PIETRANEK, Bonifacy, mgr inz.; OLCZAKOWSKI, Wladyslaw, prof. mgr inz.

Power management in the Polish coal mining industry. Pt. 1.
Gosp paliw 11 no.1:3-7 Ja '63.

PIETRANEK, Bonifacy, mgr inz.; OLCZAKOWSKI, Wladyslaw, prof. mgr. inz.

Power management in the Polish coal mining industry. Pt. 2.
Gosp paliw 11 no.2:44-46 F '63.

OLCZAKOWSKI, Wladyslaw, prof. mgr. inz.

Economizing acting of fuels and power. Gosp paliw 11 no.8: 281-282 '63.

OLCZAKOWSKI, Wladyslaw, prof. mgr inz.; MOTYKA, Ignacy, mgr inz.

Desalting pit water in the Rybnik Coal Basin. Gosp wodna 23 no.2:49-52 F '63.

1. Glowny Instytut Gornictwa, Katowice.

OLCZAKOWSKI, Wladyslaw, prof. mgr inz.

Problem of brown coal containing salts. Gosp paliw 12 no.2: 51-54 F '64.

OLCZAKOWSKI, Wladyslaw, prof. mgr inz.; CHRZASZCZ, Jerzy; MOTYKA, Ignacy, mgr inz.; SMYK, Marian; STRANC, Zofia, mgr

Desalting brown coal by the ion exchange method. Glow inst gorn prace no.339:1-28 '64.

1, Central Mining Irstitute, Katowice.

POLAND/Chemical Technology - Cellulose and Its Derivatives. H-33
Paper.

Abs Jour : Ref Zhur - Khimiya, No 24, 1958, 83830

Author : Modrzejewski, K., Olczewski, J.
Inst : -
Title : The Experiments in Preparing Papers Resistant to the Action of Hot Water.

Orig Pub : Przegl. papiern., 1958, 14, No 5, 135-138.

Abstract : The following substances were investigated in regard to their suitability in the treatment of a paper-base: a drying oil with the addition of a lead siccative, a solution of a resophthalic resin (RR) (a glyphthalic resin modified with a drying oil) in drying oils and xylol and the RR emulsions in water. The best results were obtained on a sized cardboard made from a sulfate cellulose and using the solution of RR in the drying oil with the addition

Card 1/2

POLAND/Chemical Technology - Cellulose and Its Derivative. H-33
Paper.

Abs Jour : Ref Zhur - Khimiya, No 24, 1958, 83830

of a 5% solution of red lead as the siccative. Paper packing for radiators in a heating system were prepared under optimum conditions of impregnation and drying, they adsorbed < 20% of hot water and lost 25% of strength after being boiled for one hour.

Card 2/2

OLCZYK, Andrzej, mgr inz.; SOBIECH, Wojciech, mgr inz.

The Radomsko Machine Works in Radomsko. Przegl mech 22 no.7/8: 243-244 10-25 Ap '63.

1. Senior designer, Factory Design Office, Radomsko Machine Works, (for Olczyk). 2. Deputy Head, Factory Design Office, Radomsko Machine Works, Radomsko, (for Sobiech).

BASSALIK, K.; JANOTA-BASSALIK, L.; OLCZYK, C.; HALWEG, H.

Methods for microbiological studies on active substances in peat extracts. Acta microb.polon. 9 no.4:303-313 '60.

1. Institut de Physiologie Vegetale a l'Universite de Varsovie.
(PEAT microbiol)

OLCZYK, Z.

Depression near Koluszki.

p. 10 (Turysta) No. 15, Aug. 1957, Warszawa, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

OLDAK, Franciszek

To bring into order the material management is a task of high priority. Przegl drobn wytwor 12 no.1:6-7 Ja '62.

OLDAK, Stanislaw; PILTINSKI, Jan

A case of peribronchial cyst treated as primary tuberculosis.
Gruzlica 32 no.4:361-364 Ap '64.

1. Z Oddziału Gruźlicy Dziecięcej Wojewódzkiego Szpitala im. J. Śniadeckiego w Białymstoku (Dyrektor: doc. dr. med. A. Dowgird, Ordynator Oddziału: lek. S. Oldak).

OLDAL, Gabor

Mechanized cleaning of sacks. Elelm ipar no.10:309-310 O '60.

1. Termenyforgalmi es Raktarozasi Igazgatosag.

OLDAK, P.G

Present-day bourgeois theories on the economic cycle. Vop.ekon. no.2:101-112 F '59. (MIRA 12:5)
(Business cycles)

OLDAK, P. G.

Ways of improving the national welfare. Vop.ekon. no.9:23-33 S '61. (MIRA 14:8)
(Cost and standard of living)

OLDAK, Pavel Grigor'yevich; STEBUNOV, N.S., red.; MISHNAYEVSKAYA, G.V., mlad. red.; GERASIMOVA, Ye.S., tekhn. red.

[Economic problems of raising standard of living] Ekonomicheskie problemy povysheniia urovnia zhizni. Moskva, Ekonomizdat, 1963. 110 p. (MIRA 16:12)
(Cost and standard of living)

OLDAKOWSKI, Stefan

The export possibilities of Polish-made building machinery. Przegl techn 79 Special issue:315-322 Je '61.

OLDAKOWSKI, Zygmunt.

A man to whom the year seems too long. Pol'.prof.obos. no.1:18-19 '54.
(Koseski, Edmunt) (MLRA 7:6)

OLDAL, Endre

The Warsaw seminar on incandescent cathode. Hir techn 14 no.5:193-194 O '63.

21402
S/120/61/000/002/013/042
E192/E382

9,7500

AUTHORS: Gorn, L.S., Ol'dekop, L.G. and Khazanov, B.I.

TITLE: A Reversible Dekatron Counter

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No. 2, pp. 83 - 85

TEXT: A counter circuit capable of registering directly the difference in the counting speeds of two channels is very useful in evaluating the background radiation, determining the difference in the amplitude-distribution spectra and other measurements. The reversible counters based on vacuum tubes are known (Ref. 1) but they are not entirely satisfactory due to their complexity. The two-pulse dekatrons type OG-5 (OG-5) can be used in the reversible counters in view of their symmetrical construction. The resulting circuits are comparatively simple. Constructionally, a dekatron is provided with a cylindrical anode which is surrounded by a set of 30 rods playing the part of sub-cathodes (for transferring the glow discharge) and cathodes (Ref. 2). There are various possibilities of arranging the drive circuits for the dekatrons

Card 1/6

A Reversible Dekatron ....

and the system adopted by the authors is illustrated in the figure. In this the triggering of the dekatrons is performed by amplifying stages. The principle of operation of the counter given in the diagram is as follows. The triggering circuit is based on a double triode $Л_1$ (= L_1), which drives the dekatron L_2. Two RC networks are connected between the anode resistors of this amplifying stage; these provide a different sequence of the output pulses, depending on whether the input signal is applied to the righthand or lefthand half of the tube. The signals applied to the righthand-side triode are taken from the adding input stage and produce a negative pulse at the anode load. This pulse is differentiated by one of the networks and integrated by the other network; a time shift between the two pulses is thus produced. The differentiated pulse is applied to the first sub-cathode of the dekatron and the integrated signal (delayed in time) to the second sub-cathode. In this way the information applied to the dekatron "moves" clockwise. The signals from the

S/120/61/000/002/013/042
E192/E382

A Reversible Dekatron ....

subtraction input stage (see the figure) are applied to the lefthand-side triode; the signal produced across the anode load is again differentiated and integrated but the rôle played by the two networks is now reversed. Thus, the differentiated signal is applied to the second sub-cathode, while the integrated pulse is fed to the first sub-cathode. Consequently, the discharge in the dekatron "moves" anti-clockwise. When several reversible dekatron stages are to be connected, it is necessary to obtain two signals at its output: one of these corresponds to the transition of the dekatron through zero, while the information is added, and the second signal corresponds to the transition from zero during sub-traction. Consequently, each stage of the counter (except the first) is provided with a thyratron relaxation pulser (based on L_4) and a limiter amplifier T_7 based on a transistor, type П 11 (P11). A positive pulse is produced across the cathode load of the thyratron when the dekatron reaches its zero state. This signal is differentiated and applied to the grid of the righthand-side triode L_3 (addition). As regards the

A Reversible Dekatron ....

transistor T_7, its collector load is chosen so that it operates under saturation conditions when the dekatron is in its zero state. The transition of the cathode from the zero state results in the elimination of the saturation current and a positive pulse is produced at the collector of T_7; this is then applied to the lefthand-side grid of the double triode L_3 (subtraction). The subtraction signal will be obtained every time the dekatron undergoes transition from its zero state into the position "9" as well as into the position "1". The thyratron L_4 operates in a similar way so that the output signals are ambiguous. The situation is rectified by introducing a coincidence circuit. Thus, normalising univibrators are provided at the inputs of the two channels; T_1 and T_2 at the input of the adding channel and T_4 and T_5 at the subtraction input. The signals produced by these univibrators are amplified by emitter followers T_3 and T_6

Card 4/6

A Reversible Dekatron ....

from where the positive pulses are applied to diode coincidence circuits. In the addition channel, this circuit is based on diodes $Д_5$ (= D_5) and D_6. In the subtraction channel, the circuit is based on D_3 and D_4 and this permits the transmission of the signal to the next stage only in the case when the dekatron undergoes a transition from the zero state to the position 9. A counter capable of registering 100 000, based on 5 dekatrons type [illegible]-5, 5 triodes, type 6Н6П (6N6P) and 10 transistors as well as 4 thyratrons, was built on the basis of the above circuit. The equipment was stable in operation when the supply voltage was varied by ± 10%. There are 1 figure and 3 references: 1 Soviet and 2 non-Soviet.

SUBMITTED: February 26, 1960

Card 5/6

BABICHENKO, S.I.; BOGDANOV, A.A.; GORN, L.S.; KAGAN, M.L.; KRYLOV, L.N.; OL'DEKOP, L.G.; KHAZANOV, B.I.; MELESHKO, V.K., red.; DRUZHININA, L.V., tekhn. red.; POPOVA, S.M., tekhn. red.

[Radiometric process instrumentation] Kontrol'no-izmeritel'naia radiometricheskaia apparatura. [By] S.I.Babichenko i dr. Moskva, Gosatomizdat, 1963. 148 p. (MIRA 16:12)
(Radiometry)

[redacted], Yu.A.; [redacted] V.S.

Initiation of polymeriz[redacted]tion of [redacted] homologs and substituted derivatives of [redacted]. Dokl. AN BSSR 8 no.5:317-320 My '64. (MIRA 17:9)

1. Belorusskiy gosudarstvennyy [redacted] Lenina. Predstavleno akademikom AN BSSR [redacted].

L 11359-65 EWT(m)/EPF(c) [illegible] Pc-4/Pr-4 RM
ACCESSION NR: AP4046427 S/0190/64/006/009/1617/1623

AUTHOR: Ol'dekop, Yu. A. By*lina, G. S.

TITLE: Investigations in the field of acyl peroxides. VI. The initiating activity of asymmetrical diacyl peroxides in styrene polymerization without a solvent

SOURCE: Vy*sokomolekulyarn*ye soyedineniya, v. 6, no. 9, 1964, 1617-1623

TOPIC TAGS: bulk polymerization, styrene polymerization, polymerization initiator, acyl peroxide initiator, asymmetrical diacyl peroxide

ABSTRACT: The initiating activity of benzoyl, acetylbenzoyl, acetyl-ortho (meta and para)-chlorobenzoyl, acetyl-ortho (meta and para) bromobenzoyl, acetyl meta (para) methylbenzoyl, acetyl-2,4,6-trimethylbenzoyl, acetyl-ortho (para, methoxybenzoyl, acetyl-ortho-acetoxybenzoyl, acetyl para phenylbenzoyl, acetyl-meta-nitrobenzoyl, monochloroacetylbenzoyl, propionylbenzoyl, butyrylbenzoyl, isovalerylbenzoyl and acetylhexahydrobenzoyl peroxides was determined in a study of styrene polymerization without a solvent and in the absence of air. Air was removed from the monomer by repeated vacuum freezing and thawing of the solution of peroxide in the monomer and subsequent aeration of the mass with purified nitrogen. The polymerization rate at 60, 70 and 80C, the constants of initiation, the apparent polymerization activation energy

Card 1/2

L 11359-65
ACCESSION NR: AP4045427

and the apparent initiation activation energy, compared with those for benzoyl peroxide were used to evaluate the initiating effect from the basis of the R_{p60} values (the rate of initiated polymerization at 80° of 0.506 - 2.96 x 10^{-4} mol./liter·sec., all the tested peroxides except acetyl-m-nitrobenzoyl peroxide (R_{p60} = 0.276 x 10^{-4} mol./liter·sec) were found to be superior to benzoyl peroxide (R_{p60} = 0.492 x 10^{-4}) as polymerization initiators. The behavior of the m- and p-substituted acetylbenzoyl peroxides was found to follow the Hammett law. Orig. art. has: 2 tables, 3 figures and 3 formulas.

ASSOCIATION: Byelorusskiy gosudarstvennyy universitet im. V. I. Lenina (Byelorussian State University)

SUBMITTED: 19Oct63 ENCL: 00 SUB CODE: OC

NO REF SOV: 002 OTHER: 010

Card 2/2

OL'DEKOP, Yu. A.

"Synthesis of 9, 10-Dimethyloctadecane and 9, 10-Dipropyloctadecane,"

Zhur, Obsch Khim., 14, No 4, 1944. Student, Chair. Organic Chem., Gor'kiy State Univ. -1943-.

CA

1D

Synthesis and properties of higher isoparaffin hydrocarbons of composition C_{20}–C_{30} (7,8-diisopropyltetradecane, 7,8-diisoamyltetradecane, 10,11-dipropyleicosane, 11,12-dipropyldocosane, 9,10-dioctyloctadecane, and 9,10,11,12-tetrapropyleicosane). A. D. Petrov and Yu. A. Ol'dekop. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 18, 859-64(1948). —The Grignard reagent from 47 g. Mg and 220 g. iso-PrBr in 350 ml. [illegible] was treated with 143 g. enanthaldehyde and gave [illegible] g. (85%) [illegible], b_{12} 104-5°, d_4^{20} 0.8287, n_D^{20} 1.433; this (100 g.) and 6.4 g. red P with 50 g. Br yielded 68.4% 2-methyl-3-bromononane, b. 102-4°, d_4^{20} 1.0907, n_D^{20} 1.457; the latter (85 g.), added over 4 hrs. to a hot stirred suspension of 17 g. Na in 250 ml. ligroin (b. 100-200°), yielded 27.3% 7,8-diisopropyltetradecane, b_{12} 181-6°, f.p. [illegible], [illegible] 0.0824 (in stokes). Similarly, 150 g. iso-AmBr, 100 g. enanthaldehyde, and 20 g. Mg yielded 112 g. 2-methyl-5-dodecanol, b_{12} 128-30°, n_D^{20} 1.436, d_4^{20} 0.8251, which (91 g.) gave 73 g. (70.4%) 2-methyl-5-bromododecane, b_{12} 120-33°; the latter (73 g.) with 11 g. Na in ligroin gave 13.1% 7,8-diisoamyltetradecane, b_3 178-82°, d_4^{20} 0.8116, n_D^{20} 1.455, f.p. −45°, [illegible] 0.2104, [illegible] 0.0556. Nonyl bromide (120 g.), 14.6 g. Mg, and 30 g. PrCHO gave 60 g. 4-tridecanol, b_{12} 165-6°, d_4^{20} 0.8234, n_D^{20} 1.438; this (53 g.) gave 51 g. 4-bromotridecane, d_4^{20} 1.0428, n_D^{20} 1.4[illegible]2; the latter (50 g.) and 7 g. Na gave 5.8 g. 10,11-dipropyleicosane, b_3 220-3°, d_4^{20} 0.8157, n_D^{20} 1.455, f.p. −36°, [illegible] 0.15, [illegible] 0.052345. Decyl bromide (270 g.), 30 g. Mg, and 60 g. PrCHO gave 117 g. 4-tetradecanol, b_4 140-8°, m. 21°, m. 32-3°, from EtOH, d_4^{20} 0.8272, n_D^{20} 1.412; this (91 g.), 4.5 g. red P, and 55 g. Br gave 74 g. 4-bromotetradecane, [illegible] n_D^{20} 1.467; the latter (72 g.) and [illegible] g. Na gave 11 [illegible] 11,12-dipropyldocosane, b_3 21[illegible], n_D^{20} [illegible] 0.8157, f.p. −32°, [illegible] 0.3[illegible] [illegible]. [illegible] bromododecane did not react with Mg, the [illegible], b_1 138-9°, was prepd. by heating [illegible] g. [illegible] and [illegible] g. iodine, and 6 g. red P 8 hrs. to [illegible], then [illegible] and [illegible] g. Mg (started with a little EtI) and [illegible] g. PrCHO [illegible] gave 10.5 g. [illegible] and 15 g. 9,10-dipropyleicosane, b_3 [illegible], n_D^{20} 1.442, and 15 g. 9,10-dipropyleicosane, b_3 1[illegible]; the former (10.5 g.) gave 6.3 g. of the bromide, b_1 138-9°, which (6.3 g.) with 1 g. Na, gave on boiling [illegible] in boiling ligroin 4.3% 9,10,11,12-tetrapropyleicosane, [illegible] d_4^{20} 0.8[illegible], n_D^{20} 1.4[illegible], f.p. [illegible]. [illegible] 31 g. Mg and 245 g. octyl bromide with [illegible] g. [illegible] gave, after decompn. of the complex and heating the carbinol with 50 ml. 15% KOH 4 hrs., 41.5 g. [illegible] bond, b_1 158-200°, contg. much of the corresponding olefin; this mixt. (41 g.), 13.2 g. Br, and 1.[illegible] g. red P gave 12.[illegible] g. 9-bromoheptadecane, b_1 190-3°, which (12 g.) with Na in hot ligroin gave after 30 hrs. only 0.15 g. 9,10-dioctyloctadecane, m. 30°, n_D^{20} 1.4[illegible]. G. M. Kosolapoff

Photochemical reactions of organomercury compounds in solutions. II. Reactions of diphenylmercury. G. A. Razuvaev and Yu. A. Ol'dekop. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 19, 1483-6(1949); cf. C. A. 43, 9065e.—Irradiation of Ph_2Hg (2 g.) in 15 ml. $CHBr_3$ with ultraviolet light 12 hrs. gave 1.93 g. PhHgBr, m. 278°, as well as C_6H_6 (identified as m-$C_6H_4(NO_2)_2$). In 6 hrs. Ph_2Hg in CCl_4-$CHCl_3$ similarly gave 95% PhHgCl, m. 257°, and C_6H_6. *tert*-BuCl, however, even after 200 hrs. gave but 18.5% PhHgCl and 8% Hg. Only a trace of Hg formed after 3 weeks' reaction of Ph_2Hg in Me_3CCH_2-$CHMe_2$. In 100 hrs., Ph_2Hg in PhMe gave 20% unchanged Ph_2Hg and a tarry unseparable mass. In 240 hrs. 3 g. Ph_2Hg in iso-PrOH gave 82.3% Hg, C_6H_6, and Me_2CO, with 16% Ph_2Hg recovery. In 41 hrs. Ph_2Hg in Et_2O gave 60% Hg, C_6H_6, and AcH; in 25 hrs. in $EtOCH_2CH_2OH$ it gave 79% Hg, C_6H_6, and AcH, while in 25 hrs. in Me_2CO it gave 72% Hg, 57% C_6H_6, and an unidentified yellow mass. After 25-hrs.' reaction with Et_3COH there was liberation of Hg, complete in 150 hrs., along with C_6H_6 and a small amt. of Ph_2. **III. Photoreactions of dibenzylmercury.** *Ibid.* 1487-9.—$(PhCH_2)_2Hg$ (I), irradiated in MeOH with a Hg lamp 50 hrs. gave 95% Hg and 80% bibenzyl, m. 51°. A 41-hr. reaction in $CHCl_3$ gave 100% HgCl and bibenzyl, as well as a yellow undistillable oil. $PhHgCH_2Ph$ (by heating $PhCH_2HgCl$ with Ph_2SnCl_2 in EtOH contg. 20% NaOH) similarly in 25 hrs. in MeOH gave 57% Hg and 70% Ph_2Hg, some C_6H_6, and 6?% bibenzyl, while 25 hrs. in $CHCl_3$ gave 60% Hg, 5?% PhHgCl, C_6H_6, and 5?% bibenzyl, apparently by symmetrization, followed by reaction of the sym. derivs. individually. G. M. K.

Photoreactions of organo-metallic compounds of mercury in solution. III. Photoreactions of dibenzyl mercury. G. Razuvayev and Y. Oldekop (*J. gen. Chem., U.S.S.R.*, 1949, 19, 1467—1480 (*U.S. Transl.*, 1469—1481).—The difference in behaviour of $HgPh_2$ and $Hg(CH_2Ph)_2$, attributed to the resonance stabilisation of the dibenzyl radical is investigated by the behaviour of $Hg(CH_2Ph)_2$ and $HgPh{\cdot}CH_2Ph$ on illumination with ultra-violet light in $CHCl_3$ and MeOH.

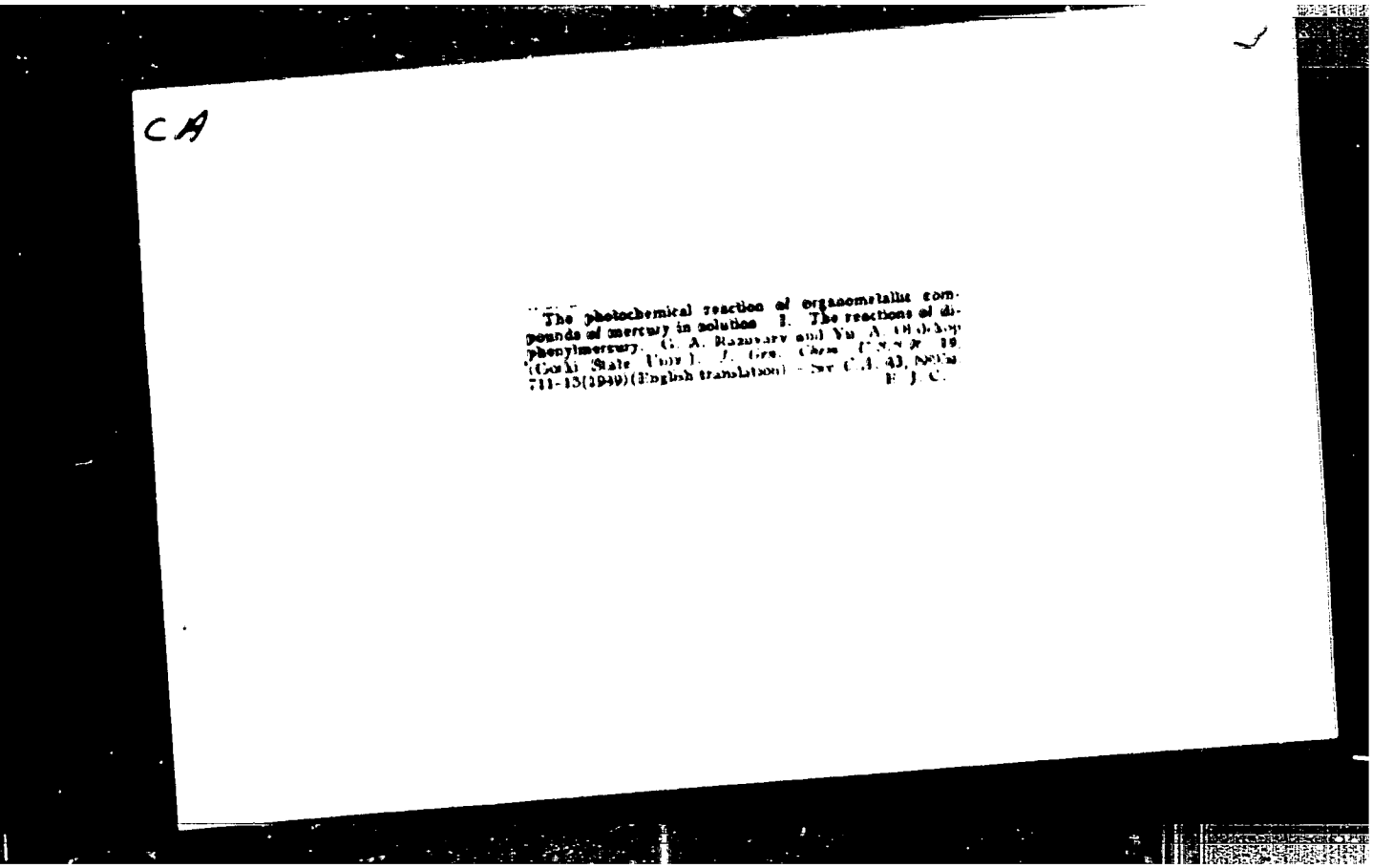
$Hg(CH_2Ph)_2$ in MeOH, on illumination for 80 hr. gives Hg (98%) and [illegible], and in $CHCl_3$, illuminated for 60 hr. gives [illegible] dibenzyl (100%). $HgPh{\cdot}CH_2Ph$ (made by adding to a boiling EtOH solution of $CH_2Ph{\cdot}HgCl$, some 30% NaOH, and an EtOH solution of Ph_3SnCl) in MeOH, on illumination for 20 hr., gives $HgPh_2$ (70%) and dibenzyl (80%), according, it is suggested, to the mechanism $CH_2Ph{\cdot}HgPh + Hg \rightarrow CH_2Ph + HgPh$; $2CH_2Ph \rightarrow (CH_2Ph)_2$; $2HgPh \rightarrow HgPh_2 + Hg$. $HgPh{\cdot}CH_2Ph$ with $CHCl_3$ on illumination for 20 hr., gives Hg (90%), PhHgCl (86%), C_6H_6 and dibenzyl (90%).

R. J. H. Birch

OL'DEKOP, YU.

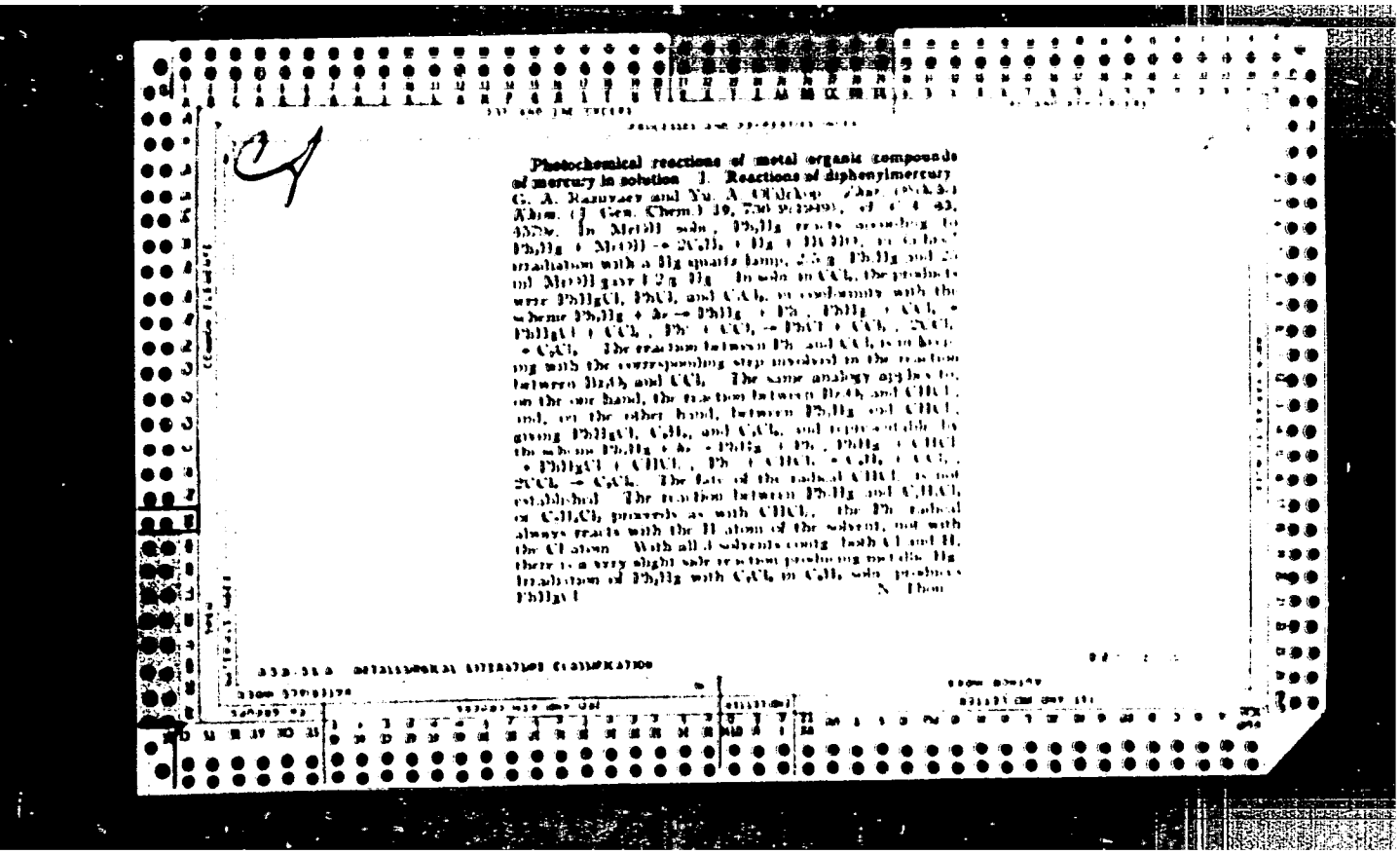
Razuvaev, G. & Ol'dekop, Yu. - "Photochemical reactions of metallo-organic compounds of mercury in solutions. VI. Photochemical reactions of o-ditolyl mercury." (p. 181)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1949, Vol. 20, No. 1



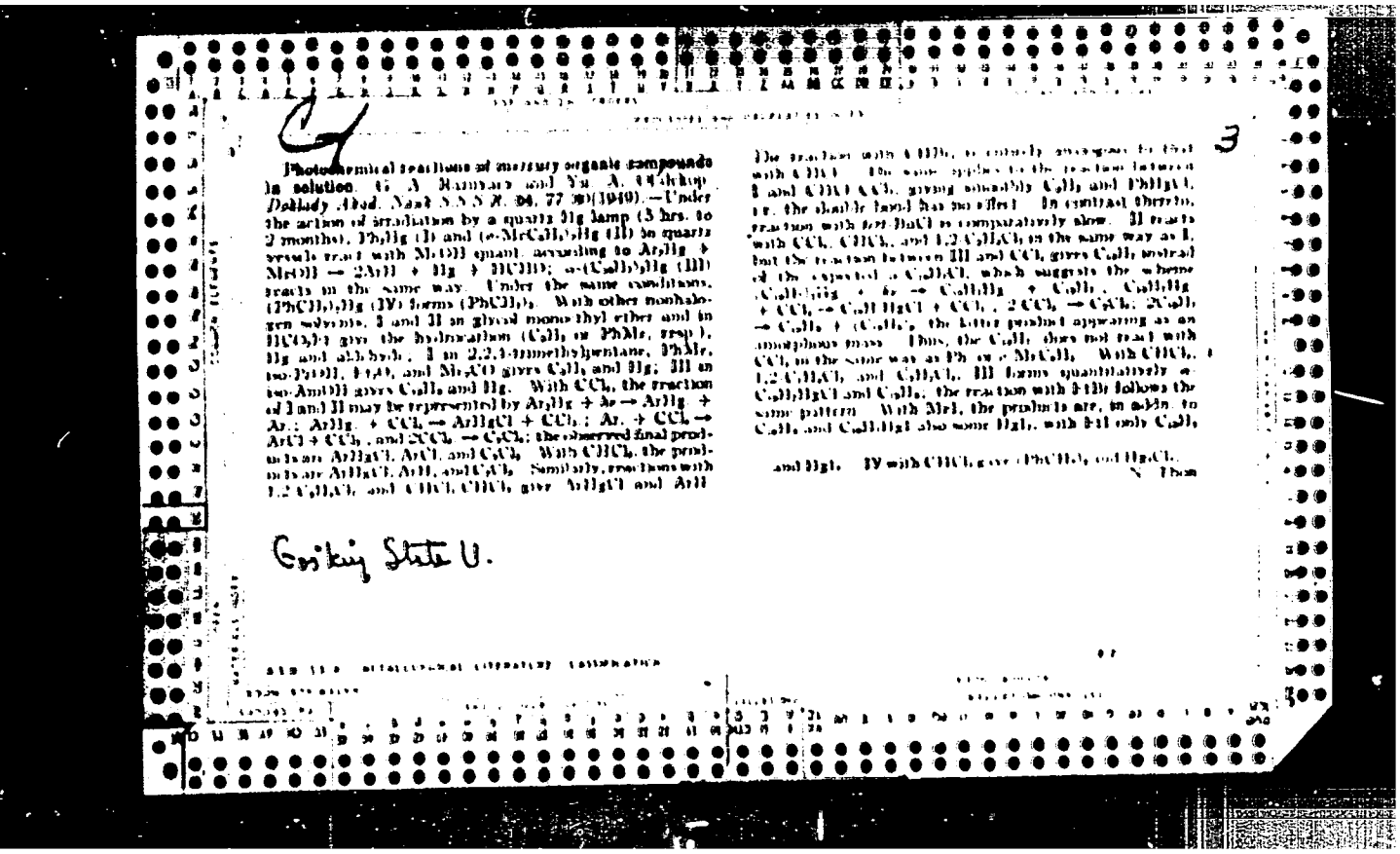
CA

The photochemical reaction of organometallic compounds of mercury in solutions I. The reactions of diphenylmercury. G. A. Razuvaev and Yu. A. [illegible] (Gork. State Univ.). J. Gen. Chem. [illegible] 711-15(1949)(English translation). See C.A. 43, [illegible] F. J. C.



Photochemical reactions of metal organic compounds of mercury in solution. I. Reactions of diphenylmercury

G. A. Razuvaev and Yu. A. [illegible] Zhur. Obshch. Khim. (J. Gen. Chem.) 19, [illegible], 1949. In MeOH soln., Ph_2Hg reacts according to $Ph_2Hg + MeOH \rightarrow PhH + PhHgOMe$, in darkness or irradiation with a Hg quartz lamp. [illegible] Ph_2Hg and 20 ml MeOH gave 1.2 g Hg. In soln in CCl_4, the products were $PhHgCl$, $PhCl$, and C_2Cl_6, in conformity with the scheme $Ph_2Hg + Br_2 \rightarrow PhHg + PhBr$, $PhHg + CCl_4 \rightarrow PhHgCl + CCl_3$, $PhBr + CCl_3 \rightarrow PhCl + CCl_2$, $2CCl_2 \rightarrow C_2Cl_6$. The reaction between Ph and CCl_4 is analogous with the corresponding step involved in the reaction between $HgPh_2$ and CCl_4. The same analogy applies to, on the one hand, the reaction between $HgPh_2$ and $CHCl_3$, and, on the other hand, between Ph_2Hg and $CHCl_3$, giving $PhHgCl$, $CHCl_2$, and C_2Cl_6, and represented by the scheme $Ph_2Hg + Br_2 \rightarrow PhHg + PhBr$, $PhHg + CHCl_3 \rightarrow PhHgCl + CHCl_2$, $PhBr + CHCl_3 \rightarrow PhH + CCl_3$, $2CCl_3 \rightarrow C_2Cl_6$. The fate of the radical $CHCl_2$ is not established. The reaction between Ph_2Hg and $C_2H_4Cl_2$ or CH_2Cl_2 proceeds as with $CHCl_3$, the Ph radical always reacts with the H atom of the solvent, not with the Cl atom. With all 3 solvents using both Cl and H, there is a very slight side reaction producing metallic Hg. Irradiation of Ph_2Hg with CCl_4 in C_6H_6 soln produces $PhHgCl$.



Photochemical reactions of mercury organic compounds in solution. G. A. Razuvaev and Yu. A. [illegible], *Doklady Akad. Nauk S.S.S.R.* 66, 77–80 (1949).—Under the action of irradiation by a quartz Hg lamp (3 hrs. to 2 months), Ph_2Hg (I) and (*o*-MeC_6H_4)$_2$Hg (II) in quartz vessels react with $MeHgI$ quant. according to $Ar_2Hg + MeHgI \rightarrow 2ArH + Hg + HgCHgI$; (*o*-$C_6H_4$)$_2$Hg (III) reacts in the same way. Under the same conditions, $(PhCH_2)_2Hg$ (IV) forms $(PhCH_2)_2$. With other nonhalogen solvents, I and II in glycol monoethyl ether and in $HC(OEt)_3$ give the hydrocarbon (C_6H_6 or $PhMe$, resp.), Hg and $ArCHO$. I in 2,2,4-trimethylpentane, $PhMe$, *iso*-$PrOH$, EtOH, and Me_2CO gives C_6H_6 and Hg; III in *iso*-AmOH gives C_6H_6 and Hg. With CCl_4, the reaction of I and II may be represented by $Ar_2Hg + Ar \rightarrow ArHg + Ar$.; $ArHg + CCl_4 \rightarrow ArHgCl + CCl_3$; $Ar. + CCl_4 \rightarrow ArCl + CCl_3$, and $2CCl_3 \rightarrow C_2Cl_6$; the observed final products are $ArHgCl$, $ArCl$, and C_2Cl_6. With $CHCl_3$, the products are $ArHgCl$, ArH, and C_2Cl_6. Similarly, reactions with 1,2-$C_6H_4Cl_2$ and $CHCl_3$, $CHCl_3$ give $ArHgCl$ and ArH [illegible] with $CHCl_3$ gave $(PhCH_2)_2$ and $HgCl_2$. Thus

Ohio State U.

CA

10

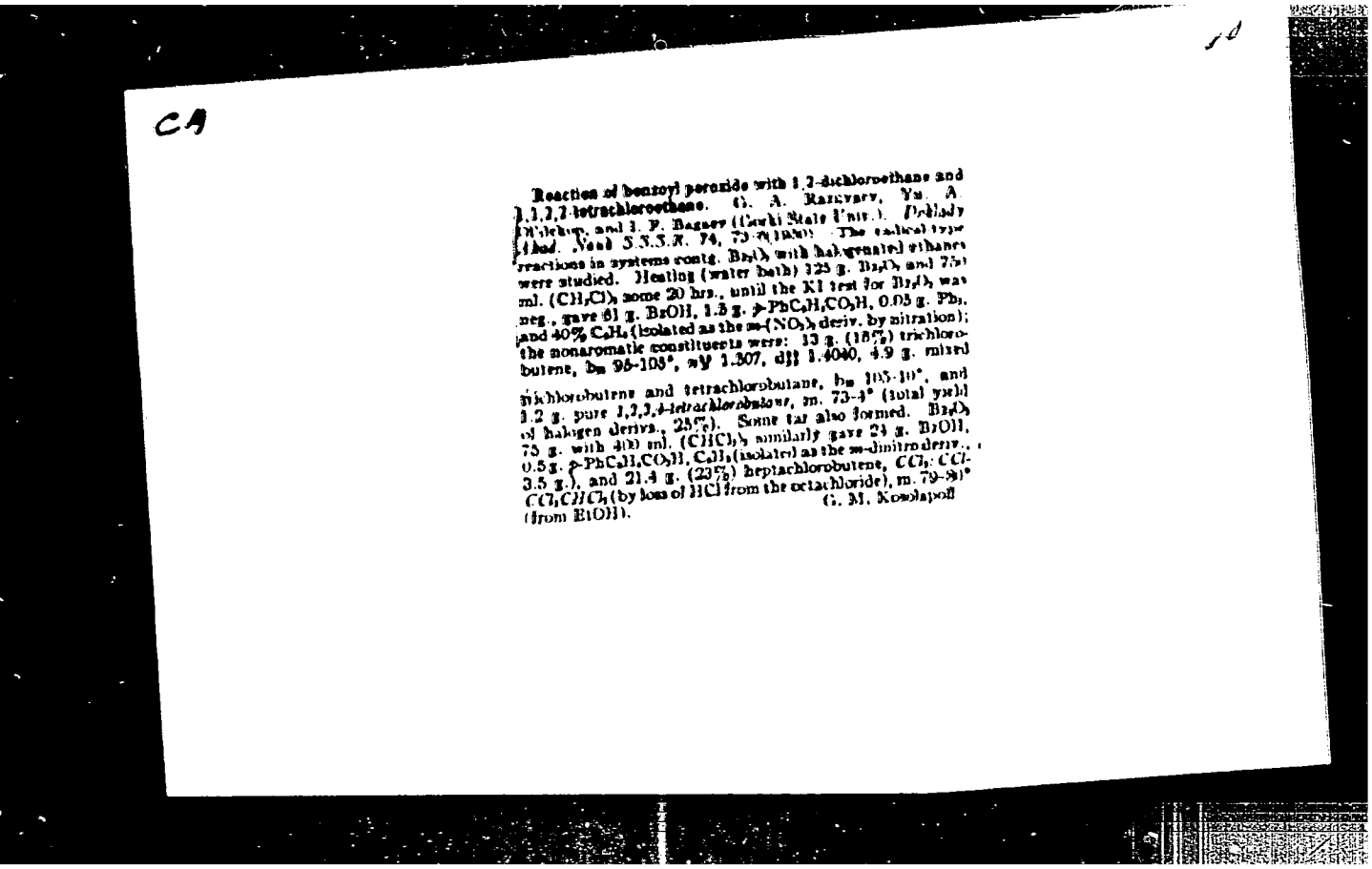
Photoreactions of metalloörganic compounds of mercury in solutions. IV. Photoreactions of di-o-tolylmercury. G. A. Razuvaev and Yu. A. Ol'dekop (State Univ., Gor'kii). Zhur. Obshchei Khim. (J. Gen. Chem.) 20, 181-4(1950); cf. C.A. 44, 3451.—$(o\text{-}MeC_6H_4)_2Hg$ (I) (2 g.) in 10 ml. MeOH irradiated 50 hrs. gave 1.03 g. Hg and PhMe (isolated as the 2,4-dinitro deriv.), as well as CH_2O. I (1 g.) in 15 ml. $EtOCH_2CH_2OH$ after 18 hrs. irradiation gave 0.52 g. Hg, 0.5 ml. PhMe, and AcH; similarly I in Et_2CHOH after 18 hrs. gave Hg, PhMe, and [illegible] aldehyde, while $ClCH_2CH_2Cl$ as solvent gave in 12 hrs. 60% Hg, PhMe, and 31% $o\text{-}MeC_6H_4HgCl$; $CHCl_3$ as solvent similarly gave 50% Hg, some unreacted I, 17% $o\text{-}MeC_6H_4HgCl$, and PhMe, as well as $(CCl_3)_2$. Reaction in CCl_4 for 10 hrs. gave 70% $o\text{-}MeC_6H_4HgCl$, C_2Cl_6, 17% I, and a liquid which with $KMnO_4$ gave $o\text{-}ClC_6H_4CO_2H$. Apparently the reactions begin by a dissocn. of I into MePh and MeC_6H_4Hg radicals. G. M. K.

OLDEKOP, Y. A.

Photochemical reactions of organometallic compounds of mercury in solutions. V. Photochemical reactions of mercury 1-, 2-dinaphthyl. G. A. Razuvaev and Y. A. Oldekop. *J. Gen. Chem. USSR*, 1950, 20, 506–509 (trans. 535–538). — Exposing $Hg(C_{10}H_7\text{-}2)_2$ to ultra-violet light in $CHCl_3$, $C_2H_3Cl_3$, or $C_2H_4Cl_2$ gives $C_{10}H_8$ and $Hg\text{-}C_{10}H_7Cl$ quant. The same products result from $Hg(C_{10}H_7)_2$ in CCl_4 in consequence of redistribution of H between the $C_{10}H_7$ radicals. The photochemical change of $Hg(C_{10}H_7)_2$ with EtBr furnishes $Hg\text{-}C_{10}H_7Br$ and $C_{10}H_8$; with MeI the products are $Hg\text{-}C_{10}H_7I$, HgI_2, and $C_{10}H_8$, and with EtI they are HgI_2 and $C_{10}H_8$. In $C_5H_{11}\text{-}OH$, $Hg(C_{10}H_7)_2$ furnishes $C_{10}H_8$ and Hg.

Irradiating $Hg(C_{10}H_7\text{-}2)_2$ (I) in CCl_4 for 20 hr. gives a brown solution from which $Hg\text{-}C_{10}H_7Cl$ (II) (93%), m.p. 189°, $C_{10}H_8$, m.p. [illegible]° (picrate, m.p. 150°) and C_2Cl_6, m.p. 187° (sealed capillary) are isolated; a tarry mass remains. In $CHCl_3$ after 20 hr., the products are II (96%), $C_{10}H_8$, and C_2Cl_6; in $C_2H_3Cl_3$ after 35 hr. they are II (93%), and $C_{10}H_8$, and in $(CH_2Cl)_2$ after 30 hr. they are II (95%) and $C_{10}H_8$. Irradiating I in EtBr for 15 hr. does not cause evolution of gas but affords a little Hg, $C_{10}H_8$, and $Hg\text{-}C_{10}H_7Br$ (93%), m.p. 202°. Irradiating I in MeI for 24 hr. gives a brown solution but no ppt. Removal of unused MeI and distillation of the residue with steam gives a solid with colour of I in the condenser. The isolated products are $C_{10}H_8$, HgI_2 (18%), and $Hg\text{-}C_{10}H_7I$ (77%), m.p. 185°. Analogously, in EtI the products are I, $C_{10}H_8$, and HgI_2 (95%). Owing to very limited solubility, the irradiation of I in alcohols is difficult to study. Apart from the formation of traces of Hg, I remains unchanged after exposure for 2 months. After 1-6 months, the solution of I in isoamyl alcohol is slightly coloured and contains a ppt. of unchanged I, Hg (68%), and $C_{10}H_8$.

H. WREN.



CA

Reaction of benzoyl peroxide with 1,2-dichloroethane and 1,1,2,2-tetrachloroethane. G. A. Razuvaev, Yu. A. Dvorkin, and I. P. Bagaev (Gorki State Univ.). *Doklady Akad. Nauk S.S.S.R.* 74, 73-6(1950). The radical type reactions in systems contg. Bz_2O_2 with halogenated ethanes were studied. Heating (water bath) 125 g. Bz_2O_2 and 750 ml. $(CH_2Cl)_2$ some 20 hrs., until the KI test for Bz_2O_2 was neg., gave 61 g. BzOH, 1.5 g. *p*-$PhC_6H_4CO_2H$, 0.05 g. Ph_2, and 40% C_2H_4 (isolated as the *m*-$(NO_2)_2$ deriv. by nitration); the monoaromatic constituents were: 13 g. (18%) trichlorobutene, b_{20} 98-103°, n_D^{20} 1.507, d_4^{20} 1.4040, 4.9 g. mixed dichlorobutene and tetrachlorobutane, b_{20} 103-10°, and 1.2 g. pure 1,2,3,4-*tetrachlorobutane*, m. 73-4° (total yield of halogen derivs., 25%). Some tar also formed. Bz_2O_2 75 g. with 400 ml. $(CHCl_2)_2$ similarly gave 24 g. BzOH, 0.5 g. *p*-$PhC_6H_4CO_2H$, C_6H_6 (isolated as the *m*-dinitro deriv., 3.5 g.), and 21.4 g. (23%) heptachlorobutene, $CCl_2:CCl-CCl_2CHCl_2$ (by loss of HCl from the octachloride), m. 79-80° (from EtOH). G. M. Kosolapoff

CA

Photoreactions of metallo-organic compounds of mercury in solutions. VI. Reactions of dimesitylmercury. G. A. Razuvaev, Yu. A. Ol'dekop, and M. N. Koroleva (State Univ., Gorki). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 930-8(1951); cf. C.A. 45, 3260e.—*Dimesitylmercury* differs in photoreactions from Ph_2Hg by the ease of cleavage of the org. radicals from Hg. Refluxing 116.5 g. 3% Na-Hg, 23.3 g. bromomesitylene, 26 ml. dry MePh, and 1.5 ml. EtOAc 14 hrs. at 130°, decanting from the Hg and Na-Hg, filtering hot, and extg. the ppt. with hot C_6H_6, gave 81.3% *dimesitylmercury* (I), m. 235°. Irradiation of I 60 hrs. with $EtOCH_2CH_2OH$ gave 97% Hg, some AcH, and 71% mesitylene (II); I and iso-PrOH after 440 hrs. gave 83.5% Hg, 3% unreacted R_2Hg, some Me_2CO, and 77% II. I and $CHCl_3$ in 130 hrs. gave 84% $HgCl_2$, some HgCl, 4.1% Hg, some II, and C_2Cl_6; similar reaction with CCl_4 gave HgCl (98%), C_2Cl_6, and chloromesitylene. Heating 2 g. I with 1.1 g. succinimide 3 hrs. at 170° gave 78% II, 2% Hg, and 31.6% *2,4,6-$Me_3C_6H_2HgN(COCH_2)_2$* (III), m. 205-6° (from aq. EtOH); the concurrently formed *disuccinimidomercury* was detected (60%) in the residual aq. soln. by treatment with H_2S, yielding HgS. III with concd. HCl in hot aq. EtOH readily gave $HgCl_2$. If the heating of the original mixt. is run for 40 min., 83% III may be obtained. Heating 1 g. I with 2 g. freshly prepd. powd. Ag 3 hrs. at 300° gave 58% II, tars, and Ag-Hg amalgam. In the decompn. reactions of I, the formation of the dimer appears to be prevented by the steric factor. G. M. Kosolapoff

OL'DEKOP, Yu. A.

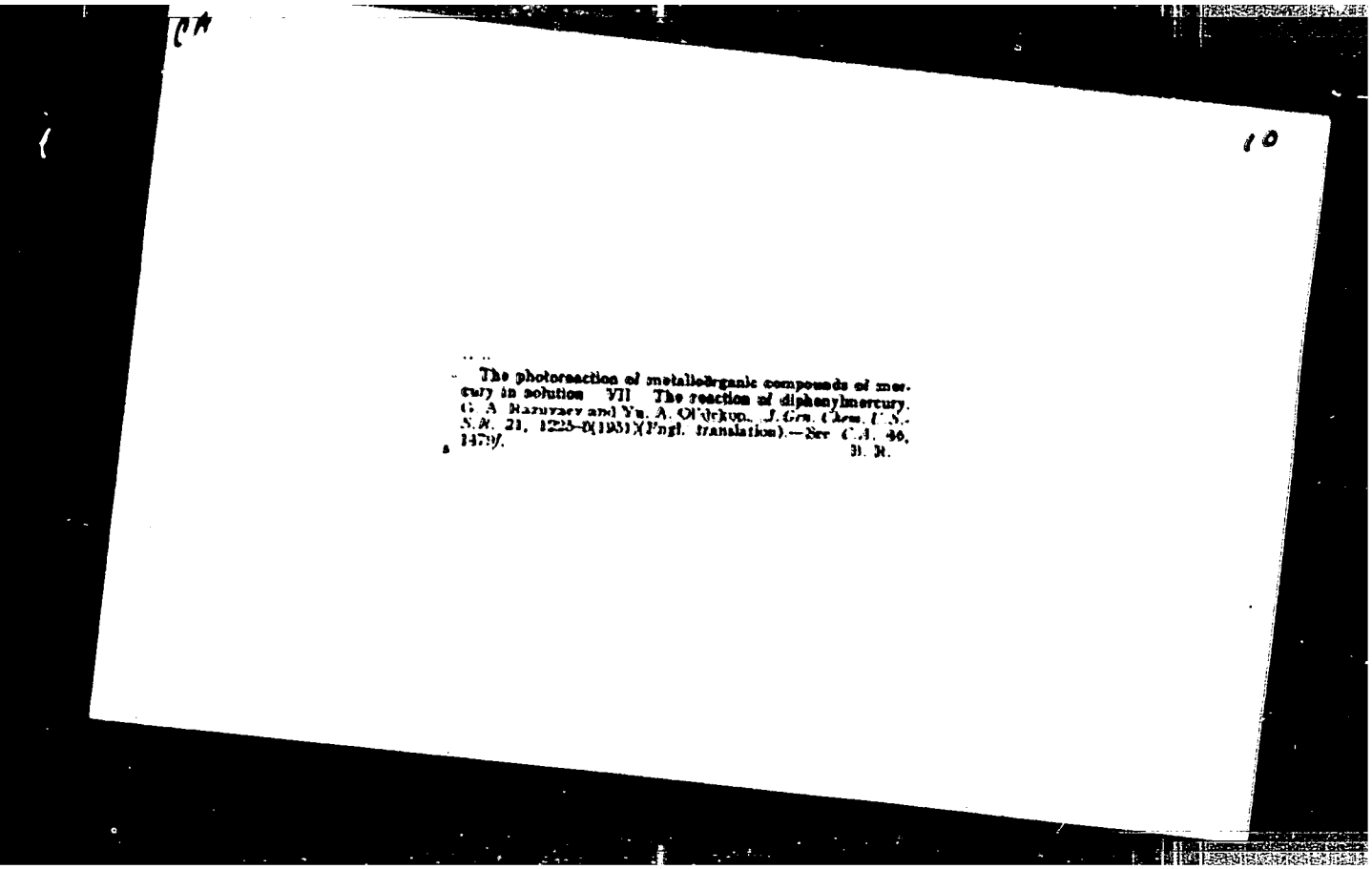
USSR/Chemistry - Organomercury Compounds Jun 51

"Photoreactions of Organic Hg Compounds in Solutions," G. A. Razuvaev, Yu. A. Ol'dekop, Gor'kiy State U

"Zhur Obshch Khim" Vol XXI, No 6, pp 1122-1124

Photoreaction of diphenyl mercury with ethyl bromide, isopropyl bromide, and chlorex (bis-β-chloroethyl ether) forms benzene and phenyl mercuribromide or chloride. Diphenyl mercury and chlorobenzene upon exposure to light form calomel. In photoreaction of diphenyl mercury with bromobenzene, phenyl mercuribromide is obtained, and p-bromodiphenyl is found in reaction products.

186T26



The photoreaction of metalloorganic compounds of mercury in solution VII The reaction of diphenylmercury. G. A. Razuvaev and Yu. A. Ol'dekop. *J. Gen. Chem. U.S.S.R.* 21, 1225–9(1951)(Engl. translation).—See *C.A.* 46, 1479*f*.

M. H.

OL'DEKOP, Yu. A.

191T26

USSR/Chemistry - Organic Mercury Compounds Jul 51

"Interaction of Certain Organic Mercury Compounds With Succinimide," G. A. Razuvayev, Yu. A. Ol'dekop, N. S. Vyazankin

"Zhur Obshch Khim" Vol XXI, No 7, pp 1283-1287

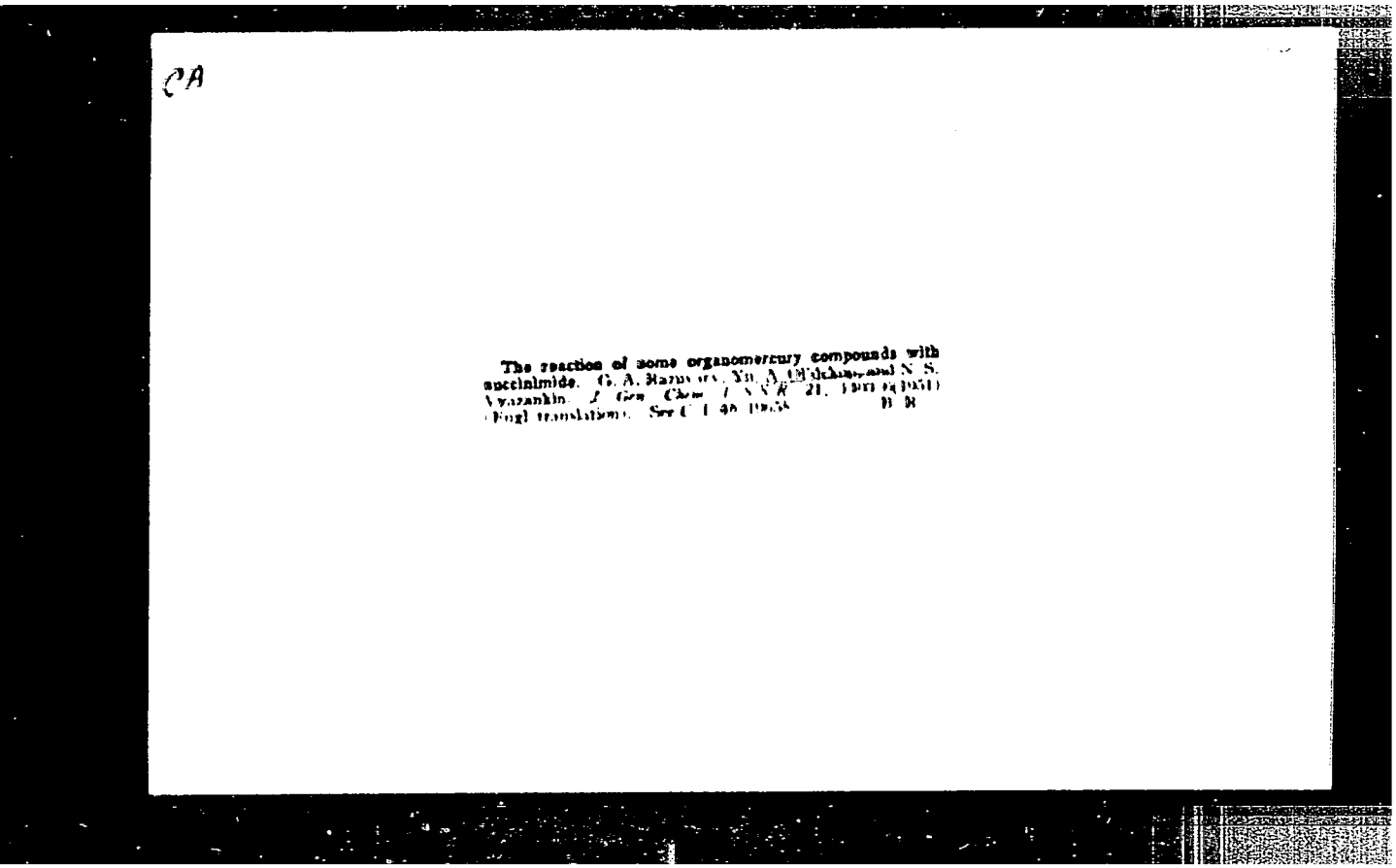
Diphenyl, o-didolyl, diethyl, 4-dinaphthyl, and 3-dinaphthyl Hg all reacted with succinimide to form $RHgN(COCH_2)_2$ compds (prepd for 1st time), which are well-crystd colorless substances, sol in H_2O, interact with HCl and KI to form corresponding

191T26

USSR/Chemistry - Organic Mercury Compounds (Contd) Jul 51

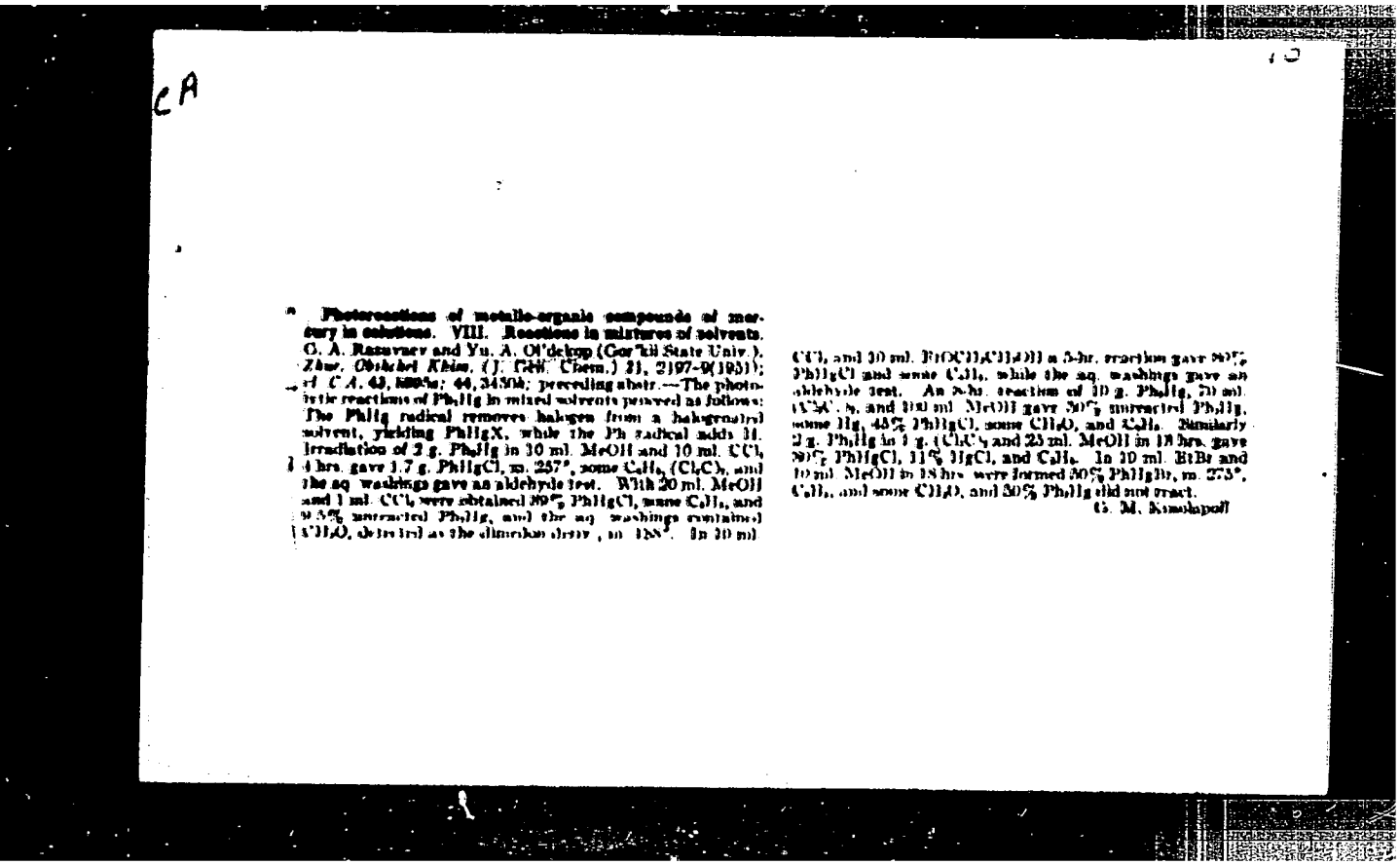
RHg x Hal compds. With H_2S phenyl- and O-totylmercurysuccinimide form diphenyl- and O-ditolyl-Hg, resp, while α-naphthyl- and ethylmercurysuccinimide form sulfides $(RHg)_2S$. Dibenzyl Hg with succinimide yields dibenzyl and Hg.

191T26



CA

The reaction of some organomercury compounds with succinimide. G. A. Razuvaev, Yu. A. Mitchan, and N. S. Vyazankin. *J. Gen. Chem. USSR* 21, [illegible] (Engl. translation). Ser. C [illegible] D. B.



CA

Photoreactions of metallo-organic compounds of mercury in solutions. VIII. Reactions in mixtures of solvents. G. A. Razuvaev and Yu. A. Ol'dekop (Gor'kii State Univ.). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 2197-9(1951); cf. *C. A.* 45, 8899a; 46, 3450h; preceding abstr.—The photolytic reactions of $PhHg$ in mixed solvents proceed as follows: The $PhHg$ radical removes halogen from a halogenated solvent, yielding $PhHgX$, while the Ph radical adds H. Irradiation of 2 g. $PhHg$ in 10 ml. MeOH and 10 ml. CCl_4 4 hrs. gave 1.7 g. $PhHgCl$, m. 257°, some C_6H_6, $(ClC)_2$, and the aq. washings gave an aldehyde test. With 20 ml. MeOH and 1 ml. CCl_4 were obtained 80% $PhHgCl$, some C_6H_6, and 9.5% unreacted $PhHg$, and the aq. washings contained CH_2O, detected as the dimedon derav., m. 188°. In 10 ml. CCl_4 and 10 ml. $EtOCH_2CH_2OH$ a 5-hr. reaction gave 80% $PhHgCl$ and some C_6H_6, while the aq. washings gave an aldehyde test. An 8-hr. reaction of 10 g. $PhHg$, 50 ml. CCl_4, and 100 ml. MeOH gave 30% unreacted $PhHg$, some Hg, 45% $PhHgCl$, some CH_2O, and C_6H_6. Similarly 2 g. $PhHg$ in 1 g. CH_2Cl_2 and 25 ml. MeOH in 18 hrs. gave 80% $PhHgCl$, 11% $HgCl$, and C_6H_6. In 10 ml. EtBr and 10 ml. MeOH in 18 hrs. were formed 80% $PhHgBr$, m. 275°, C_6H_6, and some CH_2O, and 30% $PhHg$ did not react.

G. M. Kosolapoff

OL'DEKOP, YU. A.

USSR/Chemistry - Polymerization; Jul/Aug 52
Peroxides

"New Polymerization Initiators," G. A. Razuvayev, Yu. A. Ol'dekop, Ye. I. Fedotova, Gor'kiy U

"Uspekh Khim" Vol XXI, No 4, pp 379-421

Reviews foreign work on the subject (101 references). Among USSR contributions to this field (4 references), mentions investigation which established that hydroperoxides of tertiary alcs are extremely effective in promoting emulsion polymerization of 1,3 butadiene; comparison of rates of decompn of tertiary alc hydroperoxides

216T22

at various temps in alpha-methylstyrene; study of the effect of these peroxides on polymerization of styrene in the liquid phase; initial work by A.A. Berlin, A.A. Moiseyev, and F.Kh. Abel' on the use of azonitriles and azocarboxylic acid esters as polymerization initiators /the reference on this is apparently to a 1948 USSR patent application/.

216T22

USSR/Chemistry - Organic Mercury Compounds Mar 52

"Photoreactions of Organic Mercury Compounds in Solutions. IX. The Reactions of P -Dianisyl Mercury," Yu. A. Ol'dekop, N. N. Zolotareva, Chair of Org Chem, Gor'kiy State U

"Zhur Obshch Khim" Vol XXII, No 3, pp 478-480

CCl_4 solns of P -dianisyl mercury, when exposed to light, yields calomel and anisol because of the splitting off of hydrogen from the methoxyl group. A $CHCl_3$ soln, upon exposure to light, yields P -anisyl mercurichloride and anisol. Photoreaction proceeds slowly.

209T44

USSR/Chemistry - Organic Mercury Compounds (Contd) Mar 52

OL'DEKOP, Yu. A.

of P -dianisyl mercury in CH_3OH yields anisol, mercury, and formaldehyde. However, the mercury compd is not easily sol in CH_3OH and the reaction therefore proceeds slowly.

209T44

OL'DEKOP, Yu. A.

USSR/Chemistry - Organic Mercury Compounds Mar 52

"Photoreactions of Organic Mercury Compounds in Solutions. X. Reactions of Dimethyl Mercury," G. A. Razuvayev, Yu. A. Ol'dekop, Z. N. Manchinova, Gor'kiy State U

"Zhur Obshch Khim" Vol XXII, No 3, pp 480-483

Dimethyl mercury (I), in photolysis, splits into the radicals CH_3· and CH_3Hg; the reaction proceeds as in the case of aryl mercury compds. When exposed to ultraviolet rays, I reacts with CH_3OH to form CH_4, Hg, and CHCHO. In photoreaction with

209T45

USSR/Chemistry - Organic Mercury Compounds (Contd) Mar 52

$CHCl_3$, it yields methyl mercurichloride, CH_4, and hexachloroethane. In soln of CH_3I when exposed to light, it forms methylmercuriiodide and CH_4. In CCl_4, upon exposure to light, it reacts to form methylmercurichloride, CH_3Cl and hexachloroethane. During photoreaction in soln of CH_3OH and CCl_4, it forms the radicals CH_3Hg· and CH_3· which react with various components of the soln. The former yields methylmercurichloride in reaction with CCl_4, the latter forms CH_4 in reaction with the CH_3OH.

209T45

OL' DEKOP, YU. A.

Chemical Abst.
Vol. 48 No. 5
Mar. 10, 1954
Organic Chemistry

The photoreactions of metalloorganic compounds of mercury in solutions. IX. The reactions of bis(*p*-methoxyphenyl)mercury. Yu. A. Ol'dekop and N. N. Zolotareva (Gorkii State Univ.). *J. Gen. Chem. U.S.S.R.* 22, 841–2 (1952)(Engl. translation). X. The reactions of dimethylmercury. O. A. Raevskaev, Yu. A. Ol'dekop, and Z. N. Manchinova. *Ibid.* 843–8.—See *C.A.* 47, 2724*a*. H. L. H.

238T43

USSR/Chemistry - Mercury Organic Compounds

Nov 52

"Photoreactions of Organometallic Compounds of Mercury in Solution: XI. Reactions of β-Dinaphthyl Mercury," Yu. A. Ol'dekop, Gor'kiy State U

"Zhur Obshch Khim" Vol 22, No 11, pp 2063-2064

β-dinaphthyl mercury (I) reacts with carbon tetrachloride upon exposure to ultraviolet light to form calomel, naphthalene, hexachloroethane and resinous substances. In the photoreaction between I and chloroform, calomel, naphthalene

238T43

and hexachloroethane are formed. Calomel and naphthalene have been sepd after an analagous reaction between I and 1, 2-dichloroethane. After the photoreaction of I in ethylcellosolve, metallic mercury and naphthalene were isolated.

238T43

(CA 47 no. 18: 9289 '53)

OL'DEKOP Yu. A.

OL'[illegible], Yu. A.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Organic Chemistry

Photoreactions of metalloorganic compounds of mercury in solutions. XI. The reactions of di-2-naphthylmercury. Yu. A. Ol'dekop. *J. Gen. Chem. U.S.S.R.* 22, 2119–20 (1952) (Engl. translation).—See *C.A.* 47, 9289g. H. L. H.

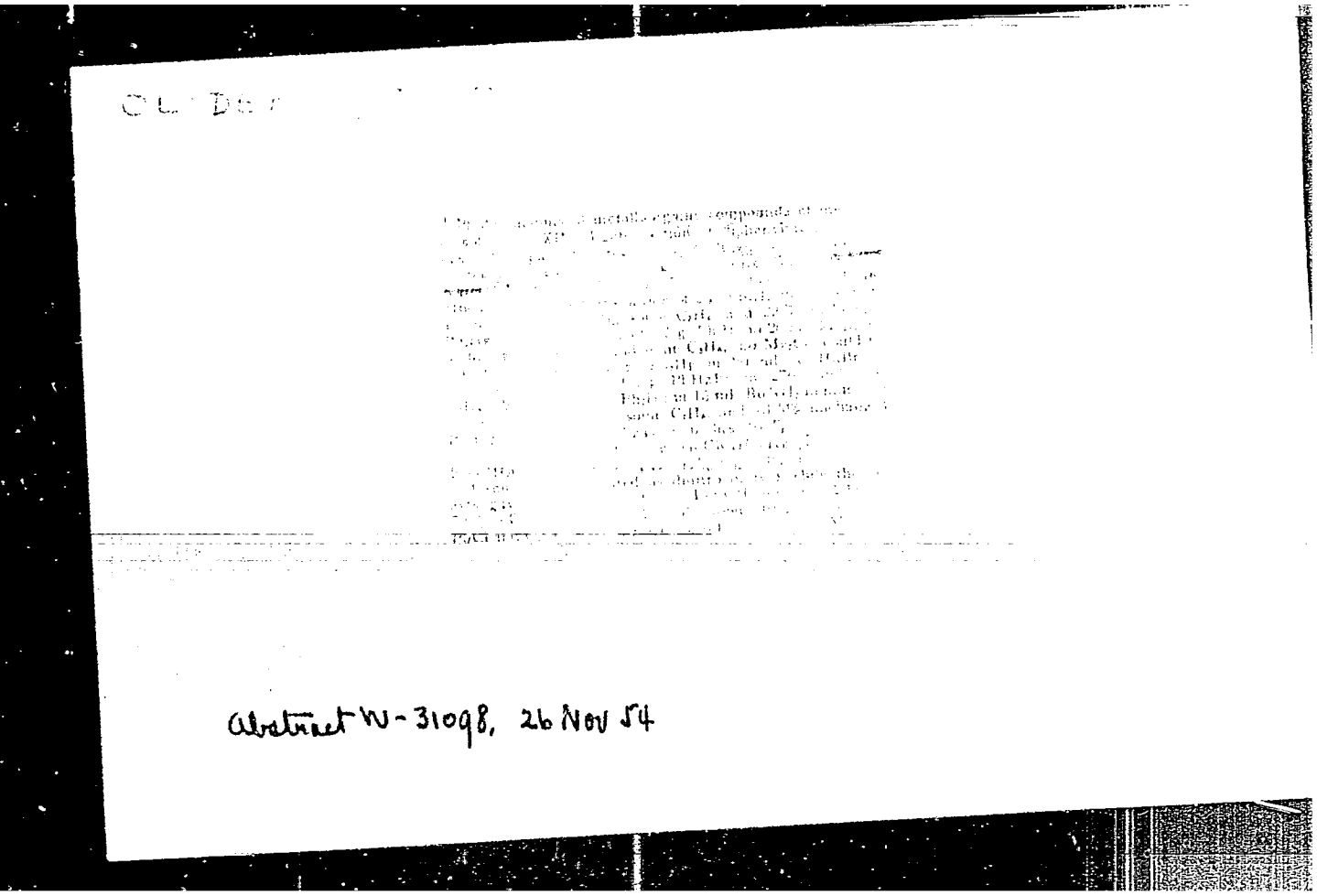
1. RAZUVAYEV, G. A., OL'DEKOP, YU. A., OROBOV, L. N.

2. USSR (600)

4. Mercury Organic Compounds

7. New method for the synthesis of mercury organic compounds. Dokl AN SSSR No 1, 1953.

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



Abstract W-31098, 26 Nov 54

OL'DEKOP YU A

C 7, Fr/C 11

Photoreactions of organometallic compounds of mercury in solutions XIII. Photoreactions of diethylmercury. G. A. Razuvaev and Yu. A. Ol'dekop (State Univ., Gorki). Sbornik Statei Obshchei Khim. 2, [illegible](1953); cf. C.A. 39, 912e.—Ultraviolet irradiation of 2 g. Et_2Hg in 20 ml. MeOH 40 hrs. gave 95% Hg, C_2H_6, and CH_2O. In iso-PrPh the products were 48% Hg and a little $(CPhMe_2)_2$, m. 113°. In $CHCl_3$ the products were 41% Hg, C_2Cl_6, 49% EtHgCl, m. 194°, and gases contg. 14% C_2H_4; in C_6H_6, 81% Hg and gases contg. 33% unsatd. hydrocarbons; in MeI, 57% EtHgI, m. 184°, some HgI_2, Hg, and gases contg. 10% unsatd. hydrocarbons. The results indicate radical cleavage of Et_2Hg into Et and EtHg radicals. G. M. K.

OL'DEKOP, YU. A.

Reaction of diphenylmercury with carbon tetrachloride. G. A. Razuvaev and Yu. A. Ol'dekop. *Zhur. Obshchei Khim.* 23, 257–9 (1953); cf. Whitmore and Thurman, *C.A.* 23, 2955.—Ph_2Hg heated in a sealed tube with CCl_4 20–42 hrs. (to 230–70°) gives formation of PhHgCl (max. yield 78.4% after 23 hrs. at 230°), HgCl (max. yield 73.1% after 27 hrs.–after 20 hrs. at 270°), $HgCl_2$ (max. yield being attained in 42 hrs. at 230°). At 270° and in prolonged runs, almost complete dearylation of Hg takes place and HgCl and $HgCl_2$ are formed. G. M. Kosolapoff

OL'DEKOP, Yu. A.

Chemical Abstracts
May 25, 1954
Organic Chemistry

(3)

Reaction of acyl peroxides with metallic mercury. G. A. Razuvaev, Yu. A. Ol'dekop, and L. N. Grobov. *Zhur. Obshchei Khim.* 23, 599-69(1953).—Identification of alkyl radicals in the liquid phase was accomplished by fixation of Hg. In the thermal decompn. of Ac_2O_2 in C_6H_6 in the presence of metallic Hg there was obtained 84.7% MeHgOAc. A similar reaction with Bz_2O_2 gave 31.5% PhHgOBz. Thermal decompn. of Ac_2O_2 in CCl_4 in the presence of Hg gave HgCl and HgOAc, along with products of chlorination of Hg by CCl_4 initiated by the peroxide; C_2Cl_6 was the org. product isolated. Bz_2O_2 under these conditions gave HgOBz. G. M. Kosolapoff

OL'DEKOP, YU R

USSR

Reaction of dibenzylmercury with carbon tetrachloride

OL'DEKOP, V. A.

USSR

OL'DEKOP, Yu.A.; SOKOLOVA, R.F.

Reaction of lead tetraphenyl and tin tetraphenyl with carbon tetrachloride, in the presence of benzoyl peroxide. Zhur.ob.khim. 23 no.7:1159-1162 Jl '53. (MLRA 6:7)

1. Gor'kovskiy Gosudarstvennyy universitet.
(Lead organic compounds) (Tin organic compounds) (Benzoyl peroxide)

RAZUVAYEV, G.A.; OL'DEKOP, Yu.A.

Reaction between isopropylmagnesium chloride and methyl ether of chloro-carbonic acid. Zhur.ob.khim. 23 no.7:1173-1175 Jl '53. (MLRA 6:7)
(Magnesium organic compounds) (Ethers)

U S S R

Photochemical reaction of diphenylmercury in mixtures of solvents. Yu. A. Ol'dekop. *Uchenye Zapiski Gor'kov. Un-ta*. 1953, No. 24, 147–53; *Referat. Zhur., Khim.* 1954, No. 28809.—The photochem. reactions studied were those of diphenylmercury (I) in the following mixts.: (1) CCl_4 (II)-benzaldehyde; (2) II-dioxane; (3) II-*sec*-BuOH; (4) II-Ac_2O; (5) II-chloromethane; (6) II-2,2,4-trimethylpentane; (7) II-bromobenzene (III); (8) III-$CHCl_3$ (IV); (9) III-ethyl Cellosolve (V); (10) IV-CH_2I_2; (11) bis(2-chloroethyl) ether-MeOH and (12) hexyl bromide-V. The expts. in quartz test tubes used 2 g. of I and 10 ml. each of the components of the mixt. In mixts. (1) to (8) and (11) C_6H_5HgCl (VI) was obtained. In all mixts. except (7) C_6H_6 (VII) was formed. In the reactions of I with the mixts. (2), (3), and (6) hexachloroethane was found. In the reaction of I with (10) C_6H_5HgBr (VII) and VIII were found. In the reaction of I with (11) CH_2O, VI, and VII were formed. In the reaction of I with (9) in which the ratio of V:III was 20:1, no VIII was found, and at a ratio of 10:10 was found VIII with a 17% yield. The quantity of metallic Hg decreased from the 1st to the 2nd case; in both bases CH_2O was found. The reaction of I with (12) was carried out analogously; at a ratio of hexyl bromide to V of 20:1, metallic Hg formed with an 18% yield, and at a ratio of 10:10 formed VIII with a 23% yield. A radical reaction mechanism is outlined for the photochem. reactions of I. In the reaction of I with the mixts. of (1) to (6) is possible a competing reaction of I with gaseous HCl formed by photodecompn. of II, the 2nd component of the mixt. In the mixt. (7), there is possible only the reaction of photodecompn. of I. In the reactions of I, the radical C_6H_5 splits off H and the rest, C_6H_5Hg, splits off the halide, Br being preferable to Cl. However, if Br is combined with an aromatic nucleus and Cl is in an aliphatic compd., Cl is split off easier.

M. Hosch

Ol'dekop Yu. A

2

11/ Inductive effect of peroxides on the reaction of diphenylmercury with carbon tetrachloride. Yu. A. Ol'dekop. *Uchenye Zapiski Gor'kovski Univ.* 1953, [illegible], 175-7; *Referat. Zhur., Khim.* 1954, No. 40728. The reaction of Ph_2Hg (I) with CCl_4 and BzH (II) was studied. I mixed with CCl_4 and BzH in the presence of air gave at 20° PhHgCl (III) and C_6H_6. The rate of the reaction was much faster and the yield of II was quant. on passing air through the reaction mixt. and on slow heating. When CCl_4 was absent in the mixt. there was a release of Hg. The reaction between I and CCl_4 is induced by the peroxide formed from BzH by passing air through the mixt. When cyclohexane (III) is used instead of BzH, no reaction between I and CCl_4 occurs; a small amt. of II is formed only on prolonged heating and passing air through the mixt.; this indicates that the peroxide formed from III accelerates the reaction very little. By passing 12 l. air during 6 hrs. through the mixt. of 2.9 g. I, 10 ml. BzH, and 20 ml. CCl_4, and heating the mixt., 96% II was obtained, m. 257° (from acetone). In the filtrate were found C_6H_5 [det'd as *m*-dinitrobenzene, m. 90° (from alc.)] and BzOH [1.5 g., m. 121° (from alc.)]. By passing the air 24 hrs. through a mixt. of 2 g. I, 15 ml. III, and 15 ml. CCl_4, no II was formed, after boiling the mixt. for 10 hrs. 10% II was obtained. E. Wirzbicki

RAZUVAYEV, G.A.; OL'DEKOP, Yu.A.; GROBOV, L.N.

New method of synthesis of organomercury compounds. Doklady Akad. Nauk S.S.S.R. 88, 77-8 '53. (MLRA 6:1)
(CA 48 no.1:142 '54)

1. Gorki State Univ.

OL'DEKOP, Yu. A.

Thermal reaction between carbon [illegible] and [illegible]ene. Yu. A. Ol'dekop [illegible] 93, [illegible] sealed tube [illegible] $CHCl_3$ [illegible] and 1.5 g. [illegible]

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001237920017-9"

Ol'dekop, Yu. A.

USSR/Chemistry - Photoreaction

Card 1/1 Pub. 151 - 14/38

Authors : Razuvaev, G. A.; Ol'dekop Yu. A.; and Latyaeva, V. N.

Title : Photoreaction of organometallic mercury compounds in solutions. Part 14.- Photoreaction of beta-mercuribispropionic acid and its dimethyl ether

Periodical : Zhur. ob. khim. 24/2, 260-262, Feb 1954

Abstract : The photoreaction (exposure to ultraviolet light) of beta-mercuribispropionic acid in solutions of methanol and monoethyl ether of ethylene glycol was investigated. The photoreaction was concluded with the separation of the mercury and formation of propionic and adipic acids. The separation of the hydrogen from the solvent by the carboxyethyl radicals was found to be instrumental in the formation of the propionic acid and the formation of adipic acid is due to the dimerization reaction of above mentioned radicals. Aldehydes were discovered in both cases. Four references: 3-USSR and 1-German (1939-1954).

Institution : State University, Gorkiy

Submitted : June 19, 1953

Ol'dekop, Yu. A.

USSR/Chemistry - Reaction processes

Card 1/1 Pub. 151 - 15/38

Authors : Razuvayev, G. A.; Moryganov, B. N.; Dlin, E. P.; and Ol'dekop, Yu. A.

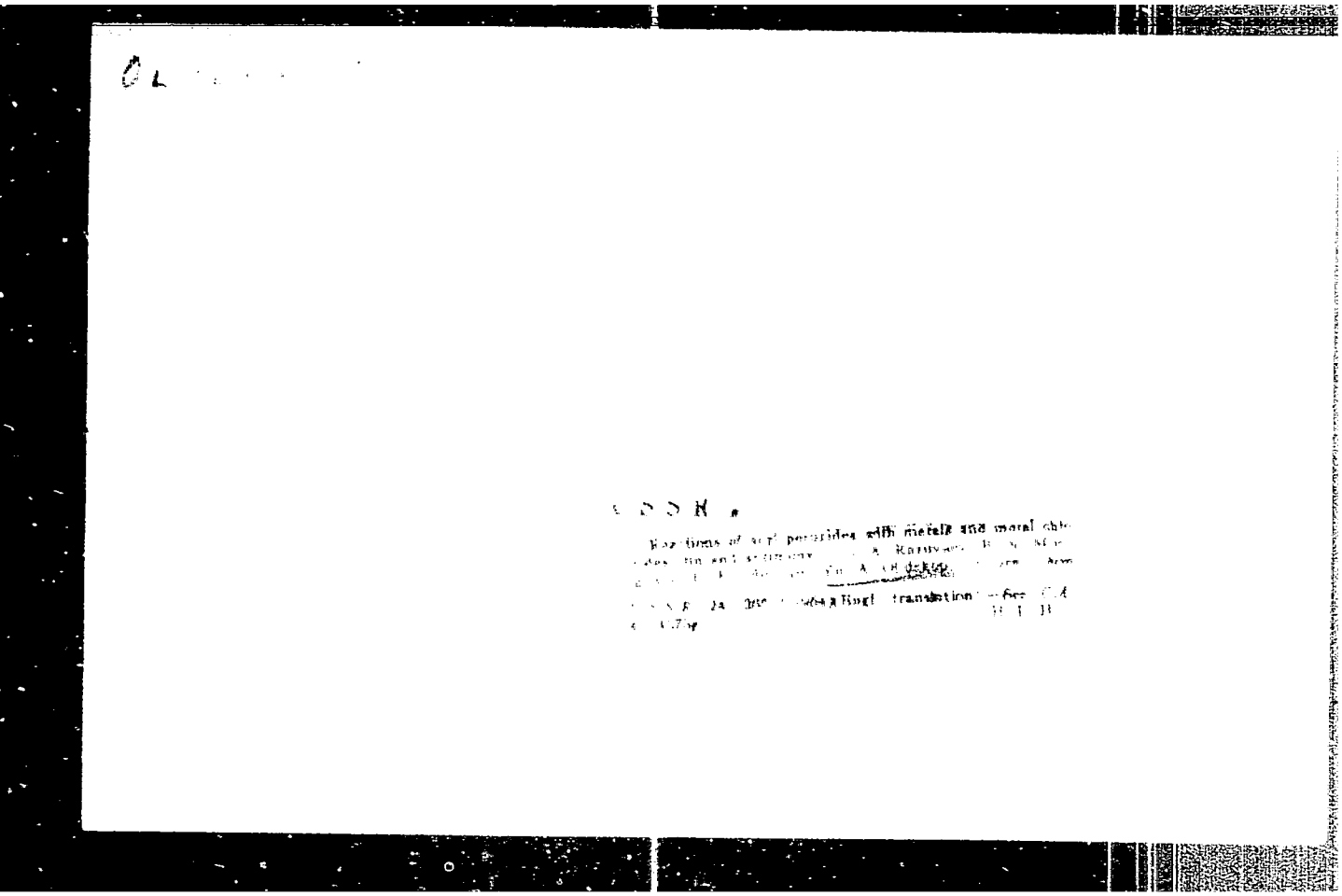
Title : Reaction of acyl peroxides with metals and metal chlorides (Sn and Sb).

Periodical : Zhur. ob. khim. 24/2, 262-265, Feb 1954

Abstract : The reaction between benzoyl peroxide and $SnCl_2$, $SbCl_3$, metallic Sn as well as the reaction between acetyl peroxide and Sb were investigated. The reactions were carried out in benzene, dichloroethane and acetic anhydride solutions. The products derived from these reactions are listed. Four references: 3-USSR and 1-USA (1927-1953).

Institution : State University, Gorkiy

Submitted : June 19, 1953



OL'DEKOP, YU. A.

USSR/ Chemistry - Physical chemistry

Card 1/1 : Pub. 22 - 28/49

Authors : Razuvaev, G. A.; Ol'dekop, Yu. A.; and Mayer, N. A.

Title : Decomposition of mercuric salts of organic acids initiated by free radicals

Periodical : Dok. AN SSSR 98/4, 613-616, Oct. 1, 1954

Abstract : The reaction of acetyl peroxide with Hg was investigated to determine the decomposition characteristics of mercuric salts of organic acids when promoted by free radicals. It was found that the above peroxide reaction can be used as a suitable method for the synthesis of methyl-mercury compounds and alkyl-mercury derivatives. Six references: 5-USA and 1-USSR (1921-1953). Graphs.

Institution : ...

Presented by : Academician N. N. Semenov, May 22, 1954

OL'DEKOP, Yu. A.

6

New method of synthesis of alkyl compounds of mercury from mercury salts of organic acids. G. A. Razuvaev, Yu. A. Ol'dekop, and N. A. Maier (State Univ., Gor'kii). *Zhur. Obshchei Khim.* 25, 697-705 [illegible] *J. Gen. Chem. U.S.S.R.* 25, 665-71(1955)(Engl. translation).—Reaction of Hg salts of aliphatic acids in the presence of peroxides is used as a new method of synthesis of aliphatic organomercury compds. The reaction has a chain mechanism. [illegible] g. NaOH was added with cooling 18 [illegible] g. [illegible] and the mixt. stirred [illegible] AcO$_2$H nor unreacted H[illegible], the concn. of [illegible] was [illegible] 0.18 g./ml. and the soln. (I) could be kept for several days. Heating 15 g. (AcOHg)$_2$, 18 ml. I, and 150 ml. C_6H_6 7.5 hrs. at reflux, filtering off and washing of the ppt. with H_2O, and treatment of the aq. ext. with KI gave 10% MeHgI, m. 145°. [illegible] ing 8 g. (AcOHg)$_2$, [illegible] g. Bz$_2$O$_2$, and 80 ml. C_6H_6 11.5 hrs., evapn. of the org. soln. and steam distn. of the residue in the presence of satd. aq. $CaCl_2$ gave 29% PhHgCl, some Ph$_2$, and BzOH. Refluxing 40 g. Hg(OAc)$_2$, 25 ml. I (contg. 3.8 g. Ac$_2$O$_2$), and 70 ml. C_6H_6 9 hrs., sepg. from a little Hg, extg. with H_2O, and adding KI to the aq. ext. gave 89.5% MeHgI; kinetic curves for this set of reactants are shown with different proportions of reactants. When the reaction was run in AcOH a 90% yield of MeHgI was obtained and the reaction rate was 25 times greater [illegible] in C_6H_6; the propagation coeff. of the chain reaction was estd. at near units. In [illegible] AcOH only traces of MeHgI were formed under similar conditions. Refluxing [illegible] Hg(OAc)$_2$, 2.5 g. [illegible] hydroxycyclohexyl hydroperoxide [illegible] [illegible] C_6H_6 7 hrs. gave [illegible] g. [illegible] and [illegible] MeHgI after usual treatment [illegible] unidentified yellow oil. The reaction run in AcOH-Ac[illegible] gave a little (AcOHg)$_2$ and 78.5% MeHgCl. Refluxing Hg(OAc)$_2$ with Bz$_2$O$_2$ in C_6H_6 12 hrs. gave pptd. Hg salts, 54% MeHgI calcd. on Hg, 41.7% PhHgCl (calcd. on Bz$_2$O$_2$), some Ph$_2$ and BzOH. Refluxing 7.2 g. Hg [illegible] 2 g. Bz$_2$O$_2$ and 60 ml. C_6H_6 12 hrs. gave [illegible] g. starting material with some H[illegible]; the filtrate after distn., treatment with $CaCl_2$ and steam distn. gave 2.9 g. Hg$_2$Cl$_2$ and some PhHgCl, along with Ph$_2$ and BzOH. Hg(O$_2$CEt)$_2$ (15 g.), 2 g. Bz$_2$O$_2$, and 60 ml. C_6H_6 refluxed 12 hrs. gave a ppt. of 9.0 g. (EtCO$_2$Hg)$_2$, while the filtrate extd. with H_2O and the ext. treated with KI gave 34% EtHgI and some Hg$_2$Cl$_2$ and PhHgCl; some BzOH was also formed.

G. M. Kosolapoff

2

Ol'dekop, Yu. A.

Reaction of photodecarboxylation of salts of mercury. A. Razuvaev and Yu. A. Ol'dekop (State Univ., Gorki). [illegible] 103, [illegible] 1955). Ultraviolet irradiation of $Hg(OAc)_2$ in AcOH 10 hrs. gave [illegible]% [illegible]; treatment of the residue with H_2O and NaI gave 71% MeHgI. Similarly [illegible] gave in 4 hrs. 55% Hg and [illegible]% EtHgI. Irradiation of $Hg(OAc)_2$ in dry MeOH 9 hrs. gave 47% HgOAc, some CH_2O, and a trace of MeHgI after aq. treatment with NaI. $Hg(OAc)_2$ in $HOCH_2CH_2OEt$ 6 hrs. gave [illegible]% Hg, [illegible]% HgOAc, and some AcH. $Hg(OAc)_2$ in C_6H_6 8 hrs. gave [illegible]% Hg and 2.8% MeHgI after aq. NaI treatment. Thus the reaction proceeds by radical cleavage of the acyl groups from Hg. G. M. K.

Name: OL'DEKOP, Yuriy Arturovich

Dissertation: Free Radical Reactions in the Liquid Phase

Degree: Doc Chem Sci

Affiliation: Gor'kiy State U

Defense Date, Place: 1 Dec 55, Council of the Inst of Organic Chemistry imeni Zelinskiy, Acad Sci USSR

Certification Date: 12 May 56

Source: BMVO 4/57

Free-radical reactions of lead tetraacetate. G. A. Razuvaev, Ya. A. Ol'dekop, [illegible], and V. [illegible] ([illegible]). *Zhur. Obshchei Khim.* 26, [illegible].—Shaking [illegible] g. $Pb(OAc)_4$ and 30 g. Hg in C_6H_6 50 hrs. gave 97.4% HgOAc and $Pb(OAc)_2$; the latter with Na_2SO_4 yielded 0.68 g. $PbSO_4$. Refluxing 2 g. $Pb(OAc)_4$ and 60 g. Hg in C_6H_6 5 hrs. gave similarly 3.37 g. HgOAc and 1.37 g. $PbSO_4$ (after treatment with Na_2SO_4). Heating 3 g. $Pb(OAc)_4$ and 10 g. $Hg(OAc)_2$ in C_6H_6 until gas evolution ceased, sepg. the ppt., and washing the org. soln. with H_2O gave, after steam distn. and treatment of distillate with KI, 0.002 g. MeHgI, while the ppt. (11.63 g.) gave $Pb(OAc)_2$ (yielding 1.38 g. $PbSO_4$ and Na_2SO_4), and 71.6% HgOAc. Heating 0.3 g. $Pb(OAc)_4$ with 10 g. $Hg(OAc)_2$ in 100 ml. AcOH similarly gave 1.1 g. HgOAc, while the filtrate with KI yielded 0.03 g. MeHgI and 1.7 g. $HgCl_2$; the residue after this, treated with KI, gave 14.88 g. mixed HgI_2 and PbI_2. Attempts to isolate Me derivs. of Pb in similar reactions initiated by heat, ultraviolet light, or Bz_2O_2 failed. Cf. *C.A.* 50, 3451h. G. M. Kosolapoff

OLIDEKOP, YU A.

Ol'dekop, Yu. A.

AUTHORS: Razuvayev, G. A., and Ol'dekop, Yu. A.

TITLE: Reactions of Acyl Peroxides with Mercury (Reaktsii Atsil'nykh perekisey so rtut'yu)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, No. 1, pp. 196-199 (U.S.S.R.)

ABSTRACT: The investigation of the reaction of acyl peroxides with Hg in various media was expanded to include in addition to benzoyl and acetyl peroxides also chloroacetyl and m-nitrobenzoyl peroxides which during decomposition offer more stable RCO_2 radicals. The solvents used in the reactions and their properties are described. It was found that acetyl peroxide reacts with Hg in a benzene medium at normal temperature without separation of CO_2 forming mercurous acetate. Chloroacetyl peroxide reacts in a similar manner; the fixation of the chloroacetyoxy-radical on Hg was observed during the mixing of the benzene solution with the Hg at normal temperature. The reaction tendency in boiling benzene remained unchanged; only the rate of reaction increased sharply. The product of this reaction was identified as mercurous chloroacetate. It became evident that the introduction of Cl sharply stabilizes the RCO_2 radical. The very same effect was demonstrated by a nitro-group on the stability of the $O_2NC_6H_4CO_2$ radical as compared with $C_6H_5CO_2$ radicals. A

OL'DEKOP, Yu. A.

"Reactions of some Alkyl-, Aryl-, and Acyloxy Radicals in Liquid Phase"

Sbornik nauchnykh rabot, vyp. 6, (Collection of Scientific Works of the Institute of Chemistry, Belorussian SSr, Academy of Sciences, No. 6) Minsk, Izd-vo AN Belorusskoy SSR, 1958, 271 pp.

5.3700(B)

66003

SOV/81-59-8-28421

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 8, p 405 (USSR)

AUTHORS: Razuvayev, G.A., Ol'dekop, Yu.A.

TITLE: The Decarboxylizing Reaction of Organic Mercury Salts

PERIODICAL: Tr. po khimii i khim. tekhnolog., 1958, Nr 1, pp 178 - 181

ABSTRACT: The possibility has been studied of initiating a chain reaction of decarboxylizing mercury salts of organic acids with $RCO_2^{\bullet}$ radicals formed in the thermal decomposition of peroxides or in the photolysis of mercury salts. In the heating of a solution of 0.047 mole of Hg acetate (I) in glacial CH_3COOH with 0.01 mole of μ-nitrobenzoyl peroxide (II) the separation of CO_2 and the formation of 0.032 mole of $CH_3HgOCOCH_3$ (III) was observed. The reaction proceeded in the following order: $(CH_3CO_2)_2Hg + O_2NC_6H_4COO^{\bullet} \rightarrow [(CH_3CO_2)_2HgO_2CC_6H_4NO_2] \rightarrow CH_3COOHgOCOC_6H_4NO_2 + CH_3CO_2^{\bullet} \rightarrow CH_3HgOCOCH_3 + CO_2 + CH_3CO_2^{\bullet}$. It was taken for preventing the decarboxylizing of the $R\text{-}COO^{\bullet}$ radicals, the stability of which increases along the series R = CH_3, C_6H_5, $NO_2C_6H_4$. The nitrobenzoate group in $CH_3COOHgOCOC_6H_4NO_2$ is not decarboxylized. In a C_6H_6 medium the same reaction proceeds with difficulty and the yield of III is ~7%. A 6-hour ultraviolet irradiation of a

Card 1/2

The Decarboxylizing Reaction of Organic Mercury Salts

6600
SOV/81-59-8-28424

boiling solution of 0.01 mole of $(C_6H_5COO)_2Hg$ (IV) in benzene causes a process which leads to the formation of $(C_6H_5CO_2)_2Hg_2$, Hg, phenylmercury benzoate, diphenyl, C_6H_5COOH and CO_2. During irradiation of IV the formation of $C_6H_5HgOCOC_6H_5$ is not observed in boiling CH_3OH, $C_6H_5CO_2\cdot$ - radicals react only with CH_3OH according to the equation: $IV + CH_3OH \rightarrow 2C_6H_5COOH + Hg + H_2CO$. An analogous photoreaction of IV in a medium of boiling ethylcellosolve is conjugated with the partial decarboxylizing of the $C_6H_5CO_2\cdot$-radical (formation of C_6H_6).

O. Chernitsov

Card 2/2

OL'DEKOP, Yu.A.

Reaction of various alkyl, aryl and acyloxy radicals in the liquid phase. Sbor. nauch. rab. Inst. khim. AN BSSR no.6:243-265 '58. (MIRA 11:11)

(Radicals (Chemistry))

AUTHORS: Ol'dekop, Yu. A., Vasilevskaya, T. V. SOV/79-28-11-23/55

TITLE: Reactions of Mercury Pivalate With Peroxides and Light (Reaktsii pivalata rtuti s perekisyami i svetom)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11, pp 3008 - 3010 (USSR)

ABSTRACT: Continuing earlier papers by G.A.Razuvayev and his collaborators (Refs 1-3) the authors investigated the reactions of the mercury pivalate (mercury trimethyl acetate) with benzoyl peroxide and the ditert.butyl dialkyl peroxide, as well as under the action of ultraviolet light. The reaction of mercury trimethyl acetate with benzoyl peroxide took place in benzene solution at 80°, and lead to the phenyl mercury compounds (94.6%). In the reaction products metallic mercury (99.7%), pivalic acid (30%), and resinous products in small amounts were found. The reaction of the ditert. butyl peroxide with mercury pivalate was carried out in chloro benzene solution at boiling temperatures of this not completely inert solvent. The final product

Card 1/3

consisted of 35.7% methyl mercury compounds, 50.6% metallic mercury, 68.7% pivalic acid and a gas containing CO_2. The fixation of the methyl radical in the cleavage of the ditert.butyl peroxide was observed for the first time. In the irradiation of mercury pivalate in the ultraviolet light in benzene at 80° the authors obtained 86.5% mercury, pivalic acid, resin and CO_2. Basing on the results obtained it may be assumed that the radical R' formed in the decomposition of the peroxide, breaks the O-Hg bond under the formation of the corresponding $RHgOCOC(CH_3)_3$. In analogy to the earlier found scheme (Ref 1) the following may be assumed:

$$(CH_3)_3CC(=O)-O-Hg-O-C(=O)C(CH_3)_3 + R' \rightarrow \left[(CH_3)_3CC(=O)-O(R')-Hg-O-C(=O)C(CH_3)_3\right] \rightarrow$$

$$\rightarrow RHgOCOC(CH_3)_3 + (CH_3)_3CCO_2 \cdot \text{(where R=}C_6H_5\text{., and }CH_3\text{.)}.$$

In the thermal and photoreactions of mercury pivalate no $(CH_3)_3CHgX$ compounds were found. There are 10 references, 3 of which are Soviet.

Reactions of Mercury Pivalate With Peroxides and Light SOV/79-28-11-23/55

ASSOCIATION: Belorusskiy gosudarstvennyy universitet imeni V.I. Lenina (Belorussian State University imeni V.I.Lenin)

SUBMITTED: September 26, 1957

Card 3/3

OL'DEKOP, Yu.A.; CHIZHEVSKAYA, I.I.

Reactions of a diacetylated derivative of cyclohexyl),)-dihydroperoxide with mercury. Sbor. nauch. rab. Inst. fiz.-org. khim. AN BSSR no. 7:68-74 '59. (MIRA 14:4)
(Mercury) (Cyclohexyl hydroperoxide)

OL'DEKOP, Yu.A.; VARLAMOV, V.I.

Photodecarboxylation of mercury monochlorodiacetate. Sbor. nauch. rab. Inst. fiz.-org. khim. AN BSSR no. 7:75-77 '59. (MIRA 14:4)
(Mercury compounds)

66424

5.3200, 5.2600(A)

~~5 (3)~~ SOV/20-128-6-29/63

AUTHORS: Ol'dekop, Yu. A., Sevchenko, A. N., Academician AS BSSR, Zyat'kov, I. P., Bylina, G. S., Yel'nitskiy, A. P.

TITLE: A New Method of Synthesizing Asymmetric Acyl Peroxides

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 6, pp 1201 - 1203 (USSR)

ABSTRACT: After giving a survey of the production methods of symmetric and asymmetric acyl peroxides ($RCOOOCOR$, and $RCOOOCOR^1$, respectively) (Refs 1-5, as well as F. Jurečka and R. Chromeček, Ref 6), the authors put forward some details of the method mentioned in the title. When a mixture of aromatic aldehyde and acetic anhydride (1 : 3) is oxidized in the air, the asymmetric acyl peroxides are formed (see Diagram in which X = p-CH_3, p-CH_3O, p-Cl; m-Cl). After 3-6 hours, the yields were 53-88%. The oxidation proceeded at 30-40° in the presence of anhydrous sodium acetate (0.2-0.3% of all substances) or calcium carbonate (10-15%). The air-charging rate was 2.5-3 l/min. The reaction mixture was illuminated with a 75 w electric bulb. All peroxides obtained are well soluble in benzene, ether, CCl_4, chloroform, alcohol, petroleum ether, and acetic acid. They explode in an open flame. They are

Card 1/2

A New Method of Synthesizing Asymmetric Acyl Peroxides

66424
SOV/20-128-6-29/63

peroxides of acetyl-p-chloro-benzoyl (I), acetyl-p-methyl-benzoyl (II), acetyl-m-chloro-benzoyl (III), and acetyl-p-methoxy-benzoyl (IV). Figure 1 shows their infrared spectra. The positions of the maxima of the 3 bands agree in (I) and (II), while they are shifted toward higher frequencies in (III), and in the direction of lower frequencies in (IV). Evidently, these bands are due to the oscillations of a benzene ring having a substituent. The results of a further analysis of the said spectra agree with the data of reference 9. Figure 2 shows ultraviolet spectra of 0.01 m.-solutions in CCl_4 of the substances produced in the range of 233-305 mμ. The analysis of these spectra is continued in a further paper by the authors. Finally, acetyl-2,4-dimethyl-benzoyl peroxide was produced, and the oxidation of benzaldehyde in propionic anhydride was studied. Investigations of other aldehydes and acid anhydrides in this reaction are being carried on. There are 2 figures and 9 references, 1 of which is Soviet.

ASSOCIATION: Belorusskiy gosudarstvennyy universitet im. V. I. Lenina (Belorussiya State University imeni V. I. Lenin)

SUBMITTED: July 6, 1959

Card 2/2

4

OL'DEKOP, Yu.A.; MAYYER, N.A.

Effect of the initiator, temperature, and medium on induced chain decomposition of mercury acetate. Dokl.AN BSSR 4 no.6:248-252 Je '60. (MIRA 13:7)

1. Institut fiziko-organicheskoy khimii AN BSSR. Predstavleno akad. AN BSSR N.F.Yermolenko.
(Mercury acetate)

S/081/62/000/003/003/090
B151/B144

AUTHORS: Ol'dekop, Yu. A., Sevchenko, A. N., Zyat'kov, I. P., Bytina, G. S., Yel'nitskiy, A. P.

TITLE: Unsymmetrical diacyl peroxides

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1962, 17, abstract 3B91 (Sb. nauchn. rabot. In-t fiz.-organ. khimii AN BSSR, no. 8, 1960, 13 - 18)

TEXT: Peroxides of acetyl-n-chlorobenzoyl (I), acetyl-n-methyl-benzoyl (II), acetyl-m-chlorobenzoyl (III), acetyl n-methoxy benzoyl (IV), acetyl-o-methyl-benzoyl (V), acetyl 2,4-dimethyl-benzoyl (VI), and propionyl-benzoyl (VII) are obtained. A mixture of an aromatic aldehyde and an acid anhyoride (1 : 3) is oxidized at 30 - 40° in the presence of anhydrous Na acetate (0.2 - 0.3% by weight of the sampled substances) or of Ca carbonate (10 - 15%) with air admitted at a rate of 2.5 - 3 liters/min. The reaction is carried out in diffuse daylight or in illumination from an incandescent lamp of 50 - 75 w for 3 - 6 hr. The product obtained is decanted with water or treated (in special cases) with HNO_3. The peroxide separating out

Card 1/2

Unsymmetrical diacyl peroxides

S/081/62/000/003/005/030
B151/B144

is washed with water, a solution of $NaHCO_3$, and then again with water and dried. I, m.p. 49.5°C; II, m.p. 65 - 65.6°C; III, m.p. 53 - 54°C; IV, m.p. 59.5°C; V, solidification temperature -20°C, d_4^{20} 1.1620; n_D^{20} 1.5126; VI, solidification temperature -7 to -9°C, d_4^{20} 1.1370; n_D^{20} 1.5216; VII, solidification temperature -20°C, d_4^{20} 1.1530; n_D^{20} 1.5097. IR and UV absorption spectra of V-VII are obtained. The spectra of substances I - IV were obtained previously (RZhKhim, 1960, no. 10, 38647). In the region of 1750 - 1840 cm^{-1} of the IR spectra, two bands are found belonging to the stretching vibrations of the C = O group. An interpretation is given for several other bands found in the spectra of I - IV. In the UV absorption spectra of V and VII, an intense absorption band is observed with maxima at 239 and 235 mμ. VII also absorbs at 275 and 283 mμ. In the spectrum of V, these bands are only very weakly developed. In the region above 300 mμ all the substances studied were transparent. [Abstracter's note: Complete translation.]

Card 2/2

36928
S/081/62/000/007/012/033
B156/B101

5.3700

AUTHORS: Azanovskaya, M. M., Ol'dekop, Yu. A., Kharitonovich, A. N.

TITLE: Silicon peroxides and their reactions

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 7, 1962, 274, abstract 7Zh347 ("Sb. nauchn. rabot. In-t fiz.-organ. khimii AN BSSR", no. 8, 1960, 32-36)

TEXT: The reactions of $Si[OOC(CH_3)_3]_4$ (I), $(CH_3)_3SiOOC(C_6H_5)(CH_3)_2$ (II) and $(CH_3)_3SiOOCH(C_6H_5)_2$ with $(C_6H_5)_3COH$ (III), and of I with $(CH_3)_2(C_6H_5)COH$ (IV), $(CH_3)_3COH$ (V) and 1-methyl cyclohexanol (VI), in the presence of acids, have been studied. During the reaction between an acetic-acid solution of III with an ether solution of II, in the presence of a small amount of H_2SO_4, $(C_6H_5)(CH_3)_2COOC(C_6H_5)_3$ is formed (yield 81% and melting point 167-169°C). $(C_6H_5)_2CHOOC(C_6H_5)_3$ (yield 72% and melting point 88-89°C) and $(CH_3)_3COOC(C_6H_5)_3$ (yield 78% and

Card 1/2

OL'DEKOP, Yu.A.; MAYYER, N.A.; GESEL'BERG, V.I.

Photochemical reactions of mercury salts of organic acids. Sbor. nauch. rab. Inst. fiz.-org. khim. AN BSSR no.8:37-40 '60.

1. Institut fiziko-Organicheskoy khimii AN BSSR.
(Mercury organic compounds)

MAYYER, N.A.; OL'DEKOP, Yu.A.

Decarboxylation of mercury salts of organic acids under the influence of peroxides. Sbor. nauch. rab. Inst. fiz.-org. khim. AN BSSR no.8:113-118 '60. (MIRA 14:3)

1. Institut fiziko-organicheskoy khimii AN BSSR.
(Peroxides) (Carboxyl group) (Mercury salts)

5.3700

77400
SOV/79-30-1-61/78

AUTHORS: Ol'dekop, Yu. A., Mayer, N. A.

TITLE: Reaction of Mercury Acetate With 1,1-Cyclohexylidene Diperacetate and Benzoyl Peroxide

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 275-282 (USSR)

ABSTRACT: This is a continuation of the authors' previous study (ZhOKh, 30, 299, 1959; and others) of the reaction of mercury acetate with 1,1-cyclohexylidene diperacetate (I) and benzoyl peroxide (II). The present article deals with the effect of the temperature, initiators, and the media on the chain reaction of mercury acetate free-radical decomposition. The following experiments were conducted. Reaction of mercury acetate with (I) in acetic acid at 80±0.5° (for 5 hours) and at 97-98° (for 2 hours). Reaction of mercury acetate with (I) in benzene and in a mixture of benzene and acetic acid at 80°. Reaction of mercury acetate with (II) in acetic acid at 80° ± 0.5°

Card 1/4

Reaction of Mercury Acetate With 1,1-Cyclohexylidene Diperacetate and Benzoyl Peroxide

77400
SOV/79-30-1-61/78

and 97-98°. Reaction of mercury acetate with (II) in benzene and in a mixture of benzene and acetic acid at 80°. The results are given in Tables 1 and 2.

Table 1. Reaction of 0.03 M mercury acetate solution with 1,1-cyclohexylidene diperacetate (I).

Nr	Taken For the reaction			Temperature	Yields						Reaction rate $\frac{\Delta V_2}{\Delta t}$ (ml/min)	
	I (in moles)	acetic acid (in ml)	Benzene (in ml)		CH_3HgX (based on Hg)	$Hg(OCOCH_3)_2$ (in % of amount taken)	$HgX(OCOCH_3)_2$ (in % of amount taken)	CO_2 (in moles)	CH_4 (in moles)	C_2H_6 (in moles)	Total gas volume	For alkanes
1	0.005	100	—	80°	36.0	57.3	3.21	0.0074	0.0009	0.00013	1.85	—
2	0.005	100	—	80	30.2	60.5	3.21	0.0071	0.0004	0.00012	—	—
3	0.01	100	—	80	95.4	0	1.18	0.027	0.0019	0.00014	11.0	—
4	0.01	100	—	80	94.3	0	1.29	0.026	0.0015	0.00014	—	—
5	0.005	100	—	97—98	94.1	0	1.93	0.0258	0.0031	0.0009	—	21.0
6	0.01	100	—	97—98	98.3	0	0	0.0404	0.0078	0.0010	—	43.0
7	0.01	—	100	80				0.0100	0.0022	0.00024	7.0	—
8	0.01	—	100	80				0.0774	0.0020	0.00025	—	~7
9	0.01	—	100	80	75.0	15.6	7.7				—	—
10	0.01	1.0	100	80	86.5	7.91	3.85	0.0357	0.0019	0.00018	—	—
11	0.01	10.0	100	80	93.9	0	0	0.0342	0.0017	0.00024	11.55	—
12	0.01	10.0	100	80	96.5	0	0	0.0377	0.0021	0.00025	—	~7

Card 2/4

Reaction of Mercury Acetate With 1,1-Cyclohexylidene Diperacetate and Benzoyl Peroxide

77400
SOV/79-30-1-61/78

Table 2. Reaction of 0.03 M mercury acetate solution with benzoyl peroxide (II).

Nr	Taken for reaction			Temperature	Yields									Rate of total gas evolution $\frac{\Delta V_0}{\Delta \tau}$ (in ml/min)
	II (in mole)	acetic acid (in ml)	Benzene (in ml)		CH_3HgX (in %, based on Hg)	C_6H_5HgX (in %, based on Hg)	$Hg(OCOCH_3)_2$ (in % of amount taken)	$Hg_2(OCOCH_3)_2$ (in % based on Hg)	$C_6H_5-C_6H_5$ (in g)	C_6H_5COOH (in g)	CO_2 (in mole)	CH_4 (in mole)	C_2H_6 (in mole)	
13	0.005	100	—	80°	82.0	2.24	0	14.15	0.02	0.01	0.0213	0.0019	0.00047	5.24
14	0.01	100	—	80	83.8	5.86	0	6.3	0.06	0.09	0.0295	0.0036	0.00019	11.4
15	0.005	100	—	97—98	95.5	3.09	0	0.65	0.02	0.02	0.0302	0.0038	0.00015	42.5
16	0.01	100	—	97—98	91.2	6.6	0	0	0.03	0.05	0.0368	0.0057	0.00016	64.4
17	0.005	100	—	97—98	39.1	60.15	0	0	0.25	0.20	0.067	0.0154	0.00064	—
18	0.005	0	100	80	40.3	7.03	34.4	15.4	0.15	0.03	0.0194	0.0011	0.00007	—
19	0.005	10	100	80	61.7	9.15	0	25.7	0.14	0.03	0.0225	0.0007	0.00015	—
20	0.01	0	100	80	70.0	11.7	0	17.30	0.21	0.30	0.0396	0.0029	0.00009	—

Card 3/4

Reaction of Mercury Acetate With 1,1-Cyclohexylidene Diperacetate and Benzoyl Peroxide

77400
SOV/79-30-1-61/78

The following conclusions are made: increasing the amount of the initiators, raising the temperature, and addition of acetic acid have a positive effect on the process of mercury acetate decomposition; in all experiments the evolved gas is composed of CO_2, CH_4, and C_2H_6. There are 2 tables; 2 figures; and 6 references, 1 U.S., 1 U.K., 1 German, 3 Soviet. The U.S. and U.K. references are: W. Cooper, J. Chem. Soc., 1951, 1340; C. D. Wagner, R. H. Smith, E. D. Peters, Ind. Eng. Chem., Anal. Ed., 19, 976 (1947).

ASSOCIATION: Institute of Chemistry of Academy of Sciences Belorussian SSR (Institut khimii Akademii nauk Belorusskoy SSR)

SUBMITTED: December 17, 1958

Card 4/4

5.3400,5.3700,5.4300

77404
SOV/79-30-1-65/78

AUTHORS: Ol'Dekop, Yu. A., Mayer, N. A.

TITLE: Reactions of Acetyl Peroxide With Mercuric Acetate and With Some Mercuric Salts of Inorganic Acids

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 299-302 (USSR)

ABSTRACT: In this work the authors continue the study of reaction between mercuric acetate and acetyl peroxide (study of reactions between mercuric acetate and acetyl, benzoyl, m-nitrobenzoyl, and some other peroxides was started earlier [Razuvayev, G. A., Ol'dekop, Yu. A., Mayer, N. A., Doklady Akad. nauk SSSR, 98, 613 (1954); Razuvayev, G. A., Ol'dekop, Yu. A., Mayer, N. A., Zhur. obshchey khim., 25, 697 (1955); Razuvayev, G. A., Ol'dekop, Yu. A., Papers on Chemistry and Chemical Technology (Trudy po khimii i khimicheskoy tekhnologii), 1st issue, Gor'kiy, 178 (1958)]) to obtain new data on the mechanism of the reaction. A 15-16% solution of acetyl peroxide in acetic acid was prepared by the

Card 1/5

method described earlier (Razuvayev, G. A., et al., Zhur. obshchey khim., 25, 697 (1955)) and analyzed iodometrically (Smit. W. S., Rec. trav. chim., 49, 675 (1930)). The reaction was conducted at 97-98° in a 250-ml 3-neck round-bottom flask provided with a dropping funnel, a reflux condenser, and a stirrer. A coil trap, cooled with a mixture of dry ice and acetone, and three absorption tubes filled with KOH (for quantitative absorption of CO_2) were attached to the upper end of the condenser. The reaction products were: methylmercury acetate $CH_3HgDCOCN_3$, (collected as precipitate and converted into CH_3HgI with KI), CO_2 (weighed in the absorption tubes), CH_4, and C_2H_6 (the latter two collected in gas burettes and analyzed with VTI-2 and Kh-1M gas analyzers). The rate of evolution of hydrocarbons (CH_4 + C_2H_6) for various initial quantities of acetyl peroxide is illustrated in Fig. 1.

Reactions of Acetyl Peroxide With Mercuric Acetate and With Some Mercuric Salts of Inorganic Acids

77404
SOV/79-30-1-65/78

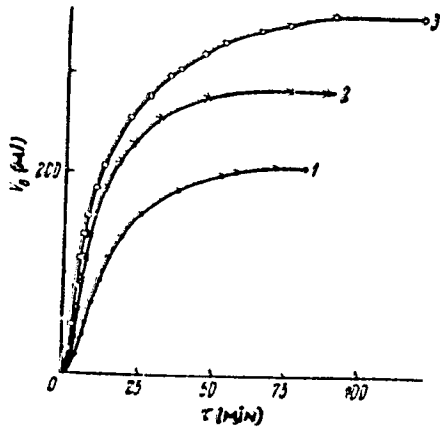


Fig. 1. Effect of intial quantity of acetyl peroxide upon rate of formation of saturated hydrocarbons. Acetyl peroxide: (1) 0.005, (2) 0.0075, (3) 0.01 moles.

Card 3/5

Reaction rate $(\frac{\Delta V_o}{\nabla \tau})$ expressed by the volume of CH_4 + + C_2H_6 is related to the peroxide quantities used in the ratio 1.0: 1.5: 2.0); it is increased by factors of 1.0 : 2.4 : 2.7, similarly to the rate increases obtained earlier (in the works cited above) for the total gas volumes (CO_2 + CH_4 + C_2H_6). The increase in volume of hydrocarbons is due to methane; the yield of ethane is not affected by the peroxide (at 0.005 moles peroxide, yields of ethane and methane are identical). The authors have also studied reactions of acetyl peroxide with mercuric sulfate, chloride, and iodide, and with mercurous sulfate and chloride. All reactions were conducted at 97-98° for 6 hr. CH_3HgI, obtained by addition of KI, was weighed (CH_3HgI was tested in all experiments by taking a mixed melting point with chemically pure CH_3HgI).

[illegible] Peroxide With Mercuric [illegible] and With Double Salts of Inorganic Acids

77404
SOV/79-30-1-65/78

Small quantities of CH_3HgI (from 0.83% yield, calculation on basis of the peroxide, for Hg_2Cl_2, to 9.8% for HgF_2) were obtained in all reactions except with HgI_2. There is 1 table; and 4 references, 3 Soviet, 1 [illegible].

ASSOCIATION: Institute of Chemistry, Academy of Sciences, Belorussian SSR (Institut khimii Akademii nauk Belorusskoy SSR)

SUBMITTED: September 25, 1958

Card 1/1