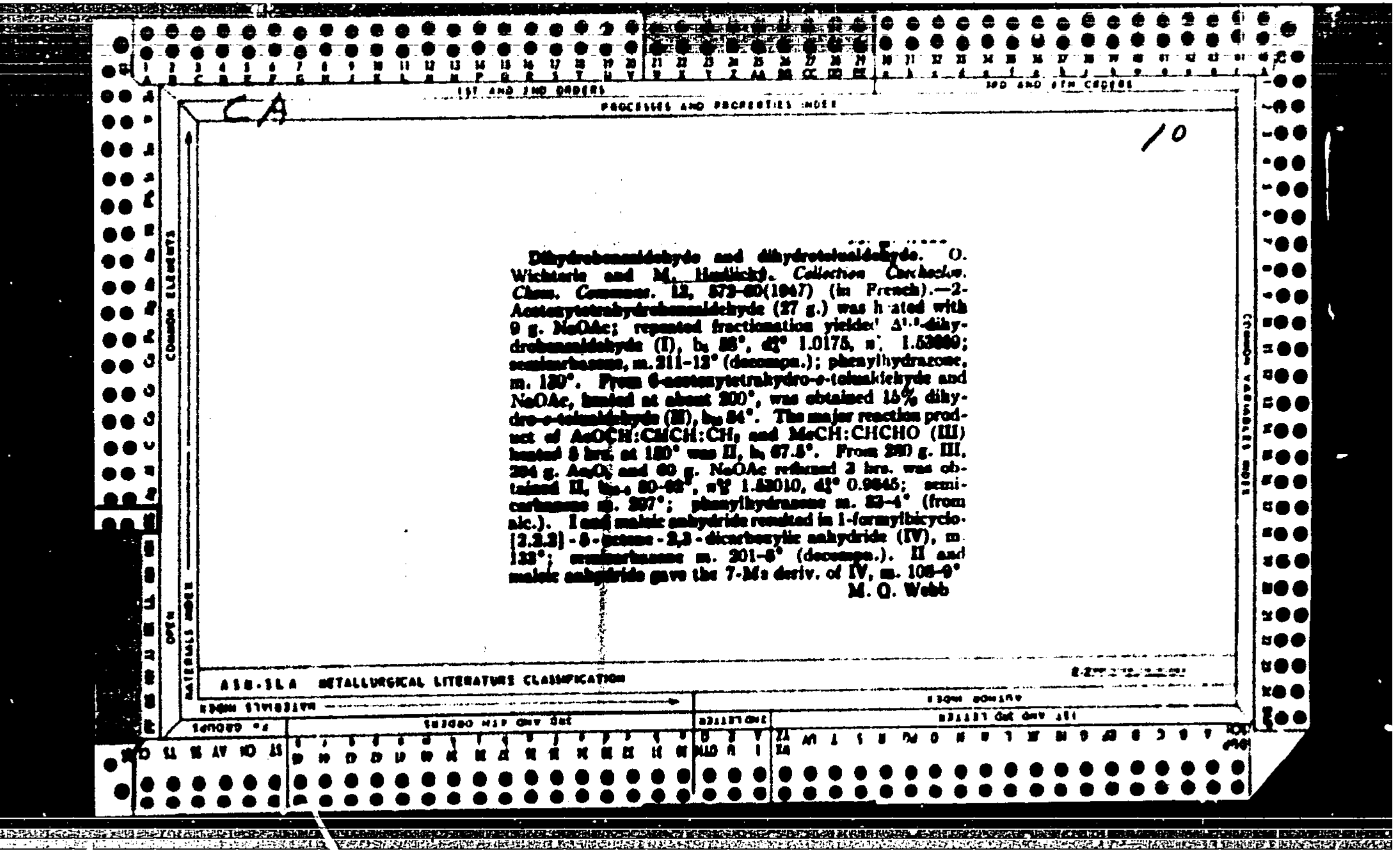

CA

10

Dihydrobenzaldehyde and dihydrotolualdehyde. O. Wichterle and M. Hudlický. *Collection Czechoslov. Chem. Communs.* 12, 573-80(1947) (in French).—2-Acetoxytetrahydrobenzaldehyde (27 g.) was heated with 9 g. NaOAc; repeated fractionation yielded $\Delta^{1,3}$-dihydrobenzaldehyde (I), b_{13} 88°, d_4^{20} 1.0175, n_D^{20} 1.53000; semicarbazone, m. 211-12° (decompn.); phenylhydrazone, m. 120°. From 6-acetoxytetrahydro-o-tolualdehyde and NaOAc, heated at about 200°, was obtained 15% dihydro-o-tolualdehyde (II), b_{12} 84°. The major reaction product of AcOCH:CHCH:CH$_2$ and MeCH:CHCHO (III) heated 5 hrs. at 180° was II, b_7 67.5°. From 280 g. III, 204 g. Ac$_2$O, and 60 g. NaOAc refluxed 3 hrs. was obtained II, b_{10-12} 80-83°, n_D^{20} 1.53010, d_4^{20} 0.9845; semicarbazone m. 207°; phenylhydrazone m. 83-4° (from alc.). I and maleic anhydride resulted in 1-formylbicyclo[2.2.2]-5-octene-2,3-dicarboxylic anhydride (IV), m. 123°; semicarbazone m. 201-3° (decompn.). II and maleic anhydride gave the 7-Me deriv. of IV, m. 108-9°

M. O. Webb

PROCESSES AND PROPERTIES INDEX

7

Colorimetric analysis of oximes, ketones, and hydrox- ylamine. O. Wichterle and M. Hudlicky (Inst. recher- ches etablissement, Bata à Zlin). *Collection Czechoslov. Chem. Communs.* 12, 661-71 (1947)(in French).—The reaction of Cl on ketoximes to form intensely blue chloro nitroso derivs., $R_2C(Cl)NO$, is converted to an analytical procedure. The aldoxime derivs., however, rearrange to colorless RC(Cl):NOH. 1-Chloro-1-nitrosocyclohexane(I), obtained in 80.5% yield from 565 g. cyclohexanone oxime (II) in 1000 cc. H_2O and 375 g. Cl at 0° 1 hr. and steam distn. of the blue oily layer, b_{12} 46°, b_{20} 60-3°, b_{20} 66.5-9°, d_{20} 1.1137. 1-Chloro-1-nitrosocyclopentane (III), prepd. below 20° from Cl and a mixt. of 50 g. cyclopentanone (IV), 41 g. $H_2NOH \cdot H_2SO_4$, 66 g. NaOAc, and 200 g. H_2O and subsequent steam distn. of the blue oily layer, b_{20} 44°, b_{760} 127° (violent decompn.), d_{20} 1.1267. Chlor- inated urea (V), from 60 g. urea and 15 cc. H_2O below 0° satd. with 30-32 g. Cl, was a mixt. of crystals and a sirupy mother liquor; the latter, lasting for several weeks, de- compd. slowly at 20° and was used for the production of I and III in analysis. Oximes are detected by addn. of a few drops of V to a soln. in org. solvents or in H_2O and sub- sequent extn. with an org. solvent to give a blue color. Test for ketones: The sample and an excess of a soln. of H_2NOH-HOAc (8.2 g. $H_2NOH \cdot H_2SO_4$ and 13.7 g. NaOAc in 1000 cc. H_2O) are treated with V, etc., to give the blue color. Test for H_2NOH: The sample (neutralized with NaOAc if acidic) is treated with IV and several drops V and the blue color extd. with xylene. Detn. of II: 0.01-0.06 g. in 10 cc. HOAc in a graduated tube, 0.2-0.3 cc. V, and 30 cc. H_2O are dild. to 50 cc. with HOAc. The extinction is then measured in a Lange universal colorimeter; a red filter (Sudan 5B red) gives greater

values. The precision in 0.005 0.010 molar solns. is ±2%. The extinction of IV oxime is similarly detd. in 60% HOAc. Detn. of cyclohexanone: 3 cc. 0.5 M H_2NOH-HOAc is added to a sample contg. 0.01-0.06 g. ketone, and, after 20 min., 20 cc. HOAc, 0.5 cc. V, and H_2O to 50 cc. vol. are added; the extinction is measured as with II. Detn. of H_2NOH: 0.01-0.035 g. NH_4Cl in 1 cc. 0.2 M NaOAc, 0.1 cc. cyclohexanone, 20 cc. HOAc, and 0.25 cc. V are dild. to 50 cc. with H_2O. Detn. of 5-keto- hydrophthalic acid (VI): 0.01 0.04 g. $H_2NOH \cdot HCl$ in 5 cc. H_2O, neutralized with 3 N NaOH to pH 10, is treated 2-5 min. with 2 cc. 0.5 M VI; after addn. of 0.5-1.0 cc. V and diln. to 50 cc., the extinction is measured. J. W. G.

ASO-SLA METALLURGICAL LITERATURE CLASSIFICATION

10

Conversion of vinyl-type halides to ketones. III. Ring closure of tris(3-chlorocrotyl)amine by sulfuric acid—constitution of the product and the preparation of certain derivatives. Miloš Hudlický. *Collection Czechoslov. Chem. Communs.* 13, 206-28(1948)(in English); cf. *C.A.* 41, 4148i.—With concd. H_2SO_4, $(MeCCl:CHCH_2)_3N$ (I) cyclizes to *3-acetyl-4,5-dimethyl-1-azabicyclo[3.3.1]-3,6-nonadiene* (II). To 2 l. H_2O satd. with NH_3 at 50° is added, with stirring, 1250 g. $MeCCl:CHCH_2Cl$ (III). After 1 hr. the temp. rises to 72°. When a sample of the reaction mixt. dissolves to a clear soln. in concd. HCl, the lower layer is sepd. and dried with KOH, giving 586 g. (60%) I, b_{3-4} 136-7°. Likewise, to 4.5 kg. III in 6 l. 95% EtOH cooled in ice is added NH_3 gas at 20-30°, the mixt. centrifuged after 24 hrs., the alc. distd. off with steam, and the aq. layer of the residue dried by distn. with C_6H_6, giving 2351 g. (70%) I, b_{3-5} 165-84°. To 850 cc. 95% H_2SO_4 in a 2-l. 3-neck flask fitted with stirrer, thermometer, dropping funnel, a tube for carrying off HCl, and a tube to the bottom for admission of air is slowly added I, keeping the temp. below 100°, while a slow current of air is passed through the reaction mixt. After 1 day it is poured into ice and, while cooled, neutralized with concd. NaOH to Congo red. Overnight the Na_2SO_4 ppts. and is centrifuged out, the filtrate made alk. to phenolphthalein with concd. NaOH, extd. 4 times with 300 cc. C_6H_6, and the C_6H_6 ext. shaken with 100 cc. NH_4Cl soln. and sepd. On distn. the portion b_{14} 139-52° is collected (115 g.); crystn. from pentane gives II, b_{14} 137-8°, d_4^{20} 1.0640, n_D^{20} 1.53378, n_D^{20} 1.53766, n_D^{20} 1.54784. *Derivs.* of II: *acid oxalate*, m. 172-3°; *acid tartrate*, m. 201°; *perchlorate*, m. 178-80°; *picrate*, m. 222-5°; *oxime*, m. 196-7°; *semicarbazone*, decomp. 210°. II (50 g.) in 75 g. dry iso-PrOH and 7.5 g. $(Me_2CHO)_3Al$ are boiled 6 hrs. to allow the Me_2CO to escape, 20 cc. iso-PrOH added, the heating continued 3 hrs., the iso-PrOH distd. off, 25 cc. H_2O and 20 cc. 30% KOH added to the cooled residue, and the oil layer extd. with C_6H_6, dried with KOH, and distd., giving 11.8 g. (23.5%) of liquid, b_{3-4} 150-64°, which solidified on long standing to the *3-(1-hydroxyethyl) analog* (IV) of II, m. 102-3° (from pentane) (*picrate*, m. 194-5°). The semicarbazone (15 g.) of II is heated 6 hrs. with 3.5 g. Na in 50 cc. abs. alc. in a sealed tube at 190°, the tube cooled and opened to release the pressure, resealed, heated 2 hrs. at 191° and then at 205°, cooled after 9 hrs., the contents poured into a distg. flask, and the alc. distd. off; extn. with ether and distn. give the *3-ethyl analog* (V) of II, b_{14} 119-51°. Also, to 900 g. $(CH_2OH)_2$ contg. the alcoholate from 46 g. Na are added (9.8 g.) II and 15 cc. $N_2H_4.H_2O$, the mixt. refluxed 50 hrs. under a condenser fitted with a $CaCl_2$ tube, cooled to 60-70°, extd. 5 times with 100 cc. C_6H_6, and the C_6H_6 distd. off, giving 6 g. (69%) V, b_{14} 93-8°, d_4^{20} 0.9920, n_D^{20} 1.51105, n_D^{20} 1.51414, n_D^{20} 1.52303; *picrate*, m. 210-11°. V (0.7 g.) with 3 g. red Se and 7 g. phenanthrene is boiled 30 hrs., the reaction mixt. dissolved in 20 cc. C_6H_6, shaken 4 times with 15 cc. 20% HCl, evapd. to dryness on a H_2O bath, and the residue dissolved in H_2O, neutralized with N KOH, and steam-distd. to give a product, the picrate (m. 190-91°) of which analyses for $C_{17}H_{18}N_4O_7$, indicating the removal of Me. A Clemmensen reduction of 80 g. II yields, after distn., 22.4 g. of a liquid (VI), b_{14} 133-5°; *picrate*, $C_{18}H_{22}N_4O_8$, m. 221-2°; *methiodide*, $C_{13}H_{22}NOI$, m. 254-5°; *oxime*, $C_{12}H_{20}N_2O$, m. 182°. VI is further reduced with Na-Hg to a compd. whose oxime m. 188-9°. To II (99.5 g.) in 250 cc. H_2O is added in lots of 100 g. at 20° the Na-Hg from 24 g. Na and 900 g. Hg, the Hg being removed after each addn. After 5 hrs. the Hg previously removed is added to the flask and heated at 100° 10 min. Extn. with C_6H_6 and distn. gives 91.5 g. *3-acetyl-4,5-dimethyl-1-azabicyclo[3.3.1]-3-nonene* (VII), b_{14} 140-2°, m. 52-3°, n_D^{20} 1.522; *picrate*, m. 341-2°; *methiodide*, m. 255-6°; *oxime*, m. 196-7°. To II (20 g.) in 130 cc. H_2O at 30° is slowly added with

shaking 400 g. of 2.5% Na-Hg and the mixt. extd. after 7
hrs. with ether; on distn. there is obtained the *3-(1-hy-*
droxyethyl) analog of VII, b_9 162-3°; *picrate*, m. 225-7°.
The product from the Clemmensen reduction of VII gives
the same oxime (mixed m.p.) as that from the amalgam
reduction of VI. VII reduced with Adams catalyst and H
and the product crystd. from a pentane-C_6H_6 mixt. gives
3-acetyl-4,5-dimethyl-1-azabicyclo[3.3.1]nonane, m. 123°;
picrate m. 234-5°. The $HOCH_2CO_2Na$ prepd. by heating
500 g. dry $(CH_2OH)_2$ and Na at 100° is sprinkled with
19.3 g. VII, 13 g. freshly distd. $N_2H_4.H_2O$ added, the mixt.
heated at 220-40° 19.5 hrs., cooled to 60-70°, extd. with
C_6H_6, the C_6H_6 ext. washed with H_2O, the solvent removed
by distn., and the residue distd. to give 13 g. of the *3-*
ethyl analog of VII, b_9 95-6°; *picrate*, m. 237°. VII (1 g.)
in HOAc adds 7.8 cc. 2 *N* Br soln. in HOAc, while HBr is
liberated; concg. to 5 cc. and cooling give 1.45 g.
of the *6-bromo deriv.* of VII, m. 202-3° (from abs. alc.).
O_3 (1.5-2%) is passed 50 hrs. into 10 g. VII in 100 cc.
HOAc at the rate of 100-200 cc./min., the mixt. refluxed
5 hrs. to decomp. the ozonide, the HOAc distd. off in a
vacuum, and the residue (16 g.) crystd. by adding EtOH-
H_2O, giving *1-(carboxymethyl)-3-acetyl-4,5-dimethyl-3-*
piperidinecarboxylic acid (VIII), m. 250-5° (decompn.).

The mother liquor from the crystn. of VIII gives with alc.
picric acid the *picrate*, $C_{16}H_{20}N_4O_9$, m. 200°. II (19.1 g.)
in 250 cc. HOAc is ozonized 30.5 hrs. by 2.8% O_3 at the rate
of 200 cc./hr., the HOAc distd. off, and half of the sirupy
liquid residue boiled with alc., yielding 3.2 g. white
crystals, $C_9H_{15}NO_3$, m. 220-40°; oxime, $C_9H_{16}N_2O_3$, m.
280°; picrate, $C_{15}H_{18}N_4O_{10}$, m. 215-6° (decompn.). Dehy-
drogenation of II by boiling in a bath at 350° with Se gives
no identifiable product. II (5 g.) in 400 cc. H_2O at 2-5°
consumed 575 cc. of 2% $KMnO_4$ (4 equivs. O). After
filtering off the MnO_2, the filtrate is concd. and acidified
with 6.5 g. concd. HCl; crystn. gives an unidentifiable
product, m. 280-5°. II (0.100 g.) in 2 cc. H_2O treated
with 6 drops 30% perhydrol, and the mixt. evapd. on a
H_2O bath and crystd. from C_6H_6 gives *3-acetyl-4,5-di-*
methyl-1-azabicyclo[3.3.1]-6-nonene 1-oxide, m. 102-3°;
picrate, m. 235-47°. Clarence T. Mason

CA 10

Alkyl ethers of cyclohexanone oxime. M. Hudlický and J. Hokr (Tech. Univ., Prague). *Collection Czechoslov. Chem. Communs.* 14, 561-2(1949)(in English).—*Cyclohexanone oxime* (I) may be easily alkylated to give *alkyl ethers* (II) which are colorless liquids of terpenelike odor, stable to 10% oleum at temps. to 40°; at 80° they form ε-*caprolactam*. II were prepd. by adding 2 mols. dialkyl sulfate to 226 g. I in 500 g. hot 20% NaOH, heating on a steam bath 0.5 hr., cooling, extg. with Et_2O, washing the ext. with $NaHSO_3$ and H_2O, drying over Na_2SO_4, and distg. II prepd. in this way were: *Me* (87% yield), b_{11} 50-1.5°, b_{12} 51.5°, d_4^{20} 0.9477, n^{20} 1.46311, 1.46606, 1.47310, and 1.47887 for the C, D, F, and G' lines, resp., and *Et* (32.5%), b_{8} 60-1°, b_{11} 64°, b_{16} 70°, d_4^{20} 0.9273, n^{20} 1.46043, 1.46327, 1.47033, and 1.47609 for the C, D, F, and G' lines, resp. The *allyl ether* (III), b_{11} 80°, d_4^{20} 0.9521, n_D^{20} 1.4817, was prepd. in 110-g. (110%) yield by adding 240 g. I in an aq. soln. of 104 g. KOH to 240 g. $CH_2{:}CHCH_2Br$, heating on a steam bath with occasional shaking, cooling, dilg. with H_2O, extg. with Et_2O, drying the ext. over Na_2SO_4, and distg. II (1 part in g.) was added to 10% oleum (2 parts in ml.) with cooling below 40°, one-eighth of the soln. heated to 80° (a violent reaction occurred), the product heated to 120°, and the rest of the mixt. added slowly; after the reaction had subsided, the mixt. was poured onto ice, neutralized with $(NH_4)_2CO_3$, and extd. with Et_2O, approx. 50% ε-caprolactam, m. 68° (from ligroin), being obtained from the ext.

E. U. Elam

CA

1

Analysis of the system cyclohexanone-cyclohexanol-phenol. **Miloš Hudlický** (Tech. Univ., Prague). *Collection Czechoslov. Chem. Communs.* 14, 564-8(1949)(in English).—A rapid, simple analysis of the system cyclohexanone (I)-cyclohexanol (II)-PhOH (III), accurate to 1-2%, is based upon the measurement of the n and d of the sample; the compn. of the sample is read directly from the triangular diagram constructed from measurements of a series of known mixts. The data are given for mixts. which contain less than 20% III, from 18 to 100% II, and 20-100% I.

E. U Elam

10

CA

Reactions of 1,3-dichloro-2-butene. I. β-Chlorocrotonic and tetrolic acids. Miroslav Dohnal and Miloš Hudlický (Tech. Univ., Prague, Czech.). *Chem. Listy* 45, 452-3 (1951).—MeCCl:CHCH$_2$OH (I) (80.3 g.), obtained by alk. hydrolysis of *MeCCl:CHMe*, was oxidized with 164 g. CrO$_3$ in 1470 ml. H$_2$O below 10° during 5 hrs.; ether extn. yielded 17.3 g. (33.3%) *3-chloro-2-butenal* (II), b$_{16}$ 40-41°. A better yield was obtained by oxidizing 10.6 g. I with 14.7 g. CrO$_3$ in 95 g. Me$_2$CO and 85 ml. H$_2$O contg. 27 g. H$_2$SO$_4$ at −8° to 8°; ether extn. yielded 5.7 g. 55% II, a yellowish liquid of crotonaldehyde-like odor, b$_{16}$ 37-40°, n_D^{20} 1.473 [*semicarbazone*, m. 162-3° (from EtOH)]. II gave 8.3% *3-chloro-2-buten-1-oic acid* (*trans*-β-chlorocrotonic acid), m. 92-4°, on autoxidation, 13% with Ag$_2$O, 17.3% or catalytically with air and (AcO)$_2$Mn. MeC:CCH$_2$OH (prepd. from I by alk. dehydrohalogenation in 60% yield) (20 g.) oxidized in Me$_2$CO with chromic mixt. at 6° gave 8.6 g. (35.8%) tetrolic acid, m. 78°, obtained by ether extn.

M. Hudlický

10

CA

Isocyclic compounds containing large rings. Miloš Hudlický. Chem. Listy 45, 311-17 (1951).—A review with 97 references. M. Hudlický

CA

Organic Chemistry-10

Oxidation of carbonyl compounds with hydrogen peroxide and peroxides. Miloš Hudlický. *Chem. [illegible]y* 46, 667-88 (1952).—A review with a list of oxidized compds. and 85 references.

M. Hudlický

Hudlicky, Milos

Hudlicky, Milos, and **Trojanek, Jan:** Preparativni reakce v organické chemii. Dil I. Prague: Nakladatelstvi československe akad. věd. 1953. 481 pp.

Hudlicky, M.

1

CH

✓Herout, V., Keil, B., Protiva, M., Hudlicky, M., Ernest, I., and Gut, J.: Laboratorní technika organické chemie. Prague: Nakl. CSAV. 1954. 756 pp. Kčs 80. Reviewed in *Chem. Listy* 49, 1415(1955).

Chem + Educ

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Herout, V., Keil, B., Protiva, M., Hudlicky, M., Ernst, I., and Gut, J.: Organic Chemistry Laboratory Techniques. Publishing House CSAV. 1954. 756pp. Kcs. 86. Reviewed in Chem. Listy49, 1415(1955).

Hudlicky, Milos

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CZECH

Hudlický, Miloš: Preparativní Reakce v Organické ~~Chemie. Díl II. Prague~~: Nakl. Česk. Akad. Věd. 1955. 565 pp. Cf. C.A. 48, 9401c.

Chem

Hudlicky, Milos: Preparative Reactions in Organic Chemistry. Part II. Prague: Publishing House of the Czech Academy of Sciences. 1955. 565pp.
~~Cf. C.A. 48, 9401c.~~

PM

[illegible] Catch. 83.-
Amides of [illegible]

by treatment with an excess [illegible] corresponding amides or lactams in [illegible] yields. Passing 271 g. dry HF directly from the [illegible] into a dry [illegible] steel flask contg. 113 g. dry cyclohexanone oxime, shaking [illegible] several hrs., connecting the [illegible]

HUDLICKY, MILOS

"Methody preparativni organicke chemie. [vyd.1.] Praha, Statni nakl. technicke literatury, 1956. [methods of preparatory reactions in organic chemistry. 1st ed. index]."

p.381 (Praha, Czechoslavakia)

Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 8, August 1958

HUDLICKY, Milos

85 982 Oct. 15, 1956 [illegible]

Adding slowly 120 g. 25% H_2O_2 and 98 g. cyclohexanone to 530 g. dry HF in a steel flask while shaking and cooling with Dry Ice and EtOH, leaving 18 hrs. at room temp., distg. HF and H_2O in vacuo, and extg. the residue with Et_2O gives 99.6 g. crude product, which yielded, when distd. in vacuo, [illegible] higher-boiling [illegible] brown wax-like [illegible]

HUDLICKY, MILOS

Reactions of 1,3-dichloro-2-butene. II. Synthesis of 2,3,4-trimethylpyridine. Rudolf Lukeš, Miloš Hudlický, and Zdeněk Janů. *Collection Czechoslov. Chem. Communs.* 21, 140-5(1956)(in English). - See C.A. 50, 7796g.
E. J. C.

[illegible]

Czechoslovakia/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 900

Author: Lukes, R., Hudlicky, M., and Janu, Z.

Institution: None

Title: Reactions of 1,3-dichloro-2-butene. II. Synthesis of 2,3,4-trimethylpyridine

Original Periodical: Chem. listy, 1956, Vol 50, No 2, 258-263 (published in Czech); Sb. chekhosl. khim. rabot, 1956, Vol 21, No 1, 140-145 (published in English with a Russian summary;

Abstract: The action of benzylamine (I) on 1,3-dichloro-2-butene (II) yields bis-(γ-chlorocrotyl)-benzylamine (III). Treatment of the latter with concentrated H_2SO_4 leads to the evolution of HCl and the formation of N-benzyl-3-acetyl-4-methyl-1,2,5,6-tetrahydropyridine (IV). Distillation of IV at ordinary pressures causes decomposition with the formation of 2,3,4-trimethylpyridine (V) and toluene; distillation of the hydrochloride of IV likewise yields V, with the additional formation

Card 1/3

Czechoslovakia/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 900

Abstract: of benzylchloride. Similar cleavages followed by rearrangement have been described previously (V. Prelog et al, Helv. chim. acta, 1942, 25, 1654). To one mole of I in 360 ml of water with 3 moles of NaOH add 2 moles of II (20 minutes at 42°); raise the temperature to 98° for 3.5 hours and stir 4.5 hours. At that temperature III is obtained in yields of 67%, bp 123.5-133.5°/1.2-1.7 mm; the picrate, mp 132-133° (from alcohol), is also formed. Add dropwise 0.5 moles of III to 150 ml of 96% H_2SO_4 at 80°, heat while passing a stream of air through the solution (to remove HCl) for 6 hours, pour over ice, make the solution alkaline, and remove C_6H_6; IV is recovered as the picrate in yields of 29.5%, mp 146-146.2° (from alcohol). IV is obtained from the picrate, bp 131°/0.2 mm, n_4^{20} 1.5519, d_4^{20} 1.0492, MR_D 69.82. Distillation of IV at 115-400° gives V in yields of 34%, bp 188.5-189.5°/740 mm, n_D^{20} 1.5151, $n_D^{22.7}$ 1.5138, d_4^{20}0.9543 (n_D markedly decreases during prolonged contact of V with air because of the high hygroscopicity of V; this explains the divergences in the physical constants given in the literature). V is obtained in 47-6% yields by the distillation of IV with 3% HCl (gas) and in 65.2% yields from the distillation of the hydrochloride of IV; in the latter case the picrate is also formed,

Card 2/3

1

Carboxylic acid amides. M. Hudlický. Czech. 87,126, Sept. 15, 1957. Acetophenone oxime (1 g.) was mixed with 8 g. CF_3CO_2H (I) at −15° and the mixt. heated to 90°. An exothermic reaction took place. The mixt. was heated 2 hrs. and I evapd. *in vacuo*. The residue gave on crystn. from 20 ml. H_2O 0.53 g. acetanilide, m. 112-13°. Similarly, benzanilide (m. 162-3°) from benzophenone oxime and ε-caprolactam ($b_{1.4}$ 100-1°, m. 64-8°) from cyclohexanone oxime were obtained.

M. Protiva

HUDLICKY, MILOS

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

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25059

Author : Hudlicky Milos
Inst : ---
Title : Reactions of 1,3-Dichloro-2-Butene. IV. Reaction with Grignard Reagents.

Orig Pub : Chem. listy, 1957, 51, No 2, 336-340; Sb. chekhosl. khim. rabot, 1957, 22, No 2, 577-582

Abstract : 1,3-dichloro-butene-2 (I) reacts with RMgX through the Cl atom in allylic position, to form chlorolefins $RCH_2CH{:}CClCH_3$ (II) [R = C_4H_9 (a), n-C_6H_{13} (b), C_6H_5 (c) and $C_6H_5CH_2$ (d); IIa-c yield with concentrated H_2SO_4 methyl ketons $R(CH_2)_2COCH_3$ (III), while IId -- a mixture of methyl naphthalene and methyl tetralin. Boiling of ether solution of RMgX (from 1 mole Mg and 1 mole RX) with 1 mole I gives II (RX, reaction duration in hours, yield of II in %, BP in °C/mm, nD (temperature in °C):

Card 1/2

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

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25059

C_4H_9BR, 3, 13, 83-92/50, 1.4434 (18); $C_6H_{13}Br$, 6, 17, 91.5-97/14.5 (solution of RMgX added to boiling I; IIb contains admixture of n-$C_{12}H_{26}$) C_6H_5Br, 6.5, 19, 102-105/15, 1.5332 (20); $C_6H_5CH_2Cl$. 2, 38, 119-122/14.5, 1.5267 (20); d_4^{20} 1.0259. 0.08-0.16 mole of II stirred at 25° with 50-100 ml 96% H_2SO_4, blowing a current of air through the mixture, to get III (R, duration of reaction in hours, yield in %): a, 18.72; b, 3, 38; c, 1.5, 53.
Communication III see RZhKhim, 1957, 60466.

Card 2/2

HUDLICKY, M.

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

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11247

Author : Hudlicky, M.
Inst :
Title : The Beckmann Rearrangement in Trifluoroacetic Acid

Orig Pub: Chem. Listy, 51, No 3, 470-473 (1957) (in Czech)

Abstract: It has been established that CF_3COOH (I) is both a catalyst and a solvent for the Beckmann rearrangement of acetophenone oxime (II), benzophenone oxime (III), and cyclohexanone oxime (IV) and of the corresponding amides. For a concentration of IV in I of 39.5% at temperatures of 75, 87.5, and 99° the following values have been obtained for the reaction rate constant: 0.00067, 0.0035, and 0.14; for a concentration of 20.2%: 0.0051, 0.013, and 0.036; for a concentration of 11.0%: 0.012, 0.025, and 0.18. The re-

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

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11297

action appears to be first order and the velocity decreases with increasing concentration. II is dissolved in molten I, refluxed 2 hrs, yield 53% acetanilide, mp 112-113° (80% of the I is recovered). By a similar procedure III yields 88% benzanilide, mp 162-163°. ε-caprolactam bp 100-101°/2.5 mm, mp 64-68° is obtained by a similar procedure from IV in yields of 62.5%.

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HUDLICKY, M.

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

Abs Jour: Ref. Zhur.-Khimiya, No II, 1958, 36284.

Author : Jarkovsky Pesata, Hudlicky M.
Inst : Not given.
Title : Reactions in the Anhydrous HF. III. Synthesis of Dichlorodifuoromethane.

Orig Pub: Chem. listy, 1957, 51, No 4, 625-632.

Abstract: Synthesis of CCl_2F_2 from CCl_4 and HF was investigated. Small quantities of SO_2 and water do not hinder this reaction. Catalytic activity of $SbCl_5$ rapidly decreases in the presence of CS_2 which reduces it to $SbCl_3$. As the result of that, when using technical grade CCl_4, small amount of Cl_2 should be added. It is recommended to employ 0.08 mols of catalyst for I mol of CCl_4, 10-20% excess HF, and maintenance of temperature at 100-120°C.

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

Abs Jour: Ref. Zhur.-Khimiya, No II, 1958, 36284.

A test run conducted (that involved preparation of 6.25 mols of product) extended for approx. 16 hours. During its course were used 150 gr. $SbCl_5$, 1020 gr. CCl_4, and 300 gr. anhydrous HF. The reactants were gradually brought up to 100-120°C as pressure was raised up to 30 atmospheres (1-2 hours). The gaseous products were condensed. Yield of CCl_2F_2 was 93% and of CCl_3F was 2%. For part II refer to Chem. listy, 1952, 46, 92.

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

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43446.

amounts of catalyst increase the formation of CHF_3. Under the above stated conditions there are formed 3.1% of $CHCl_2F$, BP 9-10°.

V. Preparation of $C_2Cl_3F_3$ (I) in the usual equipment (see preceding communication) is difficult due to insolubility of C_2Cl_6 in HF. The reaction can be effected by increasing the amount of $SbCl_5$, which acts as a solvent (0.56 mole per 1 mole C_2Cl_6). The optimum ratio HF:C_2Cl_6 is 4, temperature 150°, pressure 20 atmospheres, duration 16-25 hours. Yield of I 84.8%, together with 4.4% $C_2Cl_2F_4$ and 2.2% $C_2Cl_4F_2$.

Card : 2/2

Hudlicky, Milos

Distr: 4E3d/4E2c(j)

Reactions of 1,3-dichloro-2-butene. V. Preparation of some pyridylalkanecarboxylic acids. Miloš Hudlický and František Mareš (Tech. Univ. Prague). *Chem. listy* **51**, 157 [illegible] (1957); cf. C. A. 51, [illegible]. [illegible] Et_2O soln. of PhLi (from [illegible] g. Li, [illegible] g. PhBr, and [illegible] ml. Et_2O) [illegible] pyridine, heating the dark [illegible] 500 g. $CH_2ClCH:CClMe$, refluxing [illegible] hrs., cooling, decompg. the mixt. with 500 ml. H_2O, [illegible] Et_2O, combining the ext. with the [illegible] and distg. the residue [illegible] g. material contg. the original components, which could be recovered, and 246 g. crude 1-(α-pyridyl)-4-chloro-3-pentene (I), b_{12} 110-16°. This was dissolved in dil. HCl (1:1), the sepd. Ph_2 filtered off, the filtrate extd. with C_6H_6, the aq. layer alkalized with NaOH, extd. with $CHCl_3$, and the $CHCl_3$ ext. distd. to give 193 g. pure I, b_{12} 118-21°, d_{20} 1.0702, n_D^{20} 1.5261; picrate, m. 98-9° (EtOH). I (1 g.) ozonized at −10° in $CHCl_3$ and the soln. and the ozonide heated with AcOH and H_2O_2 2 hrs. at 70° gave 0.68 g. β-(α-pyridyl)propionic acid (II), m. 139.5-40° (C_6H_6). Treating 102 g. I with 400 ml. 81% H_2SO_4 at 60° for 6½ hrs. while stirring and passing through a stream of air, pouring the product on ice, neutralizing with NaOH, sepg. the org. layer, extg. the aq. layer with $CHCl_3$, and distg. the $CHCl_3$ layer gave 131.9 g. 1-(α-pyridyl)-4-pentanone (III), b_{12} 128-31°, n_D^{20} 1.5081; picrate, m. 110.5-11° (EtOH), characterized by condensation (5 g. III) with 3.8 g. BzH by stirring in 12 ml. EtOH, 4 ml. H_2O, and 3 ml. 10% NaOH 30

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[illegible]

hrs. at room temp., and extg. with Et_2O and C_6H_6 yielding 7 g. crystals, m. 158° (dil. EtOH), apparently of 1-(α-pyridyl)-6-phenyl-5-hexen-4-one. Degradation of III (5 g.) with NaOH by the usual procedure gave, when crystd. (C_6H_6), 1.15 g. γ-(α-pyridyl)butyric acid, m. 81°, and 1.02 g. II. Other modifications of the Willgerodt reaction having failed, a mixt. of 70 g. III, 16 g. powd. S, and 50 g. morpholine was divided into 14 glass tubes (5 g. each), heated 3 hrs. to 200°, the combined contents boiled 12 hrs. with 210 ml. 50% H_2SO_4 at 135°, the cooled reaction mixt. alkalized, 53 g. black sticky material filtered off, the filtrate extd. with $CHCl_3$, the aq. soln. decolorized with C, neutralized to pH 5, evapd. to dryness, the residue dried by azeotropic distn. with C_6H_6 and extd. with C_6H_6 to give 14 g. δ-(α-pyridyl)valeric acid (IV), m. [illegible] (C_6H_6). IV [illegible] in an aq. soln. with Raney Ni, the soln. filtered, and hydrogenated over PtO_2 gave δ-(α-piperidyl)valeric acid, m. 177° (EtOH-Et_2O). L. J. Urbánek

2/2

HUDLICKY M.

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 74110.

Author : A. Posta, M. Hudlický.
Inst : [redacted]
Title : Reactions in Anhydrous Hydrogen Fluoride. IV. Preparation of Difluorochloromethane.

Orig Pub: Collect. Czechosl. chem. communs, 1958, 23, No 3, 535-537, 537-539.

Abstract: See RZhKhim, 1958, 43446.

Card : 1/1

AUTHORS: Mareš, F and Hudlický M. CZ/9-52(82)-10-16/39

TITLE: Experiments on the Synthesis in the allo Lupinane Series. V. Synthesis of allo-Lupinine from δ-(2-Pyridyl)valeric Acid. (Synthetické pokusy v řadě allolupinanové.V. Synthesa allolupininu z kyseliny δ-(2-pyridyl)valerové).

PERIODICAL: Chemické Listy, 1958, Vol.52(82), Nr 10, pp 1933 - 1937, (Czechoslovakia)

ABSTRACT: The synthesis of 1-(2-pyridyl)pentonane-(4) and δ-(2-pyridyl)valeric acid was described in a previous publication (Chemicke Listy, 1958, Vol.52, page 1608). J. Trojanek and Z. Vesely suggested the use of these compounds during the synthesis of allolupinane and allolupinine. The hydrobromide of δ-(2-pyridyl)valeric acid was brominated and the quaternary 1,2-(1-carboxytetramethylene)pyridinium bromide obtained. This compound was hydrogenated to the hydrobromide of quinolicidine-4-carboxylic acid and its ester reduced to allolupinene. Details of the preparation of the various intermediate compounds, their boiling point and percentage composition are given. The reactions of the equivalent amounts of

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1-(2-pyridyl)pentanone-(4) with selenium oxide under various conditions is tabulated (Table 1). There are 6 References: 4 Czech, 1 German, 1 English.

ASSOCIATION: Katedra organické chemie, Vysoká škola chemicko-technologická, Praha (Department for Organic Chemistry, Chemical Institute for Chemical Technology, Prague)

SUBMITTED: 17th January, 1958

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HUDLICKY, M.; MARES, F.

"Reactions of 1,3-dichloro-2-butene" V. Preparation of some pyridyl substituted fatty acids. In English. p. 46.

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, Praha, Czechoslovakia, Vol. 24, No. 1, Jan. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 6, Sept. 59

Unclassified

06620

AUTHOR: Hudlický, M. CZECH/8-53-1-16/20

TITLE: Conference on the Chemistry of Fluorine

PERIODICAL: Chemicke listy, 1959, Vol 53, Nr 1, pp 51 - 52

ABSTRACT: A conference on the chemistry of fluorine took place in Prague during June, 1958, at which thirty papers were presented. They were parly reviews and partly original reports. Original work has been or will be published in the following journals: Collection, Chemické průmysl, Chemické zvesti and other journals.
(n.b. A report on the conference is given in this journal and the reviews will be published in its further issues.)
The Czechoslovak Chemical Society, Czechoslovak Ac.Sc., arranged on June 9 and 10, 1958, a national conference on the chemistry of fluorine. The aim of the conference was to make publically available information on the present state, nationally and internationally, of the chemistry of fluorine, as well as to evaluate the results obtained in Czechoslovakia in this field and coordinate

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Conference on the Chemistry of Fluorine

work in individual centres and to give new incentives for research and technology.

The conference began in the large lecture theatre of the Faculty of Chemical Technology (Technical University), Prague. It was opened by the introductory remarks of Academician Lukeš and the conference programme was divided into four sections.

The first half-day session was devoted to lectures on the basic raw materials for fluorine chemistry. The lecture of J. Kašpar (Faculty of Chemical Technology, Prague) contained concrete information on the occurrence of fluorite. The lectures of E. Dobiaš and J. Spurný (Faculty of Chemical Technology, Prague) and of J. Kocourek (Institute of Ore Research, Prague) reported on the preparation of fluoritic ores by flotation. A lecture by M. Odehenal (Faculty of Natural Sciences, Masaryk University, Brno) dealt with the winning of fluorosilicates during the production of citrophosphate.

The second half-day session was made up of lectures in the field of inorganic chemistry.

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Conference on the Chemistry of Fluorine

J. Suchard (Corporation for Chemical and Metallurgical Production, Ústi nad Labem) reviewed work performed by the Corporation in the production of hydrogen fluoride, cryolite, fluorosilicate and inorganic fluoride; his lecture was supplemented by detailed information on the production of hydrofluoric acid (S. Vondruš, the Corporation); chemically pure fluorides (V. Tyl, the Corporation) and fluorosilicates (J. Dubišar, the Corporation).

K. Matiašovský (Slovak Academy of Sciences, Bratislava) delivered a very detailed lecture on the production of elemental fluorine and the difficulties involved.

V. Machaček (Institute of Nuclear Physics, Czechoslovak Ac.Sc., Prague) presented a paper on the preparation of uranium fluorides.

Two further lectures dealt with health questions.

J. Marhold (Institute for Organic Synthesis Research, Pardubice-Rybitví) drew attention to the dangers of

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Conference on the Chemistry of Fluorine

(Institute for Stomatological Research, Prague)
fluorine and its compounds and J. Ružička/spoke on the significance of fluorine in dental medicine.

The analytical section was inaugurated by the review given by J. Vrešťal (Antonín Zápotocký Military Technological Academy, Brno) on the analytical determination of inorganic fluorides. Reports on original work dealt with the determination of water in high percentage hydrogen fluoride (K. Otto, M. Uhlíř, Institute for Research in Macromolecular Chemistry, Brno); pyroanalytic estimation of fluorine (K. Zubec, the Association), spectrographic determination of fluorine in silicates (A. Spačková - Stodolová, Central Geological Institute, Prague) and the determination of fluorides in the atmosphere during the welding of basic electrodes (L. Hanslian, Regional Station for Hygiene and Epidemiology, Olomouc).

Methods for the analytical determination of fluorine in organic materials were summarised in the review given by K. Otto (Institute for Research in Macromolecular Chemistry, Brno).

Card4/7 The work of J. Horáček and J. Körbl (Czechoslovak Ac.Sc.

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Conference on the Chemistry of Fluorine CZECH/8-53-1-16/20

and Institute for Pharmaceutical and Biochemical Research, Prague) dealt with the determination of carbon and hydrogen in organic compounds containing fluorine. The subject dealt with in the work of J. Janák and J. Novák (Laboratory for Gas Analysis, Czechoslovak Ac.Sc., Brno) and of V Pokorny (Institute for Research in Macromolecular Chemistry, Brno) was the chromatographic analysis of gaseous organo-fluorine derivatives.
The fourth half-day programme, the richest one, was occupied by papers on organo-fluorine compounds.
M. Hudlický (now of the Faculty of Chemical Technology, Technical University, Prague) spoke on the mode of introduction of fluorine into organic compounds, on the preparation of the main types of organofluorine derivatives and on the applications of fluorinated compounds.
The subject of V. Reinöhl's (Institute for Research in Macromolecular Chemistry, Brno) paper concerned the technological methods of production of the most important refrigerants (freons) and their application.

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Conference on the Chemistry of Fluorine

The lectures of J. Zdražil (Institute of Research in Macromolecular Chemistry, Brno) and of M. Lazar and R. Rado (Institute for Cable and Insulator Research, Bratislava) considered the preparation and properties of fluorinated polymers (teflon, teflex and copolymers).

The paper of M. Hudlický (Faculty of Chemical Technology, Technical University, Prague) dealt with the use of fluoro-derivatives as media for and catalysts in various organic reactions.

D. Ambros and J. Rovner (Institute for Research in Macromolecular Chemistry, Brno) presented a communication dealing with the auto-oxidation of trifluorochloroethylene, the crystallisation of its polymers and the determination of its molecular weight.

It is estimated that 70-80 chemists participated in the conference, among whom was a celebrated guest, Professor A.L. Henne, the discoverer of freon, from Ohio State University, USA.

The conference showed that the chemistry of fluorine, a

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Conference on the Chemistry of Fluorine

not very ancient field of study, is being fostered in quite a number of Czech laboratories and a number of modest but valuable results have been produced, as evidenced by the number of papers published in Czechoslovak chemical journals (see the bibliography on pp 52-53). It is necessary to support to the utmost the development of this branch of studies so that they may eventually be able to reduce the 10-25-year lead which the advanced industrial states have.

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HUDLICKY, M.

"Fluorine compounds as catalysts and reagents in chemical reactions"

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

HUDLICKY, M.

"Organic fluorine compounds"

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

HUDLICKY, M.

Organic compounds of fluorine. I. Fluorinated acetylenic carbinols. (EEAI 9:12)
Coll Cz Chem 25 no.4:1199-1209 Ap '60.

1. Research Institute for Pharmacy and Biochemistry Prague.
(Fluorine) (Organic compounds) (Acetyl group)
(Alcohols)

PHASE I BOOK EXPLOITATION SOV/5889

Hudlicky', Milos

Khimiya organicheskikh soyedineniy ftora (The Chemistry of Organic Fluorine Compounds) Moscow, Goskhimizdat, 1961. 372 p. Errata slip inserted. 6500 copies printed.

Translated from the Czech by Yu. I. Vaynshteyn.

Ed. (Title page): A. P. Sergeyev; Tech. Ed.: V. F. Zazul'skaya

PURPOSE: This book is intended for organic chemists and for workers in the plastics industry and in establishments which produce or utilize refrigerants.

COVERAGE: The textbook is a comprehensive treatise on the chemistry of organic fluorine compounds. The basic information necessary for experimental work and laboratory techniques, which are in many cases unusual, are included, and the possibility of further development of the chemistry of organic fluorine compounds is discussed. Special interest is shown in fluorine

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The Chemistry of Organic Fluorine Compounds SOV/5889

compounds which contain a considerable number of fluorine atoms in the molecule (polyfluoro and perfluoro derivatives, or polymers). These compounds are characterized by inertness and thermal and chemical stability, and are of theoretical interest because their behavior differs from that of other halogen compounds. This emphasis is reinforced by the rather extensive formula and subject indices and the chapters on properties, toxicity, and applications of fluorine compounds. The author, who studied the chemistry of organic compounds at Ohio and Purdue Universities under a UNESCO grant, thanks persons in the U. S. who have assisted him. He further thanks his wife, A. Hudlicka', R. Lukesh and Vikhterle, Academicians, and Reynoyl', Engineer.

TABLE OF CONTENTS: [Abridged]:

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SOV/5889

AVAILABLE: Library of Congress

SUBJECT: Chemical Engineering

BN/dk/gmp
2-27-62

Card 4/4

HUDLICKY, M.

"Methods of organic chemistry. Vol. 4: Halogen compounds" by Houben and Weyl. Reviewed by M. Hudlicky. Coll Cz Chem 26 no.7:1899-1900 Jl '61.

(Houben, Josef) (Weyl) (Chemistry, Organic)
(Halogen compounds)

HUDLICKY, M.

Organic compounds of fluorine. Part 3: Reaction of trifluoromethylalkyl ketones with acetylent. Coll Cz Chem 26 no.12:3140-3146 D '61.

1. Research Institute for Pharmacy and Biochemistry, Prague.

KAKÁČ, B; **HUDLICKÝ, M.**

Czechoslovakia

Research Institute for Pharmacy and Biochemistry -- Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 11, 1962, pp 2616-2619

"Quantitative Determination of Fluothane and its Isomer by Means of Infrared Spectrophotometry."

HUDLICKY, Milos

Improved apparatus for hydrogen bromide preparation. Chem listy 56 no.12:1442-1444 D '62.

1. Vyskumny ustav pro farmacii a biochemii, Praha.

KAKAC, B.; HUDLICKY, M.

Organic compounds of fluorine. Pt.7. Coll Cz Chem 30 no.3: 745-751 Mr '65.

1. Research Institute of Pharmacy and Biochemistry, Prague. Submitted February 25, 1964.

L 65011-65 EWA(j)/EPF(c)/EWP(j)/EWA(b) CZ/0008/64/000/012/1373/1395

ACCESSION NR: AP5023335

AUTHOR: Hudlicky, Milos

TITLE: Progress in the chemistry of organic compounds of fluorine

SOURCE: Chemicke listy, no. 12, 1964, 1373-1395

TOPIC TAGS: fluorinated organic compound, fluorination, chemical engineering

ABSTRACT: Progress in the field in the last 6 years is reviewed. Fluoridation agents are described, and methods of introducing F into organic compounds are evaluated. Reactions of organic F compounds are discussed; fluorinated organic agents and analytical processes used in their determination are reviewed. Uses of organic fluorine compounds are described, and individual plastic materials based on those are discussed. The present-day

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CCESSION NR: AP5023335

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production of organic F compounds in Czechoslovakia is reviewed. The main uses at present are as refrigerating fluids; trifluoroethylene is manufactured and polymerized into a plastic trade-named "Teflex", and a F based narcotic named "Narkotan" is also produced.

Orig. art. has: 49 formulas, 1 graph.

ASSOCIATION: Vyzkumny ustav pro farmacii a biochemii, Prague (Institute of Pharmacology and Biochemistry) 55

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

NR REF SOV: 006 OTHER: 117 JPRS

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CZECHOSLOVAKIA

HUDLICKY, M; KAKAO, B

Research Institute for Pharmacy and Biochemistry,
Prague - (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 3, March 1966, pp 1101-1112

"Organic compounds of fluorine. Part 10: The synthesis of δ-fluoronorleucine, δ-hydroxynorleucine, alloisoleucine, ω-hydroxyisoleucine, and 3-methylproline."

CZECHOSLOVAKIA

HUDLICKY, M; LEJHANCOVA, I

Research Institute for Pharmacy and Biochemistry,
Prague - (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 3, March 1966, pp 1416-14[illegible]

"Organic compounds of fluorine. Part 9: The [illegible]
[illegible]

6

GLISIN, Vladimir R.
Surname (in caps); Given Names

Country: Yugoslavia

Academic Degrees: not given

Affiliation: Department of Radiobiology, Institute of Nuclear Sciences "Boris Kidrich"

Source: Belgrade-Vintchi, Bulletin of the Institute of Nuclear Sciences "Boris Kidrich", Vol 11, Mar 1961, pp 219-277.

Data: "Some Changes of Physical-Chemical Properties of Deoxyribonucleic Acid Isolated From Salmonella Typhimurium Irradiated by UV and Gamma Rays."

Co-authors:

MUDNIK-PLEVNIK, Tamara, Department of Radiobiology, Institute of Nuclear Sciences "Boris Kidrich",
SIMIC, Marta M., Department of Radiobiology, Institute of Nuclear Sciences "Boris Kidrich",
KANAZIR, Dusan T., Department of Radiobiology, Institute of Nuclear Sciences "Boris Kidrich".

HUDNIK-PLEVNIK, Tamara; SIMIC, Marta M.

Quantitative changes in the base composition of DNA (desoxyribonucleic acid) extracted from Salmonella Typhimurium irradiated with ultraviolet rays. Bul Inst Nucl 11:231-233 '61.

1. Institute of Nuclear Sciences "Boris Kidrich," Department of Radiobiology, Vinca.

BECAREVIC, A.; HUDNIK-PLEVNIK, T.; GLISIN, V.; JANKOVAC, J.; KANAZIR, D.;
SIMIC, M.; RISTIC, G.

Labeling nucleic acids with isotopesand their use. Prim. radioaktiv. izotop. 2 no.3:80-83 D '61.

(DNA) (PHOSPHORUS ISOTOPES)

HUDNIK-PLEVNIK, T.; KANAZIR, D.

Structural changes in desoxyribonucleinic acid after UV irradiation in Salmonella typhimurium. Bul sc Youg 7 no.1/2:14 F-Ap '62.

1. Institut "B. Kidric," Vinca, Beograd.

*

HUDOLIN, Vladimir; HUDOLIN, Visnja

Complications following suboccipital myelogram performed with iodized oil. Srpski arh. celok. lek. 90 no.1:23-29 Ja '62.

1. Neurolosko-psihijatrijski odjel Opce bolnice "Dr Mladena Stojanovica" u Zagrebu Sef: dr Vladimir Hudolin.

(SPINAL CORD radiog) (IODIZED OILS toxicol)
(BRAIN dis)

5

HUDOLIN, Vl.; PETROVCIC, F.

Diagnosis of tuberous sclerosis; two personal case reports.
Neuropsihijatrija 4 no.3-4:209-217 1956.

1. Iz Neurolosko-psihijatrijskog odjela (predstojnik prof. dr.
J. Breitenfeld) i Rentgenskog zavoda (predstojnik prof. dr.
S. Kadrnka) Opce bolnice Dr. Ml. Stojanovica u Zagrebu.
(TUBEROUS SCLEROSIS, diag.
(Ser))

HUDOLIN, Vl., Dr.; MUHEK-SIMUNEC, J.; BREITENFELD, J., dr.

[redacted]

Psychiatry and clinical psychology. Lijec. vjes. 78 no.11-12: 513-518 Nov-Dec 56.

1. Iz Neuroloski-psichijatrijskog odjela Opce bolnice dr. M. Stojanovica u Zagrebu.

(PSYCHIATRY,
    relation to clin. psychol. (Ser))
(PSYCHOLOGY
    relation to psychiatry of clin. psychol. (Ser))

HUDOLIN, Vladimir

Retinal changes in tuberous sclerosis. Neuropsihijatrija 8 no.1/2: 30-42 '60.

1. Iz Neurolosko-psihijatriskog odjela Opce bolnice dra M.Stojanovica u Zabregu (Sef odjela: Dr.Vladimir Hudolin)
(TUBEROUS SCLEROSIS diag)
(RETINA dis)

HUDOLIN, Vl; RIESSNER, D.; KADRNKA, S.; KNEZEVIC, M.

Giant osteoma of the lamina cribrosa. (Contribution to the diagnosis of frontal lobe syndrome). Neuropsihijatrija 8 no.4:306-316 '60.

1. Iz Opce bolnice dra M. Stojanovica u Zagrebu: Neurolosko-psihijatrijski odjel (Sef: Dr. Vl. Hudolin) Kirurski odjel (Sef: Dr. D. Riessner) Zavod za radiologiju (Sef: Dr. S. Kadrnka) Zavod za patologiju (Sef: Dr. M. Knezevic).

(OSTEOMA case reports) (FRONTAL BONE neopl)

HUDOLIN, Vladimir, Dr.

Prevention of alcoholism, therapy and rehabilitation of alcoholics.
Lijec vjes 82 no.6:473-483 '60.

1. Iz Neurolosko-psibijatrijskog odjela Opce bolnice "Dra M.Stojanovica" u Zagregu
(ALCOHOLISM prev & control)

HUDOLIN, Vl.; PRAZIC, B.; MUACEVIC, V.; BARAC, B.

Social problems in transvestitism. Neuropsihijatrija 9 no.1:54-62 '61.

1. Iz Neurelosko-psihijatrijskog odjela Opce bolnice "Dr. M. Stojanovica", Zagreb (Sef: Dr. Vladimir Hudolin).

(SEX DEVIATION)

HUDOLIN, Vladimir, dr.

Prevention of alcoholism, therapy and rehabilitation of alcoholics (according to pneumoencephalographic examination of 147 cases). Med. glasn. 15 no.2/2a:76-80 F '61.

1. Neurolosko-psihijatrijski odjel Bolnice "Dr. M. Stojanovica" u Zagrebu. (Sef odjela: dr Vladimir Hudolin).

(ALCOHOLISM) (VENTRICULOGRAPHY)

HUDOLIN, Vladimir; HUDOLIN, Visnja

Complications following suboccipital myelogram performed with iodized oil. Srpski arh. celok. lek. 90 no.1:23-29 Ja '62.

1. Neurolosko-psihijatrijski odjel Opce bolnice "Dr Mladena Stojanovica" u Zagrebu Sef: dr Vladimir Hudolin.

(SPINAL CORD radiog) (IODIZED OILS toxicol)
(BRAIN dis)

5

HUDOMEL, Jozsef

10 years' experience with dacryocystorhinostomy. Szemeszet 97 no.3:141-149 S '60.

1. A Budapesti Orvostudomanyi Egyetem II. sz. Szemklinikajanak kozlemenye (Igazgato: Nonay Tibor egyetemi tanar, az orvostudomanyok kandidatusa)

(LACRIMAL APPARATUS surg.)

HUDOMEL, Jozsef

On foreign bodies at the chamber angle. Szemeszet 98 no.2:82-86
Je '61.

1. A Budapesti Orvostudomanyi Egyetem II sz. Szemklinikajanak kozlemenye (Igazgato: Nonay Tibor egyetemi tanar, az orvostudomanyok kandidatusa)

(EYE foreign bodies)

HUDOMEL, Jozsef; TOTH, Margit

Considerations on the Groenblad-Strandberg syndrome. Szemeszet 99 no.2:111-118 Je '62. (PSUEDOXANTHOMA ELASTICUM)

HUDOMEL, Jozsef

Abnormal course of a retinal vessel in the central fovea. Szemeszet. 99 no.3:166-169 S '62.

1. A Budapesti Orvostudomanyi Egyetem II. sz. Szemklinikajanak kozlemenye. (Igazgato: Nonay Tibor egyetemi tanar, az orvostudomanyok kandidatusa).

(RETINA blood supply)

L 40866-66

ACC NR: AP6030195 SOURCE CODE: CZ/0017/66/055/004/0203/0210

22

B

AUTHOR: Huducek, Zdenko (Engineer)

ORG: none

TITLE: Opening time in mine networks with a non-grounded neutral point with regard to contact voltage

SOURCE: Elektrotechnicky obzor, v. 55, no. 4, 1966, 203-210

TOPIC TAGS: electric capacitor, electric resistance

ABSTRACT: On the basis of an energy criterion the article derives the limiting opening time of a low-voltage network with a non-grounded neutral point upon contact with a human body. The limiting time is reduced to a function of four variables: the network voltage, the total leakage resistance of the network, the partial capacitances to ground, and the resistance of the human body. The influence of the individual variables on the limiting opening time also is analyzed. In conclusion, the necessary technical precautions also are given for the distribution of the high voltage (1000-3000 V). This paper was presented by Engineer M. Zapletal. Orig. art. has: 10 figures and 24 formulas. [Based on author's Eng. abst.] [JPRS: 36,811]

SUB CODE: 09 / SUBM DATE: 10Oct64 / SOV REF: 001 / OTH REF: 002

Card 1/1 LLB UDC: 621.316.1.04-78

0918 1039

HUDYMENKO, Fedir Sydorovych

[Higher mathematics] Vyshcha matematyka, Kyiv, Vydvo
Kyivs'koho univ., 1964. 379 p. (MIRA 19:1)

HUDZOVIC, Peter, inz.

Method of approximate determination of the excessive regulation and the duration of the regulation process in linear systems. Automatizace 8 no.1:18-19 Ja '65.

HUEBER, Josef, inz.

"Zone melting" by William G. Pfann. Reviewed by Josef Hueber.
Sdel tech 11 no.8:319 Ag '63.

HAVLIK, Otto; HUEBNER, Jiri

Results of serological investigation of toxoplasmosis in domestic and wild animals. Cesk.epidem.mikrob.imun. 9 no.5/6:391-397 Jl '60.

1. Ustav epidemiologie a mikrobiologie v Praze.
(TOXOPLASMOSIS veterinary)

HUNGARY / Chemical Technology. Chemical Products and Their Applicati-n--Ceramics. Glass. Binding Materials. Concrete H-13

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 9063

Author : Huebscher, M.

Inst : Not given

Title : Foam Glass, Its Production and Use

Orig Pub: Epitoanyag, 1958, 10, No 4-5, 109-112

Abstract: The methods of producing foam glass (FG) are indicated: 1) by introducing gasses into molten glass; 2) by introducing intense gas generators into molten glass; 3) by expanding bubbles under vacuum in the molten glass, which contains a large quantity of gases (unclear glass); 4) by mixing glass

Card 1/2

HUECKEL, Stanislaw

Development of research on soil mechanics in Poland. Review Pol Academy 9 no.1:6-13 Ja-Mr '64

HUECKEL, Stanislaw, prof. dr inz.

A conference on soil and foundation mechanics in Budapest.
Inz i bud 21 no.8:295-296, 3 of cover Ag '64.

1. Technical University, Gdansk.

HUECKEL, Stanislaw, prof.dr. inz.

The anchoring capacity of rigid horizontal elements sunk in sandy soil. Archiw hydroteoh 7 no.3:297-314 '60. (EEAI 10:2)

1. Katedra Fundamentowania Politechniki Gdanskiej, Gdansk-Wrzeszcz
(Sand) (Soils) (Building)

HUECKEL, Stanislaw, prof

A brief review of the scientific research in the field of marine and harbor hydraulics in Poland. Vodoprivreda Jug 2 no.7/8:119-123 '59.
(EEAI 10:1)

1. Ecole Polytechnique de Gdansk (Pologne), et V-directeur de l'Institut Hydrotechnique de l'Academie Polonase des Sciences, Gdansk
(Poland--Harbors) (Hydraulics) (Ships)

HUECKEL, Stanislaw

"Engineer's hydrology" by G. Remenieras. Reviewed by S. Hueckel. Archiw hydrotech 8 no.4:623-624 '61.

1. Redaktor Naczelny kwartalnika "Archiwum Hydrotechniki".

HUELLE, R., mgr inz. (Gdansk)

Refrigerating and air-conditioning installations for vessels fishing in tropical seas. Bud okretowe Warszawa 8 no. 6: 206-207 Je '63.

HUGET, Marian, mgr., (Gdynia)

Marine insurance. Techn gosp morska 12 no.2:52 '62.

HUGO, Jiri

"Science of plastics for engineers" by C.M.v. Meysenbug. Reviewed by Jiri Hugo. Stroj vyr 12 no.3:238 '64.

HUGO,J.; JIROUS,M.

Rheology of hard polyvinyl chloride. Chem prum 14 no.2:81-86
F'64.

1. Statni Vyzkumny ustav materialy a technologie, Praha

CZECHOSLOVAKIA/Chemical Technology. Chemical Products H
and Their Uses. Part IV. Synthetic
Polymers. Plastics.

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 52090

Author : Hugo, Jiri
Inst : -
Title : Epoxy Resins for Low Current Electrical Applications.

Orig Pub : Slaboproudy obzor, 1956, 17, No 8, 447-452

Abstract : Cast epoxy compounds UPON 2100 B (I) and UPON 2200 S (II) were prepared in Czechoslovakia. I and II are relatively low viscosity compositions, consisting of epoxy resins and a reactive solvent (monomeric substance containing a vinyl group).

Card : 1/4

CZECHOSLOVAKIA/Chemical Technology. Chemical Products H
and Their Uses. Part IV. Synthetic
Polymers. Plastics.

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 52090

Curing of I (initial viscosity 300-500 cps) and of III (1000-1800 cps) was accomplished at 20-50°, using 8 percent of the curing agent and 0.4 percent of the accelerator. The process was distinctly exothermic. Introduction of a filler (quartz, sand or mica) increased the specific heat, at the same time decreasing heat accumulation inside the cured slab. Presented were chemical and physical and dielectric properties of I and II, cured at 20°. Specific impact strength of I and II was correspondingly 20 and 30 $kg \cdot cm/cm^2$. Static bending yield

Card : 2/4

CZECHOSLOVAKIA/Chemical Technology. Chemical Products H
and Their Uses. Part IV. Synthetic
Polymers. Plastics.

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 52090

strength (kg/cm^2) was 420 and 620. Ultimate compressive strength was 490 and 710, while ultimate tensile strength was 260 and 280 kg/cm^2. The modulus of elasticity was found to be 20,000 and 38,000 kg/cm^2. Brinell hardness (kg/mm^2) was approximately -16 for both resins, while Martens heat resistance was 52° and 57° and Vick's heat resistance was 70° and 78°. Dielectic strength of the resins was 17.2 and 18.2 KV/mm (20°), while surface resistance was 3.7 x 10^{12} and 4.2 x 10^{12} ohms, and 2.1 x 10" and 4 x 10" ohms after water immersion for 24 hours. I and II

Card : 3/4

CZECHOSLOVAKIA/Chemical Technology. Chemical Products H
and Their Uses. Part IV. Synthetic
Polymers. Plastics.

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 52090

shrink loss upon curing than epoxy-polyester compounds. Cracks were not formed in cast I and II resins upon their subjection to heat cycling between -70 to 120°. -- L. Posin

Card : 4/4

HUGO, J.

Distr: 4E2c(j)

Creep characteristics of polyamides. I. Hugo. *Materialový Sborník* 1958, 815–28 (Pub. 1959).—Measurements on caprolactam polyamides have been carried out at 10-400 kg./sq. cm. and at 0–80°. Test specimens have been subjected to a const. tensile load at atm. moistures of 30-85% and at a temp. of 21°, and the deformation measured as a function of time. Bending tests indicated bending flexures variable with time and permitted the detn. of the so-called creep elasticity modulus at various temps. It was found possible to use the $E_t(t)$ curves for the calcn. of t creep curves, 0–80°. The calcd. curves were identical with the measured ones for stresses up to 100 kg./sq. cm. For ambient temps. or for lower ones, corrections are made for moisture content. F. H. Lieben

ZILVAR, V.; HUGO, J.

The machining of plastic. Jemna mech opt 5 no.11:329-331 N '60.

1. Statni vyzkumny ustav materialu a technologie, Praha.

HUGO, J., inz.

Mechanical properties of construction plastics. Jemna mech opt 5 no.11:343-346 N '60.

1. Statni vyzkumny ustav materialu a technologie, Praha.

L 08249-67 EWP(j) IJP(c) WW/RM

ACC NR: AP6033024 SOURCE CODE: CZ/0032/66/016/007/0551/0558

38
B

AUTHOR: Hugo, J. (Engineer); Jirous, M. (Engineer)

ORG: State Research Institute of Materials, Prague (Statni vyzkumny ustav materialu)

TITLE: Evaluation of tensile strength 15 of plastic materials

SOURCE: Strojirenstvi, v. 16, no. 7, 1966, 551-558

TOPIC TAGS: plastic, laminated plastic, polypropylene plastic, polyamide, polyvinyl chloride, epoxide, epoxy plastic, stress analysis, mechanical stress, static test

ABSTRACT: The methodology of testing and evaluating results of research on the strenght and behavior of plastic materials exposed to prolonged static stress is explained, and a survey of the results is presented. A group of polyamides, 15 polyvinyl-chlorides, polypropylene, 15 and epoxy vitreous laminates 15 was tested. Semifinished products prepared by VUGPT Gottwaldov were used for the tests. The dependencies and values determined are presented in diagrams. The paper

Card 1/2

L 08249-67

ACC NR: AP6033024

O

was presented by J. Koritta, Professor, Engineer, Doctor. Orig. art. has: 19 figures and 11 formulas. [Based on authors' abstract]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 010/ OTH REF: 011/

Card 2/2 ls

HUHN, P.

"Elementary wave mechanics" by W. Heitler. Reviewed by P. Huhn. Acta chimica Hung 38 no.2:170-171 '63.

HUHN, P.

(3)

Hungarian Technical Abst.
Vol. 5 No. 4 1953

7. Approximative solution of differential equations describing complex chemical processes — *Összetett kémiai folyamatok differenciálegyenleteinek közelítő megoldása* — Z. Szabó, P. Huhn and A. Bergh. (Hungarian Journal of Chemistry — *Magyar Kémiai Folyóirat* — Vol. 58, 1952, No. 12, pp. 370—379, 9 figs.)

The reaction kinetics of complex chemical reactions were investigated. Instead of simultaneously considering all the chemical processes, only the steps determining the rate of the elementary reactions involved — starting, propagating, branching and rupturing reactions — were taken into account ("four-stage mechanism"). By this method the process may be characterized by two differential equations: one relating to the conversion of the starting material and the other determining the rate of the change in the concentration of the active centres. If the rate constants of the elementary reactions are known, the explicit solution of the differential equations is possible by approximative numerical integration e. g. by the *Euler-Cauchy* polygon method. If these constants are unknown, it is possible to find through trials a quartet of values by which the solution of the differential equations corresponds with the experimental data. *D. Varsányi*

9-21-51

The mechanism of the ozone decomposition catalyzed by chlorine. Péter Huhn, Ferenc Tüdős and Zoltán [illegible] (Univ. Szeged, Hung.). Magyar Tudományos Akad. Kém. Osztályának Közleményei 5, 409-18(1954).—The 4-stage mechanism, which was successfully applied to the thermal decompn. of Cl₂O (C.A. 47, 5225) and to the photochem. reaction of CO, Cl₂ and O (C.A. 50, [illegible]) [illegible] valid also for the analysis of stationary, nonbranching reactions, such as the Cl-catalyzed decompn. of O₃. The following scheme (*C.A.* 45, 8386g) was used as the basis of calcn.: $Cl_2 + O_3 \rightarrow Cl + ClO + O_2$ (k_1); $Cl + O_3 \rightarrow ClO + O_2$; $ClO + O_3 \rightarrow Cl + 2O_2$ (k_2); $ClO + ClO \rightarrow Cl_2 + O_2$; $Cl + Cl + M \rightarrow Cl_2 + M$ (k'_4), where the k values are the consts. of velocity of the elementary reactions and M a partner in the triple collision. M may be O₃ all [illegible] the quantum yield of the reaction, but to a lesser degree than Cl. The proposed scheme of stabilization of radicals is more generalized than the principle suggested by Bodenstein, *et al.* (*C.A.* 24, 5581). The role of ClO₂ in the mechanism of the stabilization may be due to 2 nearly thermoneutral reactions: $ClO + O_2 \rightleftarrows ClO_3$ ($\Delta H = +0.7$ kcal.) and $ClO_3 + ClO_3 \rightleftarrows Cl_2O_6$ ($\Delta H = -1.5$ cal.). F. K.

②

HuHN, P.

30. On the calculation of successive equilibria. — P. Huhn, M. Beck. (*Magyar Kémiai Folyóirat* Vol. 61, 1955, No. 5, pp. 129–133, 9 tabs.)

CH

A simple method is given for the determination of the free ligand concentration when the total concentration of the central metal atom is known. By further derivation of this equation a relationship is given for the calculation of the free ligand concentration corresponding to the isoelectric point by using conveniently measurable concentration data. By the interpretation of this equation it became evident that the isoelectric point is unattainable in a solution of an auto-complex without the addition of excess ligand. A quantity of ligands equivalent to the valency of the central ion is bound in the complex compound at the isoelectric point and the existence of a free ligand concentration is necessary to maintain this state. The mathematical equations derived by theoretical considerations were applied to investigate the variations of the salt concentration vs the concentration of ions present by using Cd^{2+} salts which are known for their disposition to form auto-complexes.

(1)

Huhn, P

33. **The mechanism of homogeneous chain catalysis and inhibition** — Z. Szabó, P. Huhn, A. Bergh (*Magyar Kémiai Folyóirat* — Vol. 61 — 1955, No 5, pp 137—145, 7 figs., 2 tabs.)

CH

The uniform and general mechanism of homogeneous catalysis may be interpreted by the principles of free radical stabilization. It is known that a substance will have opposite effects on the same radicals depending entirely on the relative concentrations of the reactants, subject to the interaction occurring between the stabilized radicals and the starting material or between the stabilized radicals and the unstabilized radicals. Difficulties encountered in the mathematical formulation of this extremely complex process were solved successfully by employing the principles of the "four-stage mechanism" developed by the authors. To test the validity of the equations obtained by theoretical derivation the nitrous oxide-catalyzed or inhibited decomposition of propyl aldehyde was studied as a function of the nitrous oxide concentration.

(2)

HUHN P.

HUNGARY/Physical Chemistry. Kinetics. Combustion, Explosions. Topochemistry. Catalysis. B

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 73279.

Author : T. Berces, P. Huhn

Inst :

Title : On the Extension of the Concept of the Four Stage Mechanism. I. General Considerations. II. Application in the Analysis of an Experimental Kinetic Curve.

Orig Pub: Acta phys. et chim. Szeged, 1957, 3, No 1-4, 95-99; 100-111.

Abstract: I. The system of differential equations describing the concentration change of active centers (dn/dt) and initial substances for not-branched chain reactions, the chain carriers in which are 2 active centers converting one into the other in succession,

Card : 1/3

HUNGARY/Physical Chemistry. Kinetics. Combustion. Explosions. Topochemistry. Catalysis. B

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 73279.

was reduced (assuming that the chains were long enough) to a system of equations (RZhKhim, 1956, 46376) for single center chain reactions proceeding according to the four stage mechanism; origination, continuation, branching and chain rupture. Expressions of dc/dt and dn/dt for the case of thermal decomposition of SO_2Cl_2 (RZhKhim, 1958, 13796) proceeding through 2 active centers $[n = n_1 + n_2 = (Cl) + (SO_2Cl)]$ were obtained as an example.

II. The system of differential equations describing the kindetics of the thermal decomposition of SO Cl (see part I) was numerically integrated varying the rate constants of elementary stages as

Card : 2/3

Distr: 4E3d

7

Mechanism of homogeneous chain catalysis and inhibition. Z. G. Szabó, P. Huhn, and A. Berces (Univ. Szeged, Hung.). Advances in Catalysis 9, 343-62 (1957).—The principle of the stabilization of free radicals is used in interpreting the mechanism of catalyzed and inhibited chem. reactions. Math. details are given and applied to data for the decompn. of propylaldehyde and the decompn. of Et_2O as influenced by NO. Paul H. Emmett

6/1

JW 1/1

Meaning of the influencing factor of the homogeneous chain catalysis and inhibition. P. Huhn and F. Marta (Univ. Szeged, Hung.). *Acta Univ. Szegediensis, Acta Phys. et Chem.* [N.S.] 4, 33-44(1958)(in English).—A relation was established between the half period of conversion $t_{1/2}$ and the influencing factor $F(I)$, defined as the ratio of the stationary chain component of the rate of the influenced reaction to that of the noninfluenced one. $F(I)$ of the thermal decompn. of propylaldehyde catalyzed by NO was calcd. from exptl. $t_{1/2}$ and by choosing by trial suitable values for the characteristic consts. β, k_1, k_2 for the equation $F(I) = (1 + \beta I)/\sqrt{1 + 2k_1 I + k_2 I^2}$, where I is the concn. of the influencing substance, for the data of Staveley and Hinshelwood (*C.A.* 30, 6631^7) and Szabó, *et al.* (*C.A.* 53, 833*c*), and of the more detailed work, within NO pressure 0.00-60.00 mm., of the authors. The agreement between calcd. and exptl. $F(I)$ was good. The process is chain-propagated, of the order of about $^3/_2$. E. M. Vaughan

4

9:9

GW
1/1

B

HUNGARY / Physical Chemistry. Thermodynamics. Thermochemistry. Equilibria. Phase Changes. Physico-chemical Analysis.

Abs Jour : Ref Zhur - Khimiya, No 12, 1959, No. 41548

Author : Huhn, P.; Beck, M.T.
Inst : Not given
Title : Some Mathematical Considerations of Successive Equilibria

Orig Pub : Acta phys. et chem. Szeged, 1958, 4, No 1-2, 45-53

Abstract : From known equilibrium constants, the concentrations of $[I^-]$, $[Cd^{+2}]$, $[CdI^+]$, $[CdI_2]$, $[CdI_3^-]$ and $[CdI_4^{-2}]$ were calculated for molecular fractions of cadmium iodide in a 10^{-3} to 1 M solution.

Card 1/3

HUNGARY / Physical Chemistry. Thermodynamics. Thermochemistry. Equilibria. Phase Changes. Physico-chemical Analysis.

B

Abs Jour : Ref Zhur - Khimiya, No 12, 1959, No. 41548

Similar calculations were performed for cadmium bromide, cadmium chloride and cadmium thiocyanate solutions. The equilibrium constants for each stage of complex ion formation as well as isoelectric points of several cadmium complexes have been calculated. A method for the calculation of dissociation constants of polybasic acids (based on $[H]$ measurements) has been proposed. The concentrations of $[H^+]$, $[SO_4^{2-}]$, $[HSO_4^-]$ and $[H_2SO_4]$ in 10^{-4} to 1 M H_2SO_4 solutions were computed.

Card 2/3

HUNGARY / Physical Chemistry. Thermodynamics. Thermochemistry. Equilibria. Phase Changes. Physico-chemical Analysis.

B

Abs Jour : Ref Zhur - Khimiya, No 12, 1959, No. 41548

Finally, ion concentrations in the solutions of oxalic, citric and pyrophosphoric acids were established. The results were presented in tabular form.
-- A. Zolotarevskiy

Card 3/3

HUHN P.

SCIENCE

PERIODICALS: ~~ACTA ZOOLOGICA.~~ Vol. 64, No. 7/8 July/Aug. 1958
MAGYAR KEMIAI FOLYOIRAT

Huhn, P. Discussion about the Bodenstein method in the frame of four-stage mechanism. p. 263

Monthly list of East European Accessions (EEAI) Vol. 8, No. 2, LC,
February 1959, Unclass.

Distr: 4E3b

Significant points of complex formation function. M. T. Beck and P. Hahn (Univ. Szeged). *Acta. Chim. Acad. Sci. Hung.* 20, 285-93(1959)(in English).—The complex formation function of Bjerrum (*C.A.* 35, 6527^9), $\bar{n}$, was studied by measuring the stability consts. of complex systems like $Ni(SCN)_2$, CdI_2, $CdBr_2$, $HgCl_2$. For the thiocyanate system and CdI_2 the exptl. data obtained agree with those calcd. by Fronaeus (*C.A.* 47, 8582*b*) and Leden (*C.A.* 36, 4044^9). The $\bar{n} - {}^1/_2$ points do not have a definite chem. significance, but the points where $\bar{n}$ is an integer exhibit a definite chem. meaning in that the corresponding complex attains a max. value at this point. R. S. Mann

E.K.

HUHN, Peter, a kemiai tudomanyok kandidatusa (Szeged)

An account of my Moscow study trip. Kem tud kozl MTA 15 no.1:91-93 '61. (EEAI 10:6)

1. Szegedi Tudomanyegyetem Szervetlen es Analitikai Kemiai Tanszeke, Szeged.
(Russia--Chemistry, Physical and theoretical)
(Hungarians in Russia)
(Academy of Sciences of the U.S.S.R.)

HUHN, Peter, kandidatus; KALLO, Denes, kandidatus

An accont of the work of the Working Committee on Catalysis in 1963. Kem tud kozl MTA 22 no.1:103-104 '64.

COMANESCU,T., ing.; HURBILEA, I., ing.; NITU,V., ing.

Considerations on the choice of the optimum tension utilisation for electric drives in the oil extraction industry. Petrol si gaze 14 no.9:448-456 S'63.