KOLESNIKOV, I.M.; PANCHENKOV, G.M.

Formation of meta-substituted benzenes in the alkylation of aromatic hydrocarbons with unsaturated hydrocarbons. Neftekhimia 2 no.1:48-53 Ja-F '62. (MIRA 15:5)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni Institut neftekhimicheskoy i gazovoy promyshlennosti im. akad. I.M. Gubkina.
(Benzene derivatives) (Alkylation)

PANCHENKOV, G. M.; KOLESNIKOV, I. M.

Kinetic methods for calculating the dehydrogenation processes of hydrocarbons. Neftekhimia 2 no.4:480-486 Jl-Ag '62.
(MIRA 15:10)

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

(Hydrocarbons) (Dehydrogenation)

FEYZKHANOV, F.A.; PANCHENKOV, G.M.; KOLESNIKOV, I.M.

Kinetic equations of heptane reactions under the conditions of
catalytic reforming. Neftekhimiia 2 no.5:716-722 S-O '62.
(MIRA 16:1)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti
imeni I.M.Gubkina.
(Heptane) (Cracking process)

S/195/62/003/003/002/002
E075/E436

AUTHORS: Panchenkov, G.M., Tolmachev, A.M.

TITLE: On the question of the interaction of oxygen with the complex organic cobalt compounds

PERIODICAL: Kinetika i kataliz, v.3, no.3, 1962, 378-384

TEXT: The authors investigated the kinetics of the interaction of O with bis-(N,N'-disalicylalethylenediamine)-μ-aquadicobalt (CoX) and bis-(N,N'-di-(3-nitrosalicylal)-ethylenediamine)-μ-aquadicobalt (3-$NO_2$-CoX). It was found that both compounds absorb O with the evolution of heat, the maximum amount of the absorbed oxygen being 1 molecule of O for 2 atoms of Co. At low temperatures the reaction is almost irreversible, but beginning at 30°C for CoX and 40°C for 3-$NO_2$-CoX, the strength of attachment of O to the complexes rapidly decreases and the reaction becomes reversible. The following scheme is proposed for the reactions:

$$\underset{\text{gas in bulk}}{O_2} \xrightarrow{I} \underset{\text{gas on the surface}}{O_2}$$ - Diffusion of $O_2$ towards the surface of the solid phase

Card 1/3

On the question of the interaction ... S/195/62/003/003/002/002
E075/E436

$\underset{\text{gas on the surface}}{O_2} \xrightarrow{II} O_{2ads}$ - Adsorption of $O_2$ on the surface

$O_{2ads} \xrightarrow{III} \underset{\text{in the bulk of the solid phase}}{O_2}$ - Diffusion of the adsorbed $O_2$ molecules into the solid phase

$\underset{\text{inside the solid}}{O_2} \underset{IVa}{\overset{(+2CoX)\ IV}{\rightleftharpoons}} CoX_2O_2$ - Chemical reaction of the $O_2$ in the solid with the complex molecules

$Co_2X_2O_2 \xrightarrow{(+2CoX^{*})\ V} 2CoX + Co_2X_2^{*}O_2$ - Saturation of the complex molecules, for which reaction IV is not admissible.

The rates for the processes I and II are higher than that for process III. The latter is the rate determining process for the

Card 2/3

S/195/62/003/003/002/002
On the question of the interaction ... E075/E436

reaction below the critical temperatures. Above the critical temperatures both processes III and IV are equally slow and the kinetic S-shaped curves characterize the subsequent reactions. Process V occurs rapidly and is not considered in the kinetic studies. There are 4 figures and 2 tables.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet
im. M.V.Lomonosova Khimicheskiy fakul'tet
(Moscow State University imeni M.V.Lomonosov
Chemistry Division)

SUBMITTED: May 11, 1961

Card 3/3

44350
S/195/62/003/006/003/011
E075/E436

5.2440

AUTHORS: Panchenkov, G.M., Tolmachev, A.M.

TITLE: Kinetics of isotopic exchange between gaseous oxygen and oxygen absorbed by the organic complex compounds of cobalt.

PERIODICAL: Kinetika i kataliz, v.3, no.6, 1962, 861-864

TEXT: The isotopic exchange reaction

$$^{16}O^{18}O_{gas} + Co_2X_2{}^{16}O_{2\ solid} \rightleftarrows {}^{16}O_{2\ gas} + Co_2X_2{}^{16}O^{18}O_{solid}$$

where X is bis-(N, N¹-disalicylalethylenediamine)-μ-aquodicobalt, was studied for the first time. The complex saturated with oxygen at a given temperature and about 380 mm Hg was evacuated and saturated with $^{16}O^{18}O$. Samples of the gas were withdrawn periodically and analysed by mass spectrometry. The rate of isotopic exchange was measured by

$$F = \frac{C - C_o}{C_\infty - C_o}$$

where C and $C_o$ - molar fractions of the isotopic O at times t

Card 1/3

Kinetics of isotopic ...

S/195/62/003/006/003/011
E075/E436

and t = 0, respectively and $C_\infty$ - the molar fraction of the O molecules at equilibrium at which the isotopic composition is the same in the solid and gaseous phases. In most cases the equilibrium was not reached with the exception of CoX at 40°C. This made the calculation of $C_\infty$ difficult except for the reaction at 40°C. The isotopic exchange was postulated to proceed in two steps:

$$^{16}O^{18}O_{gas} + Co_2X_2{}^{16}O_{2\,solid} \xrightarrow{1} {}^{16}O_{2\,gas} + Co_2X_2{}^{16}O^{18}O_{solid} \xrightarrow[+ Co_2X_2{}^{16}O_2^*]{2}$$

$$\rightarrow Co_2X_2{}^{16}O_2 + Co_2X_2^{*}{}^{16}O^{18}O$$

The first reaction is fast and determined by the rate of diffusion of isotopic $O_2$ into the crystals of the complexes. The diffusion into the narrowest pores of the crystals was stopped however by O molecules combined with the complexes. At this stage the second slow reaction begins. The second stage is accelerated at 40 to 65°C due to weakening of bonds between O and the complexes. The effective coefficient of autodiffusion of O in $Co_2X_2O_2$

Card 2/3

Kinetics of isotopic ...

S/195/62/003/006/003/011
E075/E436

particles at 40°C was calculated to be about 2.3 x $10^{-11}$ $cm^2$/sec using R. Barrer's equation (Diffuziya v tverdykh lekakh (Diffusion in solids) Izd-vo inostr. lit., M., 1948, 43). There are 3 figures and 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova (Moscow State University imeni M.V.Lomonosova)

SUBMITTED: May 11, 1961

Card 3/3

PANCHENKOV, G.M.; KOZLOV, L.L.; YAKOVLEV, V.I.; KATSOBASHVILI, V.Ya.;
VASIL'YEV, L.A.; RYABUKHIN, Yu.S.

Polymerization of amylenes under the action of high-energy electrons. Izv. vys. ucheb. zav.; neft' i gaz 5 no.1:57-58 '62. (MIRA 16:11)

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

PANCHENKOV, G.M.; KOLESNIKOV, I.M.

Catalytic activity of a mixed platinum-palladium catalyst. Izv. vys.ucheb.zav.; neft' i gaz 5 no.8:75-77 '62. (MIRA 17:3)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akademika I.M.Gubkina.

KOLESNIKOV, I.M.; PANCHENKOV, G.M.

Kinetic equation of parallel bimolecular reactions taking place in the gas phase of flow in the presence of solid catalysts. Izv. vys. ucheb. zav.; neft' i gaz 5 no.10:61-66 '62. (MIRA 17:8)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika Gubkina.

PANCHENKOV, G.M.; YERCHENKOV, V.V.

Temperature dependence of the coordination numbers and diffusion coefficients of liquids. Ukr. fiz. zhur. 7 no.8:801-896 S '62. (MIRA 16:1)

1. Moskovskiy gosudarstvennyy universitet.
(Liquids) (Molecules) (Diffusion)

S/065/62/000/009/001/002
E075/E436

AUTHORS: Kolesnikov, I.M., Panchenkov, G.M., Orlova, A.A.

TITLE: The kinetics of the alkylation reaction of toluene with propylene using alumino-silicate catalyst

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 7, no.9, 1962, 1-8

TEXT: As the reaction was considered to be suitable for the preparation of chemically pure cymenes, its kinetics were investigated in a flow system at atmospheric pressure. Thermodynamic calculations have shown that at the molar ratio of toluene to propylene of 3:1, the alkylation should be carried out at a temperature not greater than 260°C. The composition of the catalyst was: (%) $Al_2O_3$ - 14.01; $SiO_2$ - 84.66; NaO - 0.36; $Fe_2O_3$ - 0.13; Zn and MgO - traces. It was regenerated by air at 550°C. The rate of feed of toluene into the reactor was from 0.4 to $1.8 \times 10^{-2}$ mole per 1 cc catalyst/hour. It was shown that for all the reaction temperatures investigated (180, 200, 220, 240 and 260°C) the yields of products decreased with the increasing rate of toluene feed into the reactor. The conversion of propylene exceeded that of toluene, as a result its conversion into

Card 1/2

SEMIOKHIN, I.A.; AGEYEV, Ye.P.; PANCHENKOV, G.M.; SMIRNOV, B.I.

Separarion of oxygen isotopes by the thermodiffusion method.
Zhur. fiz. khim. 36 no.1:124-129 Ja '62. (MIRA 16:8)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova.
(Oxygen—Isotopes) (Diffusion)

33695

S/076/62/036/002/007/009
B152/B110

5.2410

AUTHORS: Makarov, A. V., Koretskaya, T. V., and Panchenkov, G. M.

TITLE: Zone melting separation of boron isotopes

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 2, 1962, 391 - 393

TEXT: In this study, the suitability of zone melting for the separation of boron isotopes has been tested. Boron anhydride $B_2O_3$ was used for the purpose. The boron anhydride was filled into a stainless steel tube in such quantity that in the molten state about half the tube was full. During the experiment the tube moved at a certain velocity through a furnace heated to 700 - 800°C. In order to obtain a melting zone as narrow as possible, two water-cooled glass coolers were placed on either side of the furnace. After the experiment the sample taken from the tube was analyzed in the form of $Na_2B_4O_7$ in a mass spectrometer. Six experiments were made altogether, using different rates (1.5 - 0.15 cm/hr), tubes of different dimensions (l = 45 - 50 cm), and a varying number of passages through the melting zone (1 - 25). The mass-spectrometric

Card 1/2

PANCHENKOV, G.M.; YERCHENKOV, V.V.

Temperature dependence of the coordination number and diffusion coefficient in liquids. Zhur. fiz. khim. 36 no.4:869-872 Ap '62. (MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Diffusion) (Coordination number)

PANCHENKOV, G.M.; KUVSHINNIKOV, I.M.

Apparatus for measuring sorption from a gas stream. Zhur.fiz.-khim. 36 no.5:1104-1107 My '62. (MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Adsorption)

PANCHENKOV, G.M.; YAKOVLEV, V.I.; KOZLOV, L.L.; ZHOROV, Yu.M.; KUZOVKIN, D.A.

Activation of an aluminosilicate catalyst by protons and gamma rays of $Co^{60}$. Zhur.fiz.khim. 36 no.5:1113 My '62. (MIRA 15:8)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti.
(Aluminosilicates) (Catalysis) (Radiation)

GORSHKOV, V.I.; PANCHENKOV, G.M.; IVANOVA, T.V.

Kinetics of alkali metal ion exchange on the sulfonated KU-2 cation exchanger in water and in 60% methyl alcohol. Zhur.fiz. khim. 36 no.8:1690-1694 Ag '62. (MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova, kafedra fizicheskoy khimii.

(Metal ions) (Ion exchange resins)

SHABANOV, A.A.; GORSHKOV, V.I.; PANCHENKOV, G.M.

Electrochromatographic separation on a cation exchanger.
Part 2: Rates of motion of the zones. Zhur.fiz.khim. 36
no.8:1695-1697 Ag '62. (MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova kafedra
fizicheskiy khimii.
(Chromatographic analysis) (Electrophoresis) (Ion exchange)

42185
S/076/62/036/011/015/021
B101/B180

5.4300

AUTHORS: Panchenkov, G. M., and Zhorov, Yu. M.

TITLE: Kinetics of chemical reactions between gaseous and liquid reactants with volume changes in a stationary system

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 11, 1962, 2520-2524

TEXT: Unlike classical kinetics, the change in volume must be taken into account. For this purpose, the volume of the reacting system is represented as a function of the degree of conversion, and the following is obtained for the rate of reaction:

$$w_{A_1 liq} = \left[ n_{o_{A_1 liq}} / (V_o - \beta x_{A_1 liq}) \right] (dx_{A_1 liq}/d\tau),$$

where $A_{1\,liq}$ is the liquid reactant, $n_o$ its initial concentration, x the degree of conversion, $\tau$ the reaction time, $V_o$ the initial volume, and $\beta = (n_{o_{A_1 liq}}/\nu_1)\sum \nu_i M_i/d_i$; $\nu_i$ = stoichiometric coefficient;

Card 1/2

GORSHKOV, V.I.; KUZNETSOV, I.A.; PANCHENKOV, G.M.

Continuous countercurrent ion-exchange method of separation.
Dokl. AN SSSR 143 no.3:643-645 Mr '62. (MIRA 15:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
Predstavleno akademikom V.I.Spitsynym.
(Ion exchange)

GORSHKOV, V.I.; KUZNETSOV, I.A.; PANCHENKOV, G.M.

Maintenance of parallel transport conditions in a moving bed of ion exchanger. Zhur. fiz. khim. 36 no.3:611-613 Mr '62. (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

SEMIOKHIN, I.A.; PANCHENKOV, G.M.; KOROVKIN, V.K.

Oxygen isotope separation in the electrosynthesis of ozone. Part. 2. Zhur. fiz. khim. 36 no.11:2561-2563 N'62. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

PANCHENKOV, G.M.; ZHOROV, Yu.M.

Kinetics of chemical reactions between gaseous and liquid reactants proceeding in a stationary system with change in volume. Zhur. fiz. khim. 36 no.11:2520-2524 N'62. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

GOLUBEV, V.S.; PANCHENKOV, G.M.

Sorption kinetics and ion exchange in the outer diffusion region in the presence of liquid phase flow. Zhur.fiz.khim. 36 no.10: 2271-2274 O '62. (MIRA 17:4)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

SHABANOV, A.A.; GORSHKOV, V.I.; PANCHENKOV, G.M.

Electric conductivity of the sulfonate-cation exchanger SDV-3 in water-alcohol and water-acetone solutions. Zhur.fiz.khim. 36 no.10:2148-2152 O '62. (MIRA 17:4)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

PANCHENKOV, G.M.; KUVSHINNIKOV, I.M.; SALTYKOVA, N.M.; DENISOVA, L.N.

Sorption of water on aluminosilica gels at elevated temperatures.
Zhur. fiz. khim. 36 no.3:641-643 Mr '62. (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

PANCHENKOV, G.M.; ZHOROV, Yu.M.

Determinating the kinetic values of simple and complex chemical reactions in circulating reactors. Trudy MINKHiGP no.44:141-147 '63. (MIRA 18:5)

PANCHENKOV, G.M.; YAKOVLEV, V.I.; [illegible]; ZHURAVLEV, G.I.

Radiation-thermal cracking of oil fractions. Trudy MINKhiGP no.44:210-213 '63. (MIRA 18:5)

PANCHENKOV, G.M.; BARANOV, V.Ya.

Kinetics of the thermal cracking of individual hydrocarbons and oil fractions. Trudy MINKHiGP no.44:214-219 '63. (MIRA 18:5)

PANCHENKOV, G.M.; SKOBLO, V.A.

Adsorption of the vapors of individual hydrocarbons by molecular sieves. Trudy MINKHiGP no.44:220-226 '63. (MIRA 18:5)

TOLMACHEV, A.M.; FEDOROV, V.A.; PANCHENKOV, G.M.

Synthetic zeolites as ion exchangers. Part 3. Zhur. fiz. khim.
37 no.11:2548-2550 N'63. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

KOLESNIKOV, I.M.; PANCHENKOV, G.M.; MOROZOV, Ye.A.; ANISIMOVA, N.N.

Kinetics of the alkylation of benzene with ethylene using an aluminosilicate catalyst in the gas phase with the addition of gaseous hydrogen chloride. Izv.vys.ucheb.zav.; neft' i gaz 6 no.11:85-90 '63.
(MIRA 17:9)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im.akademika I.M.Gubkina.

GORSHKOV, V.I.; KUZNETSOV, I.A.; PANCHENKOV, G.M.; KUSTOVA, L.V.

Continuous countercurrent ion exchange method for separation of lithium and sodium. Zhur. neorg. khim. 8 no.12:2790-2794 D '63.

Feasibility of countercurrent ion exchange separation of rubidium and cesium. Ibid.:2795-2799 (MIRA 17:9)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, kafedra fizicheskoy khimii.

GORSHKOV, V.I.; PANCHENKOV, G.M.; SAVENKOVA, N.P.; SAVOST'YANOVA, S.U.

Continuous countercurrent ion exchange method for separation of rubidium and cesium on the cation exchanger KU-1. Zhur. neorg. khim. 8 no.12:2800-2805 D '63. (MIRA 17:9)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, kafedra fizicheskoy khimii.

YEREMIN, Ye.N., prof.; KISELEV, A.V., prof.; KOBOZEV, N.I., prof.; PANCHENKOV, G.M., prof.; POLTORAK, O.M., prof.; SKURATOV, S.M., prof.; TATEVSKIY, V.M., prof.; TOPCHIYEVA, K.V., prof.; FIGUROVSKIY, N.A., prof.; FILIPPOV, Yu.V., prof.; SHAKHPARONOV, M.I., prof.

IAkov Ivanovich Gerasimov; on his sixtieth birthday. Zhur. fiz. khim. 37 no.12:2803-2804 D '63. (MIRA 17:1)

1. Kafedra fizicheskoy khimii Moskovskogo gosudarstvennogo universiteta.

GERASIMOV, Yakov Ivanovich, prof.; DREVING, Vladimir Petrovich;
YEREMIN, Yevgeniy Nikolayevich; KISELEV, Andrey
Vladimirovich; LEBEDEV, Vladimir Petrovich; PANCHENKOV,
Georgiy Mitrofanovich; SHLYGIN, Aleksandr Ivanovich;
NIKOL'SKIY, B.P., prof., retsenzent; SHUSHUNOV, V.A., prof.,
retsenzent; LUR'YE, G.Ye., red.; SHPAK, Ye.G., tekhn. red.

[Course in physical chemistry] Kurs fizicheskoi khimii. [By] IA.I.Gerasimov i dr. Moskva, Goskhimizdat, 1963. Vol.1. 624 p. (MIRA 17:1)

1. Chlen-korrespondent AN SSSR (for Gerasimov, Nikol'skiy).
2. Kafedra phizicheskoy khimii Leningradskogo gosudarstvennogo universiteta (for Nikol'skiy, Shushunov).

PANCHENKOV, Georgiy Mitrofanovich

"Kinetics of chemical processes in oil refining and petrochemistry in flow-type reactors"

report to be submitted for the 6th World Petroleum Congress, Frankfurt am Main, W. Germany, 19-26 Jun 63.

PANCHENKOV, G.M.; SEMIOKHIN, I.A.; KOROVKIN, V.K.

"Zur Frage des Mechanismus der Verteilung der Isotope des Sauerstoffs bei der Elektrosynthese von Ozpn"

Third Working Conference on Stable Isotopes, 28 October to 2 November 1963, Leipzig.

PANCHENKOV, G. M.; Timofeyev, Ye.P.; TSIMMERMAN, V. D.; PECHALIN, L. I.;

"Trennung der Isotope des Titans durch Gegenstromdestillation von Titantetrachlorid"

Third Working Conference on Stable Isotopes, 28 October to 2 November 1963, Leipzig.

PANCHENKOV, G.M.; ANDREYOV, Yu.P.; KOROVKIN, V.K.; SEMIOKHIN, I.A.

"Untersuchung der Kinetik und des Mechanismus der Isotopenverteilung bei der Dissoziation von Kohlendioxyd in elektrischen Entladungen"

Third Working Conference on Stable Isotopes, 28 October to 2 November 1963, Leipzig.

PANCHENKOV, G.M.; PARBUZIN, V.S.; NIKITIN, O.T.; GRYAZNOVA, S.V.

"Trennung der Isotope des Wasserstoffs an Kobalt-Molekularsieben"

Third Working Conference on Stable Isotopes, 28 October to 2 November 1963, Leipzig.

PANCHENKOV, G. M.; KOLCHIN, A. M.;

"Massenspektrometrische Isotopenanalyse am Bortrifluorid"

"Massenspektrometrische Isotopenanalyse an einigen Elementen der Seltenen Erden"

Third Working Conference on Stable Isotopes, 28 October to 2 November 1963, Leipzig.

PANCHENKOV, G. M.; GOLUBEV, V. S.;

"Eine Methode zur Berechnung der Dynamik der Sorption und Chromatographie"

Third Working Conference on Stable Isotopes 28 Oct to 2 November 1963, Leipzig.

PANCHENKOV, G.M.; GORSHKOV, V.I.; KUZNETSOV, I.A.

"Eine kontinuierliche Gegenstrom-Ionenaustauschmethode zur Trennung von Ionenmit annaherd ubereinstimmenden Eigenschaften"

Third Working Conference on Stable Isotopes, 28 October to 2 November 1963, Leipzig.

PANCHENKOV, G.M.; GOROKHOV, L.N.; NIKITIN, O.T.

"Massenspektrometrische Isotopenanlyse am Titan"

Third Working Conference on Stable Isotopes 28 October to 2 November 1963, Leipzig.

PANCHENKOV, G. M.; KUZNETSOVA, Ye. M.; GRYAZNOVA, S. V.;

"Zur Frage der Isotopentrennung durch Extraktion"

Berechnung des elementaren Isotopentrennfaktors bei Istopenaustaustauschreaktionen und bei der Destillation.

Third Working Conference on Stable Isotopes, 28 October to 2 November 1963, Leipzig.

S/189/63/000/001/001/008
D204/D307

AUTHORS: Panchenkov, G. M. and Makarov, A. V.

TITLE: Preparation of boron trifluoride

PERIODICAL: Moscow. Universitet. Vestnik. Seriya II Khimiya, no. 1, 3-6 - 1963

TEXT: The present work was motivated by the difficulty in producing large quantities of pure $BF_3$. Considerable quantities of $BF_3$ containing ~1% $SiF_4$ may be obtained by gradually adding oleum to intimately mixed $NH_4BF_4$ and $B_2O_3$. The initial 20 - 30% of $BF_3$ are evolved in the cold; further evolution requires heating. Pyrex glass is used. The $BF_3$ passes through a water-cooled reflux condenser, 2 traps cooled with solid $CO_2$ acetone, and is purified by freezing with liquid $N_2$. The apparatus may yield ~200 l of $BF_3$ per day. Lesser quantities of $BF_3$ of higher purity ($<0.1\%$ $SiF_4$) may be obtained

Card 1/2

Preparation of boron ...

S/189/63/000/001/001/008
D204/D307

continuously by the decomposition of $C_6H_5N_2BF_4$ (into $C_6H_5F$, $N_2$ and $BF_3$) in pyrex apparatus, under reduced pressure, with gentle heating. The $C_6H_5$ was removed by passing through cold traps (acetone/solid $CO_2$), and $BF_3$ was collected in a trap cooled with liquid $N_2$. The gas may, if necessary, be further purified, e.g. by rectification or thermal diffusion. There are 2 figures.

ASSOCIATION: Kafedra fizicheskoy khimii (Physical Chemistry Department)

SUBMITTED: February 8, 1961

S/189/63/000/001/002/008
D204/D307

AUTHORS: Panchenkov, G. M., Makarov, A. V. and Rozynov, B. V.

TITLE: Kinetics of the absorption of $BF_3$ during the formation of the anisole complex

PERIODICAL: Moscow. Universitet. Vestnik. Seriya II. Khimiya, no. 1, 1963, 7-9

TEXT: The absorption of pure $BF_3$ (obtained by the decomposition of phenyl diazonium borofluoride) in the anisole. $BF_3$ complex unsaturated w.r.t. $BF_3$ was studied, in view of the interest of this problem in the separation of various isotopes of B. Pyrex apparatus was used throughout. The complex was maintained at 20°C and the initial pressure ($p_0$) was measured. Additional $BF_3$ was then passed in, to give a pressure p, and this pressure was measured as a function of time t, i.e. p(t). The experiment was regarded as finished when p(t) remained practically constant with time. It was

Card 1/2

Kinetics of the absorption ... S/189/63/000/001/002/008
D204/D307

found that at 20°C the absorption process was rapid, although not instantaneous, and obeyed the empirical relation ,

$$\frac{t}{\Delta m} = a + bt.$$

In the authors' apparatus $\Delta m = 2.05 \times 10^{-4} \Delta p$ g/mm Hg, where $\Delta p = p(t) - p_0$. There are 3 figures.

ASSOCIATION: Kafedra fizicheskoy khimii (Physical Chemistry Department)

SUBMITTED: November 27, 1961

Card 2/2

S/189/63/000/002/009/010
A057/A126

AUTHORS: Makarov, A.V., Panchenkov, G.M.

TITLE: On the cascade apparatus for boron isotope separation by the method of chemical exchange, using the thermic method for phase transformation

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya II, Khimiya, no. 2, 1963, 58 - 60

TEXT: The construction of a two-stage cascade apparatus with six packed columns for the separation of boron isotopes by chemical exchange is described. The fractionating is carried out between gaseous $BF_3$ and the liquid $BF_3$ complex with anisole. The apparatus might be used also for other $BF_3$ complexes or for separation of isotopes of other elements. It contains principally 3 reservoirs for the $BF_3 \cdot C_6H_5OCH_3$ complex, one flask for pumping over the complex, an electromagnetic regulator of the flow velocity, six packed columns (length about 2.5 m, diameter 15 and 9 mm, total length of package 15.8 m), two distillation columns, one electromagnetic flow-separator, two desorbers, six evaporators,

Card 1/2

coolers, manometer, etc. The $BF_3$ gas was prepared from $NH_4BF_4$, $B_2O_3$ and $H_2SO_4$ and passed through anisole to the saturation point with $BF_3$. The $BF_3$ complex is then passed by means of the electromagnetic doser to the first column of the cascade, then evaporated in the first evaporator (200°C); the evaporated $BF_3$ and anisole are condensed and thus the newly formed complex is passed to the top of the second packed column. This was repeated until the complex passed the fifth packed column, from where it entered the electromagnetic separator, where the thermal decomposition of the complex to $BF_3$ and anisole was effected on the desorber. By changing the duration of electric pulses and the pulse intervals, the separation degree of the complex flows was regulated. The final decomposition of the complex was attained in the second (150°C) desorber. Periodic sampling is carried out during the operation of the apparatus for isotope analysis. There is 1 figure.

ASSOCIATION: Kafedra fizicheskoy khimii (Department of Physical Chemistry)

SUBMITTED: April 6, 1962

S/152/63/000/002/003/003
B126/B186

AUTHORS: Panchenkov, G. M., Nikitina, E. V.

TITLE: Exchangeability of alumosilicates prepared by various methods

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 2, 1963, 70 - 74

TEXT: Three methods were used to prepare samples of an alumosilicate catalyst: blending of sulfate of aluminum solutions and liquid glass with subsequent coagulation to alumosilicate gel; saturation of humid silica gel with solutions of aluminum nitrate of various concentrations with subsequent decomposition of aluminum salt during drying and heating; and blending of separately precipitated silica gels and aluminum hydroxide. It was shown that the exchange of aluminum and hyrogen ions in alumosilicates obtained by joint precipitation is subject to the law of mass, and their maximum quantity exchangeable against the ion of sodium from a sodium chloride solution was calculated on this basis. However, this law is not applicable to samples obtained by saturation of silica gel or by blending separately precipitated gels. In these catalysts the quantity of exchangeable ions of aluminum is much smaller. However, an increase

Card 1/2

ACCESSION NR: AP3001604 S/0189/63/000/003/0029/0032

AUTHORS: Semiokhin, I. A.; Panchenkov, G. M.; Korovkin, V. K.

TITLE: Utilization of ozone electrosynthesis in the concentration of the rare oxygen isotope O-18

SOURCE: Moscow. Universitet. Vestnik. Seriya 2, Khimiya, no. 3, 1963, 29-32

TOPIC TAGS: electrosynthesis, ozone electrosynthesis, O-18 isotope, oxygen isotope, oxygen isotope concentration, ozonizer, ozone concentration, molecular ozone redistribution, molecular oxygen redistribution, isotope redistribution, oxygen isotope redistribution velocity

ABSTRACT: A short report was delivered at the All-Union Universities Conference on Ozone, MGU, May 1960. The purpose of this study was to determine the relation between the separation coefficient and the velocity of oxygen isotope separation (with respect to the time interval during which oxygen remained in the electrical discharge zone, to length of the reactor, to pressure, to temperature, and to the procedure of ozone accumulation and sampling). Maximum ozone concentration was 9-10 vol % (at 20C and 760 mm Hg). The isotope composition analysis was conducted with the MS-3 mass-spectrometer. The specific energy factor u/v (ratio of

Card 1/2

L 17090-63
Fo-4/Pc-4/Pr-4 RM/WW/JD/JW/JG
ACCESSION NR: AP3004692

AUTHORS: Makarov, A. V.; Panchenkov, G. M.

TITLE: Desorption kinetics of boron trifluoride from some of its complex compounds

SOURCE: Moscow, Universitet. Vestnik. Seriya II. Khimiya, No. 4, 1963, 46-49

TOPIC TAGS: boron fluoride, desorption, kinetics of desorption, complexes, anisole, phenetole, chlorex

ABSTRACT: The desorption kinetics at various temperatures of borontrifluoride from its complexes with anisole, phenetole, chlorex, and sulfuric acid were investigated. Experiments were conducted in apparatus designed by A. V. Makarov and G. M. Panchenkov (ZhFKh, 34, 639, 1960), in which the volume of evolved $BF_3$ is estimated by means of a gasometer. Fifty-three kinetic curves of the evolved gas for 10 to 60-minute intervals were plotted, with temperatures ranging from 34 to 116.5C for the anisole, from 28.9 to 146.8C for the phenetole, from 31.6 to 96.3C for the chlorex, and from 68.2 to 96.2C for the sulfuric acid complex. The results show that the desorption of $BF_3$ from its complexes proceeds at a comparatively slow rate for temperatures of 50-100C, the desorption from the sulfuric acid complex being the slowest. The findings are expected to be of

Card 1/2

L 17090-63

ACCESSION NR: AP3004692

value in the understanding of phenomena related to the separation of boron isotopes. Orig. art. has: 2 charts and 1 table.

ASSOCIATION: Moskovskiy universitet, Kafedra fizicheskoy khimii (Moscow University, Department of Physical Chemistry)

SUBMITTED: 20Jan62 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: CH NO REF SOV: 004 OTHER: 000

Card 2/2

S/2982/63/000/044/0210/0213

ACCESSION NR: AT4008703

AUTHOR: Panchenkov, G. M.; Yakovlev, V. I.; Kozlov, L. L.; Zhuravlev, G. I.

TITLE: Radiation thermal cracking of petroleum fractions

SOURCE: Moscow. Institut neftekhimicheskoy i gazovoy promy*shlennosti. Trudy*, no. 44, 1963. Neftekhimiya, pererabotka nefti i gaza, 210-213

TOPIC TAGS: cracking, petroleum product cracking, thermal cracking, radiation cracking, radiation thermal cracking, gamma irradiation, gas oil radiation cracking, petroleum product irradiation, gasoline fraction irradiation, petroleum refining, petroleum cracking, radiation cracking

ABSTRACT: Gas oil from Romashkinskaya petroleum (fraction 300-345C) was irradiated (100 r/sec) at temperatures of 400 and 425C. Another series of experiments employed the 350-500C fraction of the same petroleum, a radiation dosage of 92 r/sec and temperatures of 375 and 390C. The designations "RTC" and "HC" are used here to indicate heat cracking processes with and without the use of radiation, respectively. The authors found that radiation accelerates the decomposition of the original gas oil by 50 to 100% (see Figs. 1 and 4 in the Enclosure). The yield of gasoline fractions showed preferrable patterns for the 300-345C fraction at 425C and radiation levels above 3500 r, as well as for the other fraction at 390C and

Card 1/2

ACCESSION NR: AT4008703

levels above 3000 r (see Figs. 2 and 3 in the Enclosure). The content of olefins in gasoline fractions is lower for RTC than in corresponding fractions for HC. Orig. art. has: 4 graphs.

ASSOCIATION: INSTITUT NEFTEKHIMICHESKOY I GAZOVOY PROMY*SHLENNOSTI, MOSCOW (Institute for petroleum chemistry and the gas industry)

| | | |
|---|---|---|
| SUBMITTED: 00 | DATE ACQ: 16Jan64 | ENCL: 04 |
| SUB CODE: FL | NO REF SOV: 006 | OTHER: 002 |

Card 2/02

PANCHENKOV, G.M.; GORSHKOV, V.I.; SLOVETSKIY, V.I.

Comparative kinetic characteristics of the KU-1, SDV-3, SM-12, and SBS cation exchangers. Kin.i kat. 4 no.1:82-87 Ja-F '63. (MIRA 16:3)

1. Moskovskiy gosudarstvennyy universitet imeni M.N.Lomonosova, khimicheskiy fakul'tet.

(Ion exchange)

GOLUBEV, V.S.; KIRIGINTSEV, A.N.; PANCHENKOV, G.M.

Equation for the output curve of equilibrium sorption in a continuous flow of the substance adsorbed by an adsorbent. Kin. i kat. 4 no.4:635-643 Jl-Ag '63. (MIRA 16:11)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR i Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet.

AGEYEV, Ye.P.; PANCHENKOV, G.M.

Oxygen isotope separation by the thermal diffusion method. Atom. energ. 14 no.5:494-496 My '63. (MIRA 16:6)
(Isotope separation)

KUZNETSOV, I.A.; KUSTOVA, L.V.; GORSHKOV, V.I.; PANCHENKOV, G.M.

Equilibrium of cation exchange of alkali metals on cation exchange resins KU-1 and KU-2. Vest.Mosk.un.Ser.2:Khim. 18 no.2:10-13 Mr-Ap '63. (MIRA 16:5)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.
(Alkali metals) (Ion exchange resins)
(Chromatographic analysis)

PANCHENKOV, G.M.; MAKAROV, A.V.; D'YACHENKO, V.Ya.; MOISEYEV, V.D.

Thermal diffusion of $BF_3$ under pressure. Vest. Mosk. un. Ser. 2: Khim. 18 no.3:33-36 My-Je '63. (MIRA 16:6)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.
(Boron fluorides) (Boron isotopes)

GOLUBEV, V.S.; PANCHENKOV, G.M.

Layer by layer method of computation of the dynamics of non-equilibrium sorption and chromatography. Zhur.fiz.khim. 37 no.2: 310-317 F '63. (MIRA 16:5)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Sorption) (Chromatography)

45148

S/076/63/037/002/018/018
B144/B180

5,3821

AUTHORS: Panchenkov, G. M., Tolmachev, A. M., Fedorov, V. A.

TITLE: Synthetic zeolites as ion exchangers. II. Study of the ion exchange equilibrium

PERIODICAL: Zhurnal fizicheskoy khimii, v. 37, no. 2, 1963, 456-459

TEXT: The equilibrium of the exchange of $NH_4^+$, $Li^+$, $Na^+$, $Ca^{2+}$, $Pb^{2+}$ ions was studied on two samples of synthetic 4A zeolites at 20 ± 2°C. Based on the equation of R. M. Barrer and J. D. Falkoner (Proc. Roy. Soc., A236, 227, 1956), $\log K'_{th} = \log (M_{BX}M_{AZ}/M_{BZ}M_{AX}) + a(1 - 2M_{AZ})$ was derived for the 1,1-valent ion exchange and $\log K''_{th} = \log K + a\,(M_{AZ} - 1/2M_{BZ})/(M_{AZ} + 1/2M_{BZ})$ for the 1,2 ion exchange, where $K_{th}$ are the thermodynamic equilibrium constants, M the concentration, B the univalent cation, X the univalent anion, A a cation of valency 1 or 2, and Z the zeolite. The second equation holds only for constant concentrations of the solution. These equations include the ratio of the

Card 1/2

Synthetic zeolites as ion ... S/076/63/037/002/018/018
B144/B180

ion activities in solution and show that $K'_{th}$ is independent of the concentration, whereas $K''_{th}$ decreases significantly when the concentration increases. This was proved by the values calculated for the systems $CaCl_2$ + Li4A; $Pb(NO_3)_2$ + $NH_4$4A; $CaCl_2$ + Na4A. $K_\gamma$ is highly dependent on the degree of exchange. It decreases when small ions are replaced by big ions or univalent by bivalent ions. The separating capacity of synthetic zeolites is 150-900% greater than that of ion exchange resins. There are 2 figures and 4 tables.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: April 21, 1962

Card 2/2

L 16927-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

S/076/63/037/004/019/029

59

AUTHOR: Arshakuni, R. G., Kolchin, A. M., Panchenkov, G. M.

TITLE: Mass spectroscopic analysis of germanium isotopes 19

PERIODICAL: Zhurnal fizicheskoy khimii, V. 37, No. 4, 1963, 893-896

TEXT: A mass spectroscopic method of the isotopic analysis of germanium has been developed. For the analysis the complex salt $BaGeF_6$ which decomposes in a vaporizer is used. The amount of substance which is used in the analysis is 0.3-0.5 milligrams of $BaGeF_6$, which is not a minimum quantity. The $BaGeF_6$ interacts with the material of the vaporizer with the formation of $GeF_2$. The mass spectrum which is formed upon the ionization of the molecules of $GeF_2$ is studied. The expediency of an isotopic analysis of germanium for peaks of $GeF^+$ ions is shown and an analysis of a sample of metallic germanium is performed. An analysis is made of random errors in measurement. There are 3 figures and 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov), Moscow

SUBMITTED: May 22, 1962

Card 1/1

SEMIOKHIN, I.A.; PANCHENKOV, G.M.; YERSHOVA, N.P.

Separation of carbon isotopes by countercurrent chemical exchange in the gas phase. Part 2: Effect of nitrogen and oxygen. Zhur. fiz. khim. 37 no.6:1409-1411 Je '63. (MIRA 16:7)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Carbon isotopes) (Nitrogen) (Oxygen)

TOLMACHEV, A.M.; GORSHKOV, V.I.; PANCHENKOV, G.M.

Exchange dynamics of ions of different valencies. Zhur.fiz.khim. 37 no.7:
1635-1636 Jl '63. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet.

KUZNETSOVA, Ye.M.; MAKAROV, A.V.; PANCHENKOV, G.M.; PARBUZIN, V.S.

Estimation of the once-through isotope separation coefficient from data on the equilibrium operation of a column with a draw-off pan. Zhur. fiz.khim. 37 no.10:2349-2350 O '63. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet.

KOLESNIKOV, I.M.; PANCHENKOV, G.M.

Calculation of the kinetic constants of processes occurring in the gas phase in a flow. Zhur. fiz. khim. 37 no.12:2698-2705 D '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

SEMIOKHIN, I.A.; ANDREYEV, Yu.P.; PANCHENKOV, G.M.

Separation of oxygen and carbon isotopes in dissociation of $CO_2$ in the silent electrical discharge. Zhur. fiz. khim. 37 no.12: 2782-2783 D '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

KUZNETSOVA, Ye.M.; GRYAZNOVA, Z.V.; PANCHENKOV, G.M.

Calculation of the single-separation coefficient for some chemical exchange reactions. Dokl. AN SSSR 148 no.1:144-147 Ja '63. (MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova. Predstavleno akademikom A.N. Frumkinym.
(Isotope separation)

PANCHENKOV, G.M.; YERCHENKOV, V.V.

Relation between diffusion and short-range order in a liquid.
Vest. Mosk. un. Ser. 2:20-29 Ja-F '64. (MIRA 17:6)

1. Kafedra fizicheskoy khimii, Moskovskogo universiteta.

L [illegible]-65 EWT(l) [illegible]
AEDC(a)/AFWL/SSD/AFTC(p)
ACCESSION NR: AP4047646 S/0189/64/000/006/0040/0046

AUTHORS: Semiokhin, I. A.; Andreyev, Yu. P.; Panchenkov, G. M.

TITLE: The effect of impurities on the dissociation of carbon dioxide gas in silent discharge

SOURCE: Moscow. Universitet. [illegible]

TOPIC TAGS: dissociated gas, combustion dissociation, electric discharge

ABSTRACT: This paper describes the effects of He, A, $N_2$, $O_2$, and CO on the kinetics of $CO_2$ dissociation during electrical discharge. The actual experiments are to be described in a subsequent paper. The experimental method has been previously described [illegible] concentrations were varied [illegible] mm Hg. The total [illegible] by contact [illegible] The addition of He caused [illegible]

Card 1/[illegible]

L 10678-65

ACCESSION NR: AP4047646

no energy in the presence of $CO_2$. At a fixed pressure, the combustion voltage decreased with increase in He and A concentration, but remained constant with increase [illegible] [illegible] the total initial pressure of the gas mixture was 750 mm Hg). Change in $CO_2$ pressure (without impurity) from 300 to 750 mm Hg led to a similar change in degree of dissociation. The authors [illegible] [illegible] depends weakly on the pressure. In amounts, in arbitrary units [illegible] [illegible] that the addition of $O_2$ and CO to the initial gas mixture leads [illegible] degree of [illegible] dissociation [illegible] equilibrium constant. This is apparently due to a decline in temperature in the discharge zone because of loss of some energy during excitation of the $O_2$ and CO molecules, energy that is not then used in the dissociation of [illegible] of [illegible] constituents at [illegible]

Card 2/3

L 10678-65

ACCESSION NR: AP4047646

dissociation. In an electrical discharge, the useless or the energetically useful consumption of energy leads to [illegible] and this must be related to the [illegible] system. Orig. art. has: [illegible]

ASSOCIATION: Moskovskiy universitet (Moscow University)

SUBMITTED: [illegible]

SUB CODE: [illegible]

Card 3/3

L 16640-65 EWT(m)/EPF([illegible])/T Pr- [illegible] S/0152/64/000/009/0069/0071

ACCESSION NR: AP4048359

[illegible] Kolesnikov, I. M.

TITLE: Kinetics of the hydro[illegible] thiophenes [illegible] catalytic reforming

SOURCE: IVUZ. Neft' i gaz, no. 9, 1964, 69-71

TOPIC TAGS: hydrogenolysis, thiophene, sulfide, catalytic reforming, sulfur, heptane, butylthiophene, mercaptan, octane number

ABSTRACT: The octane number and corrosiveness of fuels are influenced considerably by the sulfides and mercaptans which they contain. One of the methods for removing the sulfur compounds [illegible] tions by the hydrogeno[illegible] found that at the [illegible] reaction mixture caused the degree of hydrogeno[illegible]

Card 1/2

L 16640-65

ACCESSION NR: AP4048359

crease, but with increasing temperature, under otherwise equal conditions, the degree of conversion increased. The reactions of hydrogenolysis are given with equations for calculation. The experimental [illegible] of the final derived equation are tabulated. The apparent activation energy was found to be 25.5 kcal/mole. By the formula given, the degree of conversion of 2-butylthiophene was calculated at different feeding rates and temperatures. The theoretical and experimental values agreed well. For thiophene highly diluted with hydrocarbon and hydrogen, the reaction of hydrogenolysis [illegible] Orig. art. has: 2 tables and 6 formulas.

ASSOCIATION: Moskovskiy institut neftekhimicheskoy i gazovoy promy*shlennosti im.akad. I. M. Gubkina (Moscow Institute of the Petrochemical and Gas Industry)

SUBMITTED: 06Apr64 ENCL: 00 SUB CODE: [illegible]

NO REF SOV: 001 OTHER: 000

Card 2/2

PANCHENKOV, G.M.; VENKATACHALAM, K.A.; ZHOROV, Yu.M.

Kinetics of the dehydrocyclization of paraffin hydrocarbons on oxide catalysts. Neftekhimiia 4 no.1:30-36 Ja-F'64
(MIRA 17:6)

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

PANCHENKOV, G.M.; ZHOROV, Yu.M.; VENKATACHALAM, K.A.; GUREVICH, I.P.

Determining the group composition of hydrocarbon mixtures by liquid chromatography with luminescent indicators. Neftekhimiia 4 no.1:128-132 Ja-F'64 (MIRA 17:6)

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

ZHOROV, Yu.M.; PANCHENKOV, G.M.

Formal kinetics of chemical reactions in the liquid phase occuring with change in volume. Izv. vys. ucheb. zav.; neft' i gaz 7 no.7: 49-53 '64. (MIRA 17:9)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akad. I.M. Gubkina.

SEMIOKHIN, I.A.; PANCHENKOV, G.M.; SALIMOVA, K.M.; ANDREYEV, Yu.P.

Isotope exchange between carbon dioxide and its ethanolamine solutions. Vest. Mosk. un. Ser. 2:Khim. 19 no.1:35-38 Ja-F '64.
(MIRA 17:6)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.

TOLMACHEV, A.M.; DENISOVA, L.V.; FEDOROV, V.A.; PANCHENKOV, G.M.

Elution-partition of alkali metal ions on a synthetic A-type zeolite. Vest. Mosk. un. Ser. 2 Khim. 19 no.2:20-22 Mr-Ap'64

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.

KOLESNIKOV, I.M.; PANCHENKOV, G.M.

Kinetics of ethyl alcohol dehydration in the gas phase in a flow. Kinetic equations. Zhur. fiz. khim. 38 no.1:96-101 Ja'64. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

PANCHENKOV, G.M.

Kinetics of chemical reactions in a flow with complete mixing.
Zhur. fiz. khim. 38 no.1:136-140 Ja'64. (MIRA 17:2)

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

**PANCHENKOV, G.M.**

Dynamics of unsteady physicochemical processes in a flow in the case of the process rate obeying the bimolecular reaction law. Zhur. fiz. khim. 38 no.3:770-773 Mr '64. (MIRA 17:7)

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

ANDREYEV, Yu.P.; SEMIOKHIN, I.A.; PANCHENKOV, G.M.; BARAYEV, V.V.

Dissociation of carbon dioxide in the silent electric discharge.
Zhur. fiz. khim. 38 no.3:794-797 Mr '64. (MIRA 17:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

GOLUBEV, V.S.; PANCHENKOV, G.M.

Determination of the diffusion mechanism controlling the rate of sorption (ion exchange). Zhur. fiz. khim. 38 no.4:1010-1013 Ap '64. (MIRA 17:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.

ANDREYEV, Yu.P.; SEMIOKHIN, I.A.; PANCHENKOV, G.M.

Redistribution of oxygen and carbon isotopes between carbon dioxide and the products of its dissociation in a silent electric discharge. Zhur. fiz. khim. 38 no.4:1032-1035 Ap '64.
(MIRA 17:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

L 21335-65 EWT(m)/EWP(e)/EWP(t)/EWP(b) Pq-4 ESD(gs)/DIAAP/IJP(c)
JD/WH

[illegible] 64/038/008/207[illegible]

ACCESSION NR: AP4044[illegible]

AUTHOR: Samiokhin, I. A.; Korovskin, V. K.; Panchenkov, G. M.; Bakhchevanski, Kh. S.

TITLE: Study of isotope effects during dissociation of carbon dioxide in a glowing electrical discharge

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 8, 2072-2076

TOPIC TAGS: [illegible] isotope, carbon dioxide, isotope enrichment, mass spectrometry, glowing discharge

ABSTRACT: Isotope exchange [illegible] dissociation of carbon dioxide in a glowing discharge was investigated [illegible] the direction and order of [illegible] as a function of experimental [illegible]. The reactor was constructed [illegible] ratus shown in figure 1 of the [illegible] lybdenum, glass and [illegible] 10 mm. The electrodes were water cooled during operation [illegible]

Cord 1/4

/

L 21335-65
ACCESSION NR: AP4044449

[illegible] were [illegible]ducted on the [illegible] instru-

Orig. art. has: 4 figures and [illegible]

ASSOCIATION: Khimicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M. V. Mendeleyeva (Chemistry Department, Moscow State University)

L 21335-65

ACCESSION NR: AP4044449

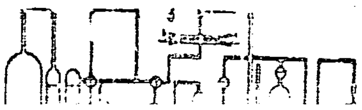
SUBMITTED: 30Jul63 [illegible]

NR REF SOV: 005 [illegible]

Card 3/4

L 22335-65
ACCESSION NR: AP4044448

ENCLOSURE: 01



[illegible] reservoir, 2 [illegible]

Card 4/4

ACCESSION NR: AP4044[illegible]

AUTHOR: Semiokhin, I. A.; Andreyev, Yu. P.; Panchenkov, G. M.

TITLE: Dissociation of carbon dioxide in a silent [illegible]
lation

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 8, 1964, [illegible]

TOPIC TAGS: [illegible]
reaction

ABSTRACT: This work is [illegible] the dissociation [illegible] pressure of gas temperature [illegible]

[illegible]

measured by [illegible]

[illegible]

Card 1/[illegible]

L 16631-65
ACCESSION NR: AP4044450

[illegible]

500 and 700 mm of Hg initial pressures at 5, 20, 47 and 87° C. It was shown that stationary dissociation equilibrium is essentially independent of the temperature of ozonizer, it changes very little with pressure and is greatly dependent on the strength of the discharge. The maximum degree of dissociation was obtained at 300 mm pressure (α = 54%). Orig. art. has: 7 figures

[illegible]

SUBMITTED: 29Jul63

ENCL: 01

SUB CODE: GC

NO REF SOV: 004

OTHER: 000

Card 2/2

L 16631-65
ACCESSION NR: AP4044450

ENCLOSURE: 01

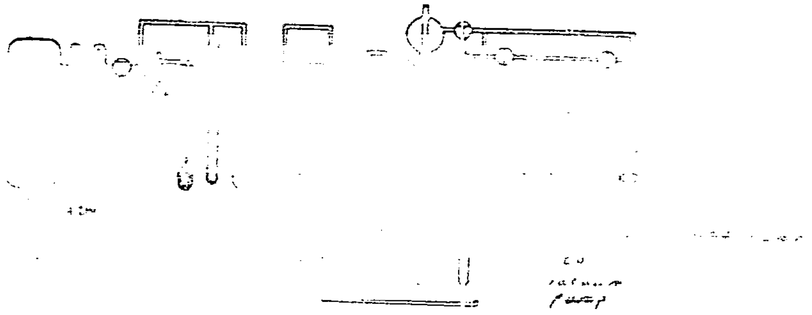


Fig. 1

Apparatus: 1--drying column, 2--rheometer, 3--ozonizer, 4--[illegible] 5--ampules, 6--furnace [illegible]