B/152/63/000/002/001/003
B126/B186

AUTHORS: Sultanov, M. Yu., Belen'kiy, M. S.

TITLE: Oxidation of CO and high-degree oxidation of n-heptane on a copper-chromium oxide catalyst $2CuO \cdot Cr_2O_3$

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 2 1963, 50 - 55

TEXT: Detailed tests on the above reactions were carried out with a view to decontaminating exhaust and recovery gases. The catalyst obtained by decomposition of precipitated copper and chromium hydroxides at 180°C was heated for 2 hrs and broken into pieces of 3 - 3.5 mm. At a volume velocity of 52000 hr^{-1} 85 % CO was oxidised at 280°C and 80 % n-heptane at 300°C. The size of the pellets did not influence the activation energy. The course of the reaction with CO and n-heptane was of the first order and with oxygen zero. The kinetics of CO oxidation in concentrations of 0.5 to 6 % can be expressed by a simple equation. For the kinetics of high-degree oxidation of n-heptane this equation applies only if the initial concentration is constant, as its increase reduces the reaction velocity. Tests

Card 1/2

Oxidation of CO and high-degree oxidation ...

with 2 % vapour in the blend showed that reaction was deferred about 1.5 times. The same decrease in the oxidation velocity of CO and n-heptane was also observed after 620 hrs of work. However the initial oxidation degree can be regained by increasing the temperature by 20°C. There are 4 figures and 3 tables.

ASSOCIATION: Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova (Azerbaydzhan Institute of Petroleum and Chemistry imeni M. Azizbekov)

SUBMITTED: July 17, 1962

Card 2/2

SULTANOV, M.Yu.; BELEN'KIY, M.S.

Effect of composition on the properties of copper-chromium oxide catalysts in the oxidation of carbon monoxide. Izv. vys. zav.; neft' i gaz 5 no.9:63-69 '62. (MIRA 17:5)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova.

SHIKHOV, N.S.

Degree of the gravity of injuries inflicted with stabbing and cutting weapons penetrating into the thoracic cavity. Azerb. med. zhur. 42 no. 7:48-52 Jl '65 (MIRA 19:1)

SADYKH-ZADE, S.I.; SULTANOV, N.T.

New method of synthesizing α,- β -chlorostyrenes by the direct chlorination of styrene. Azerb.khim.zhur. no.5:33-36 '60.
(MIRA 14:8)

(Styrene) (Chlorination)

SULTANOV, N.T.; ALIYEVA, M.A.; KODZHAYEVA, Sh.Ya.; SADYKHZADE, S.I.

Anomalous chlorination of isobutylene. Azerb. khim. zhur. no.1:35-38 '65. (MIRA 18:7)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

SULTANOV, N.T.; ALIYEVA, M.A.; SADYKHZADE, S.I.

Chlorination of methyl methacylate. Azerb.khim.zhur. no.6: 23-27 '63. (MIRA 17:3)

MAMEDOV, Shamkhal; SULTANOV, N.T.; SADYKHZADE, S.I.; KHODZHAYEVA, Sh.Ya.; PISHNAMAZZADE, B.F.

Alkylation of α-chloromethylalkyl ethers with methallyl chloride. Azerb. khim. zhur. no.1:81-87 '64. (MIRA 17:5)

L 44582-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6015674 (A) SOURCE CODE: UR/0413/66/000/009/0077/0077

36
B

INVENTOR: Sadykh-zade, S. I.; Sultanov, N. T.; Aliyeva, M. A.; Akhmedova, G. G.; Radchenko, I. I.; Roykh, B. N.; Krchmarek, V. V.

ORG: none

TITLE: Method for obtaining synthetic rubber. Class 39, No. 181295 [announced by Institute of Petrochemical Processes, AN Azerbaydzhan SSR (Institut neftekhimicheskikh protsessov AN Azerbaydzhanskoy SSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 77

TOPIC TAGS: synthetic rubber, butadiene styrene rubber, copolymerization, polymerization initiator

ABSTRACT: An Author Certificate has been issued for a method of obtaining synthetic rubber by water-emulsion copolymerization of butadiene with styrene in an alkaline medium in the presence of conventional initiators, buffers, emulsifiers, and regulators. To improve the physical and mechanical properties of the rubber, the copolymerization

Card 1/2 UDC: 678.762.2-139

L 44592-66

ACC NR: AP6015674

is carried out in the presence of methyl α,β-dichloroisobutyrate as the third comonomer for butadiene. [Translation] [NT]

SUB CODE: 11/ SUBM DATE: 04Jun65/

Card 2/2

66425
SOV/20-128-6-30/63

~~5 (2,3)~~ 5.3700 (B) (C)

AUTHORS: Petrov, A. D., Corresponding Member AS USSR, Vdovin, V. M., Sultanov, R.

TITLE: Synthesis of α,ω-Di-(cyano-alkyl) Tetraalkyl Disiloxanes

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 6, pp 1204 - 1207 (USSR)

ABSTRACT: On the basis of analogy with organic dinitriles, it is to be expected that also organo-silicon compounds having 2 fragments [A] in the molecule (A = $\equiv Si(CH_2)_nCN$, where $n \geq 2$) may be used as initial raw materials for the production of α,ω-difunctional compounds utilizable for the synthesis of organo-silicon polymers. The present paper refers to the synthesis of α,ω-dinitriles of type [B] (see Diagram). The addition of 2 moles of allyl cyanide to $HR_2SiOSiR_2H$ by means of I. L. Speir's (Ref 7) catalyst (Table 1, Experiments Nr 5 and 6) was not successful. Ethyl-methyl chlorosilane has already been added to cyanous olefines (Table 1, Experiments 3,7). The synthesis of the desired α,ω-dinitriles was possible by hydrolysis of the monochlorides obtained. Water was used as a hydrolyzing agent. By use of concentrated HCl and under harder conditions, the corresponding α,ω-acid was formed.

Card 1/2

29520
S/062/61/000/011/007/012
B103/B147

S 3700

AUTHORS: Vdovin, V. M., Sultanov, R., Sladkova, T. A., Freydlin, L. Kh., and Petrov, A. D.

TITLE: Addition of alkoxy silane hydrides to unsaturated nitriles and hydration of the ω-cyano-alkyl-alkoxy silanes produced

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 11, 1961, 2007 - 2012

TEXT: The authors studied the addition of alkoxy silane hydrides to: a) allyl cyanide; b) β-cyano-ethyl ether of allyl alcohol; and c) acrylonitrile. It has been found that the addition takes place as follows: $R'(RO)_2SiH + CH_2 = CHCH_2X \longrightarrow R'(RO)_2SiC_2H_4CH_2X$, R' being $-CH_3$, $-OC_2H_5$, or $-OCH_3$; R being $-CH_3$, or $-C_2H_5$; and X being $-OCH_2CH_2CN$, or $-CN$. The reaction takes place already at atmospheric pressure, if a mixture of equimolar quantities of the reagents is boiled in the presence of Pt/C (20% of Pt) or a 0.1 N solution of H_2PtCl_6 in isopropyl alcohol. The yields in addition products were 40 - 50% related to the components used, and up to

Card 1/

Addition of alkoxy silane hydrides...

85% related to reacted unsaturated nitrile. Yields can be increased and the reaction time essentially reduced in sealed glass ampullas. The main reaction was accompanied in all cases by a disproportionation of the alkoxy radicals of the initial alkoxy silane hydrides: $2(C_2H_5O)_3SiH \rightarrow (C_2H_5O)_4Si + [(C_2H_5O)_2SiH_2]$, whereby the dihydride formed continued to disproportionate. The frequencies of $-CH_3$ groups were absent in the infrared absorption spectra of the ω-cyano-alkyl trichlorosilane. For this reason, the structures: $Cl_3SiCH_2CH_2CH_2CN$ and $Cl_3SiCH_2CH_2CH_2OCH_2CH_2CN$ were attributed to these nitriles. The ω-cyano-alkyl-trialkoxy silanes which were produced by addition of both trialkoxy silane hydride and $HSiCl_3$ to unsaturated nitriles, had identical properties. Thus, it is concluded that the addition of both $(RO)_3SiH$ and Cl_3SiH to these nitriles proceeds in the same way, i. e., that the trialkoxy silyl group is placed at the end of the molecule. The interaction of $CH_3(OC_2H_5)_2SiH$ and unsaturated nitriles results perhaps in a mixture of products added to the double bond. This is proved by the wide boiling ranges of these products. An

Card 2/

Addition of alkoxy silane hydrides...

addition to the triple bond $-C\equiv N$ which could be possibly expected (in analogy to the data of Ref. 7, R. Calas et al. Compt. rend. 252, 420 (1961)), did not occur. Addition of $(C_2H_5O)_3SiH$ to acrylonitrile was achieved neither at atmospheric nor at elevated pressure in the presence of catalysts and other substances (in glass ampullas at 150 - 180°C); whereas acrylonitrile was polymerized and triethoxy silane disproportionated, or the initial substances remained unchanged. The ω-cyano-alkyl-triethoxy silanes produced were hydrated to the relevant primary amines in the presence of Co or Ni skeleton catalysts under pressure according to the previously described methods (A. D. Petrov et al. Dokl. AN SSSR, 129, 1064 (1959); L. Kh. Freydlin et al. Izv. AN SSSR, Otd. khim. n. 10, 1878 (1960); V. N. Vdovin et al., author's certificate, SSSR 133683: Byull. isobreteniy SSR 23 (1960)) (Table 2). It has been found that the catalyst type and the structure of the nitrile have a remarkable effect on the yield in the primary amine. The reaction was more selective in the presence of Co catalysts than of Ni catalysts. The yield in amine was higher on hydration of ω-cyano-alkyl-trialkoxy silane than on reduction of β-cyano-ethyl-triethoxy silane. It has been established that hydration of ω-(dicyano-alkyl)-tetraethoxy disiloxanes to the relevant

Card 3/

Addition of alkoxy silane hydrides...

primary α,ω-diamines is possible (Table 3). The α,ω-dinitriles mentioned were formed as by-products of etherification of ω-cyano-alkyl-trichloro-silanes. There are 3 tables and 12 references: 5 Soviet and 7 non-Soviet. The three most recent references to English-language publications read as follows: Ref. 3: L. H. Sommer et al. J. Amer. Chem. Soc. 79, 2764 (1957); Ref. 6: V. B. Jex, J. Mc Mahon, US-Patent 2907784; Chem. Abstr. 54, 4388 (1960); Ref. 11: B. V. Aller, J. Appl. Chem., 7, 130 (1957).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: June 13, 1960

Table 1. Properties of organosilicon nitriles and dinitriles.
Legend: (1) boiling point (°, mm Hg); (2) found; (3) calculated.

Table 2. Catalytic hydration of alkyl-cyano silanes in the presence of [illegible] catalysts.

Card 4/[illegible]

88571

S/020/61/136/001/019/037
B016/B055

5.3700

AUTHORS: Vdovin, V. M., Pushchevaya, K. S., Belikova, N. A., Sultanov, R., Plate, A. F., and Petrov, A. D., Corresponding Member AS USSR

TITLE: Derivatives of Silanes With Hydrocarbon Bridges Between the Si Atoms. The Polymerization of 1,1-Dimethyl Silicocyclopentane

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 1, pp. 96-99

TEXT: The authors studied the effect of aluminum halides ($AlCl_3$ and $AlBr_3$ on 1,1-dimethyl silicocyclopentane. They regard the latter as a bridge compound in which both ends of the organic radical -R- are attached to the same silicon atom. Experimental results confirmed the authors assumption that, under the influence of AlX_3, the $\equiv Si - (CH_2)_4$ bonds would be more reactive than the $\equiv Si - CH_3$ bonds. As expected, this lead to formation of a reactive radical $-Si(CH_3)_2CH_2CH_2CH_2CH_2-$, and in the presence

Card 1/3

Derivatives of Silanes With Hydrocarbon Bridges Between the Si Atoms. The Polymerization of 1,1-Dimethyl Silicocyclopentane

of $AlCl_3$ or $AlBr_3$ to a specific polymerization reaction (A):

$$(CH_3)_2Si(CH_2)_4 \xrightarrow{Al_2X_6} \left[(CH_3)_2Si\ (CH_2)_4\right]\cdot Al_2X_6 \longrightarrow$$

$$\longrightarrow \left[-(CH_3)_2Si(CH_2)_4-\right]\cdot Al_2X_6 \longrightarrow -\left[Si(CH_3)_2CH_2CH_2CH_2CH_2\right]n - + Al_2X_6 \quad (A)$$

This reaction is very rapid if the silane and the catalyst are heated for a short time. The authors verified the structure of this product by synthesizing it from corresponding fragments (B). Infrared spectroscopy proved these two products to be identical. Differences between the spectra of these two polymers and that of the monomer are explained by the spacial position of the carbon chains (isomerism). The authors thank Yu. P. Yegorov and Ye. D. Lubush for performing the spectroscopic analyses. Finally the authors discuss the polycondensation of 1,4-ditrimethyl disilyl butane. The reaction product was a colorless, rubbery insoluble polymer similar to the polymerization product obtained in reaction (A). There are 1 figure and 6 Soviet references.

Card 2/3

88571

Derivatives of Silanes With Hydrocarbon Bridges Between the Si Atoms. The Polymerization of 1,1-Dimethyl Silicocyclopentane

S/020/61/136/001/019/037
B016/B055

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: October 1, 1960

Card 3/3

2.3551
S/020/61/138/004/011/023
B103/B203

15.8170

AUTHORS: Vdovin, V. M., Sultanov, R., Lubuzh, Ye. D., and Petrov, A. D., Corresponding Member AS USSR

TITLE: Organosilicon compounds with hydrocarbon bridges between the silicon atoms. Alkylation of ω-cyano-alkyl trimethyl silanes by means of halogen methyl trimethyl silanes

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 4, 1961, 831-834

TEXT: The authors studied the production of bridge disilanes $(CH_3)_3Si-R-Si(CH_3)_3$ containing a cyano group in the hydrocarbon radical R. Such disilanes may be used for producing various polymers. These compounds have so far been obtained with difficulty. The authors point out that the cyano group bound to the β-carbon atom (with respect to Si) can be transformed into various functional groups without separating the cyano-alkyl radical from the Si atom. The reaction was conducted according to the scheme $(CH_3)_3Si(CH_2)_nCH_2CH \xrightarrow[\text{ether}]{Na} \left[(CH_3)_3Si(CH_2)_n CH(Na)CN\right]$

Card 1/5

Organosilicon compounds with hydrocarbon...

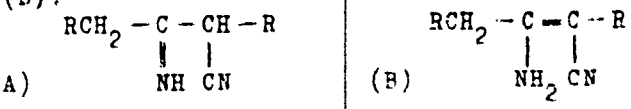
$$XCH_2Si(CH_3)_3 \xrightarrow{} (CH_3)_3Si(CH_2)_n\overset{\beta}{C}H(CN)\overset{\alpha}{C}H_2Si(CH_3)_3 + NaX, \quad (1)$$

under the conditions of alkylation of acetonitrile, where n is 1 or 2, and X is Cl, Br, or I. The structure of the compounds obtained was studied by their infrared spectra. The frequency 2238 cm^{-1} of disilane nitriles lies in a region characteristic of the cyano group, but is a little lower than its value in ω-nitriles $(CH_3)_3Si(CH_2)_nCN$ (for n = 2 and 3, 2249 cm^{-1}). This may well be reconciled with the reduction of the frequency of an electronegative group with increasing branching of the radical bound to this group. Besides, the structure of the compounds produced was confirmed by their transformation into ketones. The highest nitrile yield was obtained according to reaction (1) for $(CH_3)_3SiCH_2I$ (about 40 %). In the case of $(CH_3)_3SiCH_2Cl$, the disilane nitrile yield was lowest (about 20 %). In parallel to reaction (1), numerous by-products were formed which corresponded to the dimer of the initial β-cyano-ethyl trimethyl silane. The dimerization of silicon-

Card 2/5

Organosilicon compounds with hydrocarbon...

free nitriles under the action of sodium is known, and was confirmed by an additional experiment. From the two structures ascribed to such dimers, (A) and (B):



(A) (B)

the authors choose (B) on the basis of spectral data, where $R=-CH_2Si(CH_3)_3$. Here, they find the frequency 2201 cm^{-1} (apparatus UKC-12, IKS-12) which they consider to be that of the valency group $-C\equiv N$. This frequency is reduced, apparently owing to a chain of conjugate groups. The frequencies 3400 and 3448 cm^{-1} correspond to the symmetric and asymmetric stretching vibrations of the NH_2 group. In the infrared spectrum of the solution of this substance in CCl_4, the frequency 1630 cm^{-1} is characteristic of the $-C=C$ bond. The ultraviolet spectrum of this substance showed an intensive frequency 248 mμ (E = 46500). In the alkylation of the ω-nitrile of the type $NC-CH_2-CH_2-O-(CH_2)_3Si-(CH_3)_3$, a different reaction occurred:

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24051
S/020/61/138/004/011/023
B103/B203

Organosilicon compounds with hydrocarbon...

γ-hydroxy-propyl-trimethyl silane and an acrylonitrile polymer were formed. In a control test (without $XCH_2Si(CH_3)_3$), a γ-alcohol was also formed according to scheme (4) (a = ether, b = polymer). Decomposition of the systems $-Y=C-C-C-M$ (Y - electronegative, M - electropositive atom) was thoroughly studied by A. N. Nesmeyanov and co-workers (Ref. 14: Izbr. tr. (Selected papers), Izd. AN SSSR, 1959, p. 549, 678, 684), and is a characteristic of these systems if M is a metal. In a special experiment, the authors found that the alcoholate $(CH_3)_3Si(CH_2)_3\equiv ONa$ formed in the reaction did not react with $XCH_2Si(CH_3)$ under given conditions. There are 1 table and 18 references: 10 Soviet-bloc and 8 non-Soviet-bloc. The three references to English-language publications read as follows: Ref. 8: S. Nozakura, S. Konotsune, Bull. Chem. Soc. Japan, 29, No. 3, 322 (1956); ibid., 29, No. 3, 326 (1956); Ref. 10: R. A. Show, J. Chem. Soc., 1956, 2779; Ref. 11: H. Adkins, J. Whitman, J. Am. Chem. Soc., 64, 150 (1942).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

Card 4/5

S/020/62/145/003/029
B110/B101

11.9200

AUTHORS: Petrov, A. D., Corresponding Member AS USSR, Vdovin, V. M., and Sultanov, R.

TITLE: Synthesis and conversions of α,ω-di-(alkyl cyanide) tetramethyl disiloxanes

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 3, 1962, 606-609

TEXT: The production of α,ω-di-(alkyl cyanide)-tetramethyl siloxanes according to A. D. Petrov et al. (DAN, 128, no. 6 (1959)) was studied. The following reactions were carried out:

$$XCH_2CH_2CH_2Si(CH_3)_2Cl \xrightarrow[\text{эфир}]{CH_3MgHal} \xrightarrow{H_2O} [XCH_2CH_2CH_2Si(CH_3)_2]_2O + \quad (1)$$

$$+ XCH_2CH_2CH_2Si(CH_3)_3,$$

$X = CN, OCH_2CH_2CN \quad Hal = Cl, Br;$

$$NCCH_2CH_2SiCl_3 \xrightarrow[\text{эфир}]{n\,CH_3MgHal} \xrightarrow{H_2O} [NCCH_2CH_2Si(CH_3)_2]_2O + NCCH_2CH_2Si(CH_3)_3, \quad (2)$$

$n = 2; 2,3; 2,5 \quad Hal = Cl, Br, J.$

Card 1/4

Synthesis and conversions of ...

produced were highly viscous liquids. Their viscosity index was close to that of dimethyl polysiloxanes. In a similar way, disiloxanes with reactive CN-alkyl- and Cl-alkyl groups were obtained:

$$[NC(CH_2)_4Si(CH_3)_2]_2O + n\,[ClCH_2Si(CH_3)_2]_2O \xrightarrow{H_2SO_4} \rightarrow 2NC(CH_2)_4Si(CH_3)_2OSi(CH_3)_2CH_2Cl + (n-1)\,[ClCH_2Si(CH_3)_2]_2O. \quad (4)$$

At n = 7 chloro nitriles with 70-90% yield were obtained. According to:

$$NCCH_2CH_2Si(CH_3)_2\,OSi(CH_3)_2CH_2Cl \xrightarrow[\text{acetone}]{KI} NCCH_2CH_2Si(CH_3)_2OSi(CH_3)_2CH_2I,$$

the iodide was produced with 83% yield. There are 2 tables. The most important English-language reference is: M. Prober, J. Am. Chem. Soc., 77, 3224 (1955).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

Synthesis and conversions of...

S/020/62/143/003/019/029
B110/B101

SUBMITTED: December 11, 1961

Card 4/4

ACCESSION NR: AP4022012 S/0249/63/019/012/0025/0031

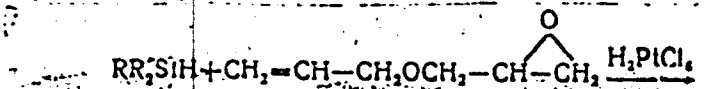
AUTHORS: Sadykh-Zade, S. I.; Sultanov, R.; Gasanova, F. A.

TITLE: The incorporation of hydrosilicones into glycidolallyl ester and some transformations of the obtained additional products (Presented by Academician A. M. Kuliyev of the Azerbaydzhan Academy of Sciences)

SOURCE: AN AzerbSSR. Doklady, v. 19, no. 12, 1963, 25-31

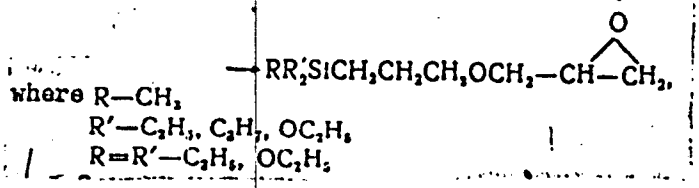
TOPIC TAGS: epoxides, epoxy derivative, glycidol, glycidolallyl ester, silane hydrosilicone, alklysilicone, trialkylsilane, alkoxysilane, catalyst, chloroplatinic acid, organosilicon compound, alkene

ABSTRACT: A method presented here permits the synthesis of siloxanes by catalytic incorporation of silanes and disilanes into glycidolallyl ester. It was shown that trialkylsilanes, alkoxysilanes, and disilanes of the HR'RSiOSiRR'H type are readily linked to glycidolallyl ester at atmospheric pressure in the presence of chloroplatinic acid, according to the reaction



Card 1/3

ACCESSION NR: AP4022012



where R—CH_3
R′—C_2H_5, C_3H_7, OC_2H_5
R=R′—C_2H_5, OC_2H_5

Eleven new organosilicon compounds were synthesized. The process is exemplified by the technique of gamma-glycidol-oxypropyltriethylsilane synthesis. In a flask provided with a reflux condenser and a thermometer were placed 23.3 gm of freshly distilled glycidolallyl ester. The flask was then heated to 90C, and to it were added 3 drops of a 0.1 normal solution of chloroplatinic acid in isopropyl alcohol, followed by gradual admixture of 21.6 gm of triethylsilane. When 6 ml of $(C_2H_5)_2SiH$ were added, the temperature rose spontaneously to 130C. After the non-reacted components were removed by vacuum distillation, 16.4 gm of the desired compound were produced. Boiling point of this compound was 120-121C.

ACCESSION NR: AP4022012

It was established that the trialkylsilanes were linked to the glycidolallyl ester according to Farmer's law. Orig. art. has: 13 formulas and 1 table.

ASSOCIATION: INKhP im. Yu. G. Mamedaliyeva (INKhP)

SUBMITTED: 13Nov63 DATE ACQ: 08Apr64 ENCL: 00

SUB CODE: CH NO REF SOV: 006 OTHER: 000

Card 3/3

SADYKHZADE, S.I.; SULTANOV, R.; KHALILOVA, E.M.

Addition of silicon hydrides to β-propargylhydroxy propionitrile. Azerb. khim. zhur. no.1:57-62 '64. (MIRA 17:5)

KHALILOVA, S.M.; SULTANOV, R.; SADYKHZADE, S.I.

Synthesis of silicon-containing unsaturated acetates.
Azerb. khim. zhur. no.1:97-103 '64. (MIRA 17:5)

SADYKH-ZADE, S.I.; SULTANOV, F.; GASANOVA, F.A.; BOKOVOY, A.P.; LITVINOVA, O.V.; PONOMARENKO, V.A.

Synthesis of epoxyaminoorganosilanes. Dokl. AN Azerb. SSR 20 no. 6:25-27 '64. (MIRA 17:9)

1. Institut neftekhimicheskikh protsessov AN AzerSSR. Predstavleno akademikom AN AzerSSR M.A.Dalinym.

L 09732-65 EWG(j)/EWT(m)/EPF(c)/EPR/EWP(j)/T/EWP(t)/EWP(b) Pc-4/Pr-4/
ps-4 IJP(c) RM/JD
ACCESSION NR: AP4049802 S/0316/64/000/004/0047/0053

AUTHOR: Gasanova, F. A.; Sultanov, R.; Sady*khzade, S. I.

TITLE: Synthesis of silicon-containing chlorohydrins and their oxides

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 4, 1964, 47-53

TOPIC TAGS: silicon chlorohydrin, silicon hydride, silane, silicon chlorohydrin oxide

ABSTRACT: This is a continuation of previous work by the same authors on methods of synthesizing silico-olefin oxides. It was found that silicon hydrides and dihydrides, in the presence of platinum catalysts, readily react with 3-allyloxy-1-chloropropanol-2 and glycidallyl ether forming the corresponding silicon-containing chlorohydrins and their oxides. By verifying the structure of these compounds with the aid of the opposite synthetic reaction it was proven that silicon hydrides under the above conditions become bonded to 3-allyloxy-1-chloropropanol-2 and to the glycidallyl ether only at the C-C double bond, according to Farmer's rule. The best yields of silico-organic oxides are obtained by directly compounding silicon hydrides with glycidallyl ether rather than with 3-allyloxy-1-chloropropanol-2 with subsequent dehydrochlorination. The following compounds were synthesized: sym-di-(gamma-glycidoxypropyl)-dimethyldiethyldisiloxane;

Card 1/2

L 19732-65
ACCESSION NR: AP4049802

3-methyldipropylsilylpropoxy-1-chloro-2-trimethylsiloxypropane; 3-methyldiethylsilyl-propoxy-1-ethoxypropanol-2; 3-methyldiethylsilylpropoxy-1-diethylaminopropanol-2; 2-methyl-2-ethyl-4-methyldiethylsilylpropoxy-methyldioxolan-1,3; 3-methyltetramethyl-enesilylpropoxy-1-chloropropanol-2; 3-methyltetramethylenesilyl-1-glycidoxypropane; and 3-triethylsilyl-1-glycidoxypropane. Orig. art. has: 8 chemical formulas and 1 table.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: OC

NO REF SOV: 004 OTHER: 000

Card 2/2

L 11325-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RPL DJ/RM
ACCESSION NR: AP4045056 S/0249/64/020/006/0025/0027

AUTHOR: Sadykh-Zade, S. I.; Gasanova, F. A.; Sultanov, K.; Sokovoy, A. P.; Litvinova, O. V.; Ponomarenko, V. A. B

TITLE: Synthesis of [(epoxyamino)organo]silanes

SOURCE: AN AzerbSSR. Doklady, v. 20, no. 6, 1964, 25-27

TOPIC TAGS: silicone, silane, organosilicon compound

ABSTRACT: A study of the synthesis of organosilicon monomers containing epoxy groups in organic substituents on silicon has been continued. The feasibility was shown of synthesizing [(epoxyamino)organo]silanes by addition of alkyl(alkoxy)silanes to alkenylepoxyamines in the presence of chloroplatinic acid. Twelve [(epoxyamino)organo]silanes were prepared in 8—57.9% yields; their physical constants are tabulated in the original article. Most of the new compounds polymerize on standing. Their polymerization properties will be described in a separate paper. Addition of 1,3-diethyl-1,3-dimethyldisiloxane to diallylepoxyamine in the presence of chloroplatinic acid formed in quantitative yield a viscous oil polymer which sets on standing.

Card 1/2

L 11325-65
ACCESSION NR: AP4045056

[$C_{15}H_{31}Si_2O_2N$]; the average molecular weight is 1780. Orig. art. has: 1 table and 10 formulas.

ASSOCIATION: Institut neftekhimicheskikh protsessov (Institute of Petrochemical Processes)

SUBMITTED: 25Feb64 ATD PRESS: 3106 ENCL: 00

SUB CODE: OC, IC NO REF SOV: 005 OTHER: 001

Card 2/2

L 24688-65 EWT(m)/EFF(c)/EWP(j)/T Pc-4/Pr-4 RM
ACCESSION NR: AP4049426 S/0316/64/000/001/0097/0103

AUTHOR: Khalilova, E. M.; Sultanov, R.; Sady*khizade, S. I. 18 8

TITLE: Synthesis of silicon-containing unsaturated acetates

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 1, 1964, 97-103

TOPIC TAGS: acetate, unsaturated acetate, silicon containing acetate

ABSTRACT: Silicon-containing acetates and diacetates were prepared by reacting silicon hydrides with unsaturated compounds containing functional groups at atmospheric pressure in the presence of 0.1 N H_2PtCl_6 in isopropyl alcohol as a catalyst. The acetates and their properties are listed in two extensive tables which include the structural formula and data on boiling point, yield and elemental analysis. Under these experimental conditions, the Si hydrides add at the triple bond, which is not in accord with Markovnikov's rule. Orig. art. has: 1 figure, 2 tables and 14 chemical structures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: OC

Card 1/1 NO REF SOV: 006 OTHER: 002

L 38518-65 EPF(c)/EWP(j)/EWA(c)/EWT(m)/T Pc-4/Pr-4 RPL RM/JW

ACCESSION NR: AP5007804 S/0316/64/000/002/0097/0102 24

AUTHOR: Sultanov, R.; Khalilova, E. M.; Sadykhzade, S. I.

TITLE: Synthesis of unsaturated silicon-containing amines

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 2, 1964, 97-102

TOPIC TAGS: unsaturated amine, heteroorganic compound, organosilicon compound, amine synthesis, alkoxysilane, propargylamine, acetylenic amine, Grignard reagent, decyanoethylation

ABSTRACT: A route was developed for the synthesis of olefinic silico-organic amines by addition of alkyl- or alkoxysilanes to diethylpropargylamine or [illegible] physical properties and [illegible] studied. The silanes [illegible] isopropyl alcohol [illegible] at atmospheric pressure under [illegible] ine and diethylprop-argylamine gave [illegible]-methyldiethylsilyl-[illegible]-diethylaminopropene-1

$$(CH_3)(C_2H_5)_2SiCH=CH\cdot CH_2N(C_2H_5)_2$$

Card 1/2

L 38518-65

ACCESSION NR: AP5007804

and the reaction of silane isomers gave 1-methyltetramethylenesilyl-, 1-trie-
thylsilyl-, 1-methyldipropylsilyl-, 1-ethyldipropylsilyl-, 1-methyldiethoxy-
[illegible] By reaction of alkyl- or
[illegible]
$(CH_3)(C_2H_5)Si(CH{=}CH{-}CH_2N(CH_2CH_2CN)CH_2CH{=}CH_2$
[illegible] 1-methyltetramethylenesilyl-, 1-triethylsilyl-, 1-methyldipropylsilyl-, 1
[illegible]

ASSOCIATION None

SUBMITTED: 00 ENCL: 00 SUB CODE: OC

NO REF SOV: 002 OTHER: 000

Card 2/2

L 4055[illegible] EWT(m)/EPF(c)/EWP(j)/EWA(c) Pc-4/Pr-4 GS/RM

ACCESSION NR: AT5002121 S/0000/64/000/000/0130/0134

AUTHOR: Sultanov, R.; Vdovin, V. M.

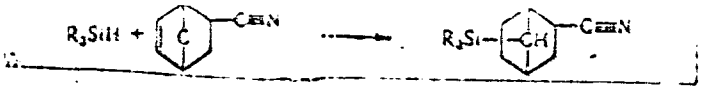
TITLE: Cyano-containing silico-organic compounds

SOURCE: AN SSSR. Institut neftekhimicheskogo sinteza. Sintez i svoystva monomerov [illegible] Nauka, 1964, 130-134

TOPIC TAGS: heteroorganic compound, silicoorganic compound, cyanide, cyanoolefin, hydrosilane, siliconitrile

ABSTRACT: Pt/C catalysts with 5 or 20% Pt and a 0.1 N solution of H_2PtCl_6 in isopropyl alcohol were used as the catalysts in the reaction of introducing hydrosilanes with cyano-containing olefins (a) and derivatives of silicon-containing nitriles (b), and in the reaction of 1-hydro-1-methylsilicocyclopentane with cyano-containing olefins (c):

$$R_1R'SiH+(CH_2=CHCH_2)_2NCH_2CH_2CN \rightarrow R_1R'SiCH_2CH_2CH_2N(CH_2CH_2CN)CH_2CH=CH_2 \quad (1)$$

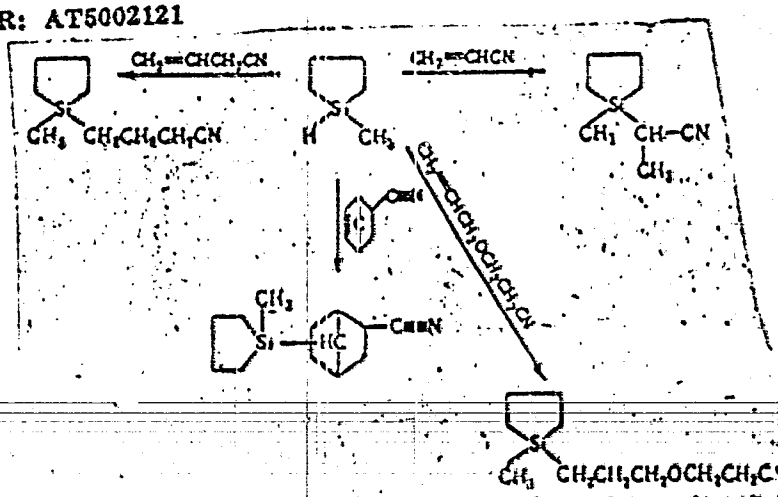


(2)

Card 1/3

L 40558-65

ACCESSION NR: AT5002121

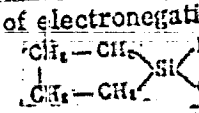
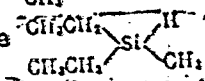


(3)

As a result of the study, a great number of new cyano-alkyl monomers with 1, 2 or 3 hydrolizable groups on the silicon atom were prepared, unidentified individually in the paper, and observations were made that: 1) all the hydrosilanes investigated combine to produce >C = C< multiple bonds; 2) cyano-containing olefins with an isolated primary

Card 2/3

L 40558-65
ACCESSION NR: AT5002121

double bond react more actively with hydrosilanes of all types; 3) the hydrosilanes combine with cyano-allyl less actively as the number of electronegative substitutes at the silicon atom diminishes; and 4) the cyclic hydride  is far more active toward all the studied nitriles than its open-chain analogue  . The synthesis of a silicon-substituted acrylonitrile by bromination and subsequent dehydrobromination of β-cyanoethyltrichlorosilane is briefly reported. Orig. art. has: 9 formulas.

ASSOCIATION: None

SUBMITTED: 30Jul64 ENCL: 00 SUB CODE: OC

NO REF SOV: 011 OTHER: 004

Card 3/3

SADYKH-ZADE, S.I ; SULTANOV, A.; MAMEDOVA, B.A.

Addition of triorganosilanes to vinylethynyl-α-furylcarbinol.
Dokl. AN Azerb. SSR 21 no.2:23-27 '65. (MIRA 18:5)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

L 61507-65 EWT(m) JAJ/EM

ACCESSION NR: AP5012869 UR/0249/65/021/002/0023/0027

AUTHORS: Sadykh-Zade, S. I.; Sultanov, E.; Mamedova, B. A.

TITLE: Addition of triorganosilanes to vinylethynyl-α-furylcarbinol

SOURCE: AN AzerbSSR. Doklady, v. 21, no. 2, 1965, 23-27

TOPIC TAGS: silane, esterification, polymer, furane compound

ABSTRACT: Reaction between vinylethynyl-α-furfylcarbinol (A) and methyltetramethylenesilane in the presence of Pt/C (20% Pt) gave a 50% yield of 1-(α-furyl)-3 methyltetramethylenesilylpentadiene-2,4-ol-1 (I) boiling point at 154-156C/3 mm Hg; n_D^{20} - 1.5430; d_4^{20} - 1.0384; molar ref. calculated - 75.04, molar ref exp 75.40. Reaction between A and triethylsilane in the presence of H_2PtCl_2 and hydroquinone (reaction scheme 2) gave 48.5% yield of 1-(α-furyl)-3 triethylsilylpentadiene-2,4-ol-1. (II) boiling point at 135-136C/1.5 mm Hg. n_D^{20} = 1.5202; d_4^{20} = 0.9831; molar ref calculated 81.44; molar ref exp 81.80. Reaction between A and methyldiethylsilane (following scheme 2) gave 48% yield of 1-(α-furyl)-3-methyldiethylsilylpentadiene-2,4-ol-1. Boiling point at 128-130C/1 mm Hg; n_D^{20} -

Card 1/2

L 61507-65

ACCESSION NR: AP5012869

2

1.5202; d_4^{20} - 0.9953; molar ref cal 76.93; molar ref exp 76.62. Reaction between A and methyldipropylsilane (following scheme 2) gave 42% yield of 1(α-furyl)-3 methyldipropylsilylpentadiene 2,4-ol-1. Boiling point at 142-144/1 mm Hg; n_D^{20} - 1.5108; d_4^{20} - 0.9655; molar ref calculated 86.43; molar ref exp 86.37. Reaction between 1-(α-furyl)-3 methyldiethylsilylpentadiene 2, 4-ol-1 and potassium acetate, acetic anhydride in dry benzene gave a 53% yield of 1-(α-furyl) -1 acetoxy -3 methyldiethylpentadiene 2,4; boiling point at 121-122.5/1.5 mm Hg; n_D^{20} - 1.5149; d_4^{20} - 1.0240, molar ref calculated 86.41; molar ref exp 86.10. The authors thank I. G. Ismail-Zade for determining the IR spectra. Orig. art. has: 6 formulas.

ASSOCIATION: Institut neftekhimicheskikh protsessov (Institute for Petrochemical Processes)

SUBMITTED: 10Apr64 ENCL: 00 SUB CODE: OC

NO REF SOV: 004 OTHER: 002

Card 2/2

L 51524-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RM/WW
ACCESSION NR: AP5015298 UR/0286/65/000/009/0068/0068
678.621'375

AUTHOR: Kamenskiy, I. V.; Sadykh-zade, S. I.; Guseynov, D. A.; Iskenderov, M. A.; Sultanov, R. A.; Mamedov, F. V.

TITLE: A method for producing resin. Class 39, No. 170670

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 68

TOPIC TAGS: resin, amine, thermal stability, polycondensation, furfurol

ABSTRACT: This Author's Certificate introduces a method for producing resin by polycondensation of furfurol and amine. The thermal and chemical stability of the product are improved by using allylamine.

ASSOCIATION: none

SUBMITTED: 21May64 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 000 OTHER: 000

Card 1/1

L 1900-66 EWT(m)/EPF(c)/EWP(j) RM UR/0286/65/000/013/0019/0019
ACCESSION NR: AP5021552 661.718.1.5

AUTHOR: Sadykh-Zade, S. I.; Sultanov, R. A. o.; Mamedova, B. A. k.; Ashurov, D. A. o.

TITLE: Preparative method for unsaturated organosilicophosphorus compounds. Class 12, No. 172320

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 19

TOPIC TAGS: organosilicon compound, organophosphorus compound, organic synthesis

ABSTRACT: An Author Certificate has been issued for a preparative method for unsaturated organosilicophosphorus monomers having hydrolyzable substituents at the silicon atom. Dialkyl propargylphosphonates are refluxed with alkyl(alkoxy)silanes in the presence of chloroplatinic acid. [SM]

ASSOCIATION: Institut neftekhimicheskikh protsessov AN Azerbaydzhanskoy SSR (Institute of Petrochemical Processes, AN Azerbaydzhan SSR)

SUBMITTED: 23Apr64 ENCL: 00 SUB CODE: OC, IC
NO REF SOV: 000 OTHER: 000 ATD PRESS: 4088
Card 1/1

SULTANOV, R.A.; [illegible] [illegible] [illegible]; [illegible]IYEVA, F.M.

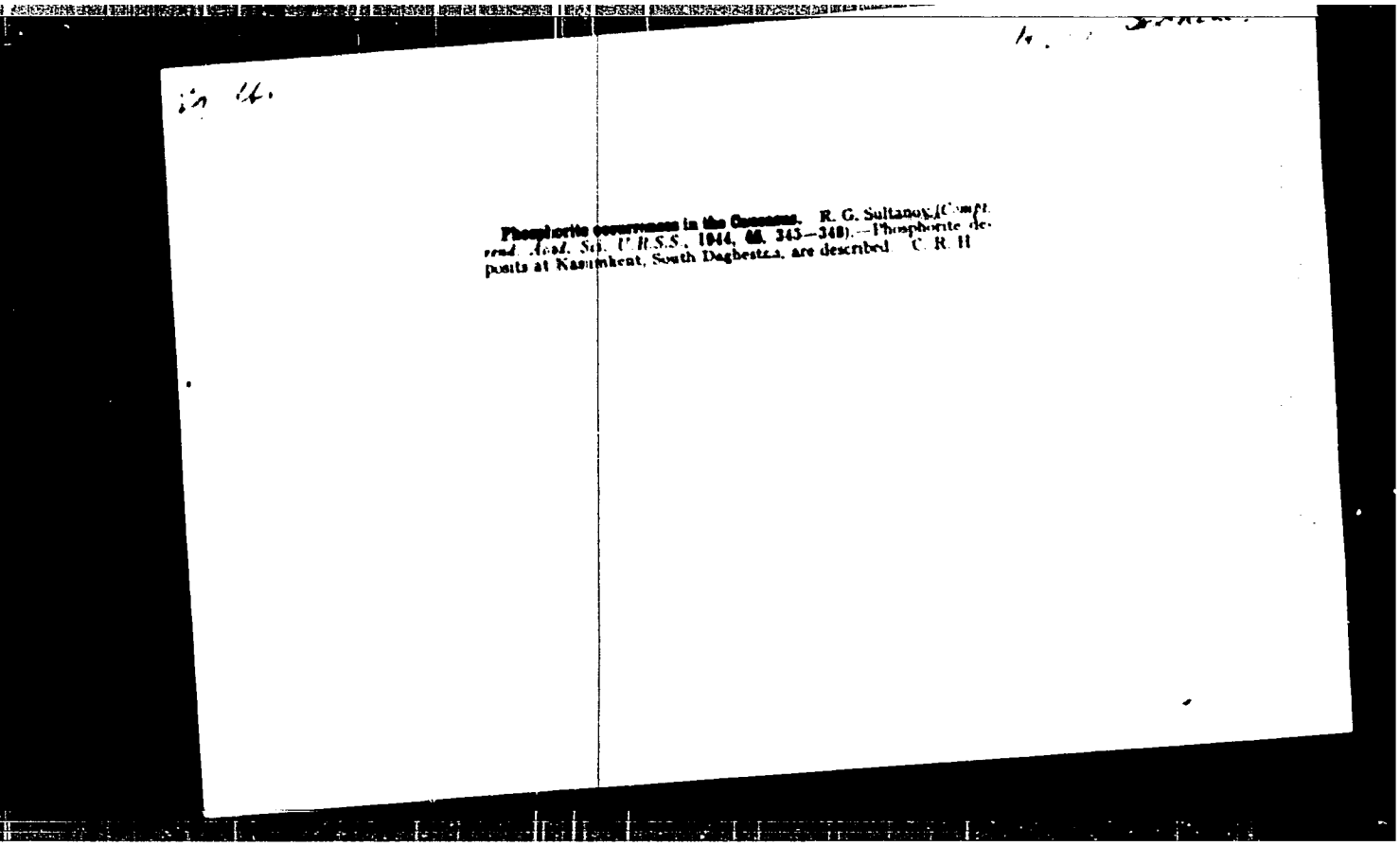
[illegible] of [illegible] cyanoacetanilides. Zhur. org. khim. 1 no.7:1336 [illegible]. (MIRA 18:11)

1. Institut neftekhimicheskikh protsessov imeni Yu.G.Mamedaliyeva AN Azerbaydzhanskoy SSR, Baku.

APPROVED FOR RELEASE: 08/26/2000 CIA-RDP86-00513R001653910014-1"

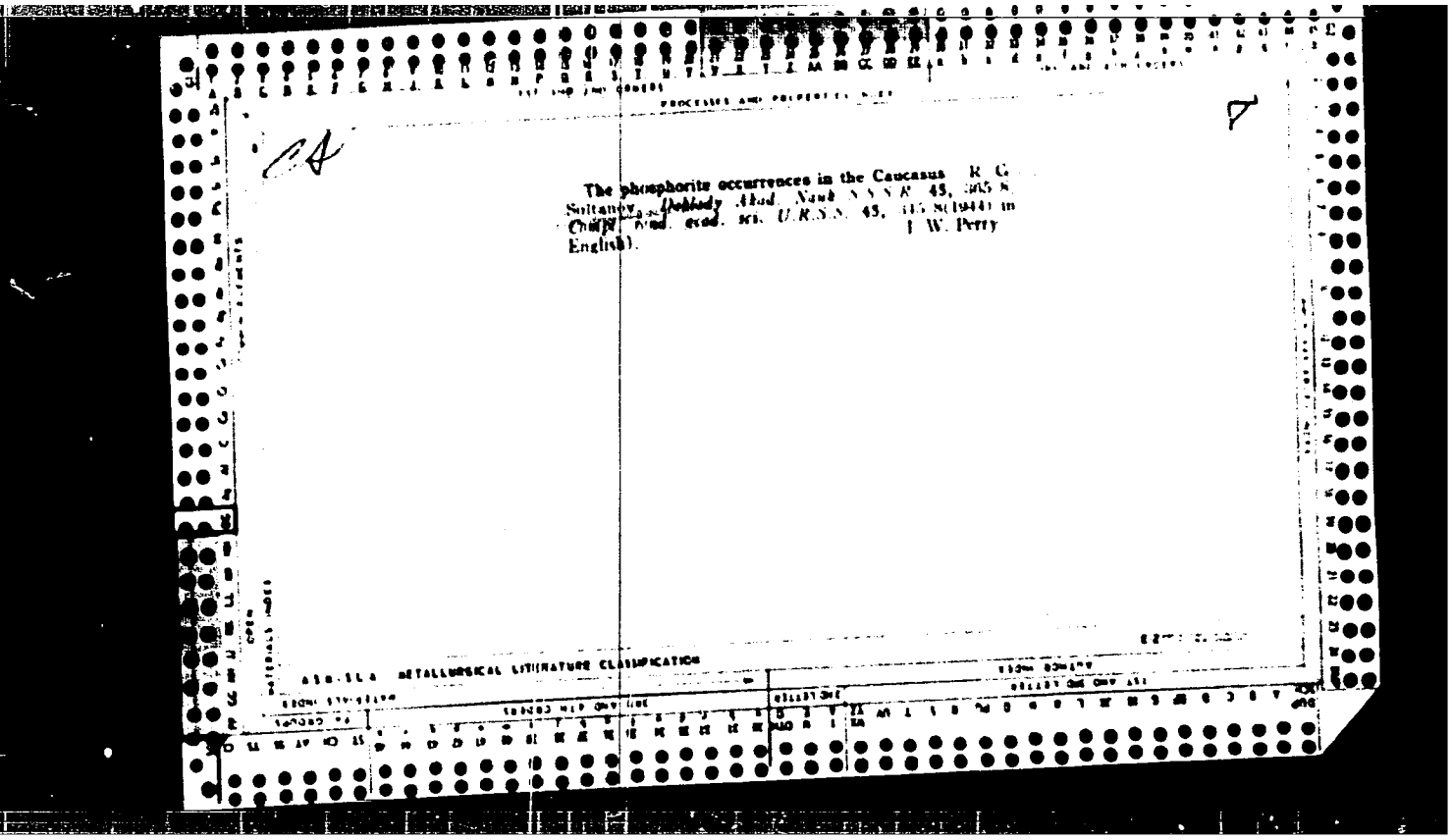
SULTANOV, R. G.

Mbr., Azerbaydzhan Affil., Acad. Sci., -1944-. "Prospects of the Coal Deposits of Azerbaydzhan," Dok. AN, 43, No. 3, 1944; "On the Phosphorite Occurrences in the Caucasus," ibid., 45, No. 8, 1944.



in 44.

Phosphorite occurrences in the Caucasus. R. G. Sultanov. (Compt. rend. Acad. Sci. U.R.S.S., 1944, 45, 343–348).—Phosphorite deposits at Kasumkent, South Daghestan, are described. C. R. H.



SULTANOV, R.G.

Demudation surfaces on the southern slope of the Greater Caucasus. (MLRA 9:12)
Uch. zap. AGU no.7:37-43 '55.

(Caucasus, Northern--Erosion)

SULTANOV, Ramiz.

History of the geological development of the Baku Archipelago area during the Pliocene and Pleistocene. Uch. zap. AGU no.9: 25-33 '56. (MLRA 10:4)

(Baku Archipelago--Geology, Stratigraphic)

SULTANOV, R.G.; GASANOV, M.M.

Origin of swamps in the Azerbaijan S.S.R. Uch. zap. AGU no.9: 33-36 '55. (MLRA 9:11)

(Azerbaijan--Peat bogs)

SULTANOV, R.G.

Tectonic characteristics of the Baku Archipelago. Dokl.AN Azerb. SSR 11 no.6:385-388 '55. (MLRA 9:6)

1.Institut geologii imeni akademika I.M.Gubkina AN Azerbaydzhanskoy SSR. Predstavleno deystvitel'nym chlenom AN Azerbaydzhanskoy SSR m.a.Kashkayem.
(Baku Archipelago--Geology, Structural)

15-1957-12-17065

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 12, p 52 (USSR)

AUTHOR: Sultanov, R. G.

TITLE: The Relation Between the Boundary at the Southern Slope of Bol'shoy Kavkaz (Great Caucasus) and the Adjoining Alazani-Avtaran Valley in Azerbaydzhan (O kharaktere sopryazheniya granitsy yuzhnogo sklona Bol'shogo Kavkaza s primykayushchey Alazano-Avtaranskoy podgornoy dolinoy v Azerbaydzhane)

PERIODICAL: Dokl. AN AzerbSSR, 1955, vol 11, Nr 9, pp 617-622

ABSTRACT: Bibliographical entry

Card 1/1

The Geologic Structure (Cont.)

The Akchagyl deposits border the crest in a narrow band, and the Apsheron rocks form the limbs and quaquaversal dipping beds of the fold. Petrographic study of the rocks of the Produktivnyy series has shown that these rocks belong to the pyroxene-hornblende series of the Pirsagat section.

Card 2/2

R. G. Garetskiy

15-57-7-10045

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7, p 194 (USSR)

AUTHOR: Sultanov Ramiz

TITLE: The Geologic History of the Development of the Region of the Baku Archipelago in the Pliocene and Post-Pliocene (Istoriya geologicheskogo razvitiya rayona Bakinskogo arkhipelaga v pliotsene i post-pliotsene --In Azerbaydzhan)

PERIODICAL: Uch. zap. Azerb. un-t, 1956, Nr 9, pp 25-33

ABSTRACT: A large amount of data is treated; these data were obtained by drilling, gathered from mud-volcano ejecta, and observed directly during field work. This material has permitted the author to decipher the paleo-geographic conditions of sediment accumulation in the region of the Baku Archipelago in the Caspian Sea, beginning at the age of the Produktivnyy

Card 1/3

The Geologic History of the Development (Cont.)

are found in deposits of almost all the series formed during this interval. The author furnishes paleogeographic maps.

3/3

V. G. Rikhter

15-57-12-17204

Dacites and Andesites in the Belokany Region (Cont.)

fault zone in Apsheron time or somewhat later. After these intrusions, but before the Quaternary, there was a time of hydrothermal activity and quartz veins were formed, cutting the dacites and andesites, and, probably, giving rise to the thermal springs in this region (at the village of Elisu and others). The dacites are apparently derivatives of the granodiorites in the upper reaches of the Akhtychay.

Card 2/2

O. V. Bryzgalin

SULTANOV, Ramiz.

Gas resources of the Apsheron stage deposits in the Baku Archipelago [in Azerbaijani with summary in Russian]. Uch. zap. AGU no.4:77-81 '57. (MIRA 11:1)

(Baku Archipelago--Gas, Natural)

SULTANOV, R.G.

Some volcanic rocks in the southern slope of the Caucasus in Azerbaijan. Uch.zap.AGU. Geol.-geog.ser. no.1:11-22 '59. (MIRA 15:12)

(Azerbaijan--Rocks, Igneous)

SULTANOV, R.G.; DADSHEV, F.G.

Periodicity of the eruptions of the mud volcanoes in Azerbaijan. (MIRA 14:6)
Uch.zap.AGU.Geol.-geog.ser. no.3:55-61 '60.
(Azerbaijan--Mud volcanoes)

SULTANOV, Ramiz

Geology of the anticlinal zone of the Khamamdag, Kornilov-Pavlov shoal field. Trudy Inst.geol.AN Azerb.SSR 20:155-173 '60. (MIRA 14:9)
(Khamamdag--Petroleum geology)

AKHMEDOV, G.A.; ZEYNALOV, M.M.; SULTANOV, R.G.; TAGIYEV, E.A.

Correlating cross sections of the producing formation in the Apsheron Peninsula and southeastern Kobystan. Uch.zap. AGU. Geol.-geog.ser. no.4:81-88 '60. (MIRA 15:9)
(Apsheron Peninsula--Geology, Stratigraphic)
(Kobystan--Geology, Stratigraphic)

SULTANOV, R.G.; GADZHIYEV, M.P.

Ancient glaciation of the northeastern slope of the Lesser Caucasus. Trudy Tbil.NIGMI no.9:144-147 '61. (MIRA 15:3)

1. Institut geografii AN Azerbaydzhanskoy SSR.
(Azerbaijan--Glaciers)

SULTANOV, R.G.; GUSEYNOV, A.A.; GADZHIYEV, M.P.

Peat deposits in Kedabek District, Azerbaijan. Dokl. AN Azerb. SSR 17 no. 2:125-129 '61. (MIRA 14:4)

1. Institut geologii AN Azerbaydzhanskoy SSR. Predstavleno akademikom AN Azerbaydzhanskoy SSR V.R. Volobuyevym.
(Kedabek District—Peat)

SULTANOV, R.G.; PASHALY, I.V.

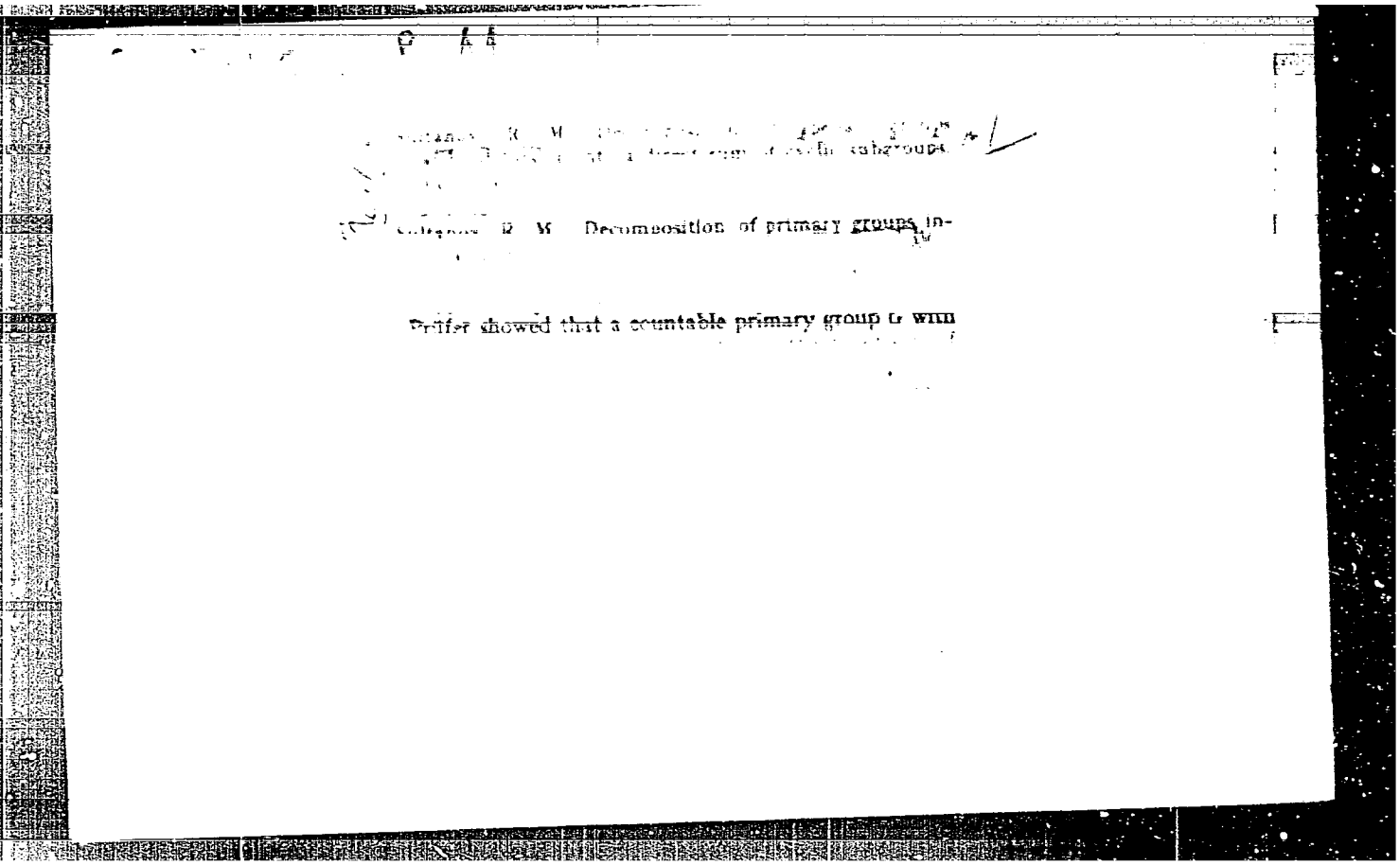
Genetic conditions and features of the distribution of mineral springs in Kedabek District. Dokl.An Azerb. SSR 17 no.5:395-399 '61. (MIRA 14:6)

1. Institut geografii AN Azerbaydzhanskoy SSR. Predstavleno akademikom AN Azerbaydzhanskoy SSR Sh. F. Mekhtiyevym.
(Kedabek District—Springs)

SULTANOV, R. G.; GADZHIYEV, M. P.

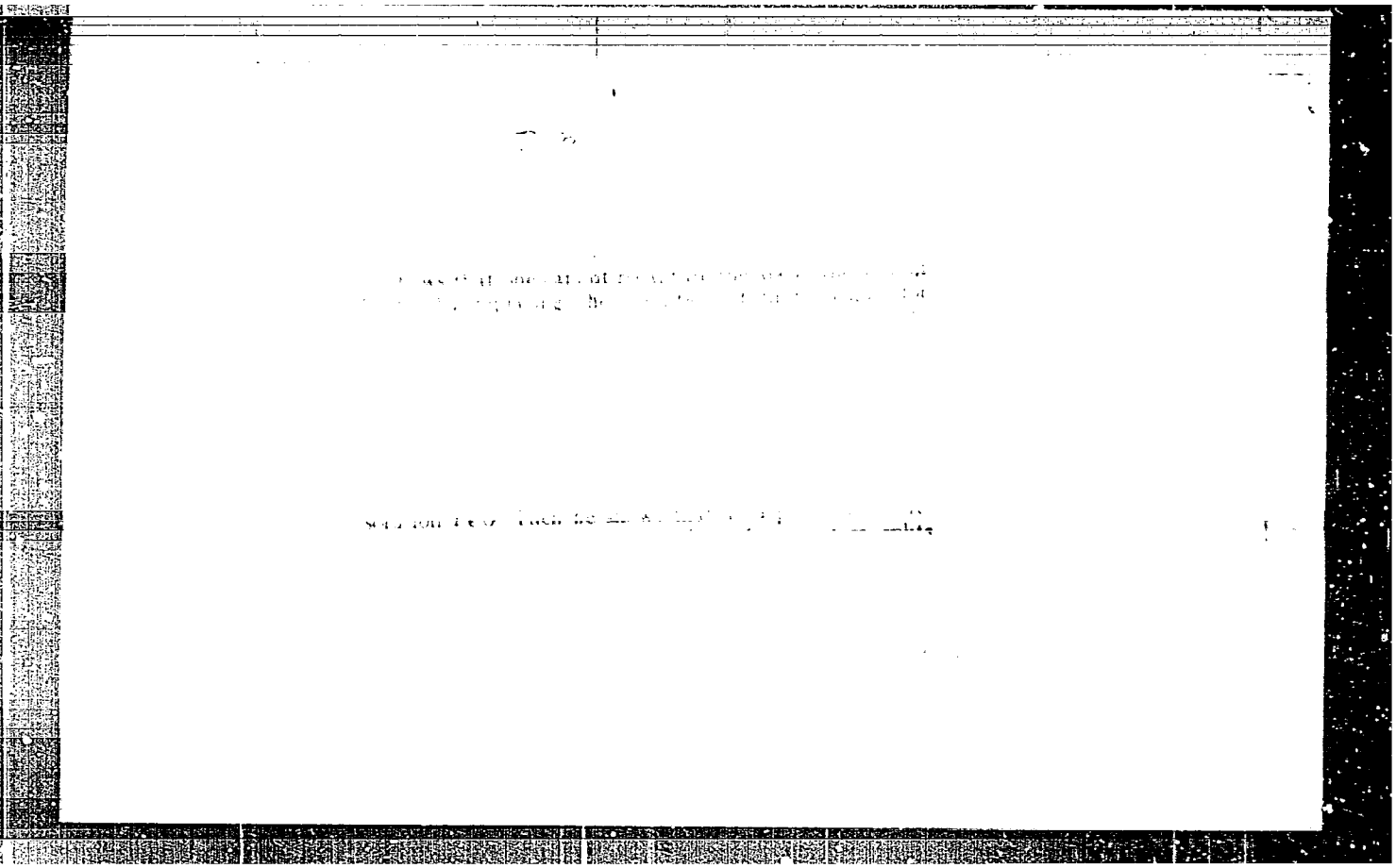
Quaternary sediments in the Shamkhorchay-Dzegamchay interfluve. Uch. zap. AGU. Geol.-geog. ser. no.1:15-23 '62. (MIRA 16:1)

(Shamkhorchay Valley--Geology)
(Dzegamchay Valley--Geology)



Decomposition of primary groups in-

Prüfer showed that a countable primary group G with



SULTANOV, R.M.

Direct sum expansion of an operator group. Uch.zap.AGU no.3:3-15 '55. (MLRA 9:12)

(Groups, Theory of)

SULTANOV, R.H.

The complete continuity of Urysohn's operator [in Azerbaijani with summary in Russian]. Uch. zap. AGU no.2:19-25 '57. (MIRA 11:1)
(Operators (Mathematics))

32503

16.4130

S/044/61/000/011/026/049
C111/C444

AUTHORS: Krasnosel'skiy, M. A., Rutitskiy, Ya. B., Sultanov, R. M.

TITLE: On a non-linear operator, operating in spaces of abstract functions

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1961, 73, abstract 11B397 (Izv. AN. Azerb. SSR. Ser. fiz.-mat. i tekhn. n., 1959, no. 3, 15-21)

TEXT: Investigated are certain properties of the operator

$$fu(t) = f(t,u(t)) \qquad (1)$$

which transforms a subset of a certain Banach space B into another Banach space B_1. One assumes that the abstract function $f(t,u)$ with values in B_1 is strongly measurable for every fixed $u \in B$, and that the operator $f(t,u)$ is strongly continuous with respect to u for almost all $t \in \Omega$; Ω is a bounded closed set of the finite dimensional Euclidian space. In the article it is proved that the theorems on the continuity and boundedness of the operator f which formerly have been proved for the spaces L^p, $L^p_{(u)}$ of vector functions, for Orlicz spaces

Card 1/3

32503
S/044/61/000/011/026/049
C111/C444

On a non-linear operator, operating . .

etc., hold for broad classes of abstract function spaces. The concept of a "$\mathfrak{X}$ - space" is introduced as follows: Let $\breve{B}$ be the linear subset of all measurable abstract functions u(t) with values in the Banach space B; let $\breve{B}$ be made a complete Banach space by aid of a certain norm $\| \cdot \|_{\breve{B}}$. The space $\breve{B}$ is called "$\mathfrak{X}$- space", if the following conditions are satisfied:

1.) There is $\| u \|_{\breve{B}} = 0$ if and only if u(t) = 0 almost everywhere on Ω;

2.) $\breve{B}$ contains all functions taking a constant value on Ω;

3.) $\breve{B}$ contains together with the abstract function u(t) all functions $u(t)\,\chi_E(t)$ $\chi_E(t)$ being the characteristic function of the measurable set $E \subset \Omega$; there $\| u\,\chi_E \|_{\breve{B}} \leq \| u \|_{\breve{B}}$;

4.) Out of the condition $\| u \|_{\breve{B}} \to 0$ there follows that the functions $u_n(t)$ converge to 0 with respect to the norm.

The authors investigate certain properties of the introduced $\mathfrak{X}$ - spaces under certain additional conditions and prove the continuity of the

Card 2/3

L 15381-63 EWT(d)/FCC(w)/BDS--AFFTC/IJP(C)
ACCESSION NR: AR3004129 S/0044/63/000/005/B079/B080

SOURCE: RZh. Matematika, Abs. 5B318

53

AUTHOR: Sultanov, R. M.

TITLE: Investigation of the parameter dependence of the continuity of solutions of nonlinear integral equations 16

CITED SOURCE: Uch. zap. Azerb. un-t, Fiz-matem. i khim. ser., no. 6, 1960, 11-18

TOPIC TAGS: nonlinear integral equation, continuous solution, integral equation parameter, Banach space

TRANSLATION: The paper studies the continuity of the nonlinear integral equation

$$x(t) = x_0(t) + \int_{t_0}^{t} K[t, s, x(s), \lambda]ds \quad (1)$$

where $x = (x_1, x_2, \ldots, x_n) \in E_n$, $(K = K_1, \ldots, K_n) \in E_n$, $\lambda \in G$, G - number set containing the limiting point λ_0. The author proposes the introduction of the following conditions: 1) The vector function $K(t, s, x, \lambda)$ is defined for $x \in S$ (S -

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open set in E_n), t, s $\in [t_0, T]$, $\lambda \in G$. For given x $\in S$, $\lambda \in G$ the vector function K is measurable over s $\in [t_0, T]$ and there exists a function M(t, s, λ), integrable over s according to Lebesgue in $[t_0, T]$, such that it obeys the inequality

$$\| K[t, s, x, \lambda] \|_{E_n} < M(t, s, \lambda) \tag{2}$$

for

$$(t, s, x, \lambda) \in [t_0, T] \times [t_0, T) \times S \times G. \tag{3}$$

Further, if $t_1 \in [t_0, T]$, then

$$\lim_{t \to \bar{t}} \int_{t_0}^{t_1} K[t, s; x(s, \lambda), \lambda]\, ds = \int_{t_0}^{t_1} K[\bar{t}, s, x(s, \lambda), \lambda]\, ds. \tag{4}$$

For (t, s) $\in [t_0, T] \times [t_0, T]$, $\lambda \in G$, the vector function is continuous in x.

2) There exist a nondecreasing function $\psi(\delta)$ which is defined for

$$0<\delta<d\ (d>0),\ \lim_{\delta\to 0}\psi(\delta)=0 \tag{5}$$

and a function integrable according to Lebesgue

$$x(t,s)>1,\ \int_{t_0}^{T}x(t,s)\,ds<\text{const} \tag{6}$$

such that

$$\left\|\int_{t_0}^{t}[K(t,s,x_1,\lambda)-K(t,s,x_2,\lambda)]\,ds\right\|_{E_n}<$$
$$<\int_{t_0}^{t}\psi(\|x_1(s)-x_2(s)\|)\,x(t,s)\,ds \tag{7}$$

for

$$x_1,x_2\in S,\ \|x_1-x_2\|<d,\ t,s\in[t,T],\ \lambda\in G. \tag{8}$$

3) If the function v(t) is the solution of (1) for $\lambda=\lambda_0$ over $[t_0, T_1]$, $t_0<T_1\leq T$, $v(t_0)=x(t_0,\lambda_0)$, then $v(t)=x(t,\lambda_0)$ for $t\in[t_0, T_1]$,

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where $x(t, \lambda_0)$ is the solution of (1) for $\lambda = \lambda_0$ found for $t \in [t_0, T]$. 6

4) Let

$$\lim_{\lambda \to \lambda_0} \int_{t_0}^{t} K(t, s, x, \lambda)\, ds = \int_{t_0}^{t} K(t, s, x, \lambda_0)\, ds \qquad (9)$$

be uniform with respect to t, x. In presence of the above conditions the author proved the following: Theorem 1. In presence of the conditions 1-4 for any $\eta > 0$ one can find a $\delta > 0$ such that for every solution $x(t, \lambda)$ of (1) found over $[t_0 T]$ and satisfying

$$\| x(t_0, \lambda) - x(t_0, \lambda_0) \| < \delta \text{ with } |\lambda - \lambda_0| < \delta \qquad (10)$$

inequality

$$\| x(t, \lambda) - x(t, \lambda_0) \| < \eta \qquad (11)$$

exists for $t \in [t_0, T]$. Similar results can be established within the Banach space. A. Guseynov.

DATE ACQ: 19Jun63 SUB CODE: MM ENCL: 00

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SULTANOV, R.M.

Differentiability of solutions of nonlinear integral equations with respect to the parameter. Uch. zap. AGU. Ser. fiz.-mat. i khim. nauk no.2:9-16 '61. (MIRA 16:7)

SULTANOV, R.S., inzh.

The D-451 semi-rotatable clamshell loader. Stroi.i dor.mash. 7 no.10:4-6 O '62. (MIRA 15:11)
(Earthmoving machinery)

SULTANOV, R.S.

The KIaSh-60 plant hole digger. Trakt. i sel'khozmash. 33 no.7: 34 Jl '63. (MIRA 16:11)

SULTANOV, R.S., inzh.

Improved model of the KPIA-100 hole digging machine. Trakt. i sel'khozmash. 33 no.12:34 D '63. (MIRA 17:2)

SULTANOV, S.A., inzhener-geolog.

Main problems in the geological analysis of the Tuymazy fields development. Trudy MNI no.12:176-184 '53. (MLRA 9:8)
(Tuymazy--Petroleum geology)

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MEKHTIYEV, S.D.; SULTANOV, S.A.

Conversion of isopropylcyclohexane into synthetic aluminum silicates. Dokl. AN Azerb. SSR 10 no.6:413-420 '54. (MLRA 8:10)

1. Institut nefti Akademii nauk Azerbaydzhanskoy SSR. Predstavleno deystvitel'nym chlenom Akademii nauk Azerbaydzhanskoy SSR M.F.Nagiyevym

(Aluminum silicates)

SULTANOV S.A.

Name: SULTANOV, S. A.

Dissertation: Analysis of data from field and geophysical investigations of well cross sections for studying the collector properties and petroleum and water saturation of productive Devonian deposits in Western Bashkiria and Eastern Tataria

Degree: Cand Geol-Min Sci

Defended at: Min Higher Education USSR, Moscow Order of Labor Red Banner Petroleum Inst imeni Academician I. M. Gubkin, Chair of Field Geophysics

Publication Date, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 47, 1956

Oil Accumulation Properties and Petroleum-Water (Cont.)

ASSR and Eastern Tatarskaya ASSR, on the basis of comparison of geophysical data obtained in the wells and determinations of oil accumulation properties on samples of rock. He shows that in a number of cases proposed methods require refinement. In particular, he improves the accuracy of methods of determining porosity of rock using natural potentials measurable in the wells, as well as the permeability of petroleum-saturated strata according to their specific electrical resistance. Analysis of production and of geophysical measurements in wells, drilled to determine the position of the water-petroleum contact, show that in the process of water injection into separate strata of the Tuymazy and Bavly deposits the translocation of the petroleum surface occurs nonuniformly and the surface of the water-petroleum contact in these formations is not horizontal. Hence, observations in a few control wells are not sufficient to trace the changes of the water-petroleum contact during the process of water injection. Measurements--particularly those obtained by radiometric methods--must be taken in a large number of wells.

N. A. Per'kov

ASSOCIATION: Mosk. neft. in-t (Moscow Petroleum Institute)

SULTANOV, S.A., aspirant.

Practical application of radiation logging in wells to determine the oil-water contact. Neftianik 1 no.4:29-30 Ap '56. (MLRA 9:10)

1. Kafedra promyslovoy geofiziki Moskovskogo neftyanogo instituta imeni I.M. Gubkina.
(Oil well logging, Radiation)

SULTANOV, S. A.

"Radiometry as Applied to Oil Wells in Developing an Oilfield"

Problems of Petroleum Production and Petroleum Engineering, Moscow, Neftyanoy institut, Gostoptekhizdat, 1957, 393pp. (Trudy vyp. 20)
This book is a collection of articles written by professors and faculty members of the Petroleum Inst. im I. M. Gubkin.

SULTANOV, S. A.

"Radiometric Survey in Controlling the Movements of Bottom-Hole Oil Well Waters," Utilization of Radioactive Isotopes &Emanations in the Petroleum Industry (Symposium). Min. Petroleum Industry USSR, 1957.

Results of the Joint Session of the Technical Council of Min. of the Petroleum Industry USSR and Soviet Sci. and Technical Association, Moscow 14-19 Mar 1956.

S, Manov, S.A,

93-4-9, 20

AUTHOR: ..in, .I. and Sultanov, ...

TITLE: ... Coning Water Appear During ... Well Exploitation? (...brazuyutsya ... konusy obvodneniya pri ekspluatatsii skvazhin)

PERIODICAL: Neftyanoye Khozyaystvo, 1957, Nr 6, pp. 32-35 (USSR)

ABSTRACT: The authors examine the problem of coning water from the standpoint of radiometric observations made for the purpose of finding the oil-water contact. A radiometric study of an oil-bearing stratum of 20-40 cm. radius showed that formation of coning water greatly affects the accuracy of data concerning the natural location of the oil-water zone, and a substantial accumulation of coning water entirely excludes radiometric methods. Therefore, control of coning water becomes a subject of special study when oil field tests are made and when the oil-water contact is determined by radiometric methods. The process of coning from the standpoint of hydrodynamics is sufficiently well known in literature. Theoretically a well will be flooded by water within ten or more days if coning occurs, yet it is not so in practice. At the Tuymazy and Pavly oil fields, which are of the flat bed type, wells drilled in the so called "plankton" sector of the deposit were not flooded by coning water. For many years these highly productive wells have been yielding petroleum free of water or with small, slowly increasing quantities of water. The absence of significant coning formation is supported by correlated radiometric data on oil-water contact in producing

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124-58-9-10166

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 199 (USSR)

AUTHOR: Sultanov, S. A.

TITLE: Radiometric Survey of Wells in Oil-reservoir Development (Radiometriya skvazhin v praktike razrabotki neftyanykh mestorozhdeniy)

PERIODICAL: Tr. Mosk. neft. in-ta, 1957, Nr 20, pp 61-66

ABSTRACT: An examination of the results of the employment of radiometric methods for the holding off of the water-oil interface at the Tuymazy deposit. It is noted that these methods permit a determination of the lifting rate of the bottom water and the construction of a map of the water-oil boundary interface.

V. N. Nikolayevskiy

1 Oil wells--USSR 2. Radiometers--Applications

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YERONIN, V.A.; MAL'TSEV, M.V.; VAKHITOV, G.G.; SULTANOV, S.A.

Introducing new machinery and methods in the exploitation of Tatar oil fields. Neft. Khoz. 35 no.10:24-31 O '57. (MIRA 11:1)
(Tatar A.S.S.R.--Petroleum engineering)

SULTANOV, S.A.; MARDANOV, M.A.; VELIYEV, K.G.; MARKHASEVA, S.M.

Oxidation of isopropylene benzene obtained in the presence of aluminosilicate catalysts [in Azerbaijani with summary in Russian]. Azerb.neft.khoz. 36 no.7:34-36 Je '57. (MIRA 10:10)
(Oxidation) (Benzene) (Aluminosilicates)

MAMEDALIYEV, Yu.G.; SULTANOV, S.A.

Alkylating benzene in a pulverulent catalyst fluidized bed [in Azerbaijani with summary in Russian]. Azerb.neft.khoz. 36 no.8:28-30 Ag '57. (MIRA 10:11)

(Alkylation) (Benzene) (Fluidization)

SULTANOV, S. A.: Master Chem Sci (diss) -- "Alkylation of benzene with olefins in the boiling layer of a catalyst". Baku, 1958, published by the Acad Sci Azerb SSR. 10 pp (Acad Sci Azerb SSR, Inst of Oil, Azerb Sci Res Inst of the Petroleum-Refining Industry im V. V. Kuybyshev), 150 copies (KL, No 6, 1959, 126)

LOKSHIN, I.A.; SULTANOV, S.A.; PULUYAN, I.G.

Present status of the development of the Bavly oil field. Geol.nefti 2 no.3:5-13 Mr '58. (MIRA 12:6)

1. Upravleniye neftyanoy promyshlennosti Tatsovnarkhoza. (Bavly District--Oil fields--Production methods)

KINZIKEYEV, A.R.; POLUYAN, I.G.; SULTANOV, S.A.

Oil potential of the coal-bearing horizon in the Bavly oil field.
Geol.nefti 2 no.10:30-35 O '58. (MIRA 11:11)

1. Tatarskiy neftyanoy issledovatel'skiy institut i neftepromyslovoye upravleniye Tresta Bavlinskoy neftyanoy promyshlennosti.
(Bavly District--Petroleum geology)

MAMEDALIYEV, Yu.G.; ALIYEV, V.S.; SULTANOV, S.A.

Alkylation of benzene in a pilot plant in a fluid bed of a finely-dispersed circulating catalyst under pressure [in Azerbaijani with summary in Russian]. Dokl. AN Azerb. SSR 14 no.9:681-685 '58. (MIRA 11:10)
(Benzene) (Alkylation)
(Fluidization)

MAMEDALIYEV, Yu.G.; SULTANOV, S.A.

Synthesis of dialkyl benzene [in Azerbaijani with summary in Russian]. Azerb. neft. khoz. 37 no.9:33-35 S '58. (MIRA 11:12)
(Benzene)

SULTANOV, S.A.; MARDANOV, M.A.

Using aluminosilicate catalysts with various promotors in the reaction of benzene dialkylation. Azerb.neft.khoz. 37 no.10: 32-33 O '58. (MIRA 12:2)
(Benzene) (Aluminosilicates) (Alkylation)

SULTANOV, S.A.

Displacement of the water-oil contact in water-drive reservoirs of the platform type and the industrial evaluation of oil recovery. Trudy VNII no.24:129-140 '59. (MIRA 13:5)
(Oil reservoir engineering)