

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11363.

of solution and 38.8 gms AM are taken). The maximum yield of I (70-80%), bp 99-101°, is obtained when a 20-30% aqueous solution of NaOH is used. Higher and lower concentrations lower the yield. Tetrakis [sic]-trimethylcyloxy-silane, $[(CH_3)_3SiO]_4 Si$ bp 220-222°/739 mm), has been isolated as a side product and constitutes 48.1% of the higher boiling substances formed during the hydrolysis.

Card : 2/2

CZECHOSLOVAKIA/Organic Chemistry - Theoretical and General
Questions on Organic Chemistry.

G.

Abs Jour : Ref Zhur - Khiniya, No 9, 1958, 28643

later becomes very marked. In the opinion of the authors methyl radicals are present in the reaction space both in the gas phase and on the surface of the Si or at the surface of the contact mass (CM). The radicals in the gas phase combine to form silicon-free reaction products while the radicals localized on the surface of the Si or on the CM form the methylchlorosilanes proper. The gradual decrease in the yield of methylchlorosilanes continues until the radicals present in the gas phase are exhausted. The sharp decrease in yield begins when the NO which is added begins to react also with the radicals localized on the surface of the CM. The reactions of the methyl radicals in the gas phase are discussed, in particular, the reactions with CHCl_3 and H_2 , thermal decomposition,

Card 2/3

BAZANT, V.

CZECHOSLOVAKIA/Analytic Chemistry. Analysis of Inorganic
Substances. E

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 73701.

Author : Miloslav Houda, Jiri Koerbl. Vladimir Bazant,
Rudolf Pribil.

Inst :

Title : Complexometrical Titration (Chelatometry).
XXXV. Indirect Determination of Aluminum With
Xylenol Orange.

Orig Pub: Chem. Listy, 1957, 51, No 12, 2259-2265.

Abstract: The conditions of quantitative formation of Al
chelate with ethylenedinitrylo-tetraacetic acid
(I), as well as the condition of reverse titra-
tion of the excessive I with $Pb(NO_3)_2$, $ZnSO_4$
and $Th(NO_3)_4$ with the application of xylenol

Card : 1/4

CZECHOSLOVAKIA/Analytic Chemistry. Analysis of Inorganic
Substances.

E

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 73701.

tion with ZnSO solution. All the studied salts $\text{Pb}(\text{NO}_3)_2$, ZnSO_4 , $\text{Th}(\text{NO}_3)_4$, especially $\text{Pb}(\text{NO}_3)_2$, which can be used also as the main substance, are suitable for the reverse titration of I. But in the last case, the presence of a large amount of SO_4^{2-} interferes with the titration. The presence of SO_4^{2-} is caused by the formation of PbSO_4 suspension, which disappears very slowly in the vicinity of the equivalency point. If $\text{Th}(\text{NO}_3)_4$ is used for the reverse titration, it will be necessary to adjust pH exactly, because $\text{Th}(\text{NO}_3)_4$ produces a complex with II starting from pH above 4.5, and that complex is stabler than the chelate with I; the optimum pH is at 2.5 to 3.5 in this case. All

Card : 3/4

~~ERDELY, LASZLO~~

BAZANT, Vladimír

Distr: 4E3b/4E3d/4E2c(j)

Linear polysiloxanes. Vladimír Bazant and Josef Bencs. Czech. 88,096, Dec. 15, 1958. Hydrolyzing organosiloxanes contg. a hydrolyzable alkoxyl group with mineral acids gives the title compds., suitable for use as liquids for diffusion pumps. 1,1-Diphenyl-1,3,3-trimethyl-3-butoxydisiloxane (165 g.) heated with 750 ml. 1:5 HCl 4 hrs. to 100°, the mixt. cooled, extd. with Et₂O, the Et₂O layer washed with H₂O until neutral, dried, the Et₂O evapd. and the residue distd. *in vacuo* over a 2-5 HTP column filled with Dixon rings gives 80.4 g. 1,1,7,7-tetraphenyl-1,3,3,5,5,7-hexamethyltetrasiloxane, bp. 210-11°. L. J. Urbánek

3
1- 829 (WA)
3

SH

JK

BAZANT, V

Distr: 4E3b/4E3d/4E2c(j)

Hydrolyzable organosiloxanes. ³ ~~Vladimír Bazant and~~
~~Josef Benš. Czech. 88,097, Dec. 15, 1968. Letting react~~
 a mixt. of alk. trialkylsilanolates and alkyl- or dialkyl-
 alkoxyhalosilanes gives the title compds., suitable for fur-
 1-20/10
 3
 3
 ther processing to yield linear polysiloxanes. Adding to
 102.0 g. Me₂PhSiONa 810 ml. C₂H₅ and dropwise in the
 course of 30 min. with shaking 145.4 g. Me₂ClSiOBu, co-
 agulating the sepd. NaCl jelly by dilg. with 810 ml. C₂H₅
 and 1 l. Et₂O and refluxing 4 hrs., filtering off the salt, distg.
 the solvent, and distg. the residue over a 2-5 plate column;
 gives 117 g. 1,3,3-triphenyl-1,1-dimethyl-3-butoxydisiloxane.
 b.p. 175-8°. L. J. Urbank.

8/11
JR

VLADIMIR BALANT

Distr: 4E2c(j)/4E3d

4
2-may
2

Organosilicon compounds. XV. Preparation of linear methylphenyltetrasiloxanes. Vladimir Balant and Josef Benes (Ch. akad. v'ed, Prague). *Chem. listy* 58, 1757-61 (1958); *Ch. C.A.* 51, 11238a. — Phenylchlorobutoxysilanes treated with $MeMgCl$ (I) gave methylphenylbutoxysilanes. Hydrolysis gave methylphenylsilanols whose reaction with methylphenylchlorobutoxysilane (II) yielded methylphenylbutoxydisiloxanes; hydrolysis gave methylphenyltetrasiloxanes. Treating 1289 g. $PhSiCl_3$ with 675 ml. H_2O according to Kerr and Hobbs (*C.A.* 48, 3720d) and distg. gave 55.3% $PhSiCl_2(OBu)$ (III), b.p. 130-5°, and 19.8% $PhSiCl(OBu)_2$, b.p. 151-60°. Adding 2900 ml. ether soln. (1.79 mole/l.) to 623 g. III during 2 hrs., stirring the mixt. 2 hrs., extg. with Et_2O , evapp. the Et_2O , and distg. the residue gave 86.3% $Me_2PhSi(OBu)_2$, b.p. 105-0°, d_4^{20} 0.9680, n_D^{20} 1.4779, η^{20} 1.771 cp. Similar treatment of 1018 g. $Ph_2SiCl(OBu)$ (IV) with 2010 ml. soln. contg. 1.41 mole/l. Et_2O gave 84% $MePh_2Si(OBu)_2$, b.p. 175-7°, d_4^{20} 0.9884. Adding 245 ml. ether soln. contg. 1.63 mole/l. I to 98 g. III during 30 min., stirring the mixt. 30 min., extg. with Et_2O , and distg. gave 57% II, b.p. 137-0°. Adding during 1 hr. 510 g. Ph_2SiCl_2 (V) to 175 g. $PhMe_2SiONa$ (VI), refluxing the mixt. 4 hrs., filtering through kieselguhr, and distg. gave 61.9% $Me_2Ph_2SiOSiPh_2Cl$ (VII), b.p. 162-4°. Adding 145.4 g. IV to 102 g. 85.6% VI and 810 ml. C_6H_6

during 30 min. while stirring, dilg. with 810 ml. C_6H_6 and 1000 ml. Et_2O , refluxing 4 hrs., filtering off the $NaCl$, and distg. the filtrate gave 57.6% $Ph_2Me_2SiOSiPh_2OBu$, b.p. 175-6°, d_4^{20} 1.0453, d_4^{20} 1.0470, n_D^{20} 1.5361, n_D^{20} 1.5370. Similarly were prepd. (% yield, b.p./mm., d_4^{20} , n_D^{20} given): $Ph_2SiOSiPh_2MeOBu$, 49.7, 187-9°/0.6, 1.0405, 1.5402; $MePh_2SiOSiMe_2OBu$ (VIII), 58, 129-30.5°/0.2, 0.9939, 1.5108; $Me_2PhSiOSiMe_2PhOBu$, 50.8, 139-40°/0.6, 0.9885, 1.5052; $Me_2Ph_2SiOSiMe_2OBu$, 61.7, 118-20°/7, 0.9983, 1.4598; and $Me_2SiOSiPh_2OBu$, 52.4, 128-9°/0.5, 0.9919, 1.5132. Heating 104.9 g. VIII with 750 ml. 1:5 HCl 4 hrs. at 100°, extg. with Et_2O , washing the ext. with H_2O to neutrality, drying with Na_2SO_4 , and distg. gave 58.4% $(Me_2Ph_2SiOSiMe_2)_2O$, b.p. 210-11°, d_4^{20} 1.055, d_4^{20} 1.0572, n_D^{20} 1.5352, n_D^{20} 1.5391. Similarly were prepd. (% yield, b.p./mm., d_4^{20} , n_D^{20} given): $(Ph_2SiOSiMe_2)_2O$, 68.1, — (m. 102-3°), —; $(Me_2Ph_2SiOSiMe_2)_2O$, 56.2, 173-4°/0.65, 1.0249, 1.5191; and $(Me_2Ph_2SiOSiMe_2)_2O$, 54.9, 129-31°/0.5, 0.9815, 1.4816. Heating 69 g. $HOSiPh_2OSiPh_2OH$ with 31.5 g. Me_2SiCl_2 to boiling, stopping heating as soon as a vigorous reaction has started, dilg. the mixt. with Et_2O after 2.5 hrs., washing the Et_2O soln., and distg. gave 41.7% $(Me_2SiOSiPh_2)_2O$, b.p. 192-3°, m. 48-8.5° ($CHCl_3$).

M. Hudlicky

B
1/1

gag.

BAZANT, V.

AUTHORS: Kocák, M., Schvalder, B. and Bazant, V.
TITLE: Organosilicon Compounds (Organosilikonové sloučeniny)
 XVII. Molecular Spectra of Methylphenyl Siloxanes
 (XVII. Molekulární spektra metylfenylsiloxanů)
PERIODICAL: Chemické listy, 1958, Vol 52, Nr 11, pp 2048 - 2055
 (Chechoslavia)

ABSTRACT: Study of the vibration spectra of methylphenyl siloxanes enabled determining the analytical frequency of individual substituents and di-function siloxane units in the molecule. A sufficient number of these frequencies, it is possible to make a sufficient analysis of the individual substituents and of silicon atoms of their infra-red and Raman spectra. In their experiments the authors used compounds prepared synthetically (11). The authors used methylphenyl tetrasiloxanes and butoxysiloxanes) as a means of a method described by Bazant and Kocák (Ref 12). This enabled obtaining extensive experimental information on substances of a guaranteed constitution for which it was possible to verify the individual analytical frequencies in a sufficiently large number of cases. Since the authors anticipated additive properties in individual infra-red absorption bands they measured the apparent extinction coefficients for all frequencies between 1250 and 697 cm^{-1} . The carried out quantitative analysis is of importance in studying the progress of reactions of methylphenyl siloxanes (Ref 13,14). The authors verified the additive properties in most of the characteristic bands and established the quantitative analytical bands for the methyl groups and the phenyl group in the molecule. In the analysis of the infra-violet spectra, the authors found the existence of additive properties in the band around 265 $m\mu$. In addition to general determination of the number of methyl groups in the molecule, the used method also enables determining the number of individual siloxane units in the molecule for instance, of trimethyl siloxane, by determining the apparent, of tri-coefficient for the bands at 680 and 740 cm^{-1} extinction. Similar additive relations also apply for most of the phenyl frequencies (particularly for the bands 995 - 697 cm^{-1}) and for certain phenyl units, for instance, triphenyl siloxane unit. The determination of the real number of phenyl groups in the molecule can be carried out more conveniently by quantitative analysis of the ultra-violet spectra. The accuracy of which is very high (see Table 6) spectra. The ultra-violet spectra of all the methylphenyl siloxanes measured by the authors have the same appearance and they differ only in intensity. There are 5 figures, 6 tables and 19 references, 2 of which are Czech, 1 Scandinavian, 12 English, 1 Soviet and 3 German.

ASSOCIATION: Oddělení fyzikální chemie a Organické technické chemie, Ústav pro fyzikální chemie, Československá akademie věd, Praha (Physical Chemistry Division and Organic Chemistry Division, Institute of Chemistry, Czechoslovakian A.C.S., Prague)

SUBMITTED: March 14, 1958

(4)

PHASE I BOOK EXPLOITATION

CZECH/3510

Bažant, Vladimír, Engineer, Doctor, Winner of State Prize, Václav Chvalovský, Engineer, Doctor, Winner of State Prize, Jiří Rathouský, Engineer, Doctor, Winner of State Prize, Miroslav Schätz, Engineer, Jan Starch, Engineer, Otakar Kolář, Engineer, Antonín Dyk, Engineer, and Petr Hix, Winner of State Prize.

Technické použití silikonu (Industrial Use of Silicones) Praha, Státní Nakladatelství Technické Literatury, 1959. 365 p. (Series: Makromolekulární látky, sv. 3) 1,400 copies printed.

Reviewer: Jiří Čermak, Engineer; Tech. Ed.: František Trla; Resp. Ed.: Vladimír Spáčil, Engineer.

PURPOSE: This book is intended mainly for technicians who use silicones and for chemists doing research on the applications of silicones.

COVERAGE: The book is an introduction to silicone chemistry. Applications of silicones in the rubber industry, in the electrical and machine-manufacturing industries as surface finishes, and in various fields of technology as

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Industrial Use of Silicones

CZECH/3510

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Industrial Use of Silicones

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Appendixes. Tables of Commercially Produced Silicone Products

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AVAILABLE: Library of Congress (TP248.S8B35)

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TM/mas
6-2-60

BAZANT V.

Z/009/60/000/01/032/038
E142/E235

AUTHOR: None Given

TITLE: New Books

SYNOPSIS: Chemistry prequel, 1960, Nr 1, pp 30-40

ABSTRACT: The following books are reviewed:
"Examples of Chemical and Engineering Calculations 1/1" by A. Pils, M. Rys, Z. Volak, V. Fehob and
"Encyclopedia" published by
"Technical Uses of Silicones" by J. Fritz, T. Juch.
and J. Babonak; published by J. Babonak, V. Chvalovak
SNTL, Prague, 1959; reviewed by J. Dvornik, Research
Institute for Macromolecular Chemistry
"Chemical Analyses in the Polygraphic Industry" by
J. Pavicky. Published by
SNTL, Prague, 1959; reviewed by S. Lankaf.
"Survey of Organic Chemistry" ("Précis de Chimie
Organique") by V. Orignard; published by
Masson a spol., Paris, 1958; reviewed by V. Vesely.

Card 1/2

"Macromolecular Substances" ("Hochpolymer - Erstellungen,
Klebstoffen und Anstrichstoffen") by
K. H. Illers, published by
for Macromolecular Chemistry, Research Institute
SNTL, Prague, 1959

Card 2/2

BAZANI, VEJDI, 1935

Distr: 4E2c(j)/4E3d

Organosiliceous epoxides, Vladimír Matoušek and Vladimír Bázani. Czech. 92,652, Nov. 15, 1939. Treatment of unsat'd organosiliceous compds with org peracids resulted in a smooth reaction to yield the corresponding epoxides, cleavage of the SiC bond and formation of esters or diols being avoided. Thus, .50 g. bis(vinyl)dimethyl siloxane added to 384 g. peracetic acid in 5000 ml. Et₂O, 3500 ml. Et₂O slowly distd in a column, the residue refluxed 12 hrs, the ppt filtered off, the Et₂O soln. neutralized with satd. NaHCO₃ soln, the Et₂O layer sepd., washed, and dried gave 84 g. bis(1,2-epoxyvinyl)dimethyl siloxane. Similarly were obtained 147 g. bis(1,2-epoxybutenyl)dimethylsilane from 168 g. dibutenyldimethylsilane, 196 g. bis(p-1,2-epoxystyryl)dimethylsilane from 204 g. bis(p-styryl)dimethylsilane, and 186 g. bis(p-1,2-epoxyallylphenyl)dimethylsilane from 294 g. bis(p-1,2-epoxyallylphenyl)dimethylsilane. L. J. Urbánek

4
 1-BW(RW)
 5-1-5 (NE/Key)
 3

BAZANI, V.

Distr: 4E3d

/ Obtaining phenol and cresols from xylene fractions.
Miloslav Kraus, Karel Kochiova, and Vladimir Bazani.
Czech. 89,688, Apr. 15, 1958. Xylene fractions contg.
approx. 20% ethylphenols evapd. in a stream of H (100
ml. H/g.), the mixt. passed at 500° over catalyst contg.
20% Al(BF₄)₃ on γ-alumina at 1 kg. fraction/hr./l. catalytic
space gives a liquid product contg. H₂O 2.7, mixt. of C₆H₆
and PhMe 2.0, PhOH 25.4, o-cresol 6.3, mixt. of m- and p-
cresol 25.5, mixt. of xylenols 23.8, and distn. residue 14.3%.
L. J. Urbánek

4
1-29 (112)
1

JK

JK

BAZANT, V.; JOKLIN, J.

"A capillary tube crusher for use in gas chromatography"

Chemicke Listy. Praha, Czechoslovakia. Vol. 53, no. 3, Mar 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 7, July 59, Unclas

5 (3)

AUTHORS:

Komers, R., Bazhant, V.

80V/20-126-6-34/67

TITLE:

Analysis of the Mixture of Dimethyl Esters of Benzene-dicarboxylic Acids by Means of the Gas-Liquid Chromatography (Analiz smesi dimetilovykh efirov benzoldikarbonovykh kislot pri pomoshchi gazoshidkostnoy khromatografii)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 6, pp 1268 - 1269 (USSR)

ABSTRACT:

In recent times, phthalic-, isophthalic-, and terephthalic acid which belong to the acids mentioned in the title gained considerable importance as intermediate products in the production of some plastics. This applies above all to terephthalic acid which serves for the production of artificial fibers of the polyester type. The good quality of the fibers depends on the maximum purity of this acid or of its dimethyl ester - the initial product for polyethylene terephthalate. The methods of determination of the mentioned purity described in publications (Refs 1-6) are on the one hand very complicated and not sufficiently precise, on the other, they do not permit the simultaneous determination of all 3 isomers. For the case that the distribution of the iso- and terephthalic acid could not be at-

Card 1/3

**Analysis of the Mixture of Dimethyl Esters of
Benzene-dicarboxylic Acids by Means of the Gas-
Liquid Chromatography**

SOV/20-126-6-34/67

tained by paper chromatography, Franco (Ref 6) described the nitration of their mixture with subsequent separation by paper of the nitro-derivatives obtained. Also in this case, however, the presence of phthalic acid (or of its 3- and 4-nitro-derivatives) exercises a disturbing effect. The authors found that by means of the chromatography (Ref 7) mentioned in the title the necessary separation may be attained in certain stationary phases which contain oxygroups. This is due to the different association of the individual isomeric methyl esters with the stationary phase. The presence of benzoic acid ester has no effect at all on the results of chromatographic analysis. The device by the firm Griffin and George (London) was used for the investigations. Nitrogen at 165° served as carrier gas. Porous material "pórovina" (Ref 8) wetted with 10.8% erythrite served as checker (nasadka) of the column. The specific elution volume V_G^0 was calculated for dimethyl isophthalate. Table 1 gives the results. Figure 1 shows the course of the chromatographic analysis. There are 1 figure, 1 table, and 7 references.

Card 2/3

Analysis of the Mixture of Dimethyl Esters of
Benzene-dicarboxylic Acids by Means of the Gas-
Liquid Chromatography

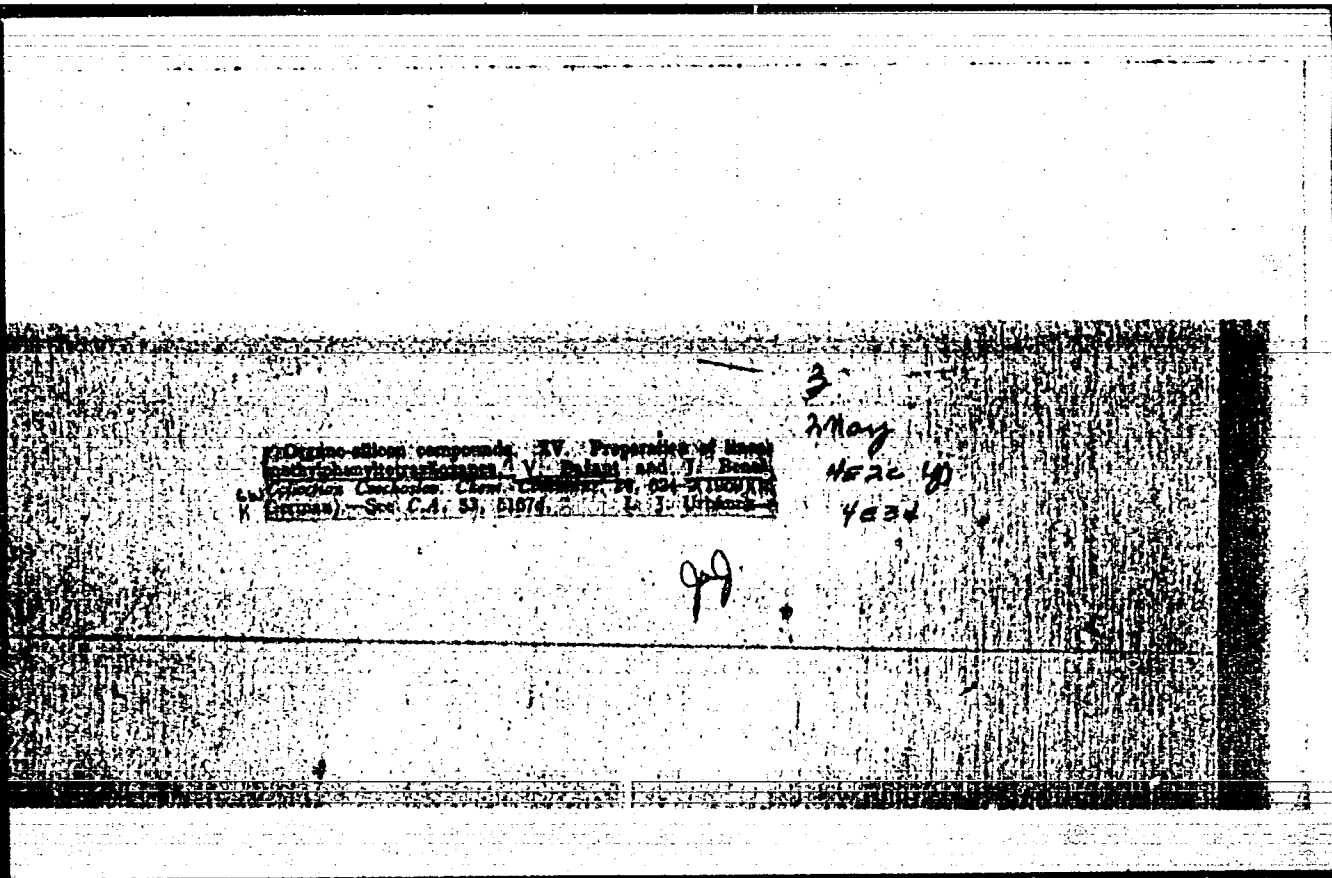
SOV/20-126-6-34/67

ASSOCIATION: Otdeleniye organicheskoy tekhnologii Khimicheskogo instituta
Chekhoslovatskoy Akademii nauk, Praga (Department of Organic
Technology of the Chemical Institute of the Czech Academy of
Sciences, Prague)

PRESENTED: April 1, 1959, by B. A. Kazanskiy, Academician

SUBMITTED: March, 27, 1959

Card 3/3



Acidity and activity of fluoroborate catalysts. M. Kraus, K. Kochlovi, R. Komers, and V. Bařant (Čel. akad. věd, PRAHA). *Collection Czechoslov. Chem. Commun.* 24, 1189-93 (1959).—The study of the isomerization of *o*- to *m*- and *p*-xylene, of *p*-cresol, and of the disproportionation of xylene, cumene, and *o*-iso-PrC₂H₄OH on catalysts prepd. by impregnating γ -alumina with $\text{Al}(\text{BF}_4)_3$ (I) (C.A. 51, 12538a) indicates that the catalyst activity is proportional to the abundance of acid centers and that catalysis is caused by a new compd. formed from alumina and I which contains approx. 20% I. M. Hudlický

BAZANT, V.

Distr: 4E2c(j)/4E3d/4E3b

V. Organic silicon compounds. XVII. Exchange reactions of chlorosilanes with methylalkoxysilanes. V. Bazant (Ceskoslov. akad. věd, Prague). *Collection Czechoslov. Chem. Commun.* 24, 3754-7 (1959) (in German); cf. C.A. 53, 5167d. — $\text{MeSi}(\text{O}i\text{Bu})_3$ obtained as distn. residue from the sepn. of methylchlorosilanes via their Bu esters can be transformed by reaction with chlorosilanes to give valuable intermediary products that can be hydrolyzed to yield alkoxysilanes or converted by selective alkylation to butoxysilanes with various org. groups attached to the Si atom. $\text{MeSi}(\text{O}i\text{Bu})_3$ reacts at 150° and 10 atm. with chlorosilanes practically instantaneously, whereas extending the reaction time over 1 hr. and raising the temp. above 150° reduces the yields through disproportionation and condensation reactions. Me_2SiCl_2 (592.0 g.) and 1048.0 g. $\text{MeSi}(\text{O}i\text{Bu})_3$ heated with stirring in a glass-lined autoclave 1 hr. to 150° , and the product cooled and distd. with a 15-plate column gives the following fractions: 65.0 g. Me_2SiCl_2 , b. $64-6^\circ$; 500.0 g. $\text{Me}_2\text{SiCl}_2(\text{O}i\text{Bu})$, b. $146-8^\circ$; 1090.0 g. $\text{Me}_2\text{Si}(\text{O}i\text{Bu})_2\text{Cl}$, b. $98-100^\circ$; 53.0 g. distn. residue. Similarly is obtained $\text{Me}_2\text{SiCl}_2(\text{O}i\text{Bu})$ from Me_2SiCl_2 and $\text{Me}_2\text{Si}(\text{O}i\text{Bu})_2$ in 14.3% yield or from Me_2SiCl_2 and $\text{Me}_2\text{Si}(\text{O}i\text{Bu})_3$ in 75.5% yield, beside $\text{Me}_2\text{SiCl}_2(\text{O}i\text{Bu})$, b. $35-6^\circ$; $\text{Me}_2\text{SiCl}_2(\text{O}i\text{Bu})$ and $\text{Ph}_2\text{SiCl}_2(\text{O}i\text{Bu})$, b. $184-5^\circ$, d₄ 1.0783, from Ph_2SiCl_2 and $\text{Me}_2\text{Si}(\text{O}i\text{Bu})_3$; $\text{Me}_2\text{SiCl}_2(\text{O}i\text{Bu})$ and $\text{PhSiCl}_2(\text{O}i\text{Bu})$, b. $145-7^\circ$, from PhSiCl_2 and $\text{Me}_2\text{Si}(\text{O}i\text{Bu})_3$; $\text{Me}_2\text{SiCl}_2(\text{O}i\text{Bu})$, b. $54-5^\circ$, d₄ 0.9209, and $\text{Et}_2\text{SiCl}_2(\text{O}i\text{Bu})$, b. $84-6^\circ$, d₄ 0.9173, from Et_2SiCl_2 and $\text{Me}_2\text{Si}(\text{O}i\text{Bu})_3$ (OPr-iso) (I). I obtained in 27.0-g. yield by heating to boiling 330.0 g. $\text{Me}_2\text{Si}(\text{O}i\text{Bu})_3$ with 180.0 g. abs. iso- PrOH , adding dropwise 70 ml. pyridine and stirring the mixt. 2 hrs. gives a product, b. $163.5-5.0^\circ$, d₄ 0.8339. Compds. with branched alkoxy groups practically do not react owing to steric hindrance. XVIII. Preparation of epoxyorganosilanes by oxidation of alkenylsilanes with perphthalic acid. V. Bazant and V. Matoušek.

Ibid. 3758-62 (in German). — MeMgCl (1.8 moles) in 1145 ml. abs. Et_2O added dropwise in the course of 3 hrs. with vigorous stirring to 145 g. $\text{CH}_2=\text{CHSiCl}_3$ in 1800 ml. abs. Et_2O , the mixt. stirred another 5 hrs. and extd. 24 hrs. with Et_2O gives 26 g. $\text{CH}_2=\text{CHSiCl}_2\text{Me}$ (I), b. 83.5° , d₄ 0.884. I (25 g.) in 50 ml. Et_2O treated with stirring in the course of 15 min. with 60 ml. 3% HCl and the mixt. reduced 3 hrs. gives 14 g. bis(vinylidimethyl)disiloxane (II), b. $128-9^\circ$, n_D 1.4077, d₄ 0.785. Perphthalic acid (26 g.) in 750 ml. Et_2O treated with 15 g. $\text{CH}_2=\text{CHSiMe}_2$, from the mixt. 550 ml. Et_2O slowly distd., the thick residue refluxed 13 hrs., the ppt. filtered off and the Et_2O soln. worked up as usual gives 4 g. epoxyethyltrimethylsilane, b. 107° , n_D 1.4144. Similarly are obtained: 19.2% bis(1,2-epoxyethylidimethyl)disiloxane, b. 183° , n_D 1.4278, d₄ 0.908, from II; 19.2% 1,2-epoxyethylidimethylethylsilane, b. $133-4^\circ$, n_D 1.4222, d₄ 0.875, from $\text{CH}_2=\text{CHEtSiMe}_2$; 44.3% 1,2-epoxybutyltrimethylsilane, b. 158° , n_D 1.4269, d₄ 0.833, from 3-butenyltrimethylsilane. Oxidn. of hexamethyldisiloxane (III) with perphthalic acid and oxidn. of $\text{CH}_2=\text{CHEtSiMe}_2$ with H_2O_2 in Et_2O failed to give a reaction product. Oxidn. of $\text{CH}_2=\text{CHCH}_2\text{SiMe}_2$ gives, instead of the expected epoxypropylsilane, III, and a mixt. of unidentified products. Likewise, oxidn. of $\text{CH}_2=\text{CHSi}(\text{OR})_2$ gives no individual epoxide but yields AcOH , resulting from partial oxidn. of the EtO groups; further polysiloxane is produced by condensation side-reactions and resinous polymers. Catalytic dehydration of 18 g. β -trimethylsilylphenylcarbinol (IV) in 27 g. PhMe over 10 ml. $\gamma\text{-Al}_2\text{O}_3$ at 225° and subsequent thermal depolymerization of the solid polystyrylmethylsilane gives 6 g. $\beta\text{-CH}_2=\text{CHC}_6\text{H}_4\text{SiMe}_2$ (V), b. $185-210^\circ$. V (12 g.) treated with perphthalic acid as above gives 1.7 g. β -trimethylsilylstyrene oxide, b. $115-20^\circ$. IV, obtained in 26-g. yield by adding dropwise 175 g. $\beta\text{-BrC}_6\text{H}_4\text{SiMe}_2$ in 800 ml. abs. Et_2O to 19 g. Mg , treating the mixt. with stirring at

BAZANT, V.

Silicon organic compounds. XVII. Exchange reactions of organic
chlorosilanes with methylalkoxysilanes. In German. Coll. Cs. Chem.
24 no.11:3754-3757 N '59. (HEAI 9:5)

1. Abteilung für organische Technologie, Chemisches Institut,
Tschechoslowakische Akademie der Wissenschaften, Prag.
(Silicon organic compounds) (Chlorosilane) (Methylsilane) (Alkoxy groups)

BAZANT, V.; MATOUSEK, V.

Silicon organic compounds. XVIII. Preparation of epoxyorganic silanes by oxidation of alkenylsilanes with naphthalenedicarboxylic acid. In German. Coll. Cz. Chem. 24 no. 11:3758-3762 N '59. (KAI 9:5)

1. Abteilung für organische Technologie, Chemisches Institut, Tschechoslowakische Akademie der Wissenschaften, Prag.

(Silicon) (Epoxy groups) (Silanes) (Alkenyl groups)
(Naphthalenedicarboxylic acid) (Organic compounds)

PHASE I BOOK EXPLOITATION SOV/5851

Bažant, V., V. Chvalovský, and J. Rathouský (State Prize Winners)

Silikony: kremniyorganicheskiye soyedineniya, ikh polucheniye, svoystva i primeneniye (Silicons: Organosilicon Compounds, Their Production, Properties, and Application) Moscow, Goskhimizdat, 1960. 709 p. Errata slip inserted. 4000 copies printed.

Translated from the Czech by Yu. I. Vaynshteyn and V. I. Stanko.
Ed.: V. I. Pakhomov; Tech. Ed.: V. F. Zazul'skaya.

PURPOSE : This book is intended for scientists, engineers, and technicians in industries which produce or utilize silicon materials.

COVERAGE: The monograph is a Russian-language translation from the original Czech which reviews the nomenclature of organosilicon compounds, their properties, methods of producing various classes of organosilicon compounds and polymeric materials

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2

Silicons: Organosilicon Compounds (Cont.)

SOV/5851

made from silicon compounds. The book purportedly embraces almost all of the available information on organosilicon compounds. A special chapter deals with methods of analyzing organosilicon compounds, and a section has been added on their physiological properties, i. e., their use in medicine, pharmacy, cosmetics preparation, etc. The authors thank Academician F. Shorn, Director of the Institute of Organic Chemistry, Czechoslovak Academy of Sciences. There are 5200 references, including 2900 added for the Russian edition.

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Ch. III. Silicon Compounds With Covalent Bonds	37
Ch. IV. Methods of Obtaining Organosilicon Compounds	52
Card 2/5	

43764

S/081/62/000/023/106/120
B101/B186

53700

AUTHORS: Matoušek, Vladimír, Schätz, Miroslav, Bažant, Vladimír

TITLE: Method of producing thermoplastic polyorganosiloxanes

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 728, abstract
23P399 (Pat. CzSSR 95379, May 15, 1960)

TEXT: Thermoplastic polyorganosiloxanes having the composition $(R)_x(R')_ySiO_{(4-x-y)/2}$ are obtained by hydrolyzing the mixture of the corresponding chlorosilanes or alkoxy silanes. R = H, F, or a monovalent aliphatic radical; R' is an organic radical which contains ≥ 6 C atoms, preferably also halogen atoms, and which has a noticeable steric effect, $x/y < 1$, and $x+y$ is a number between 0.5 and 1.9. After hydrolysis and removal of the solvent, solid brittle resins are obtained which are soluble in nonpolar and in most of the polar solvents. These polymers (PM) are thermoplastic because of the steric effect of the substituent, which prevents further polycondensation of the solid PM. The PM are cured by the usual curing agents, e.g. triethanol amine. Products with good

Card 1/2

Method of producing thermoplastic...

S/081/62'000/023/106/120
B101/B1.

mechanical, electrical, and thermal properties are obtained. Example:
112 g CH_3SiCl and 475 g $\text{C}_6\text{H}_5\text{SiCl}_3$ are mixed with 500 ml toluene. In the
course of mixing, 1000 ml water, 500 ml toluene, and 500 ml ether are
gradually added. After removing the aqueous layer, the mixture is washed
with water until attaining a neutral reaction. Then, the ether and
toluene are distilled off, and the molten PM of the composition
 $(\text{CH}_3)_{0.25}(\text{C}_6\text{H}_5)_{0.75}\text{SiO}_{1.5}$ is poured into a bowl. [Abstracter's note:
Complete translation.] X

Card 2/2

KRAUZ, Milosh [Kraus, M.]; Kockhlefl', Karel [Kochloefl, K.];
BAZHANT, V. [Bazant, V.]

Fluoborate catalyst for the isomerisation of cresols. Probl. kin. i
kat. 10:379-384 '60. (MIRA 14:5)

1. Khimicheskiy institut Chekhoslovatskoy Akademii nauk, Praga.
(Cresol) (Aluminum fluoborate)

RAVEOUSKY, J.; KRUCHNA, O.; BAZANT, V.

Silicon organic compounds. XIX. Reaction of alkylchlorosilane with
arylchlorosilane on solid acid catalysts. Coll Cz Chem 25 no.7:
1807-1814 J1 '60. (KEAI 10:9)

1. Institut für theoretische Grundlagen der chemischen Technik,
Tschechoslowakische Akademie der Wissenschaften, Prag.

(Silicon) (Organic compounds) (Chlorosilane)
(Alkyl groups) (Aryl groups) (Catalysts)

BAZANT, V.

Distr: 4E2c(j)/4E3d

4
 BW(BW)
 JAJ(NB)(MAY)
 2

41
 /Organosilicon compounds. XX. Determination of the basicity of the silicon-bound oxygen by infrared spectroscopy. M. Horák, V. Bázant, and V. Chvalovský (Ústav org. chemie a biochemie CSAV, Prague). Collection Czechoslov. Chem. Commun. 25, 2822-30(1960) in German; cf. CA 54, 24478a.—The formation of the H-bond between various proton donors and isostructural alkyl ethers, alkoxy-silanes, and siloxanes was studied. The basicity of the O atoms decreases in the series of groups: COC, COSi, and SiOSi; this effect is attributed to the partial formation of the multiple bond in the SiO group. The induction and steric effects of alkyl groups on H-bond formation were studied. B. Ecker-

S/081/62/000/012/045/063
B156/B144

AUTHORS: Beránek, Ludvík, Bažant, Vladimír

TITLE: A method of producing olefins by dehydrating alcohols

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1962, 423, abstract 12L21 (Czechosl. Patent 98240, January 15, 1961)

TEXT: Olefins are produced by paraphase dehydration of alcohols in the presence of catalysts (Cat) (Al_2O_3 , SiO_2 , TiO_2 or mixtures of these substances), with 10^{-8} -50% of a base, for instance pyridine (I) or quinoline, added to the alcohols or their vapors. 91.5 g of a mixture of 4-methyl cyclohexanol (4-II) vapors and N_2 (molar ratio 1:10) with 0.1 mole-% (related to 4-II) of I are passed at 3.66 mole/l of Cat/hour, at 235°C , through 50 ml of activated Al_2O_3 , first selectively treated by passing through it 3320 l of N_2 containing 1.37 g of I for 41 hr; which results in 26 g of a liquid product containing 21.8 g of 4-methyl cyclohexene (4-III) free from isomers. By passing 87.7 g of a mixture of 2-II and N_2

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A method of producing ...

S/081/62/000/012/045/063
B156/B144

(3 : 7) with 0.1 mole-% of quinoline at 4.91 mole/l of Cat/hour, at 250°C, through 50 ml of freshly activated Al₂O₃, 53.8 g of a product containing 69% of 3-III and 31% of 1-III are obtained; these components being then separated by rectification. The yield of 3-III is three times the amount not adding quinoline. In a similar way 52.5 g of a product containing 30% of olefins, (in which is 99.2% of heptene-1) are produced from 54 g of heptanol-1 and 1 mole-% of I. When none of I was added, the olefines contained only 33.5% of heptene-1. [Abstracter's note: Complete translation.]

Card 2/2

37751

S/661/61/000/006/001/081
D205/D302

5.3100

11.1750

AUTHOR: Bazhant, V.

TITLE: Review of works on the investigation of silico-organic compounds carried out in the Chemistry Institute of the Czechoslovak Academy of Sciences

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedineniy; trudy konferentsii. no. 6: Doklady, diskussii, resheniye. II Vses. konfer. po khimii i prakt. prim. kremneorg. soyed., Len., 1958. Leningrad, Izd-vo AN SSSR. 1961, 11 - 20

TEXT: Exchange reactions of methyl alkoxy silanes with organochlorosilanes were studied. In liquid phase, at elevated temperature and pressure (optimum conditions - 150°C, 10 atm.) methyl-tri-(n-butoxy)silane reacts quantitatively with chlorosilanes. No external catalysts are required. Bifunctional butoxy silanes gave low yields and the presence of chlorine in the molecule depresses the exchange reaction still further. Derivatives containing branched.

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S/661/61/000/006/001/0811
D205/D302

Review of works ...

alkoxy-groups do not react at all, this being explained by steric hindrance. The reduction of chlorosilanes and alkoxy-silanes by metal hydrides was studied. The reactions were carried out at 50°C in ethyl or iso-amyl ether in nitrogen, with stirring, using tert.-butyl-lithium aluminum hydride. When attempting the reduction of chloroethoxysilanes by the same reducing agent an exchange of alkoxy-groups was observed between the reducing and reduced agents. A further problem investigated was the oxidation of alkyl and alkenyl groups at the silicon atom. Perphthalic acid was used as the oxidant. The oxidation of alkenylsilanes proceeded without decomposition even at elevated temperatures. Silicoorganic epoxides were obtained. On oxidation of allyl trimethylsilane and vinyl triethoxysilane no epoxides were formed. In the investigation of the direct synthesis of silicoorganic compounds negative results were obtained at the attempt to prepare aliphatic, oxygen-containing compounds. A method of gas-liquid chromatographic analysis for a mixture of ethyl chlorosilanes was worked out. A mixture of 8 components was fractionated. The direct synthesis of alkyl substituted

Card 2/4

Review of works ...

S/661/61/000/006/001/031
D205/D302

aryl-halogeno silanes was studied. On the reaction of alkylphenyl bromides with silicon, in the presence of Cu and Ag at 300°C, phenyl bromosilanes are formed with relatively good yields. The side reactions are enhanced by temperature and by the size of the alkyl substituent. The relative reactivity of the alkyl phenylbromides at 360°C was determined. Attempts to prepare organochlorosilanes containing various groups on the Si by methods other than the Grignard synthesis have led to adoption of the catalytic disproportionation method for this purpose. $MAlCl_4$ (where M=Na, K, Cu, Ca and Ba) were employed as catalysts for the interaction of diphenyl-dichlorosilane and diethyl dichlorosilanes. Catalysts containing the alkali metals proved to be the most effective. The chloride complexes lose gradually their activity under the influence of side reactions. Methyl phenylchlorosilane was prepared by transalkylation, using these catalysts, with a yield of 20%. At 500°C on $KAlCl_4$ methyl dichlorosilane reacts with diphenyl dichlorosilane yielding 50% of methyl phenyl dichlorosilane. M. G. Voronkov (IKhS AN SSSR, Leningrad), Ye. A. Chernyshev (IOKj AN SSSR, Moscow) and

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X

Review of works ...

S/661/61/000/006/001/081
D205/D302

Ya. I. Vabel' (Moscow) took part in the discussion which followed.
There are 4 figures and 3 tables.

ASSOCIATION: Institute of Chemistry of the Czechoslovak Academy
of Sciences, Prague

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X

S/661/61/000/006/020/081
D205/D302

AUTHORS: Khvalovskiy, V., and Bazhant, V.

TITLE: Splitting the Si-C₆H₅ bond by mineral acids

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedineniy; trudy konferentsii, no. 6, Doklady, diskussii resheniye. II Vses. Konfer. po khimii i prakt. prim. soyed., Len. 1958. Leningrad. Izd-vo AN SSSR. 1961, 101-109

TEXT: The aim of this investigation was to establish the splitting rate as a function of temperature, acid concentration and structure and also of the number of siloxane bonds at the dephenylated Si atom. A further task was to establish the conditions at which HNO₃ in its action on a silicophenylic compound splits off benzene, with the simultaneous formation of nitrobenzene. The investigation of the influence of the number of siloxane bonds at the dephenylated silicon atom was performed by the action of aq. HCl in CCl₄ and

Card 1/4

Splitting the Si-C₆H₅ ...S/661/61/000/006/020/081
D205/D302

xylylene-dioxane mixtures on $[(C_6H_5SiO)_{1.5}]_x$, $[(C_6H_5(CH_3)SiO)]_3$, $[(C_6H_5(CH_3)_2Si)]_2O$ and $C_6H_5Si(CH_3)_3$. It is shown that the presence of oxygen atoms bonded to the silicon slows down the splitting reaction. The velocity constant decreases uniformly with the increase in the number of oxygen atoms. The influence of temperature on the reaction was investigated between H₂SO₄ (80.34%) and trimethyl phenyl silane in the 30 - 70°C range and has shown that the splitting reaction is of the first order. The influence of oxygen atoms bonded to the silicon atom in the reactions with H₂SO₄ was found to be similar to the above described in the reactions with HCl. It is concluded that in both these cases the splitting mechanism is based on the electrophilic attack on the carbon of the phenyl group bonded to the silicon atom. The formation of benzene sulfonic acid in the splitting reactions was studied by using highly concentrated H₂SO₄ (80.34 - 96.55%) in reactions with benzene, trimethylsilane and sym.-tetramethyl diphenyl disiloxane under the same conditions. ✓

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Splitting the Si-C₆H₅ ...S/661/61/000/006/020/081
D205/D302

It was shown that the reactions with the silico-phenylic compounds give higher yields of benzene sulfonic acid than the reaction with benzene. This is in accordance with the greater ionic character of the C-Si bond as compared with the C-H bond. Concentrated HNO₃ splits silico-phenylic compounds almost quantitatively with the formation of nitrobenzene. This work has preparative and analytic implications in addition to its practical implications connected with the production of methylphenylic silico-polymers. p-Trimethylsilyl benzene sulfonic acid was synthesized by the splitting of bis-(trimethylsilyl)-benzene with concentrated sulfuric acid. Ye. A. Chernyshev (IOKh, AN SSSR, Moscow) took part in the discussion, stating that the work of the authors has opened a new way for the synthesis of aromatic nitro-compounds with a definite position of the nitro group. There are 6 figures and 13 non-Soviet-bloc references. The 4 most recent references to the English-language publications read as follows: R. A. Benkeser and H. R. Krysiak, J. Am. Chem. Soc., 75, 4528, (1953); G. Illuminati, J. F. Nobis and H. Gilman, J. Am. Chem. Soc., 73, 5887, (1951); H. H. Szmant, O. M.

Card 3/4

✓

Splitting the Si-C₆H₅ ...

S/661/61/000/006/020/031
D205/D302

Davlin and G. A. Brost, J. Am. Chem. Soc., 73, 3059, (1951); S. V. Suthankar and H. Gilman, J. Am. Chem. Soc., 72, 4884, (1950).

ASSOCIATION: Institut khimii Chekhoslovatskoy Akademii nauk, Praha (Institute of Chemistry, Czechoslovak Academy of Sciences, Prague)

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Card 4/4

S/661/61/000/006/061/081
D267/D302

AUTHORS: Gorak, M., Shneider, B. and Bazhant, V.

TITLE: Molecular spectra of methyl phenyl siloxanes

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedineniy; trudy konferentsii, no. 6: Doklady, diskussii, resheniye. II Vses. konfer. po khimii i prakt. prim. kremneorg. soyed., Len. 1958. Leningrad, Izd-vo AN SSSR, 1961, 272-277

TEXT: The investigation was carried out in order to check the occurrence of characteristic frequencies corresponding to the methyl or phenyl groups, and possibly to discover other characteristic frequencies in the infrared absorption spectra and Raman spectra. The general methods of preparing the individual methyl phenyl siloxanes (and in particular methyl phenyl tetrasiloxanes) are given. In all, 23 substituted silanes and siloxanes were studied, mainly in the frequency range 800 - 600 cm^{-1} . Characteristic frequencies

Card 1/2

Molecular spectra of ...

S/661/61/000/005/061/081
D267/D,02

were detected in both spectra for various elementary members. It was found that the descending displacement of the characteristic frequency for the Si-O-Si group can be used as the approximate measure of the number of phenyl groups in the molecule. To obtain the number of methyl groups in siloxanes it is better to use the method of areas of absorption bands near 1250 cm^{-1} than the method based on the calculation of the apparent coefficients of extinction. It is also possible to determine the number of the separate siloxane members by determining the apparent coefficient of extinction for bands near 840 and 750 cm^{-1} . The true number of phenyl groups is more conveniently determined by quantitative analysis based on ultraviolet spectra. The position of the symmetric frequency of the Si-O bond can be used to differentiate between linear and cyclic compounds, and even to determine the size of the cycle. There are 5 tables.

ASSOCIATION: Institut Khimii Czechoslovatskoy Akademii nauk, Praga
(Institute of Chemistry, Czechoslovak Academy of Sciences, Prague) ✓

Card 2/2

JOST, F.; BAZANT, V.

Catalyst dealkylation of organic alkyl compounds. Part 3:
Demethylation of cresols on nickel catalysts. Coll Cz Chem
no.12:3020-3027 D '61.

1. Institut für theoretische Grundlagen der chemischen Technik,
Tschechoslowakische Akademie der Wissenschaften, Prag.

S/081/62/000/009/033/075
B158/B101

AUTHORS: Joklik, J., Bazant, V.

TITLE: Organosilicon compounds. XXII. The effect of impurities in silicon on direct synthesis of methylchlorosilanes

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 9, 1962, 275-276, abstract 9Zh288 (Collect. Czechosl. Chem. Commun. v. 26, no. 2, 1961, 417 - 426)

TEXT: The direct synthesis of methylchlorosilanes from CH_3Cl and chemically pure Si, leading to the formation of $\sim 90\%$ $(\text{CH}_3)_2\text{SiCl}_2$ (I), is described. The effect of impurities in the contact mass on the composition of the reaction products and the effect of Cl_2 , HCl and H_2 were studied. Addition of 1-3% Al increases the content of the side products CH_3SiCl_3 (II) from 3.5 to 9.2% and the content of $(\text{CH}_3)_3\text{SiCl}$ (III) from 1.1 to 5.7%, reducing the content of I from 89.1 to 78.1%. In the presence of AlCl_3 , the high

Card 1/2.

Organosilicon compounds. ...

S/081/62/000/009/033/075
B158/B101

methylated silanes are converted to low methylated silanes. NaAlCl_4 has the same effect. C impurity (up to 2%) has no essential effect on the composition of the reaction products. The presence in the contact mass of C and AlCl_3 reduces the content of I in the reaction products to 50% or less. The effect of Fe impurity is negligible; addition of FeCl_3 causes an increase in the $\text{CH}_3\text{SiHCl}_2$ (IV) content to 5%; additions of Ti and CuTiCl_4 cause an appreciable formation of II and III; addition of Zn has the same effect. The presence of chlorine and HCl impurities in the CH_3Cl leads to IV and HSiCl_3 , while H_2 impurity has no effect. The apparatus is described.

[Abstracter's note: Complete translation.]

Card 2/2

S/081/62/000/009/034/075
B158/3101

AUTHORS: Joklik, J., Kraus, M. < Bazant, V.

TITLE: Organosilicon compounds. XXIII. The kinetics of the reaction between methyl chloride and chemically pure silicon in the presence of a copper catalyst

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 9, 1962, 276, abstract 9Zh289 (Collect. Czechosl. Chem. Commun., v. 26, no. 2, 1961, 427 - 435)

TEXT: The velocity of the reaction between CH_3Cl and pure Si in the presence of Cu in a stationary apparatus ($280\text{-}320^\circ\text{C}/100\text{-}1200$ mm Hg) was studied. The basic reaction product (up to 90%) is $(\text{CH}_3)_2\text{SiCl}_2$. The reaction induction period (1-3 hours) depends on the purity of the Si surface. The reaction rate depends, moreover, on the pressure of the CH_3Cl , temperature, and Cu content in the contact mass. The mechanism of the reaction is discussed. [Abstracter's note: Complete translation.]

Card 1/1

S/081/62/000/009/035/075
B158/B101

AUTHORS: Kadlec, M., Kraus, M., Bažant, V.

TITLE: Organosilicon compounds. XXIV. The kinetics of direct synthesis of methylchlorosilanes at a raised pressure

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 9, 1962, 276, abstract 9Zh290 (Collect. Czechosl. Chem. Commun, v.26, no. 2, 1961, 436-441)

TEXT: The direct synthesis of methylchlorosilanes by reacting CH_3Cl with technical Si in the presence of Cu catalysts in a flow-through apparatus (280 - 370°C, 1-7atm.) is described. The reaction rate depends on pressure, reaching a maximum value at 4-6 atm. [Abstracter's note: Complete translation.] ✓

Card 1/1

KADLEC, J.; JOST, F.; BAZANT, V.

Catalytic dealkylation of alkylaromatic compounds. I. Simultaneous hydration and dealkylation of o-cresol on aluminum oxide containing nickel catalysts. Coll Cs Chem 26 no.3:818-826 Mr '61.

(KEAI 10:9)

1. Institut für theoretische Grundlagen der chemischen Technik,
Tschechoslowakische Akademie der Wissenschaften, Prag.

(Cresol) (Aluminum oxide) (Nickel) (Catalysts)

KADLEC, J.; BAZANT, V.

Catalytic dealkylation of alkyl aromatic compounds. Part 2: Dealkylation of o-ethyl and o-propylphenol by means of hydrogenation, Coll Cs Chem 26 no.4:1201-1203 Ap '61.

1. Institut für theoretische Grundlagen der chemischen Technik, Tschechoslowakische Akademie der Wissenschaften, Prag.

(Aromatic compounds) (Alkylation)

SCHNEIDER, P.; KRAUS, M.; BAZANT, V.

Catalytic dealkylation of alkylaromatic compounds. III. Reaction of kinetics of ethylphenols over an acidic catalyst. Coll Cs chem 26 no.6:1636-1645 Je '61.

1. Institute for Chemical Process Fundamentals, Czechoslovak Academy of Science, Prague.

(Alkyl group) (Ethylphenol)

40289

S/081/62/000/014/010/039
B166/B144

5.3700

AUTHORS: Beneš, J., Chvalovský, V., Bažant, V.

TITLE: Organosilicon compounds. XXVI. The influence of structure on the oxidation rate of methyl-phenyl siloxanes

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 14, 1962, 275, abstract 14Zh298 (Collect. Czechosl. Chem. Commun., v. 26; no. 6, 1961, 1627-1635)

TEXT: The selective oxidation rate of the CH_3 group in $[(\text{CH}_3)_3\text{Si}]_2\text{O}$ (I), $[(\text{CH}_3)_n(\text{C}_6\text{H}_5)_{3-n}\text{Si}]_2\text{O}$ (II) ($n = 1-2$) and $[(\text{CH}_3)_n(\text{C}_6\text{H}_5)_{2-n}\text{SiO}]_4$ (III) ($n = 1-2$) was studied in the gaseous phase at $350-450^\circ\text{C}$. With increase in the number of O atoms around the Si linked with the CH_3 group, the rate constant and the activation energy of the reaction decrease. When the CH_3 groups are substituted by phenyl groups the reaction rate decreases as a result of the spatial influence of the phenyl groups. An anomalous influence of the surface of the glass on the reaction rate was detected

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Organosilicon compounds. XXVI. ...

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B166/B144

for I and II. The oxidation products of I, II and III are HCOH, HCOOH, CO₂ and CO. For communication XXV see RZhKhim, 1962, 11Zh58.

[Abstracter's note: Complete translation.]

X

Card 2/2

40208

S/081/62/000/015/008/038
B168/B10153700
AUTHORS: Jirinec, S., Basant, V., Ohvalovsky, V.

TITLE: Organosilicon compounds. XXVII. Reduction of alkoxychlorosilanes by metal hydrides

PERIODICAL: Referativnyy zhurnal.Khimiya, no. 15, 1962, 256 - 257, abstract 15Zh286 (Collect. Czechosl. Chem. Commun, v.26, no. 7, 1961, 1815 - 1825)

TEXT: The reduction of $(RO)_3SiCl$ (Ia-c, where (a) $R = C_2H_5$, (b) $R = iso-C_3H_7$, (c) $R = tert-C_4H_9$), $R_2SiCl(OR')$ (IIa-c, where (a) $R = R' = C_2H_5$, (b) $R = C_2H_5$, $R' = tert-C_4H_9$; (c) $R = R' = CH_3$) and $C_6H_5SiCl(OC_3H_7-iso)_2$ (III) by the action of $LiAlH_4$ (IV), $LiAl(tert-C_4H_9O)_3H$ (V) and $NaB(OCH_3)_3H$ (VI) was studied. The Si-Cl bond was reduced much more easily than the Si-OR bond; hence the alkoxychlorosilanes could be reduced selectively to the corresponding alkoxyhydrosilanes. When IV and VI were used
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Organosilicon compounds. ...

S/081/62/000/013/008/038
B168/B101

the reduction was accompanied by condensation reactions and regroupings, as a result of which the alkoxyhydridesilanes could not be isolated. When V was used the role played by the side reactions diminished, although in the case of the ethoxy derivatives the (C_2H_5O) groups were partially substituted by $(tert-C_4H_9O)$ groups. The influence of the structure and number of R-Si bonds on the reactive capacity of alkoxychlorosilanes was studied. When alkoxychlorosilanes reacted with anhydrous $AlCl_3$, the corresponding alkyl-

chlorides were produced. 43 ml ether solution of 37.7 mmole IV was added to a solution of 0.151 mole Ia in 150 ml ether in an N_2 atmosphere ($-70^\circ C$, 3 hr); after agitation for 30 hr the temperature of the mixture was raised to $20^\circ C$ (0.771 g SiH_4 being liberated during this period) and 1.1 g of the initial Ia and 2.5 g $(C_2H_5O)_2Si$ (VII) were isolated by distillation of the filtrate. Reduction of 2.43 g Ia with an excess of V in tetrahydrofuran (60-100 hr) produced $(C_2H_5O)SiH_3$. The following figures in reference to the substances isolated are given in the order yield in %, boiling point in $^\circ C/mm$, n_D^{25} , d_4^{25} : 2.9, 38-42/21, 1.6796, -; $(C_2H_5O)_2(tert-C_4H_9O)SiH_3$, 12.6, 46-47.5/13, 1.3826, 0.864; $(C_2H_5O)(tert-C_4H_9O)_2SiH_3$, 10.6, 57-58/13, -, -; VII, 24, 59-60/13, 1.3810, 0.920, and SiH_4 . Reduction of 15 g Ib by the Card 2/4.

Organosilicon compounds. ...

S/081/62/000/015/008/038
B168/B101

action of V produced $(\text{iso-C}_3\text{H}_7\text{O})_3\text{SiOSiH}(\text{O-C}_3\text{H}_7\text{-iso})_2$, 4, 78-79/3.5, 1.7907, 0.9501; $(\text{iso-C}_3\text{H}_7\text{O})_6\text{Si}_3\text{H}_2\text{O}_2$, 3.3, 120-123/4, 1.3940, 0.964, $(\text{iso-C}_3\text{H}_7\text{O})_4\text{Si}$, 21.5, 82-83.5, 1.3840, 0.873, and SiH_4 . Under these conditions Ie remained unchanged. Reduction of 41.5 g IIa by the action of V resulted in $(\text{C}_2\text{H}_5)_2\text{SiH}_2$, 4.8, -, -, -; $(\text{C}_2\text{H}_5)_2\text{SiH}(\text{OC}_2\text{H}_5)$, 29.7, 53-54/89, 1.3989, 0.786; $(\text{C}_2\text{H}_5)_2\text{SiH}(\text{OC}_4\text{H}_9\text{-tert})$, 10.7, 55.5-56/38, -, -; $(\text{C}_2\text{H}_5)_2\text{Si}(\text{OC}_2\text{H}_5)_2$, 41.4, 72-73/38, 1.3987, 0.858; $(\text{C}_2\text{H}_5)_2\text{Si}(\text{OC}_2\text{H}_5)(\text{OC}_4\text{H}_9\text{-tert})$, 1.2, 58-60/13, -, - and $[(\text{C}_2\text{H}_5)_2\text{HSi}]_2\text{O}$, 9.3, 55-56/13, -, 0.797. Reduction of 39 g IIb under corresponding conditions produced $(\text{C}_2\text{H}_5)_2\text{SiH}(\text{OC}_4\text{H}_9\text{-tert})$, 32.2, 58-58.5/49, 1.4031, 0.793; $(\text{C}_2\text{H}_5)_2\text{Si}(\text{OC}_4\text{H}_9\text{-tert})_2$, 1.7, 82.5-83.5/49, -, -; $[(\text{C}_2\text{H}_5)_2\text{HSi}]_2\text{O}$, 21, 56-58/13, 1.4170, 0.821, and $(\text{C}_2\text{H}_5)_2\text{Si}[\text{OSi}(\text{C}_2\text{H}_5)_2\text{H}]_2$, 8.1, 85.5/2.5, 1.4189, 0.871. Reduction of 26 g III under the same conditions resulted in $\text{C}_6\text{H}_5\text{SiH}_3$, 2.6, 53-55/100, -, -; $\text{C}_6\text{H}_5\text{SiH}(\text{OC}_3\text{H}_7\text{-iso})_2$, 4.5, 74-76/3, -, -; $\text{C}_6\text{H}_5\text{SiCl}(\text{OC}_3\text{H}_7\text{-iso})_2$, 8.5, 87-89/3.5, -, -;

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Organosilicon compounds. . . .

S/081/62/000/015/008/038
B168/B101

$C_6H_5Si(OC_3H_7-iso)_3$, 19.5, 82-83/1.3, 1.4493, 0.945, and $[C_6H_5SiH(OC_3H_7-iso)_2]_2$, 5.8, 130-135/0.9, -, -. Reduction of 17.2 g IIc by the action VI produced $(CH_3)_2SiH_2$, yield 40.3%, $(CH_3)_2SiCl_2$, yield 2.9%, and $(CH_3)_2Si(OCH_3)_2$, 36.8, 74/740, 1.3699, 0.861. 1 g anhydrous $AlCl_3$ was added to 5 g Ia (72-90°C, 110 min.) and the reaction products yielded 1.3 g C_2H_5Cl . Under analagous conditions $(C_2H_5O)_2SiCl_2$ and $AlCl_3$ (78 min.) yielded 93% C_2H_5Cl ; Ib and $AlCl_3$ (12 min.) produced iso- C_3H_7Cl , yield 86%; (iso- C_3H_7O) $_2SiCl_2$ and $AlCl_3$ (6 min.) yielded 98% iso- C_3H_7Cl ; IIa and $AlCl_3$ (300 min.) yielded 39% C_2H_5Cl . Report XXVI, see RZhKhim, 1962, 14Zh298. [Abstracter's note: Complete translation.]

Card 4/4

5.3700

L1743
S/081/62/000/019/018/053
B144/B180

AUTHORS: Bazant, V., Kraus, M.

TITLE: Organosilicon compounds. XXVIII. Direct synthesis of ethyl chlorosilanes

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1962, 225, abstract 19Zh245 (Collect. Czechoslov. Chem. Commun., v. 26, no. 8, 1961, 2028 - 2034 [Ger.; summary in Rus.])

TEXT: The kinetics of C_2H_5Cl interaction with Si was studied in the presence of a copper catalyst (ratio by weight Si:Cu = 9:1) in a flow-through reactor at 200 - 320°C. All the ethyl chlorosilanes are formed simultaneously. The splitting of C_2H_5Cl with formation of C_2H_4 and HCl is not a secondary reaction. Hence, the formation of $C_2H_5SiHCl_2$ must be attributed to secondary reactions taking place at the copper surface. The effect of the temperature and partial C_2H_5Cl pressure on the course of the reaction was studied. The experimental setup and procedure are described. Report XXVII Card 1/2

S/081/62/000/017/047/102
B158/B186

AUTHOR: Bažant, Vladimír

TITLE: Synthesis and reactions of organosilicon compounds

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1962, 250, abstract
17Zh300 (Rozpr. CSAV. Rada MPV, v. 71, no. 11, 1961, 1-58
[Czech; summaries in Hung. and Russ.]

TEXT: A review is given of work on the chemistry of organosilicon
compounds carried out at two Czechoslovak chemical institutes in the
period 1950-1960. 105 references. [Abstracter's note: Complete
translation.]

Card 1/1

KOCHLOEFL, K.; SCHNEIDER, P.; BAZANT, V.

Examination of the composition of lignite tar fraction with Sdp. 220-280°C. Part 1: Hydrocarbons forming inclusion compounds with urea. Coll Cs Chem 27 no.9:2090-2101 S '62.

1. Institut für theoretische Grundlagen der chemischen Technik, Tschechoslowakische Akademie der Wissenschaften, Prag.

KRAUS, Milos; KOCHLOEFL, Karel; SETINEK, Karel; BERANEK, Ludvik;
HOUDA, Miloslav; BAZANT, Vladimir

The course of potassium phthalate rearrangement to potassium terephthalate. Chem prum 12 no.10:529-534 0 '62.

1. Ustav teoretických základů chemické techniky, Československá akademie věd, Praha.

BAZANT, U.

Program, Activities of Geochemical Chemical Commission, Vol. 87, No. 6, April 1968 (continued).

18. "The Chemistry of Sodium Permanganate Electrochemical Methods," J. BAZANT, Electrochemical Methods, Interscience, pp. 914-919.

19. "The Theory of the Boundary Layer of a Finite Absorbing Crystal," E. BAZANT, Journal of Physical Chemistry at the Geochemical Academy of Sciences, Prague, pp. 900-907.

20. "A Contribution to the Problem of the Reaction of Absorption on a Cathode," E. BAZANT, Journal of Physical Chemistry at the Geochemical Academy of Sciences, pp. 908-910.

21. "The Kinetics of Oxidation, Part II. A Contribution to the Theory of the Reaction of Oxidation in Electrolytic Solutions," J. BAZANT and E. BAZANT, Journal of Electroanalytical Chemistry and Applied Chemistry at the Geochemical Academy of Sciences, Prague, pp. 911-917.

22. "The Kinetics of Electrolysis on Solids," Part VI. The Pericathodic Reaction - Reaction Solution System, and the Inert Nature of the Electrode, E. BAZANT, Journal of Electroanalytical Chemistry at the Geochemical Academy of Sciences, Prague, pp. 918-920.

23. "The Kinetics of Electrolysis on Solids," Part VII. Kinetics of Reaction by Adsorption (Electrode), E. BAZANT, Journal of Electroanalytical Chemistry at the Geochemical Academy of Sciences, Prague, pp. 921-929.

24. "Kinetics of Reaction with Pyridine and Its N-Substituted Derivatives," Part III. Generalization and Trialkylammonium Compounds," J. BAZANT, Journal of Electroanalytical Chemistry at the Geochemical Academy of Sciences, Prague, pp. 930-936.

25. "Kinetics of Reaction with Pyridine and Its N-Substituted Derivatives," Part III. Generalization and Trialkylammonium Compounds," J. BAZANT, Journal of Electroanalytical Chemistry at the Geochemical Academy of Sciences, Prague, pp. 937-943 (includes errata).

26. "Kinetics of Reaction with Pyridine and Its N-Substituted Derivatives," Part III. Generalization and Trialkylammonium Compounds," J. BAZANT, Journal of Electroanalytical Chemistry at the Geochemical Academy of Sciences, Prague, pp. 944-950.

27. "The Kinetics of Organic Catalysts," Part IV. The Reaction of Acids," E. BAZANT and O. VIKTOROVA, Journal of Electroanalytical Chemistry at the Geochemical Academy of Sciences, Prague, pp. 951-959.

28

BAZANT, V.

"Organosilicon compounds" by C.Eaborn. Reviewed by V.Basant.
Coll Cz Chem 27 no.12:3076-3077 D '62.

KRAUS, Milos; SETINEK, Karol; JOST, Frantisek; BAZANT, Vladimir

Some properties of catalysts for rearrangement of potassium phthalate into potassium terephthalate. Chem prum 13 no.2:67-70 F '63.

1. Ustav teoretických základů chemické techniky, Československá akademie věd, Praha.

RATHOUSKY, Jiri; KRUCHNA, Oldrich; SETINEK, Karel; BAZANT, Vladimir;
SILADI, J.

Practical problems of terephthalic acid isolation from the rearrangement product of potassium phthalate to potassium terephthalate. Chem prum 13 no.6:295-299 Je '63.

1. Ustav teoretických zakladu chemické techniky, Československá akademie věd, Praha (for all, except Siladi).
2. Spolek pro chemickou a hutní výrobu, Ústí nad Labem (for Siladi).

KOCHLOEFL, K.; GREBENOVSKY, E.; BAZANT, VL.

Quantitative determination of some benzenecarboxylic acids.
Chem prum 13 no.6:303-305 Ja '63.

1. Ustav teoretických zakladu chemické techniky, Československá
akademie věd, Praha a Spolek pro chemickou a hutní výrobu, Ústí
nad Labem.

SETINEK, Karel; BAZANT, Vladimír

Study of potassium terephthalate preparation. Chem prum 13 no.10:
509-512 0 '63.

1. Ustav teoretických základů chemické techniky, Československá
akademie věd, Praha.

KRAUS, M.; BAZANT, V.

Catalytic dealkylation of alkylaromatic compounds. Pt.6. Coll
Cz Chem 28 no.7:1877-1884 J1 '63.

1. Institute of Chemical Process Fundamentals, Czechoslovak
Akademy of Sciences, Prague.

24.4200

24111
Z/026/60/005/006/002/002
D256/D304

AUTHOR: Bažant, Zdeněk, P.

TITLE: Relaxation with variable load term, and its application in solving plates and torsion problems

PERIODICAL: Aplikace matematiky, v. 5, no. 6, 1960, 458 - 472

TEXT: Relaxation with a variable load term is a generalization of the normal relaxation method: here the so-called "load terms", (the right hand side of the equation) are changed, in addition to the usual successive change of the variables themselves. The aim is to accelerate the relaxation process, and it is most useful, when the usual process is slow, as in the case of complicated boundary conditions, or in solving a large symmetrical network, where the diagonal coefficients of the system are not appreciably larger than the others. This method has been described previously by the author (Ref. 1: Relaxační řešení šikmých desek s volnými okraji; Inženýrské stavby 1958, no. 8, p. 437) in principle. In

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24141

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D256/D304

Relaxation with variable...

method is that a load case is solved, which is also an unknown. Thus, the singular net points cannot be chosen at will, but only so that the solution for the given right-hand sides of the equations may be obtained as a linear combination of the results. If r singular net points are used, the relaxation will have to be performed $r + 1$ times in the general case, and in special cases r times. It is very advantageous to use this method when solving a system with identical right-hand sides; or with only one non-zero right hand side, as the relaxation will only have to be performed once with one singular point. In most other cases it is still necessary to perform the relaxation several times; the method is then usually not faster than the usual one. If more accurate results are to be obtained, it is possible to compensate the load terms according to the residues. Part of the resultant value of the variable load term is then considered to be also residue. Its magnitude is determined by the condition that the loading of the net by this residue, together with remaining residues, cancels one fixed selected unknown. This may be done by using the influence

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Relaxation with variable ...

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area of this variable, either approximately determined or only estimated, which will determine the obtainable accuracy. The possibility of such a type of solution is a consequence of the linearity of the system of equations, and it follows from the theorem of linear algebra which states how and under what conditions it is possible to determine the solution for a given right-hand side from the known solutions of a fixed system of linear equations for different right-hand sides. There follow some practical examples of the use of the method. There are 8 figures, 2 tables and 9 references: 4 Soviet-bloc and 5 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: R.V. Southwell, Relaxation methods in Engineering science, Oxford Univ. Press 1940, and Relaxation methods in Theoretical Physics OUP 1946; S.P. Timoshenko, Theory of Plates and Shells, New York, 1940, Mc Graw-Hill; R.V. Southwell, Relaxation Methods in Theoretical Physics. A continuation of the treatise; Oxford 1946.

ASSOCIATION: FIS ČVUT Praha (Building Faculty, Technical University, Prague)
 SUBMITTED: March 20, 1959
 Card 4/4

BAZANT, Zdenek F., inz.

Calculation of influence lines of multiple-bay frames with
inserted hinges. Inz stavby 9 no.9:344-346 S '61.

1. Dopravoprojekt, Praha.

BAZANT, Zdenek P., ins.

Effect of the creep and shrinkage of statically indeterminate concrete constructions of various age. *Ins stavby* 9 no.11:426-433 N '61.

1. Depraveprojekt, Praha.

BAZANT, Zdenek

A device for electric calibrating of radiometers of the
"Kaktus" type. Jaderna energie 8 no.8:290-292 Ag '62.

1. Ustav jaderného výzkumu, Československá akademie věd.

BAZANT, Zdenek, prof., inz., dr., Dr. Sc.

"Foundation engineering in practice" by E. Bachus. Reviewed by
Zdenek Bazant. Inz stavby 10 no. 2:78 F '62.

BAZANT, Zdenek, prof., ins., dr., Dr., Sc.

Mechanized construction of clay walls. Ins stavby 10 no.3:89-91
Mr '62.

1. Ceske vysoke uceni technicke, Praha.

BAZANT, Zdenek P., inz.

Determining the prestressing loss caused by the friction of curved cables by their elongation under stress. Ins. stavby 10 no.8:290-293 Ag '62.

1. Dopravoprojekt, Praha.

BAZANT, Zdenek, prof., inz., dr., Dr.Sc.

Underground walls, a new element in building foundation. Ina stavby
10 no.10:371-378 0 '62.

1. Ceske vysoke uceni technicke, Praha.

BAZANT, Zdenek, prof., inz., dr., Dr.Sc.

"Foundation design simply explained" by J.Faber and F.Mead.
Reviewed by Zdenek Bazant. Inz stavby 10 no.12:471 D '62.

BAZANT, Zdenek; CECH, Jaroslav; HEKRDLE, Jaroslav; HLADKY, Stanislav

Adaptation and design of some operational dosimetric instruments. *Jaderna energie* 9 no.7:233 JI '63.

1. Ustav jaderneho vyzkumu, Ceskoslovenska akademie ved,
Rez u Prahy.

NOVOTNY, Vladimír, inž.; BAZANT, Zdeněk P., inž.

Design of a perfected prestressing system for bridges
cemented and assembled by the cantilever method. Inž
stavby 11 no.1:11-13 Ja '63.

1. Dopravoprojekt Praha.

HAZANT, Zdenek, prof., ins. dr., DrSc.

Ensuring a perfect fixing of columns into foundations. Ins
stavby 11 no.7:241-242 J1 '63.

1. Ceske vysoke uceni technicke, Praha.

BAZANT, Zdenek, prof., DrSc.

"Foundation engineering" by K. Szechy. Vol.1. Reviewed by
Zdenek Bazant. Inz stavby 11 no.10:400 0 '63.

BAZANT, Zdenek P., inz. CSc.

Design of an advantageous system of spatial arrangement of bridge girder rubber bearings. Inz stavby 12 no. 3:114-115 Mr '64.

1. Institute of Building, Czech Higher School of Technology.

BUBNI, Zdenek, inz. CSc.

Effect of time in the interaction of statically indeterminate structures with their subsoil. Stav cas 12 no.9:542-558 '64.

1. Institute of Building of the Czech Higher School of Technology, Prague.

BAZANT, Zienek P., inz.

Theory of the creep and shrinkage of the concrete in non-homogenous structures and sections. Stav casopis 10 no.9:552-576 162.

1. Dopravoprojekt Praha.

BAZANT, Zdenek P., inz. CSc.

Approximate methods of calculating the creep and shrinkage of nonhomogeneous concrete constructions and the use of automatic computers. Stav cas 12 no. 7:414-431 '64.

1. Institute of Building, Czech Higher School of Technology, Prague.

(10-1)
BAZANT ml., Zd., prof.

Commemorating the 90th birthday of professor Jan Kolar,
the Nestor of Czech civil engineers. Inz stavby 6 no.3:113
Mr '58.

ORAVEC, Citrad; HOLOUBEK, Viktor; BAZANY, Miroslav

The properdin system in tumorous disease. II. The level of properdin in healthy and tumorous fowls (tumour B 77). Cesk. onkol. 3 no.4:279-283 1956.

1. Oncological Research Institute, Bratislava.

(IMMUNITY,

properdin in exper. sarcoma B 77 and in normal fowls)

(SERUM GLOBULIN,

same)

(NEOPLASMS, experimental,

sarcoma B 77, comparison of properdin in normal & tumor-bearing fowls)

(SARCOMA, experimental,

B 77, comparison of properdin in normal & tumor-bearing fowls)

BAZANY M

CZECHOSLOVAKIA/General Problems of Pathology. Tumors

U-4

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 66024

Author : Oravec C., Holoubek V., Bazany M.

Inst : -

Title : The Properdin System in a Tumorous Disease. III. The Time Sequence of Changes in the Level of Properdin in Rabbits with Brown-Pearce Carcinoma.

Orig Pub : Neoplasma, 1957, 4, No 1, 3-6

Abstract : Brown-Pearce carcinoma was transplanted to rabbits (29) and the properdin (I) level was determined during various time intervals by measuring the difference in bactericidal properties between the intact serum and that devoid of I. During the 1st stage (on the 14-day following transplantation) the I content was significantly increased; later (14th-23rd day) it was decreased. In the resistant animals in which the tumor failed to develop and which were sacrificed on the 149th day after transplantation, the I content was normal. One year after the 1st transplantation the tumor was again

Card : 1/2

BRZANY, M.

CZECHOSLOVAKIA / General Problems of Pathology.
Immunity

U

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41864.

Author : Oravec, C., Holoubek, V., Kovarova, V., Klinec, M.,
Brzany, M.

Inst : Not given.

Title : The Properdin System in a Tumorous Disease. IV.
The Level of Properdin in Guinea Pigs Treated
with Cortisone, X-rays and with Herpes Virus.

Orig Pub: Neoplasma, 1957, 4, No 1, 7-9.

Abstract: The investigations were conducted in connection
with the effectiveness of experiments on hetero-
transplantation of tumors with application of cor-
tisonone and X-ray irradiation. Guinea pigs were
injected, for a period of 5 days, with 2.5 mg of
cortisonone acetate intra-abdominally, or were once
irradiated with 600 r, or were infected intrader-

Card 1/2

CZECHOSLOVAKIA / General Problems of Pathology.
Immunity.

U

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41864.

Abstract: mally with the herpes virus. The animals were killed on the 6th day and the properdin (I) content was determined by the difference in the bactericidal action of the intact serum and of the serum deprived of I. Following all means of treatment, the bactericidal action of the intact serum as well as its I content decreased. However, the I concentration in guinea pigs, treated with cortisone, decreased to a lesser degree than in those infected with herpes or exposed to X-rays. It is assumed that there exists an indirect relation between RES (reticulo endo-thelial system) and I, and also a similar mechanism of action of cortisone and X-rays on the I system. -- F. L. Bukh.

Card 2/2

6

SMIDOVA-KOVAROVA, V.; ORAVEC, C.; BAZANY, M.; KOSSEY, P.

Heterotransplantation of tumours. Part IV. Heterotransplantation of Walker 256 rat carcinoma in hamsters treated with cortisone in combination with normal rat organs antigen and with tumour antigen. Neoplasma, Bratisl. 7 no. 2: 167-171 '60.

1. Oncological Research Institute, Bratislava, C.S.R.
(NEOPLASMS exper)
(CORTISONE pharmacol)

BAZAR, Elemer (Szombathely)

Development of railroad engineering in France. Vasut 14 no.9:30-32
S '64.

SATPAYEV; BOISHEV; POKROVSKIY; AMANZHOLOV; AUYEZOV; BALAKAYEV; KENESBAYEV;
SAURANBAYEV; MUKANOV; SMIRNOVA; DZHUMALIYEV; ISMAILOV; KHASNOV, K.;
NUSUNBEKOV; SULEYMENOV; SHAKHMATOV; DAKHSHLEYGER; BAZARBAYEV; TSUNVAZO;
SHAMIYEVA; SIL'CHENKO; GABDULLIN; MUSABAYEV; MAKHMUDOV; MULLINA;
MAMANOV; ISKAKOV; SARYBAYEV; KHAYDAROV; ARALBAYEV; NURMUGAMBEETOVA;
KHASHENOVA; SULEYMEENOVA; AKHMETOV; ISENGALIYEVA; NOMINKHANOV;
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