wedge-out to the east and north. The series is composed of massive sandstones and units of thin-bedded quartz sandstones; siltstones; sandy, argillaceous, and carbonaceous shales; mudstones; and layers and seams of coal. Autochthonous coal beds are confined to the middle (productive) part of the series, occurring toward the bottom of this middle unit. Scarce fresh-water fossils (pelecypods) indicate that the rocks in the eastern part of the belt accumulated principally in a continental environment. The western part is distinguished by a dominance of marine sedimentation. The age of the coal-bearing series is determined by the discovery of Pliensbachian fossils. The clastic Tsebel'da series (150 to 200 m thick along the Bizhgon River in the western part of the belt), conformable with the coal-bearing series, is referred to the upper Pliensbachian and to the Domerian. Above this series there occurs a volcanic series assigned to the Domerian and lower Toarcian. Fossiliferous clastic rocks of the upper Toarcian (up to 100 m) overlie older formations transgressively. Clay-sand deposits of the Aalenian (50 to 120 m thick) are divided into four zones. Conglomerates and sandstones,
Card 2/3

15-57-3-3477

The Geologic Structure of the Belt (Cont.)

which have been described as upper Aalenian, are proved to be Bajocian. The Jurassic rocks have a homoclinal dip to the north, complicated by local secondary folding (coal-bearing series) and faults which have produced block structure. The most significant of these structures are pre-Aalenian faults. Individual coal-bearing areas suitable for exploration and mining may be discovered in the belt.

Card 3/3

A. Ya. D.

ZESASHVILI, V. I.

15-1957-7-9037

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7,
p 30 (USSR)

AUTHOR: Kakhadze, I. R., Zesashvili, V. I.

TITLE: A New Middle Jurassic Genus Kubanoceras gen. nov.
(Novyy sredneyurskiy rod Kubanoceras gen. nov.)

PERIODICAL: Soobshch. AN GruzSSR, 1956, vol 16, Nr 9, pp 707-
709

ABSTRACT: Perisphinctes (Grossouwria) asinus, described by A. Zatrovniy (Izv. Geol. kom., 1914, vol 33, Nr 5) from the Upper Bajocian clays of the Kuban' River, is proposed as the genotype of the new genus Kubanoceras. It is characterized by whorls subtrapezoidal to subquadrate in section, with an umbo from 0.42 (with a diameter of 10 mm) to 0.47-0.54 (with a diameter of 40-90 mm). The ribs are common, narrow, and either radial or inclined forward; they branch in the upper half of the whorl and pass to the ventral side

Card 1/2

15-1957-7-9037

A New Middle Jurassic Genus Kubanoceras gen. nov. (Cont.)

without interruption; a sharp node occurs on each rib beneath the points of branching; and the nodes are compressed. Two groups are differentiated: 1) Kubanoceras asinus, with ribs radial or slightly inclined forward, similar to Procerites Siem.; and 2) K. ultimum sp. nov., with numerous ribs bent strongly forward, similar to Ataxioceras Font. The following new species belong to the new genus: K. depressum, K. martiusiformis, K. kardonikensis, K. kitae, K. stephanocera-
toides, K. gurami. It is possible that this genus belongs to the Stephanoceratidae lineage.

Card 2/2

V. V. Drushchits

ZESKOV, P.; HAJNSEK, F.

Abdominal epilepsy. Neuropsihijatrija 8 no.4:317-324 '60.

1. Iz Klinike za dječje bolesti (Predstojnik: Prof. dr. N. Skrivansli)
i Neurolosko-psihijatrijske klinike Med. fakulteta u Zagrebu (Predstojnik:
Prof. dr. R. Lopasic)

(EPILEPSY diag) (ABDOMEN ACUTE diag)

HAJNSEK, F.; ZESKOV, P.; HRCKO, N.

Electroencephalographic changes in hydrocephalus of non-neoplastic origin. Neuropsihijatrija 11 no.1:39-47 '63

1. Iz Neurolosko-psihijatrijske klinike (predstojnik: prof.dr. R.Lopasic) i Klinike za dječje bolesti Med. fakulteta u Zagrebu (predstojnik: prof.dr.P.Erak).

ZESKOV, P.; GROEVIC, N.; LJETIC, V.

Dumbbell ganglioneuroblastoma of the spine. Neuropsihijatrija 10
no.1/285-98 '62.

1. Iz Klinike za dječje bolesti, Neuropatološkog odjela Neurolosko-
psihijatrijske klinike i Kirurske klinike Medicinskog Fakulteta u
Zagrebu.

(GANGLIONEUROMA)

(SPINAL CORD NEOPLASMS)

5

ZETEK, Ing. J.

The final stage of development of bioscope. Cas. lek. cesk. 98 no.3:
89-90 16 Jan 59.

1. Pracovník V. U. Zdravotnické techniky, Praha 9, Kurta Konrada 6.
(ELECTROMYOGRAPHY, appar. & instruments,
bioscope (Cz))

ZEFEK, Ya.

New Czechoslovak medical equipment at the international fair in
Brno. Med.prom. 14 no.3:56-60 Mr '60. (MIRA 13:6)

1. Narodnoye predpriyatiye Khirana, Praga.
(CZECHOSLOVAKIA--MEDICAL INSTRUMENTS AND APPARATUS)

CHICHIGIN, Vasilii Grigor'yevich; PRINTSEV, V.V., dotsent, retsenzent;
LAPIN, zasluzhennyy uchitel', retsenzent; STAL'KOV, G.A.,
retsenzent; ZETEL', S.I., dotsent, retsenzent; KARASEV, P.A.,
dotsent, retsenzent [deceased]; DUBNOV, Ya.S., prof., retsenzent
[deceased]; PAZEL'SKIY, S.V., red.; TATURA, G.L., tekhn.red.

[Method for teaching geometry; plane geometry. Textbook for
high-school teachers] Metodika prepodavaniia geometrii; planimetriia.
Posobie dlia uchitelei srednei shkoly. Moskva, Gos.uchebno-pedagog.
izd-vo M-va prosv.RSFSR, 1959. 391 p. (MIRA 13:3)
(Geometry--Study and teaching)

ZETEL', Semen Isaakovich; BONCHKOVSKIY, R.N., red. [deceased];
UMANSKIY, G.S., red.; SMIRNOVA, M.I., tekhn. red.

[A new geometry of the triangle; textbook for teachers] Novaia
geometriia treugol'nika; posobie dlia uchitelei. Izd. 2. Moskva,
Uchpedgiz, 1962. 150 p. (MIRA 15:6)

(Geometry, Modern)

ZETEL, S.

Construction of some models of successions Tr. from the Russian. p. 167.
(Pokroky Matematiky, Fysiky A Astronomie, Vol. 2, no. 2, 1957. Praha,
Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

SERPINSKIY, Vatslav [Sierpinski, Waclaw]; prof.; ZETEL', S.I., red.;
SIDOROVA, L.A., red.; GOLOVKO, B.N., tekhn.red.

[Pythagorean triangles; textbook for teachers] Pifagorovy
treugol'niki; posobie dlia uchitelei. Pod red. S.I.Zetelia.
Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR, 1959.
110 p. [Translated from the Polish]. (MIRA 12:7)

1. Varshavskiy universitet. Vitsse-prezident Pol'skoy Akademii
nauk (for Serpinskiy).
(Triangle)

ARAMANOVICH, I.G. (Moskva); ZHIBEL', S.I. (Moskva)

Approximation of function graphs by second-order curves. Mat. pros.
no. 4:179-187 '59.

(MIRA 12:11)

(Geometry, Algebraic)

ZETEL', S.I.(Moscow)

Problems on an obtuse triangle ABC having the difference of the angles A and B equal to 90° . Mat. pros.no.2:234,236 '57.

(Triangle)

(MIRA 11:7)

ZETET, S.I.

16(1)

PHASE I BOOK EXPLOITATION 80V/2508

Matematicheskiye prosvetsheniye; matematika, yeye propodavaniye, prilozheniya i teorii, vpp. 4 (Mathematical Education Mathematics, Its Teaching, Application and History, No. 4) Moscow, Gosstatizdat, 1959. 15,000 copies printed.

Ed.: I.M. Bronshcheyn, Editorial Board of Series; I.N. Bronshcheyn, A.I. Markushavich, I.M. Yaglom, Tech. Ed.: S.M. Akhmasov.

PURPOSE: This book is intended for persons without an extensive secondary education who are interested in trends in contemporary mathematics. The book may be useful to high school mathematics teachers.

COVERAGE: The book consists of articles, reviews, and scientific and technological reports, some of which are translations from other languages. The state of modern mathematics from including applications, history, teaching of mathematics in schools, and mathematical developments in the USSR and abroad. One section deals with scientific and pedagogical life in the USSR and another contains reviews of certain mathematical publications. Some mathematical background is necessary to understand the book; certain articles require a knowledge of higher mathematics.

Mathematical Education; (cont.)

80V/2508

III. SCIENTIFIC-METHODOLOGICAL REPORTS (Teaching Experience and Pedagogical Experimentation)

- Aramanovich, I.G., and S.I. Zetel'. On an Approximation of Graphs of Functions by Curves of the Second Order [Comics] 179
 - Gradstein, I.J. (Deceased) On One Sufficient Test of Indefinite Integrals Turning to Zero 189
 - Segal, B.I. On the Local Limit Theorem in Probability Theory 193
 - Tekshe, K. (Rumery) Remarks on the Theory of Geometric Constructions 197
- Brief Reports:
- 1. Baik, K.B. Computing a Sum by Weighting 205
 - 2. Glazbur, B.L. Simplification of Multiplication From Left to Right 205
 - 3. Kuznetsov, A.V. A Study of the Roots of a Cubic Equation 207

Card 5/8

ZETEL', S.I. (Moskva).

Division of the circle. Mat. v shkole no.6:4-8 N-D '56.

(MIRA 10:1)

(Circle)

ZETEL', S.I. (Moscow)

Construction of certain formulas and sequences. Mat.v shkole
no.3:5-12 My-Je '55. (MIRA 8:7)
(Algebra--Graphic methods)

ZETEL', S. II

O postroyeni i nekotorykh pravil'nykh mnogougol'niko v sverdlovsk, izv. ural'sk un-ta, 3
(1922-1923), 195-203

SO: Mathematics in the USSR, 1917-1947

edited by Kurosh, A.G.

Markushevich, A.L.

Radhevskiy, P.K.

Moscow-Lenigrad, 1948

ZHTEL', Semen Isaakovich; OSTIANU, N.M., red.; KREYS, I.G., tekhn.red.

[Geometry of the line and geometry of the compass] Geometriia lineiki
i geometriia tsirkulia. Izd. 2-oe, dop. Moskva, Gos. uchebno-
pedagog. izd-vo M-va prosv. RSFSR, 1957. 162 p. (MIRA 11:5)
(Geometry, Plane)

ZETELAKI, Zoltanne

Possibilities for applying glucose oxidase in the food industry. Elelm ipar 18 no.5:178-183 Je '64.

1. Central Research Institute of the Food Industry, Budapest.

ZETEN, Z.; KARWEG, K.

"Poradnik kreślacza żelbetnika" (Guide-book of a designer in iron-concrete works), by Z. Zeten and K. Karweg. Reported in New Books (Nowe Książki), No. 12, June 15, 1956.

JUBA, Adolf, dr.,; SZANDTNER, Gyorgy, dr.,; ZETENY, Gyozo, dr.

Surgical therapy of Sturge-Weber disease. Orv. hetil. 96 no.12:
329-333 20 Mar 55

1. A Szegedi Orvostudományi Egyetem 2. Sebészeti Klinikájának
(igazgató: Lang Imre dr. egyet. tanár) és a Gyulai Megyei
Kórház Elme-ideg (főorvos: Juba Adolf dr.) és Radiológiai Osztályának
(főorvos Zeteny Gyozo dr.) közleménye.
(ANGIOMATOSIS,
Sturge-Weber dis., surg.)

JUBA, Adolf, dr.,; SZANDTNER, Gyorgy, dr.,; ZETENY, Gyozo, dr.

Surgical therapy of Sturge-Weber disease. Orv. hetil. 96 no.12:
329-333 20 Mar 55

1. A Szegedi Orvostudományi Egyetem 2. Sebészeti Klinikájának
(igazgató: Lang Imre dr. egyet. tanár) és a Gyulai Megyei
Kórház Elme-ideg (főorvos: Juba Adolf dr.) és Radiológiai Osztályának
(főorvos Zeteny Gyozo dr.) közleménye.
(ANGIOMATOSIS,
Sturge-Weber dis., surg.)

KIBEDI, Tibor, dr.; ZETENY, Gyozo, dr.

Cardiac calcification. Magy. radiol. 7 no.1:31-35 Jan 55.

1. A Bekesmegyei Tanacs Korhaza, Gyula (igazgato: Juba, Adolf dr. foorvos) rentgenosztalyanak (foorvos: Zeteny, Gyozo dr.) kozlemenye.

(CALCIFICATION,
myocardium, x-ray.)
(MYOCARDIUM, diseases,
calcification, x-ray.)

ZETENYI, Endre, dr., foiskolai docens (Eger)

Alaska. Term tud kozl 7 no.2:84-86 F '63.

~~ZETLGV G-V~~

Basic principles for organizing the material and technical supply
for the railroads. Zhel.dor.transpr, 39 no.6:15-20 Je '57.

(MLRA 10:7)

1. Zamestitel' nachal'nika Glavnogo upravleniya material'no-
tekhnicheskogo obespecheniya Ministerstva putey soobshcheniya.
(Railroads--Equipment and supplies)

ZETILOV, German Vasil'yevich; TAGUNTSEV, Sergey Dmitriyevich.
Prinimal uchastiye ARASHKEVICH, G.M.; GOLOVACHEV, B.N.;

[Fundamentals of the supply of materials and equipment
in railroad transportation] Osnovy material'no-tekhniche-
skogo snabzheniia zheleznodorazhnogo transporta. Izd.2.,
dop. i perer. Moskva, Izd-vo "Transport," 1964. 315 p.
(MIRA 17:7)

ZETILOV, German Vasil'yevich; TAGUNTSEV, Sergey Dmitriyevich; KRISHTAL',
L.I., red.; VERINA, G.P., tekhn.red.

[Principles of supply of materials and equipment to railroads]
Osnovy material'no-tekhnicheskogo snabzheniia zheleznodorozhnogo
transporta. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 354 p.
(MIRA 13:3)
(Railroads--Management) (Railroads--Equipment and supplies)

INT AND 1ND CROSS
100 AND 4TH CROSS

PROCESS AND PROPERTIES INDEX

Intensifying gold extraction by the cyanide process under pressure. I. N. Plaksin and A. P. Zolotarev. *Soviet Zolotoprom*, 1937, No. 2, 69-73. Theoretical considerations show that in the reaction expressing the cyanide process of Au extrn., $2 Au + 4 KCN + O_2 + H_2O \rightarrow 2 KAu(CN)_2 + 2 KOH$, an increase of the air pressure over the reaction soln. will speed up the reaction. With solns. contg. 0.1% or more NaCN, an increase of pressure from 1 to 7 atm. resulted in an increase of the rate of Au soln.

10, 24 and 36 times in the case of Balot, Mirdvaks and Bakr-Uryaksk ores, resp. S. L. Mablorsky
Gold or 4-5"

ALSO SEE METALLURGICAL LITERATURE CLASSIFICATION

100 AND 4TH CROSS

1. ZETIUKOV, N. A.
2. USSR (600)
4. Pine - Dnieper Valley
7. Planting pine in clumps with peat fertilizer on Lower Dnieper sands.
Les 1 step' 5, No. 3, 1953.

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

BARDENSHTEYN, S.B.; DZHAGATSPANYAN, R.V.; ZETKHIN, V.I.

Analysis of a mixture of isomeric trichlorobenzenes and of a mixture of isomeric tetrachlorobenzenes based on their infrared absorption spectra. Zav.lab. 26 no.2:167-171 '60. (MIRA 13:5)
(Benzene--Spectra)

ZETKIN, V. I.

USSR/Chemistry - Organosilicon Compounds

21 Mar 52

"Preparation of Hexalkoxy Derivatives of Disilanemethane." Acad A. V. Topchiyev, N. S. Nametkin, V. I. Zetkin

"Dok Ak Nauk SSSR" Vol 83, No 3, pp 423 - 425

Hexachlordisilanemethane was prepared from silicon and methylene chloride. This was used as the starting material for the synthesis of hexapropoxy, hexaisopropoxy, hexabutoxy, and hexaisopentoxy disilanemethanes from the corresponding alcohols. The reactions were carried out in a stream of nitrogen.

PA 227T7

ZETKIN, V. I.

USSR/Chemistry - Organosilicon Compounds

21 May 52

"Hexalcozyderivatives of Disilanemethane," N. S. Nametkin, Acad A. V. Topchiyev,
V. I. Zetkin

"Dok Ak Nauk SSSR" Vol LXXXIV, No 3, pp513, 514

PA225T4

(BA-AII Ap. '53:584)

ZETKIN, V. I.

USSR/Chemistry - Organosilicon Compounds

11 Jun 52

"Preparation of Hexalkoxy Derivatives of Disilanethane," A.V. Topchiyev,
N.S. Nametkin, V.I. Zetkin

"Dok Ak Nauk SSSR" Vol LXXXIV, No 5, pp 979, 980

Hexahexoxy-, hexaheptoxy-, hexaoctoxy-, and hexanonoxydisilanethanes were
prepd from the appropriate primary normal alc and hexachlordisilanethane.

223T16

TOPCHYEV, A. V., NAMETKIN, N. S., ZETKIN, V. I.

Methylene Chloride; Silicon; Organosilicon

Synthesis of organosilicon compounds from methylene chloride and silicon, Dokl. AN SSSR 82 no. 6, 1952.

Monthly List of Russian Accessions. Library of Congress, July 1952. UNCLASSIFIED

ZETKIN, V. I.

PA 234T29

USSR/Chemistry - Organosilicon
Compounds

21 Oct 52

"Some Aromatic and Hydroaromatic Derivatives of
Hexahydroxydisilanmethane," Acad A. V. Topchiyev,
N. S. Nametkin, V. I. Zetkin

"Dok Ak Nauk SSSR" Vol 86, No 6, pp 1133, 1134

Hexaphenylmethoxydisilanmethane, hexaphenoxy-
disilanmethane, hexacyclohexyloxydisilanmethane,
hexacresoxydisilanmethane were prepd from hexa-
chlorodisilanmethane and benzyl alc, phenol, cy-
clohexanol, and m-cresol, respect.

(CA 47 no. 22:12281 '53)

234T29

ZETKIN, V.I.

CA., V-48
Jan 10, 1954
Organic Chem.

Some aromatic and hydroaromatic derivatives of hexa-alkoxydisiloxane. N. S. Nametkin, A. V. Topchlev, and V. I. Zetkin. *Doklady Akad. Nauk S.S.S.R.* 87, 59-60 (1952).—Addn. of 40 g. $\text{Cl}_2\text{SiCH}_2\text{CH}_2\text{SiCl}_2$ to 145 g. $\text{Ph-CH}_2\text{OH}$ gave an unstated yield of $[(\text{PhCH}_2\text{O})_2\text{SiCH}_2]_2$, b_p 335-6°, d_4^{20} 1.5522, n_D^{20} 1.5070. Similarly cyclohexanol gave $[(\text{C}_6\text{H}_{11}\text{O})_2\text{SiCH}_2]_2$, b_p 300-302°, d_4^{20} 1.0292, n_D^{20} 1.4803. PhOH at 50° gave $[(\text{PhO})_2\text{SiCH}_2]_2$, b_p 310-13°, m 90° (from CH_2Cl_2), while $m\text{-MeC}_6\text{H}_4\text{OH}$ gave $[(m\text{-MeC}_6\text{H}_4\text{O})_2\text{SiCH}_2]_2$, b_p 316-18°, m 78-9° (from petr. ether). The refractive indexes of the latter 2 substances by immersion method were N_p 1.6065 and N_s 1.674 (at 594 $m\mu$) and N_p 1.592 and N_s 1.704 (at 400 $m\mu$) resp. G. M. K.

4
Chem
③

MF
7-28-54

ZETKIN, V. I.

USSR/Chemistry - Organosilicon Compounds

1 Nov 52

"Some Aromatic and Hydroaromatic Derivatives of Hexoxydisilanethane," N. S. Nametkin, Acad A. V. Topchiyev, and V. I. Zetkin

DAN SSSR, Vol 87, No 1, pp 59-60

Hexaphenylmethoxydisilanethane, hexacyclohexoxydisilanethane, hexaphenoxydisilanethane, and hexacresoxydisilanethane were prep'd by treating dichloroethane with metallic silicon in the presence of powd copper (catalyst) to obtain hexachlorodisilanethane which was then treated with benzyl alcohol, cyclohexanol, phenol, and *m*-cresol, resp.

PA 252111

(CA 48 no.1:114 14)

ZETKIN, V. I.

USSR/Chemistry - Organosilicon Compounds

21 Nov 52

"Hexalkoxy Derivatives of Disilanethane," Acad A. V. Topchiyev, N. S. Nametkin, and V. I. Zetkin

"Dok Ak Nauk SSSR" Vol 87, No 3, pp 431,432

The preparation and physical and chemical properties of the following are described: hexapropoxy disilanethane, hexaisopropoxy disilanethane, hexabutoxy disilanethane, hexaisobutoxy disilanethane, and hexaisopentoxy disilanethane.

PA 245T12

(CA 47 no. 22: 12223 '53)

ZETKIN, V. I.

Some hexaalkoxy derivatives of disilaneethane and di-
 silanoethane. N. S. Nametkin, A. V. Topchiev, and
 V. I. Zetkin. *Doklady Akad. Nauk S.S.S.R.* 87, 601-3
 (1952); *cr. C.A.* 47, 12223f. —Addn. of 95 g. CH_3SiCl_2 ,
 over 35 min. to 150 g. abs. MeOH gave an unstated yield of
 $\text{CH}_3\text{Si}(\text{OMe})_2$, b_p 92-3°, d_{20} 1.0873, n_D^{20} 1.4071. Similarly
 were obtained: EtO analog, b_p 114-15°, d_{20} 0.9741, n_D^{20}
 1.4098; Me, CH₂CH₂O analog, b_p 180-2°, d_{20} 0.9110, n_D^{20}
 1.4240; $[\text{CH}_3\text{Si}(\text{OMe})_2]_2$, b_p 103-4°, d_{20} 1.0687, n_D^{20} 1.4001;
 $[\text{CH}_3\text{Si}(\text{OEt})_2]_2$, b_p 122-3°, d_{20} 0.9660, n_D^{20} 1.4120.
 S. M. Kosolapoff

3

C.A. V-48
Jan 10, 1954
Organic Chemistry

MF
7-28-54

~~Journal of Chemistry - Silicon-Organic Compounds~~ V. I. ZETKIN

1 Dec 52

"Some Hexalkoxy Derivatives of Disilanethane and Disilamethane," N. S. Nemetkin,
Acad A. V. Topchiyev, V. I. Zetkin

DAN SSSR, Vol 87, No 4, pp 601-603

The prep and properties of hexamethoxydisilamethane, hexaethoxydisilamethane, hex-
aisobutoxydisilamethane, and hexamethoxydisilanethane are described. These compds
were prepd from hexachlordisilamethane or hexachlordisilanethane and the corres-
ponding alc.

256T11

USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 17/45

Authors : Topchiev, A. V., Academician; Nametkin, N. S.; and Zetkin, V. I.

Title : Comparative physico-chemical characteristic of silicon hydrocarbons and siloxanes

Periodical : Dok. AN SSSR 99/4, 551-553, Dec 1, 1954

Abstract : The physico-chemical properties of hitherto unknown silicon hydrocarbons - hexalkyl derivatives of disilanemethane and disilanethane - which represent two homologous series $R_3SiCH_2SiR_3$ and $R_3SiCH_2CH_2SiR_3$, were investigated. Viscosity, boiling point, specific weight, and index of refraction of the silicon hydrocarbons were determined and presented in table. Five USSR references (1951-1954). Table; graphs.

Institution : Academy of Sciences USSR, Petroleum Institute

Submitted : September 21, 1954

Syntheses of hexa-alkyl derivatives of cyclotrimethylsilo-
trisilane. N. S. Namerkin, A. V. Topchiev, and V. I.
Zelkin. *Doklady Akad. Nauk S.S.S.R.* 63, 1045-7 (1953).
From the reaction of CH_3Cl with Si_3Cl_6 (cf. C.A. 48,
1297 (s)) was isolated a fraction, b_p 157-40°, which on chilling
gave 1,1,1,3,3,3-hexachlorocyclotrimethylsilo-trisilane, b_p 133-
41°, m. 85°. This treated with RMgX gave: 73.8%
corresponding hexa-*Me* deriv., b_p 90-7°; 66% hexa-*Et*
analog, b_p 136-8°; 59.8% hexa-*Pr* analog, b_p 165-6°; and
65.5% hexa-*Bu* analog, b_p 203-4°. The reactions with
 RMgX were completed by distn. of the solvent Et_2O and
heating the residues 2-3 hrs. at 110-90° (depending on the
size of R group).
G. M. Kosolapoff

Preparation of hexaalkoxy derivatives of cyclotriphosphazene. A. V. I. ~~...~~ and ~~...~~
 Dokl. Akad. Nauk S.S.S.R. 103, 95-6 (1955). -- MeOH
 (40 g.), 60 g. Et₃NH, and 40 g. CH₃SiCl₂CH₂SiCl₂CH₂Si-
 Cl₂ in MePh with cooling under N gave 62.2% CH₃Si-
 (OMe)₆CH₂Si(OMe)₆CH₂Si(OMe)₆, b₄ 105-6°, d₄
 1.1172, n_D²⁰ 1.4376, and 14.5% (CH₃Si(OMe)₆CH₂Si-
 (OMe)₆CH₂Si(OMe)₆)₂O, b₄ 198-203°, d₄ 1.1828, n_D²⁰ 1.4548
 Use of EtOH similarly gave 64% hexa-Et analog, b₄ 132-3°,
 d₄ 1.0157, n_D²⁰ 1.4330, with 16% deca-Et analog, b₄ 230-5°,
 d₄ 1.0021, n_D²⁰ 1.4425. PrOH similarly gave 63.5% hexa-
 Pr analog, b₄ 171-2°, d₄ 0.9691, n_D²⁰ 1.4372, and BuOH
 gave 64% hexa-Bu analog, b₄ 190-7°, d₄ 0.9520, n_D²⁰
 1.4331.
 G. M. Kosolapoff

4 117

MA

ACCESSION NR: AP4034544

S/0020/64/155/005/1163/1166

AUTHORS: Dzhagatspanyan, R.V.; Filippov, M.T.; Motsarev, G.V.; Zetkin,
V.I.; Rozenberg, V.R.

TITLE: Radiative chlorination of certain organochlorosilanes and
organopolysiloxanes

SOURCE: AN SSSR. Doklady*, .v. 155, no. 5, 1964, 1163-1166

TOPIC TAGS: chlorination, irradiation chlorination, organochloro-
silane, organopolysiloxane, chlorination mechanism, polydimethyl-
siloxane, polyphenylmethylsiloxane, ethyltrichlorosilane, methyltri-
chlorosilane, dimethyldichlorosilane, phenyltrichlorosilane, phenyl-
methyldichlorosilane, photochemical chlorination, substitution
chlorination, addition chlorination, ionic mechanism, free radical
mechanism

ABSTRACT: The mechanisms involved in the chlorination of various
organosilane derivatives under the influence of Co60 radiation were
investigated. A polydimethylsiloxane resin, molecular weight 400,000-
500,000, was chlorinated at 0C as a 4% solution in CCl₄. After

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ACCESSION NR: AP4034544

chlorination under 4200 rad/min. radiation the chlorine content was 50-55%; optimum reaction time was 15-30 minutes. Total radiation greater than 1.25×10^5 rad did not lead to a higher chlorine content, but promoted degradation of the polymer. By chlorinating polyphenylmethylsiloxane under the same conditions, products containing up to 56.1% chlorine were obtained. About 80% of the chlorine reacted with the aromatic nucleus and 20% replaced hydrogens on a methyl group. Chlorination of ethyltrichlorosilane (molar ratio $\text{Cl}_2:\text{C}_2\text{H}_5\text{SiCl}_2=3:7$) at 0°C using 900 rad/min gave α - and β -monochloroderivatives in a ratio of 1:1.7, corresponding to results obtained by photochemical chlorination. On chlorinating methyltrichlorosilane and dimethyldichlorosilane the amount of monochloro derivatives in the reaction mixture did not depend on the molar ratio of reagents and the change in the amount of dosage did not influence the products of chlorination. The relative reaction rate of methyltrichlorosilane did not depend on the concentration of chlorine and at 0°C and 3300 rad/min equaled 0.148 ± 0.030 moles/liter-min. The magnitude is proportional to the square root of the power of dosage. The energy

Card 2/3

ACCESSION NR: AP4034544

of activation is about 7300-6100 cal/mole for the reaction. Phenyltrichlorosilane and phenylmethyldichlorosilane were chlorinated at 0-150C at 5900 and 800 rad/min at 0-20C. The chlorine added to the double bond of the aromatic nucleus giving $C_6H_5Cl_6SiCl_3$ and $C_6H_5Cl_6(CH_3)SiCl_2$. This additive chlorination under radiation is analogous to photochemical chlorination. At 50C, addition chlorination products as well as products of substitution chlorination in the methyl group and the aromatic nucleus were formed. At 100-150C substitution chlorination of the aromatic nucleus predominated indicating ionic mechanism for the arylalkylchlorosilanes. A free radical mechanism was postulated for the alkylchlorosilanes. Orig. art. has: 11 equations and 1 table

ASSOCIATION: None

SUBMITTED: 16Nov63

ENCL: 00

SUB CODE: oc

NR REF SOV: 005

OTHER: 002

Card 3/3

L 27304-66 EWT(m)/EPF(n)-2/ENP(j)/T/EWA(h)/ENA(l) IJP(c) GG/RM

ACC NR: AP6008980

(A)

SOURCE CODE: UR/0190/65/007/011/1959/1963

AUTHORS: Dzhagatspanyan, R. V.; Kolbasov, V. I.; Bardenshteyn, S. B.; Korolev,
B. M.; Romenskiy, I. A.; Zetkin, V. I.

ORG: none

TITLE: The structure of radiation chlorinated and sulfochlorinated polyethylene

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 11, 1965, 1959-1963

TOPIC TAGS: polymer, polyethylene, chlorination, aliphatic compound, chlorine

ABSTRACT: The structure of radiation chlorinated and sulfochlorinated polyethylene in the solid state and in solution was studied by IR spectroscopy. The polyethylene specimens were prepared after the method of R. V. Dzhagatspanyan, L. M. Yakimenko, A. I. Gershenovich, and V. I. Zetkin (Avt. svid. No. 150625, 1961; Byull. izobreteniy, 1963, No. 20, 93). The IR spectra of the investigated compounds are presented. It was found that the IR spectra of bulk radiation sulfochlorinated polyethylene were identical to those sulfochlorinated in bulk by chlorine. It is concluded that chlorination of the polymer occurs more readily in the amorphous phase than in the crystalline phase. Orig. art. has: 2 graphs.

SUB CODE: 11/ SURM DATE: 26Dec64/ ORIG REF: 003/ OTH REF: 005

Card 1/1

UDC: 678.01:53+678.743

L 36444-66 EWP(j)/EWT(m) RM/JW
ACC NR: AP6018073 (A)

SOURCE CODE: UR/0076/66/040/005/1121/1125

AUTHOR: Zetkin, V. I.; Panchenkov, G. M.; Kolesnikov, I. M.; Zakharov, Ye. V.; Kupriyanov, I. I. 29

ORG: Moscow Institute of the Petrochemical and Gas Industry im. I. M. Gubkin
(Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti) B

TITLE: Reactivity of nitrobenzene and its chlorine derivatives. 1. Investigation of high temperature destructive chlorination

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 5, 1966, 1121-1125

TOPIC TAGS: nitrobenzene, nitrogen compound, chlorinated aromatic compound, chlorinated organic compound

ABSTRACT: Destructive chlorination of nitrobenzene, and ortho-, para-, and metha-chloronitrobenzenes was studied in the 403°-673°K range in the presence and absence of activated carbon. Glass ampoules containing nitrocompounds with chlorine and carbon were charged at liquid nitrogen temperature, evacuated, and sealed. Subsequently, the ampoules were heated in thermostats for 30 minutes at reaction

Card 1/2

UDC: 541.128

L 36444-66

ACC NR: AP6018073

temperature and cooled to room temperature whereupon the contents were analyzed. In the presence of activated carbon, the rate of destructive chlorination was found to be greater than in the absence of activated carbon. The lower the nitrobenzene to chlorine ratio, the greater was the rate of destructive chlorination. The reactivity of various chloronitrobenzenes was found to decrease in order ortho>para>meta. Orig. art. has: 7 figures.

SUB CODE: 07/ SUBM DATE: 13May65/ ORIG REF: 006/ OTH REF: 007

Card 2/2 JFS

L. 00619-67 EMT(m) WE
ACC NR: AP6015121

(A)

SOURCE CODES: UR/0061/66/000/005/001E/002G

AUTHOR: Dzbagatpanyan, R. V.; Lyankin, Yu. G.; Filippov, M. T.; Sinitsin, V. I.;
Yakimenko, L. M.; Globova, L. I.; Zotkin, V. I.

ORG: none

TITLE: Radiation chlorination of kerosene

SOURCE: Khimicheskaya promyshlennost', no. 5, 1966, 18-20

TOPIC TAGS: kerosene, gamma radiation, chlorination, photochemistry

ABSTRACT: Groznyy keroseno, from which the aromatic and unsaturated compounds were eliminated by extraction with liquid SO_2 was used during chlorination initiated by γ -radiation of Co^{60} made in the apparatus described by the authors previously (Khim. prom. no. 4, 247, 1965). After purification the kerosene had a molecular weight of 177. Chlorine was passed at the rate of 0.469 g/min in the reactor set into a thermostat with a controlled given temperature. The radiation source was introduced after 15 minutes. The chlorination products were purified from Cl_2 and HCl by passing a flow of nitrogen. The densities and refractive indexes were measured and the degree of chlorination was determined from the graphs, plotted experimentally, showing the dependence of density d_{20}^{20} and the refractory indexes n_D^{20} of the chlorinated products on their chlorine content. Kinetic curves (content of chlorine vs time in min) were

Card 1/2

UDC: 665.634-4 : 66.094.403.085.3

L 08659-67

ACC NR: AP6015121

plotted at various temperatures of chlorination ($T = 20, 40, \text{ and } 60C$) and at various doses of radiation ($P = 26.1, 7.3, 1.8, \text{ and } 0.81 \text{ rad/sec}$). The dependence of the radiation-chemical efficiency coefficient G (number of atoms bound with carbon per 100 equivalent) on the radiation dose P was plotted from kinetic curves. The expression

$$G = 1.22 \cdot 10^5 e^{-\left(\frac{1600}{T} + 5.76 \cdot 10^{-2} [\%Cl]\right) P^{-0.47}}$$

well describes the results obtained. (Disagreement of experimental and calculated values averaged $\pm 10.8\%$.) This equation can be used for designing a reactor for a temperature range of 0-100C, a radiation dose of 1-50 rad/sec, and a chlorine content of 5-60%.

The apparent energy of activation was determined as 3200 cal/mole. The results of radiation chlorination were compared with those of photochemical chlorination and chlorination initiated by azo-bis-isobutyronitril. It was shown that the same degree of chlorination was achieved more rapidly during radiation chlorination. At $T = 20C$ and $P = 26 \text{ rad/sec}$, the product containing $Cl > 60\%$ was obtained in 90 minutes during radiation chlorination. It took 23 and 21 hours to obtain the same product by photochemical chlorination and chlorination initiated by azo-bis-isobutyronitril, respectively. Radiation chlorination also has other advantages: it depends little on temperature and is controlled by the radiation dose (easily controllable rate of chlorination), the rate of the radiation process does not depend on the color of the reacting mixture, and there is a much smaller danger of resinification because of an absence of local overheating. Orig. art. has: 3 fig., 4 formulas, and 1 table.

SUB CODE: 07/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001

Card 2/2 ml

DELAGATSPANYAN, R.V.; YAKIMENKO, L.M.; SINITSYN, V.I.; LYASKIN, Yu.G.;
ZEIKIN, V.I.; LIBMAN, B.Ya.

Radiochemical sulfochlorination of kerosine and synthine. Khim. prom.
41 no.4:7-11 Ap '65. (MIRA 18:8)

ZETKIN, V.I.; ZAKHAROV, Ye.V.; KOLESNIKOV, I.M.; PANCHENKOV, G.M.

Destructive high-temperature chlorination of nitrobenzene and
some of the its derivatives. Zhur. fiz. khim. 39 no.5:1240-
1242 My '65. (MIRA 18:8)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti
imeni I.M. Gubkina.

LC0907-66 EWT(m)/EPF(c)/EWP(j) RM

ACCESSION NR: AP5019676

UR/0064/65/000/008/0573/0575
661.7:547.269.11'113.7

15
B

AUTHORS: Zetkin, V. I.; Libman, B. Ya.

TITLE: Production of perchloromethylmercaptan (trichloromethansulfphenylchloride)

SOURCE: Khimicheskaya promyshlennost', no. 8, 1965, 573-575

TOPIC TAGS: sulfur compound, sulfur dioxide, mercaptan, chlorine inorganic compound, chlorine organic compound, chlorine, chlorination, perchloromethylmercaptan

ABSTRACT: The object of the investigation was to determine optimum conditions for the synthesis of perchloromethylmercaptan (A). The product was obtained by the chlorination of carbon disulfide in the presence of iodine. The influence of temperature, amount of catalyst, time, depth of chlorination, and impurities on the yield of product were determined. The experiments were carried out in a cylindrical reaction vessel equipped with a thermometer and a stirrer. The optimum conditions were found to be: temperature 10-20C, amount of catalyst 0.5 weight percent, depth of chlorination up to d_{4}^{20} 1.59-1.61. It was found that the presence of iron impurities causes the formation of carbon tetrachloride, and it

Card 1/2

L00907-66

ACCESSION NR: AP5019676

is therefore recommended that chlorination be carried out with freshly distilled carbon disulfide. The purification of A by means of sulfur dioxide described by N. N. Mel'nikov, P. P. Trunov, and Ye. M. Sokolova (avt., svid 136367, 1960; Byull. izobr., No. 5, 24, 1961) is not suitable for commercial production of A. Orig. art. has: 2 tables, 5 graphs, and 4 equations.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB COIE: 00

NO REF SOV: 003

OTHER: 003

Card 2/2

ZETKIN, V.I.; ZHKHAROV, Ye.V.; FISHKIS, M.Ya.; KOLESNIKOV, I.M.

Detection of chloronitrobenzenes. Zhur. anal. khim. 19 no.11:
1415-1416 '64. (MIRA 18:2)

I. I.M. Gubkin Moscow Institute of Petroleum Chemistry and Gas
Industry.

DZHAGATSPANYAN, R.V.; ZETKIN, V.I. Prinimali uchastiye: OSPELOV, V.Ye.;
KOLBASOV, V.I.

Sulfochlorination of polyethylene under the action of Co^{60} gamma
radiation. Plast.massy no.10:5-8 '64.
(MIRA 17:10)

ACCESSION NR: A94044020

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MOTSAREV, G.V.; YAKUBOVICH, A.Ya.; ROZENBERG, V.R.; FILIPPOV, M.T.;
DZHAGATSPANYAN, R.V.; BARDENSHEYN, S.B.; KOLBASOV, V.I.;
ZETKIN, V.I.

Halogenation of aromatic silanes. Part 17: Addition of chlorine
to phenyl-trichlorosilane. Preparation of hexachlorocyclohexyl-
trichlorosilane and the mechanism of its formation. Zhur. ob.
khim. 35 no.7:1178-1183 J1 '65. (MIRA 18:8)

DZHAGATSPANYAN, R.V.; FILIPPOV, M.T.; MOTSAREV, G.V.; ZETKIN, V.I.
ROZENBERG, V.R.

Radiation-induced chlorination of some organochlorosilanes and
organopolysiloxanes. Dokl. AN SSSR 155 no. 5:1163-1166 Ap '64.
(MIRA 17:5)

1. Predstavleno akademikom S.S.Medvedevym.

DZHAGATSPANYAN, R.V.; ZETKIN, V.I.; POSPELOV, V.Ye.; FEDCHENKO, V.S.

Radiation-induced chemical sulfochlorination of polydimethyl-
siloxane. Plast.massy no.2:16-18 '63. (MIRA 16:2)
(Siloxanes) (Chlorosulfonylation) (Radiation)

REF/EXF/IN/EPF/IN/EXF/IN/RDS AFPTC/ASB Pg=4/Pg=4/Pr=4 RM/WW

AUTHOR: Dznagatspanyan, R. V.; Zetkin, V. I.; Kostelov, N. Ye.; Fedorenko, V. S.

TITLE: Radiochemical⁴ sulfochlorination of polystyrene⁷

SOURCE: Plasticheskiye massy*, no. 5, 1963, 4-7

TOPIC TAGS: sulfochlorination, polystyrene, chlorine, sulfur dioxide, cobalt sup 60, sulfuryl chloride

ABSTRACT: Improved properties were anticipated from the sulfochlorination of polystyrene, achieved by reacting 1% polystyrene emulsion with chlorine and sulfur dioxide (in molar ratios of 0.22:1 - 4.05:1) dissolved in carbon tetrachloride and subjected to Gamma-radiation from a Co sup 60 source. Over a range of 0 - 55C, the reaction rate increased with increasing temperature to a maximum at 40C. Increasing the total dose of radiation had little effect on the process, which was all but complete within 15-20 minutes. No clear relationship was found between the rate and outcome of the reaction and the molar ratio of the two gases: although the final sulfur content was more dependent than was the chlorine content on the initial ratio, in no case did the final product contain much more than 3% sulfur. Unlike the other polymers, polystyrene could not be sulfochlorinated with sulfuryl chloride. Sulfochlorinated polystyrene had better adhesive qualities (with glass and

Card 1/2 15

L.12964-63
ACCESSION NR: AP3000393

metals) than polystyrene, a hardness of approximately 0.9 (pendulum apparatus), an impact strength of approximately 50 kg/sec x cm/cm sup 2, and an elasticity in bend of 1 on the NIK scale. Applied without admixture to iron plates, it withstood 6 hours' exposure to 1500. It was, however, less resistant than polystyrene to the action of acids, alkalis, and water. Orig. art. has: 1 figure, 1 formula, 3 tables. 0

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 10Jun63

ENCL: 00

SUB CODE: MA

NO REF SOV: 003

OTHER: 000

Card 2/2

S/844/62/000/000/066/129
D204/D307

AUTHORS: Dzhagatspanyan, R. V., Zetkin, V. I., Motsarev, G. V.
and Filippov, M. T.

TITLE: The chlorination of phenylmethyldichlorosilane (I) and
dimethyldichlorosilane (II) under the action of γ irradi-
ation

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khi-
mii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962,
386-389

TEXT: I was chlorinated in sealed ampoules, at 0 and 20°C, under
 γ irradiation (~120 r/sec, over 15 or 30 min), with molar ratios
(n) of Cl₂ : I equal to 0.25:1, 0.5:1, and 1:1, since polychlori-
nated silanes are of interest in preparing fluorinated Si-contain-
ing monomers and polymers. In contrast to chemically initiated
chlorination of I, the present reaction was one of addition of Cl₂
into the aromatic ring rather than substitution into the methyl

Card 1/2

The chlorination of ...

S/844/62/000/000/066/129
D204/D307

group, the main product being a viscous oil, which by chemical and ir spectroscopic tests proved to be $\text{CH}_3 \cdot \text{C}_6\text{H}_5\text{Cl}_6\text{SiCl}_2$. A small amount of CH_3 -chlorinated compounds was also formed. No product in which chlorination of CH_3 - and C_6H_5 -groups occurred simultaneously was observed, although it might form in initial mixtures richer in Cl_2 . Silane II was similarly chlorinated at 0°C , with n equal to 0.3:1 and 0.5:1, under 2 min doses of γ rays at 120 r/sec, to give ~30% yields of the monochloride and 5 to ~17% yields of the dichloride, the latter becoming greater with increasing n. There are 4 tables.

ASSOCIATION: NII Goskomiteta, Soveta Ministrov SSSR po khimii
(NII for Chemistry of the State Committee, Council of
Ministers of the USSR)

Card 2/2

B/844/62/000/000/067/129
D204/D307AUTHORS: Dzhagazbpanyan, R. V., Zetkin, V. I. and Zykova, Ye. N.

TITLE: Radiational sulfo-oxidation of certain paraffins

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 390-393

TEXT: The present work was carried out in view of the difficulties in the continuous photochemical sulfo-oxidation of higher paraffins, which is important in the production of detergents. Aromatics- and olefin-free normal octane, nonane and undecane were irradiated with γ rays (110 r/sec, over 2 hours), at 25°C, with $SO_2:O_2$ ratios (n) ranging from 1:1 to 3:1. For $n-C_8H_{18}$, the yield of sulfonic acid rose with increasing n, to a maximum of ~17% at n equal to 2:1. For $n-C_9H_{20}$ and $n-C_{11}H_{24}$, with n equal to 2:1 [Abstracter's note: $n-C_9H_{20}$ is described as n -octane in the text], the yields assessed

Card 1/2

S/832/62/000/000/007/015
D244/D307

AUTHORS: Topchiyev, A.V., Nametkin, N.S. and Zetkin, V.I.

TITLE: Alkoxy(aroxy)-derivatives of the reaction products of methylene dichloride and 1,2-dichloroethane with silicon

SOURCE: Issledovaniya v oblasti kremniyorgani-cheskikh soyedineniy; sintez i fiziko-khimicheskiye svoystva. Sbornik statey. Inst. neftekhim. sint. AN SSSR. Moscow. Izd-vo AN SSSR, 1962, 146 - 155

TEXT: The alkoxy-derivatives of disilylmethane and cyclo-trimethylbenzyltrisilane were synthesized to elucidate the influence of various alkoxy- and aroxy- groups on their properties. It was also of interest to establish the dependence of the reaction rate of Cl exchange for the alkoxy residues, on the latter's size and nature. Hexaalkoxy-(aroxy)-

Card 1/2

Alkoxy(aroxy)-derivatives ...

S/832/62/000/000/007/015
D244/D307

-derivatives of disilylmethane and disilylethane were obtained by the interaction of alcohols, phenol and cresol with hexachloro derivatives of the disilyl compounds. For primary alcohols the reaction proceeds under mild conditions, all six Cl atoms being exchanged for alkoxy groups. A secondary reaction also takes place leading to the formation of condensation products. The reaction is more difficult for secondary and especially for the tertiary alcohols. For these alcohols the application of acid acceptors (pyridine, toluene, diethylamine) prevents the condensation reaction and facilitates Cl exchange. Alkoxy derivatives from the cyclomethylenetrisilane series were obtained by reacting methyl, ethyl, propyl, and butyl alcohols, with 1,1,3,3,5,5-benzylchlorocyclo-trimethylenetrisilane, using diethylamine as an acid acceptor. It was shown that the derivatives of disilylmethane possess the lowest temperature coefficient of viscosity. There are 5 figures and 4 tables.

Card 2/2

FILIPPOV, M.T.; DZHAGATSPANYAN, R.V.; MOTSAREV, G.V.; ZETKIN, V.I.

Infrared spectra of some organochlorosilanes containing chlorine
in the organic group. Zhur.fiz.khim. 36 no.8:1751-1754 Ag '62.
(MIRA 15:8)

(Silane--Spectra) (Chlorine organic compounds--Spectra)

S/B44/62/000/000/069/129
D204/D307

AUTHORS: Yakimenko, L. M., Dzhagatspanyan, R. V., Zetkin, V. I.,
Korolev, B. N. and Maksimov, M. P. (deceased)

TITLE: Chlorine exchange between hexachlorocyclohexane (I) and
carbon tetrachloride, under the action of γ radiation

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khi-
mi. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962,
398-402

TEXT: The behavior was studied of purified α -, β -, γ -, and δ -iso-
mers of I, with CCl_4 labelled with Cl^{36} , under the action of γ ir-
radiation at 120 r/sec over 1 - 15 hours, at $\sim 30^\circ\text{C}$. The mixtures
consisted of 250 mg of I, 8 ml of CCl_4 , and 1 ml of labelled CCl_4 ,
and the chlorine exchange was assessed by the change in the acti-
vity of I (dissolved in 2.5 ml of benzene). No transfer of Cl^{36}
took place in the absence of irradiation. The activity of α -I and
 β -I rose to a constant value of $\sim 1\%$ (arbitrary units) after 5 - 6
Card 1/2

Chlorine exchange between ...

S/844/62/000/000/069/129
D204/D307

hours, whilst that of γ -I increased to a constant $\sim 0.6\%$ after 8 - 10 hours. The activity of δ -I was 0.5% after 6 hours. At comparatively low doses of irradiation the processes involved are chiefly the chlorination of I and Cl-exchange, whilst further irradiation allows a 3rd reaction, loss of HCl by I (to form pentachlorocyclohexene), to proceed. The rise of the activity of I might be ascribed to a dynamic equilibrium between these processes, but is more probably due to: (1) radiolysis of CCl_4 to CCl_3 and Cl, formation of C_2Cl_6 and Cl_2 , and recombination to CCl_4 ; (2) $\text{RCl} + \text{Cl} \rightarrow \text{HCl} + \text{R}'\text{Cl}$, $\text{R}'\text{Cl} + \text{Cl} \rightarrow \text{R}''\text{Cl}$, $\text{R}'\text{Cl} + \text{CCl}_3 \rightarrow \text{R}'''\text{Cl}$, $\text{R}'\text{Cl} + \text{CCl}_4 \rightarrow \text{RCl} + \text{CCl}_3$; (3) $\text{RCl} + \text{Cl} \rightarrow \text{RCl}$ (exchange reaction); (4) $\text{RCl} \rightarrow \text{HCl} + \text{R}'''\text{Cl}$ (dehydrohalogenation). Reaction (4) and chlorination reaction (2) are in agreement with the observed considerable evolution of HCl. There are 2 figures and 1 table.

ASSOCIATION: NII Goskomiteta, Soveta Ministrov SSSR po khimii (NII for Chemistry of the State Committee, Council of Ministers of the USSR)

Card 2/2

DZHAGATSPANYAN, R.V.; ZETKIN, V.I.; FEDCHENKO, V.S.

Radiative-chemicalsulfochlorination of polyisobutylene. Plast.-
massy no.5:6-9 '62. (MIFA 15:4)
(Propene) (Chlorosulfonylation) (Radiation)

S/076/62/036/008/004/011
B101/B144

AUTHORS:

Filippov, M. T., Dzhagatspanyan, R. V., Motsarev, G. V., and Zetkin, V. I.

TITLE:

Infrared spectra of organochlorosilanes containing chlorine in the organic group

PERIODICAL:

Zhurnal fizicheskoy khimii, v. 36, no. 8, 1962, 1751 - 1754

TEXT:

IR spectra of $\text{CH}_3\text{C}_6\text{H}_5\text{SiCl}_2$ (I); $\text{CH}_2\text{ClC}_6\text{H}_5\text{SiCl}_2$ (II); $\text{CHCl}_2\text{C}_6\text{H}_5\text{SiCl}_2$ (III); $\text{CCl}_3\text{C}_6\text{H}_5\text{SiCl}_2$ (IV); $(\text{CH}_3)_2\text{SiCl}_2$ (V); $\text{CH}_2\text{ClCH}_3\text{SiCl}_2$ (VI), and $\text{CHCl}_2\text{CH}_3\text{SiCl}_2$ (VII) were studied with the following results: (1) The 3.35 and 3.4 μ bands correspond to the asymmetric and symmetric stretching vibrations of CH in the methyl group. (2) The position of the bands in the range 11-16 μ strongly depends on the degree of chlorination: The 11.76 - 12.7 μ band of V in VI becomes weaker and is shifted toward longer waves; in VII it splits into two bands. (3) The 12.58 μ band of I corresponds to the Si-bound CH_3 group. It changes with the degree of chlorination.

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Infrared spectra of...

S/076/62/036/008/004/C11
B101/B144

chlorination and disappears in IV. (4) The bands of 13-15 μ for I-IV correspond to the C₆H₅ groups. (5) The 15.62 μ band of VI and the 15.38 μ band of II are ascribed to the SiCH₂Cl group. There are no bands in this range for the other compounds. (6) In the case of IV, 11.36 and 11.90 μ bands were observed which appear due to symmetric and asymmetric stretching vibrations of the C-Cl bond in CCl₃. This was confirmed by the fact that CCl₃(CH₃)Si(OC₂H₅)₂ and (CCl₃)₂Si(OC₂H₅)₂ also showed bands in the range 11-11.4 μ which were absent in compounds containing no CCl₃ group. There are 5 figures and 2 tables. ✓

SUBMITTED: November 9, 1960

Card 2/2

15.9205

30.117
S/081/62/000/012/058/063
B158/B101

AUTHORS: Dzhagatspanyan, R. V., Zetkin, V. I., Motsarev, G. V.,
Filippov, M. T.

TITLE: Chlorination of silicon-containing monomers and polymers
under the effect of gamma-radiation

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1962, 612-613
abstract 12P282 (Sb. "Radioakt. izotopy i yadern. izlucheniya
v nar.kh-ve SSSR. V. I.". M., Gostoptekhizdat, 1961,
197-200)

TEXT: Polydimethylsiloxane rubber (I) and polyphenylmethylsiloxane (II)
as well as a number of monomers were chlorinated at 0°C under the action
of γ -radiation (Co⁶⁰ with an activity of 1400 g-equiv of Ra). Chlorination
of I takes place easily and rapidly until the introduction of an average
of two Cl atoms into the chain of the polymer, after which the process
rate falls sharply. In a metal autoclave at both 0°C and 60°C
destruction of the polymer takes place. With chlorination of II (molar
Card 1/2

Chlorination of silicon-containing ...

S/081/62/000/012/058/063
B158/B101

ratio of Cl:siloxane = 2:1 and 3:1) substitution and addition chlorination takes place in the aromatic ring. With chlorination of $(\text{CH}_3)_3\text{ClSi}$ (molar ratio of Cl_2 :silane = 0.51:1) the basic product is a monochlorine derivative; chlorination of 18.6 g of ethyl-trichlorosilane (molar ratio of Cl_2 :silane = 0.35:1) gives 6.5 g of α and β -chloroethyl-trichlorosilanes. Chlorination of methyl-phenyl dichlorosilane results in the formation of $(\text{C}_6\text{H}_2\text{Cl}_3)(\text{OCl}_3)\text{SiCl}_2$ (b. p. 185-188/10 mm). [Abstracter's note: Complete translation.]

Card 2/2

36896
S/191/62/000/005/003/012,
B110/B101

15.8062
AUTHORS: Dzhagatspanyan, R. V., Zetkin, V. I., Fedchenko, V. S.

TITLE: Radiation-chemical sulfochlorination of polyisobutylene
PERIODICAL: Plasticheskiye massy, no. 5, 1962, 6-9

TEXT: Since vulcanized chlorosulfonized polyethylene has good technical properties, the authors wanted to improve the cheap, accessible, but technically imperfect polyisobutylene by sulfochlorination. The solution of polyisobutylene in dry carbon tetrachloride was sulfochlorinated in the K-1400 (K-1400) radiation unit by means of a Co60 radiation source (90 r/sec) according to the following reactions:
 $RH \rightarrow R^{\cdot} + H$; $R + SO_2 \rightarrow RSO_2^{\cdot}$; $RSO_2^{\cdot} + Cl_2 \rightarrow RSO_2Cl + Cl^{\cdot}$
 $R^{\cdot} + Cl_2 \rightarrow RCl + Cl^{\cdot}$. Reaction with a mixture of sulfur dioxide and chlorine under the effect of γ -rays sets in at once and proceeds at a high rate, limited only by the rate of heat dissipation, the efficiency of the supply and the degree of mixing of the liquid and gaseous phases. After termination of the reaction, nitrogen is blown through in order to remove the dissolved gases, and the same volume of methyl alcohol is then added

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are 2 tables.
offering a practical

LEL'CHUK, Semen L'vovich; TUEYANSKAYA, Vitaliya Semenovna; ZETKIN,
V.I., red.; KOGAN, V.V., tekhn. red.

[Physicochemical properties of some organosilicon compounds]
Fizikokhimicheskie svoistva nekotorykh kremniorganicheskikh
soedinenii. Moskva, Gos. nauchno-tekhn.izd-vo khim. lit-ry,
1961. 38 p. (MIRA 15:3)

(Silicon organic compounds)

MEL'NIKOV, N.N.; ~~ZETKIN, V.I.~~; LIBMAN, B.Ya.; SOKOLOVA, Ye.M.; ZAKHAROV,
Ye.V.; PARFENOV, A.I.; TRUNOV, P.P.; GOLYSHIN, N.M.

Organic fungicides as substitutes for copper-containing preparations.
Khim. prom. no.10:28-30 0 '61. (MIRA 15:2)
(Fungicides)

DZHAGATSPANYAN, R.V.; ZETKIN, V.I.; MOTSAREV, G.V.; FILIPPOV, M.T.

Gamma-ray induced chlorination of organosilicon monomers and polymers.
Part 1: Chlorination of the polyphenylmethyl siloxane liquid and of
polydimethyl siloxane rubber. Infrared spectra of the chlorination
products. Vysokom. soed. 3 no. 4:607-612 Ap '61. (MIRA 14:4)
(Siloxanes) (Chlorination)

DZHAGATSPANYAN, R.V.; ZETKIN, V.I.; FIKIPPOV, M.T.

Study of the radiation induced addition of silicochloroform to
some olefins. Zhur. VKHO 6 no.2:231-232 '61. (MIRA 14:3)
(Silane) (Olefins)

ZETKIN, V.I.

137

PHASE I BOOK EXPLOITATION

SOV/5486

Vsesoyuznoye soveshchaniye po vnedreniyu radioaktivnykh izotopov i yadernykh izlucheniyy v narodnoye khozyaystvo SSSR. Riga, 1960.

Radioaktivnyye izotopy i yadernyye izlucheniya v narodnom khozyaystve SSSR; trudy soveshchaniya v 4 tomakh. t. 1: Obshchiye voprosy primeneniya izotopov, pribory s istochnikami radioaktivnykh izlucheniyy, radiatsionnaya khimiya, khimicheskaya i neftepererabatyvayushchaya promyshlennost' (Radioactive Isotopes and Nuclear Radiations in the National Economy of the USSR; Transactions of the Symposium in 4 Volumes. v. 1: General Problems in the Utilization of Isotopes; Instruments With Sources of Radioactive Radiation; Radiation Chemistry; the Chemical and Petroleum-Refining Industry) Moscow, Gosoptekhizdat, 1961. 340 p. 4,140 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR, and Gosudarstvennyy komitet Soveta Ministrov SSSR po ispol'zovaniyu atomnoy energii.

Ed. (Title page): N.A. Petrov, L.I. Petrenko and P.S. Savitskiy; Eds. of this Vol.: L.I. Petrenko, P.S. Savitskiy, V.I. Sinitsin, Ya. M. Kolotyркиn, N.P. Syrkin and R.F. Romm; Executive Eds.: Ye. S. Levina and B. F. Titkaya; Tech. Ed.: E.A. Mukhina.

Card 1/40

Radioactive Isotopes (Cont.)

807/5486

137

PURPOSE: The book is intended for technical personnel concerned with problems of application of radioactive isotopes and nuclear radiation in all branches of the Soviet economy.

COVERAGE: An All-Union Conference on problems in the introduction of radioactive isotopes and nuclear radiation into the national economy of the Soviet Union took place in Riga on 12-16 April 1960. The Conference was sponsored by: the Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR (State Scientific and Technical Committee of the Council of Ministers, USSR); Glavnoye upravleniye po ispol'zovaniyu atomnoy energii pri Sovete Ministrov SSSR (Main Administration for the Utilization of Atomic Energy of the Council of Ministers, USSR); Academy of Sciences, USSR; Gosplan USSR; Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (State Committee of the Council of Ministers, USSR, for Automation and Machine Building) and the Council of Ministers of the Latvian SSR. The transactions of this Conference are published in four volumes. Volume I contains articles on the following subjects: the general problems of the Conference topics; the state and prospects of development of radiation chemistry; and results and prospects of applying radioactive isotopes and nuclear radiation in the petroleum refining and chemical industries. Problems of designing and manufacturing instruments which contain sources of radioactive radiation and are used for checking and automation of technological processes are examined, along with problems of accident prevention in their use. No personalities are mentioned. References accompany some of the articles.

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Radioactive Isotopes

SOV/5486

- Dzhagatspanyan, R.V., V.I. Zetkin, Ye. N. Zykova, and M.T. Filippov.
Sulfochlorination and Sulfooxidation of Polyethylene, Polypropylene,
Polyisobutylene, and Paraffin Hydrocarbons by Radiation 201
- Topchiyev, A.V., L.S. Polak, N. Ya. Chernyak, V. Ye. Glushnev,
P. Ya. Glazunov, I.V. Vereshchinskiy, N.P. Syrkus, A. Kh. Breger,
and B.I. Vaynshteyn. Radiation-Thermal Hydrocarbon Cracking 206
- Beer, A.A., M.A. Besprozvanny, T.I. Limanova, and M.T. Filippov.
Radiation-Chemical Telomerization 211
- Zimakov, P.V., Ye. V. Volkova, A.V. Fokin, A.D. Sorokin, and V.M.
Belikov. Utilization of Nuclear Radiation Energy in Fluorinated
Olefin Polymerization Processes 219
- Breger, A. Kh., V.B. Osipov, and V.A. Gol'din. Universal Installation
(K-60000) With Co^{60} γ -Radiation Source of 60,000 Gram-Equivalent
Radium Activity, for Simulating Radiation-Chemical Apparatus and
Carrying Out Investigations 227

Card-8/12

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S/063/61/006/002/004/004

A105/A129

AUTHORS: Dzhagatspanyan, R. V., Zetkin, V. I., Filippov, M. T.

TITLE: A study of the radiation addition of silicochloroform to certain olefines

PERIODICAL: Zhurnal vsesoyuznogo khimicheskogo obshchestva im. D. I. Mendeleeva, v. 6, no. 2, 1961, 231 - 232

TEXT: The authors refer to the reaction of addition of hydridesolanes at the multiple bonds of organic compounds as being the most promising process for the production of various silicon-organic monomers of high purity. The present article deals with an investigation of the addition of trichlorosilane to nonene-1 and cyclohexene under the action of γ - radiation at two dose rates (70 r/sec and 123 r/sec), 25 and 70°C and a molar ratio of the reagents of 1:1. Co^{60} was the radiation source having an activity of 1,400 g-equiv. of radium. The reaction products were decomposed by fractional distillation. The formed compounds were identified by the chlorine content and the determination of carbon and hydrogen could be carried out by transforming the halidesilanes into the corresponding alkoxy-derivatives. Tables 1 and 2 show the results of the in-

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A study of the radiation addition of silicochloroform.. A105/A129

vestigations of the addition of trichlorosilane to nonene-1. It is seen that an increase in the dosage from 70 r/sec to 123 r/sec increases the rate of reaction. Table 3 lists the results of the addition of trichlorosilane to cyclohexene. The values of G calculated from the experimental data obtained by the present authors in the reaction of addition of trichlorosilane to nonene-1 and cyclohexene were found to be comparatively low and close to the values of other experiments (Ref. 4). Under the effect of γ -emission the addition of trichlorosilane to nonene was found to take place with about the same yield as when initiated with benzoyl peroxide viz. 60.9% at 85°C in the presence of weight 3% of benzoyl peroxide (Ref. 5). There are 3 tables and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc.

Table 1: 1 - Addition of trichlorosilane to nonene-1. Dose rate 70 r/sec, temperature 25°C, mol. ratio 1:1; 2 - reagent charge; 3 - radiation time h; 4 - yield, % of theoretical; 5 - radiation-chemical yield G (mol/sec 100 ev); 6 - nonene-1; 7 - SiHCl₃.

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2203, 1372

21135

S/190/61/003/004/010/014
B101/B207

AUTHORS: Dzbagatspanyan, R. V., Zetkin, V. I., Motsarev, G. V.,
Filippov, M. T.

TITLE: Chlorination of organo-silicon monomers and polymers under
the action of gamma rays. I. Chlorination of liquid poly-
phenyl-methyl siloxane and of polydimethyl siloxane rubber.
The infrared spectra of the chlorination products

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 4, 1961, 607-612

TEXT: In the introduction, the authors state that initiating the chlorina-
tion of organosilicon compounds by means of ultraviolet light proceeds too
slowly; however, that chemical initiators as e.g., benzoyl peroxide re-
quire a higher temperature at which a sufficient chlorination of methyl
chloro silanes is not possible owing to their instability. Therefore, the
present study aimed at initiating chlorination by means of gamma rays of
Co⁶⁰ at low temperatures. The following compounds were chlorinated:
1) Polyphenyl-methyl siloxane (poly-PMS) (molecular weight 2000), and 2)
three samples of polymethyl siloxane rubber (poly-MSR) (molecular weight

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Chlorination of ...

S/190/61/003/004/010/014
B101/B207

400,000-500,000). 4-5% solutions of the polymers in CCl_4 were used, to which chlorine taken from the cylinder was added. The samples were irradiated in sealed ampoules at 0°C with gamma rays of Co^{60} , activity 1400 g. equ radium. Tables 1 and 2 list the results. Heating with 40% KOH of a chlorinated poly-PMS sample with 55.5% Cl yielded a paste from which crystals with a chlorine content of 64.3-66.7% were separated. On the basis of analytical results, they obtain the empirical formula $\text{C}_6\text{H}_6\text{Cl}_4$ or $\text{C}_6\text{H}_4\text{Cl}_4$.

The infrared spectra of the oily residue of hydrolysis showed an intensive band at 9-10 μ which corresponds to the Si-O bond. Chlorination of poly-MSR led, according to the sample used, to quite different results with respect to the intensity of reaction and the chlorine content of the product obtained. This is due to impurities (catalyst residues) in commercial poly-MSR. Study of the infrared spectra yielded 3690 and 3615 cm^{-1} bands both in initial and chlorinated rubber. These bands are due to OH groups (3690 cm^{-1} free OH; 3615 cm^{-1} OH with H bond). Accordingly, commercial poly-MSR contains silanol groups. As a result of spectral analysis the following is stated: though the IR spectra of chlorinated poly-PMS and poly-MSR differ from those of the initial samples, no absorption bands were found to exist which are characteristic of chlorinated substances.

Card 2, 5

21135

S/190/61/003/004/010/014
B101/B207

Chlorination of ...

There are 2 figures, 5 tables, and 14 references: 8 Soviet-bloc and 6 non-Soviet-bloc. The 2 references to English-language publications read as follows: Ch. Tamborcki, H. W. Post, J. Org. Chem., 17, 1400, 1952; C. W. Joung, P. C. Servais, C. C. Currie, M. J. Hunter, J. Amer. Chem. Soc., 70, 3750, 1948.

SUBMITTED: July 15, 1960

④ Опыт №	② Загружено реагентом, г		③ Соотношение моль Cl основатель	④ Мощность доз., р/сек	⑤ Время облучения, мин	⑥ Пес продукта, г	⑦ Содержание хлора, %	
	⑥ хлор	⑦ диэтилен					⑧ по титрованию	⑨ по анализу
1	4,70	4,05	1,07:1	70	30	8,874	48,0	51
2	7,2	4,65	2,08:1	70	30	11,425	50,5	61
3	4,9	3,12	3:1	120	2	0,4819	50,1	61
4	4,0	3,12	3:1	120	5	7,0128	54,6	61
5	4,9	3,12	3:1	120	10	7,8840	50,7	61
6	2,43	4,08	1:1	120	15	7,1914	33,9	34,3
7	3,3	3,12	2,03:1	120	15	5,9615	50,2	51

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B101/B207

Chlorination of ...

Table 1. Chlorination of a 4% solution of $[(C_6H_5)(CH_3)SiO]_n$ in CCl_4 at $0^\circ C$.
Legend: 1) No. of the experiment; weighed portion, g; a) chlorine, b) polymer; 3) ratio mole Cl: mole structure unit of polymer; 4) dose, r/sec; 5) time of irradiation; min; 6) weight of the product obtained; 7) chlorine content; c) found; d) calculated on the assumption of chlorine addition to the double bonds of the ring.

1 № опыта	2 Реагенты		3 Обра- зец	4 Соотноше- ние молей Cl основомоль	5 Темпера- тура, °C	6 Мощность дозы, р/сек	7 Время облуче- ния, мин.	8 Содержание хлора в продукте, %	
	а) хлор	б) полимер						с) най- дено	д) вычис- лено
1	3,99	3,83	1	1,09:1	0	70	30	32,3	32,8
2	7,77	3,83	1	2,05:1	0	70	15	41,1	50,0
3	7,93	3,83	1	2,17:1	0	70	30	48,9	52,1
4	10,97	3,83	1	3:1	22,5	70	30	49,8	59,2
5	10,97	3,83	1	3:1	0	70	60	55,3	59,2
6	13,2	3,14	2	4,4:1	0	120	10	64,6	67,8
7	2,38	2,49	3	1:1	20	—	—	37,7	32,4
8	4,08	2,49	3	1,64:1	20	—	—	46,6	45,0
9	4,44	1,87	3	2,5:1	0	120	5	60,7	54,2
10	5,28	1,87	3	2,97:1	0	120	5	63,0	58,5

Card 4/5

21135

S/190/61/003/004/010/014
B101/B207

Chlorination of ...

Table 2. Chlorination of a 4% solution of $[(CH_3)_2SiO]_n$ in CCl_4 .

Legend: 1) No. of experiment; 2) weighed portion, g; a) chlorine; b) polymer; 3) No. of sample; 4) ratio mole Cl : mole structure unit of polymer; 5) temperature; 6) dose, r/sec; 7) irradiation time, min; 8) chlorine content in the product; c) found; d) calculated; *) 10 hr in scattered light.

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Card 5/5