"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

33590

S/204/61/001/005/008/008
E075/E484

γ-radiolysis of n-hexane ...

i.e. H_2, C_6H_{12}, C_8H_{18} - $C_{12}H_{26}$ and C_2-C_4 fractions, begin to decrease for the solutions containing 10^{-4} mole/litre of benzene. Practically no further changes in the yields occur for benzene concentrations of about 10^{-3} mole/litre and upwards. Thus the solutions become "saturated" with the radiation inhibitor, the maximum decrease in the yields of hydrogen being about 20%. The yields of heavy radiolysis products and hexane are also decreased by about 20% irrespective of the chemical mechanism in which they were formed. The constancy of composition of the heavy residue was checked by mass spectroscopy. For the products forming when C-C bonds are ruptured, i.e. C_2 - C_4 fractions, the yields are lowered only by 14%. In this case benzene shows less inhibiting action. Since the percentage of various fractions is approximately the same for all C_2 - C_4 fractions, it is inferred that the inhibition affects equally odd and even carbon numbered hydrocarbons. The authors explain the fact that the inhibiting action does not depend on differences in chemical mechanisms of product formation, by postulating that the inhibitor accepts at least a part of excitation energy from molecules, radicals or ions

Card 2/3

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33590

γ-radiolysis of n-hexane ... S/204/61/001/005/008/008
E075/E484

directly from excited electronic levels before the energy is transmitted to vibrational levels, which establishes conditions for chemical reactions. Further process of decomposition of excited species does not depend on the presence of small amounts of inhibitors. Consequently the composition of stable radiolysis products hardly changes. Acknowledgments are expressed to N.M.Rytova for her assistance. There are 2 figures, 2 tables and 12 references: 5 Soviet-bloc and 7 non-Soviet-bloc. The four most recent references to English language publications read as follows: Ref.4: F.H.Krenz, Nature, v.176, 1955, 1113; Ref.5: M. Burton, S. Lipsky, M.P.Reddy, J. Chem. Phys., v.26, 1957, 1337; Ref.6: G. Freeman, J. Chem. Phys., v.33, 1960, 71; Ref.7: D.R.Kalkwarf, Nucleonics, v.18, no.5, 1960, 76.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR (Institute of Petrochemical Synthesis AS USSR)

SUBMITTED: September 5, 1961

Card 3/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

S/081/62/000/004/005/087
B149/B101

AUTHORS: Kolbanovsky Yu. A., Kustanovich I. M., Polak L. S. Shcherbakova, A. S.

TITLE: The action of gamma radiation on oxide catalysts and on catalyst-adsorbed hydrocarbon systems

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 68-69, abstract 4B479 (Tr. Tashkentsk. konferentsii po mirn. ispol'zovaniyu atomn. energii, v. 1, 1959. Tashkent, AN UzSSR, 1961, 191-192)

TEXT: The spectra of electron paramagnetic resonance (epr) of the following catalysts were studied before and after irradiation with ~1.25 Mev γ-quanta: Al_2O_3; aluminosilicate for cracking; alumino-molybdenum; K_2O-activated alumino-chromium; MoS_2 and cobaltic alumino-molybdenum. The epr spectra of irradiated catalyst-hydrocarbon systems were also investigated. An epr signal was obtained before irradiation in the case of alumino-chromium catalyst. All the other catalysts except MoS_2, gave

Card 1/2

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an epr signal after irradiation. The adsorption of heptane on MoS_2 gave rise to two maxima, situated on both sides of the g-factor 2.0033. The adsorption of hydrocarbons on other catalysts did not alter the epr spectra. After irradiation of catalyst-hydrocarbon systems, a signal with g<2 appears. This is, in the authors opinion, evidence of electron interaction between the hydrocarbons radiolyzed in the adsorbed state and the surface of the catalyst. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

S/844/62/000/000/010/129
D290/D307

AUTHORS: Polak, L. S. and Shcherbakova, A. S.

TITLE: Low temperature radiolysis of hexane and cyclohexane in the presence of small amounts of benzene and dibenzylsulfide

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 74-75

TEXT: This paper is the first in a series in which the authors investigate the possibility of acceptors of excitation inhibiting the formation of free radicals after irradiation in the solid phase at -196°C. Small amounts (10^{-4} - 5×10^{-3} M) of the excitation acceptors (benzene and dibenzylsulfide) were added to n-hexane and cyclohexane; the mean distance between molecules of the additives was in the range of 60 - 200 Å. The specimens were irradiated using a Co^{60} source with a dose of 20 Mr and EPR spectra were taken at

Card 1/2

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-196°C. The presence of excitation acceptors led to a decrease of up to 50% in the radical yields; dibenzylsulfide also caused changes in the EPR hyperfine structure. The relative changes of amplitude of the hyperfine structure lines were inversely proportional to the mean distance between the molecules of the additive. The addition of iodine did not change the EPR spectra; this fact can be explained if we assume that iodine can only accept molecular excitation that leads to disruption of the molecules. There are 5 figures.

ASSOCIATION: Institut neftekhimicheskogo sintezа AN SSSR (Institute of Petrochemical Synthesis, AS USSR)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

POLAK, L.S.; SHCHERBAKOVA, A.S.

Effect of small additions of excitation acceptor on radical formation in the γ-radiolysis of n.hexane. Neftekhimiia 2 no.3:339-341 My-Je '62. (MIRA 15:8)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Radicals (Chemistry)) (Hexane) (Gamma rays)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, A. S.

16

PHASE I BOOK EXPLOITATION SOV/6177

Akademiya nauk SSSR. Institut neftekhimicheskogo sinteza

Radioliz uglevodorodov; nekotoryye fiziko-khimicheskiye problemy (Radiolysis of Hydrocarbons; Some Physicochemical Problems) Moscow, Izd-vo AN SSSR, 1962. 207 p. Errata slip inserted. 5000 copies printed.

Resp. Eds.: A. V. Topchiyev, Academician, and L. S. Polak, Doctor of Physics and Mathematics; Ed.: L. T. Bugayenko; Tech Ed.: Ch. A. Zentsel'skaya.

PURPOSE: This book is intended for physical and industrial chemists interested in the properties and behavior of irradiated hydrocarbons.

COVERAGE: The book gives a systematic presentation of the results of research on the radiolysis of hydrocarbons carried out from 1957 through 1961 at the Laboratory of Radiation Chemistry, Institut neftekhimicheskogo sinteza AN SSSR (Institute of Petro-

Card 1/4

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16

Chemical Synthesis, Academy of Sciences USSR). Although the results were obtained for individual compounds, they may be generalized and applied to other members of the same homologous series. The following persons participated in making the experiments and in writing the text: V. G. Beryozkin, V. E. Glushnev, Yu. A. Kolbanovskiy, I. M. Kustanovich, V. D. Popov, A. Ya. Temkin, V. D. Timofeyev, N. Ya. Chernyak, V. A. Shakhray, E. B. Shlikhter, A. S. Shcherbakova, B. M. Negodov, A. Z. Peryshkina, N. M. Rytova, T. A. Tegina, Yu. B. Emin, A. M. Brodskiy, V. V. Voyevodskiy, P. Ya. Glazunov, B. A. Smirnova, and Yu. L. Khait. References, mainly Soviet and English, follow individual chapters.

TABLE OF CONTENTS [Abridged]:

Foreword 3

Ch. I. Physicochemical Characteristics of Hydrocarbon Radiolysis 5

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, A. V. Cand Med Sci -- (diss) "[illegible] of the mammary gland in the therapy of uterine myomas and functional (gynecological) hemorrhages. Experimental clinical study." Tomsk, 1959. 8 pp (Tomsk State Med Inst), 200 copies (KL, 44-59, 130)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, B.Ye.

One of the types of longitudinal-transverse waves recorded during seismic studies of refracted waves by the correlation method. Razved. i prom. geofiz. no.46:7-14 '62. (MIRA 16:3)
(Seismic waves)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, B.Ye.; Prinimali uchastiye: BOBROVNIK, I.I.; ISHCHENKO, A.Ya.; KISIN, B.A.

Using the method of transformed head waves in the southwestern part of the West Siberian Plain. Trudy Inst. geol. i geofiz. Sib. otd.AN SSSR no.16:95-112 '62. (MIRA 16:9)
(West Siberian Plain--Seismic prospecting)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, B.Ye.

Recording composite waves and testing methods of sounding in the Zeya-Bureya intermontane depression of the Far East. Razved. i prom. geofiz. no.49:51-58 '63 (MIRA 17:7)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

[illegible] V. [illegible]

Using alternating refracted waves for mapping the surface relief of a crystalline basement. Neftegaz. geol. i geofiz. no.4: 44-47 '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

BUKHVALOV, I.B.; KIRPICHNIKOVA, Ye.S.; RYABOV, V.F.; SHCHERBAKOVA, E.G.

Different blood types in birds; based on materials collected in the steppe districts of the Virgin Territory. Vest. Mosk. un. Ser. 6; Biol., pochv. 19 no.3:51-55 My-Je '64. (MIRA 17:12)

1. Kafedra tsitologii i gistologii Moskovskogo universiteta.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

KOSTIN, Ivan Ivanovich, zhurnalist; SHCHERBAKOVA, F.M., red.; KOPYTKOVA, L.K., tekhn. red.

[Struggle for time] Bytva za chas. Kyiv, Derzhpolitvydav URSR, 1963. 52 p. (MIRA 16:12)
(Ukraine--Efficiency, Industrial)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

KOCHUBEY, Anton Danilovich [Kochubei,A.D.]; SHCHERBAKOVA, F.M., red.

[Planning and administrative guidance at the present stage] Planuvannia i hospodars'ke kerivnytstvo na suchasnomu etapi. Kyiv, Derzhpolitvydav URSR, 1963. 139 p. (MIRA 17:7)

1. Predsedatel' Gosplana Ukr.SSR (for Kochubey).

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

ALEKSANDROV, G.N., kand.tekhn.nauk; SHCHERBAKOVA, G.A., inzh.

Characteristics of the corona of electric transmission lines with bundle conductors at simusoidal voltage. Izv.vys.ucheb. zav.; energ. 2 no.9:24-30 S '59. (MIRA 13:2)

1. Leningradskiy politekhnicheskiy institut im. M.I.Kalinina.
(Electric lines) (Corona (Electricity)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

ALEKSANDROV, G.N., kand.tekhn.nauk; SHCHERBAKOVA, G.A., inzh.

Generalizing the results of numerical calculations of corona characteristics on bundle conductors. Izv.vys.ucheb.zav.; energ. 3 no.1:11-18 Ja '60. (MIRA 13:1)

1. Leningradskiy politekhnicheskiy institut im. M.I.Kalinina.
(Corona(Electricity)) (Electric lines)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

KOVALEV, Aleksandr Grigor'yevich; MYASISHCHEV, Vladimir Nikolayevich; ANAN'YEV, B.G., otv.red.; SHCHERBAKOVA, G.A., red.; ZHUKOVA, Ye.G., tekhn.red.

[Psychological peculiarities of man] Psikhicheskie osobennosti cheloveka. Leningrad, Izd-vo Leningr.univ. Vol.2. [Aptitudes] Sposobnosti. 1960. 302 p. (MIRA 13:8)

1. Deystvitel'nyy chlen Akademii pedagogicheskikh nauk RSFSR (for Anan'yev).

(Ability)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

TROFIMOV, Vladimir Andreyevich, kand.med.nauk; SHCHERBAKOVA,G.A., red.; GULYAYEVA,T.S., tekhn.red.

[Tobacco is the enemy of health] Tabak - vrag zdorov'ia. Leningrad, Gos.izd-vo med.lit-ry Medgiz, Leningr.otd-nie, 1959. 36 p. (MIRA 14:5)

(TOBACCO--PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

MYASISHCHEV, Vladimir Nikolayevich; SHCHERBAKOVA, G.A., red.; VODOLAGINA, S.D., tekhn. red.

[Personality and neuroses] Lichnost' i nevrozy. Leningrad, Izd-vo Leningr. univ., 1960. 424 p. (MIRA 14:11)
(PERSONALITY) (NEUROSES)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

BOZHIN, V.P., doktor filos. nauk, nauchnyy red.; SHCHERBAKOVA, G.A., red.; GURDZHIYEVA, A.M., tekhn. red.

[For communist labor]Za kommunisticheskii trud. Leningrad, 1962. 371 p. (MIRA 16:1)

1. Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR. Leningradskoye otdeleniye.
(Labor and laboring classes) (Socialist competition)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

S/181/63/005/004/018/047
B102/B186

AUTHORS: Vasil'yev, Ya. V., and ~~Shcherbakova, G. A.~~

TITLE: Magnetic susceptibility in the system α-Fe_2O_3-α-Al_2O_3

PERIODICAL: Fizika tverdogo tela, v. 5, no. 4, 1963, 1090 - 1093

TEXT: A solid solution of α-Fe_2O_3 - α-Al_2O_3 was prepared from pure (p.a.) initial substances and subjected to X-ray phase analysis. The two-phase range was found to be between 10^{+3}_{-1} and 85 ± 5 mole% α-Fe_2O_3. The magnetic susceptibility was measured according to the Faraday method in fields of 10-18 koe. χ was determined as a function of the composition for temperatures between 20 and 850°C with an absolute accuracy of $\pm3\%$. χ of preparations containing more than 10% Fe_2O_3 depended on the field strength and was therefore not measured. The curves $1/\chi = f(T)$ show an inflection point near room temperature; below and above this point χ satisfies the Curie-Weiss law. With increasing content of α-Al_2O_3 the Curie-Weiss constant θ tends to zero and the magnetic moment of the Fe-III ions to the magnetic moment of the free

Card 1/2

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Magnetic susceptibility in the... S/181/63/005/004/018/047
B102/B186

Fe-III ions in their ground state. The behavior of the Fe_2O_3 system on dilution agrees with results of theoretical considerations (J. Phys. Chem. Sol., 10, 19, 1959; 16, 169, 1961). There are 2 figures and 1 table.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: November 4, 1962

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

Shcherbakova, G. D.

USSR/ Chemistry - Inorganic chemistry

Card 1/1 Pub. 116 - 6/29

Authors : Gorokhovatskiy, Ya. B.; Rubanik, M. Ya.; Belaya, A. A.; Popova, Ye. N.; Kholyavenko, K. M.; and Shcherbakova, G. D.

Title : Kinetics of catalytic oxidation of ethylene into ethylene oxide in a zone exceeding the maximum limit of spontaneous combustion

Periodical : Ukr. khim. zhur. 21/6, 714-720, Dec 1955

Abstract : The relation between the rate of reaction and the ethylene and oxygen contents in the basic reaction mixture was investigated in a zone exceeding the maximum limit of spontaneous combustion. It was established that the yield does not depend upon the ethylene content in the mixture but increases with the increase in the oxygen content of the mixture. The equation governing the kinetics of oxidation of ethylene over a silver catalyst (in the case of rich ethylene mixtures) is presented. The heat of activation for the summary ethylene oxidation process was established at 18 kcal/mol. Ten references: 3 USSR, 1 Austral., 1 Canad., 4 Eng. and 1 USA (1945-1954). Tables; graphs.

Institution : Acad. of Sc., Ukr. SSR. Inst. of Phys. Chem. im. L. V. Pisarzhevskiy

Submitted : April 14, 1955

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

RUBANIK, M.Ya.; KHOLYAVENKO, K.M.; GOROKHOVATSKIY, Ya.B.; BELAYA, A.A.; POPOVA, Ye.N.; SHCHERBAKOVA, G.D.

Effect of macrofactors on the rate of catalytic oxidation of ethylene. Ukr.khim.zhur. 22 no.2:190-196 '56. (MLRA 9:8)

1. Institut fizicheskoy khimii imeni L.V. Pisarzhevskogo AN USSR.
(Oxidation) (Ethylene)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

1. [illegible], V. S.

2. USSR (600)

4. Onions

7. Practice of leaders in raising Balakleya onion seed. Sel. i sem. 20, No. 5, 1953.

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

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, G. S. Cand Agr Sci -- (diss) "Selection of [redacted] Cucumbers in the Forest Steppe of the Ukrainian SSR." Khar'kov, 1957. 14 pp 22 cm. (Min of Agriculture USSR, Khar'kov Order of Labor Red Banner Agricultural Inst im V. V. Dokuchayev), 100 copies (KL, 28-57, 111)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, G.S.[Shcherbakova, H.S.]; TITARENKO, G.R.[Tytarenko, H.R.]; YEFREMOV, M.V.[IEfremov, M.V.], red.; SAVCHENKO, M.S., tekhn. red.

[Cucumbers]Ochirky. Kyiv, Derzhsil'hospvydav URSR, 1961. 95 p. (MIRA 15:11)

(Ukraine—Cucumbers)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

KATTS, Nikolay Vasil'yevich, izobretatel'; CHERNOIVANNIK, A.Ya., spetsred.; SHCHERBAKOVA, G.V., red.; CHEBYSHEVA, Ye.A., tekhn.red.

[Restoration of worn parts by means of metalization; experience of the "Bol'shevik" Confectionery Factory in Moscow] Vosstanovlenie iznoshennykh detalei elektrometallizatsiei; opyt Moskovskoi konditerskoi fabriki "Bol'shevik." Moskva, Pishchepromizdat, 1957. 57 p. (MIRA 12:1)

1. Zaveduyushchiy kafedroy tekhnologii metallov Moskovskogo tekstil'nogo instituta (for Katts).
(Metal spraying)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

RYABOVA, A.V., prepodavatel'; AL'MENOVA, A.F., prepodavatel'; KUCHUSHEVA, L.I., prepodavatel'; PAVLOVSKAYA, T.M., prepodavatel'; OZEROVA, A.G., red.; SHCHERBAKOVA, G.V., red.; VLADIMIRTSEV, V.P., red. izd-va; KHUSNUTDINOV, Sh.S., tekhn.red.; GALKINA, V.N., tekhn.red.

[Dressmaking] Kroika i shit'e. Kazan', Tatarskoe knizhnoe izd-vo, 1959. 831 p. (MIRA 14:2)

1. Trekhgodichnyye kursy kroyki i shit'ya pri klube im. V.P. Menzhinskogo Ministerstva vnutrennikh del Tatarskoy ASSR (for Rybova).
(Dressmaking--Pattern design) (Sewing)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

S/020/62/146/005/011/011
B144/B186

AUTHOR: Shcherbakova, G. V.

TITLE: Activity of glutamino decarboxylase and content of γ-aminobutyric acid in the brain of rats, under different functional conditions due to increased oxygen pressure

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 5, 1962, 1213-1215

TEXT: Decarboxylation and the content of γ-aminobutyric acid (I) were studied in groups of 10 - 30 rats under O_2 pressures from 4 to 6 atm which caused alterations from twilight states up to heavy spasms; also in 0.1 g/kg barbamyl narcosis and under the combined influence of narcosis and O_2. The O_2 effect was investigated in intact rats and in brain homogenates in phosphate buffer pH 6.4. Decarboxylation was determined using the Warburg apparatus and the content in I was measured by paper chromatography. After 30 min action of 6 atm O_2 on brain homogenates the activity of glutaminic acid decarboxylase (II) decreased by 23.8%; whereas the total decarboxylase activity increased by 22.7%. In intact animals, the activity of II de-

Card 1/3

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

creased by 12.9 and 28.5% under the action of 4 atm O_2 for 1 hr and for 1 hr 45 min, respectively; application of 6 atm O_2 resulted in 59.4% reduction. Under equal conditions, the content of I in the brain was reduced by 25, 35, and 60%; whereas the decarboxylase activity in total increased by 12.7, 17.8, and 23.5%. After 1 hr, the content in I decreased by 24% in narcotized rats and by 49%, when narcosis was combined with 4 atm O_2. A metabolic scheme explaining the additive effect of barbamyl and O_2 is given:

glutaminic acid
II ↓
I + α-ketoglutaric acid
transaminase ↓ ↑
succinamic aldehyde + glutaminic acid
↓ dehydrogenase
succinic acid

Conclusion: II is no inhibitor in itself, but an indicator of CNS inhibition. There are 3 tables. The most important English-language reference is: C. . Baxter, F. Claude, E. Roberts, Proc. Soc. Exp. Biol.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

S/020/62/146/005/011/011
B144/B186

Activity of glutamino...

and Med., 104, no. 3 (1960).

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet (Rostov-na-Donu State University)

PRESENTED: April 16, 1962, by A. I. Oparin, Academician

SUBMITTED: April 12, 1962

Card 3/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, I.M., kandidat meditsinskikh nauk

Viral origin of psoriasis. Vest. ven. i derm. no.3:26-29 My-Je '54. (MLRA 7:8)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. deystvitel'nyi chlen Akademii meditsinskikh nauk SSSR prof. O.N.Podvysotskaya) I Leningradskogo meditsinskogo instituta.
(PSORIASIS, etiology and pathogenesis, *viral origin)

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L 10375-65 EWT(1)/EPA(s)-2/EWG(k)/EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4/Pt-10/Pz-6 IJP(c)/ASD(a)-5/ESD(dp)/AFWL/ESD(t)/RAEM(t) AT/RM

ACCESSION NR: AP4047200 S/0190/64/006/010/1773/1777

AUTHOR: Berlin, A. A.; Cherkashin, M. I.; Aseyev, Yu. G.; Shcherba-Shcherbakova, I. M.

TITLE: Polymers with a conjugated system. Polymerization of phenylacetylene over triethylaluminum-titanium trichloride catalyst

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 10, 1964, 1773-1777

TOPIC TAGS: polyphenylacetylene, organic semiconductor, semiconducting polymer, phenylacetylene, catalytic polymerization

ABSTRACT: A study was made of the catalytic polymerization of phenylacetylene (PA) in the presence of the $(C_2H_5)_3Al \cdot TiCl_3$ complex and the properties of the catalytic polymer were compared with those of the thermal polymerization product. PA polymerized relatively readily at 20—70C; at an Al/Ti molar ratio of 1, yellow-orange polymers were formed (paramagnetic center concentration, about 10^{17} spin/g) which have a higher average molecular weight ($\bar{M}_n$ = 5000) than in the case of thermal-initiated or radiation-induced polymerization (M_n = 800—1200). Low-molecular-weight products were also formed which

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L 10375-65

ACCESSION NR: AP4047200

3

contained 1,3,5-triphenylbenzene, whereas no noticeable amounts of 1,3,5-derivatives of benzene were produced in thermal polymerization. Both catalytic and thermal PA polymers were resistant to the effect of atmospheric oxygen up to 300-400C. Neither readily undergoes electrophilic addition (bromination), hydrogenation, or adduct formation with maleic anhydride. In bromination, substitution prevails over addition, indicating the "aromatic character" of the polymers. IR spectra of both types of polymers are identical, essentially conform to the spectrum of polystyrene, and do not show the presence of 1,4-substituted phenyl rings in the backbone. Orig. art. has: 4 tables.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AN SSSR).

SUBMITTED: 23Nov63 ATD PRESS: 3119 ENCL: 00

SUB CODE: SS, OC NO REF SOV: 005 OTHER: 002

Card 2/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

II-4

USSR/Cultivated Plants - Grains.

Abs Jour : Ref Zhur - Biol., No 9, 1958, 39828

Author : Lysogorov, S.D., Bartmanskaya, M.A., Shcherbakova, I.S., Inkhal'chevskiy, V.D.

Inst : -

Title : Problems of The Agrotechny of Corn Seeds in the Southern Steppe of the Ukraine.

Orig Pub : V sb.: Kukuruza v 1955 g. Vyp. 6, M., Sel'khozgiz, 1956, 66-81.

Abstract : The result of experiment conducted by the department of general agriculture and plant-cultivation of the Kherson agricultural institute on the subject of agrotechny applied to corn (1954-1955) are given in this paper. It is suggested that corn for seed be grown in the southern steppe of the Ukraine by pocket planting (70 x 70 cm). One plant is placed in the bunch without irrigation - and 2-3 plants when placed in one cluster, are irrigated.

-- Ye.T. Zhukovskaya

Card 1/1

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, I.V.; MORKOVKINA, L.G.; ZBITNEVA, G.S.

Change in the activity of blood catalase in poisoning with cadmium compounds. Nauch. trudy Riaz. med. inst. 15:65-67 '62. (MIRA 17:5)

1. Kafedra biologicheskoy khimii (zav. kafedroy - prof. G.A.Usbekov) Ryazanskogo meditsinskogo instituta imeni Pavlova.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

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[illegible]CH[illegible]KOVA, [illegible].V.

[illegible] of sodium hyposulfite in the disintoxication of the organism poisoned with cadmium chloride. Nauch. trudy Riaz. med. [illegible] [illegible] 1962.

[illegible] of ascorbic [illegible] and cysteine in disintoxication of [illegible] poisoned with cadmium chloride. Ibid.:[illegible]

[illegible] kafedra biologicheskoy khimii (zav. kafedroy [illegible]) [illegible] Ryazanskogo meditsinskogo instituta imeni [illegible].

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHEBRIKOVA, I.V.

Changes in the serum protein fractions in carbon disulfide intoxication. Nauch. trudy Riaz.med.inst. 23:56-58 '63. (MIRA 18:12)

1. Kafedra biokhimii (zav. kafedroy - prof. G.A.Uzbekov) Ryazanskogo meditsinskogo instituta imeni akademika I.P.Pavlova.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, I.V.; KLIMENTOVSKAYA, A.Ye.

Change in the content of some groups of serum proteins in chronic poisoning by cadmium and zinc compounds. Farmakol. toksikol. 26 no.3:365-369 My-Je'63 (MIRA 17:2)

1. Kafedra biologicheskoy khimii (zav. - prof. G.A. Uzbekov) Ryazanskogo meditsinskogo instituta imeni I.P.Pavlova.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, K.

Puti povysheniia produktivnosti korov (Ways of increasing the productivity of cows) Moskva, "Mosk. rabochii," 1953. 56 p.

SO: Monthly List of Russian Accessions, Vol. 7, No. 6, Sep. 1954

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, K.; LASHIN, Ya.

[Feed supply of the "Aleksandrovo" State Farm] Kormovaia baza sovkhoza "Aleksandrovo." [Moskva] Moskovskii rabochii, 1956. 67 p. (MLRA 9:9)

(Moscow Province--Forage plants)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

CA

2

Adsorption from solutions and the microporosity of activated charcoals. A. V. Kiselev and K. D. Shcherbakova. Doklady Akad. Nauk S.S.S.R. 45, 257-9(1944); Compt. rend. acad. sci. U.R.S.S. 45, 241-3(1944)(in English).—The adsorption of aliphatic alcs. (butyl through heptyl), fatty acids (acetic through heptylic), and

Na salts of oleic and erucic acids from aq. solns. by a specially purified activated charcoal was studied. At low concns., the adsorption, which increased with an increase in mol. wt., i.e., in the "direct Traube series," was apparently controlled by contending forces acting on the adsorbate. At higher concns., corresponding to max. adsorption, the vol. of the micropores of the adsorbent was the factor controlling the extent of adsorption. This was shown by the fact that the vol. of the adsorbed mols. was substantially identical for the above mentioned adsorbates, all of which are characterized by a small, identical cross section (approx. 20 A.²). Further confirmation is found in the fact that a smaller vol. of adsorbed mols. was observed at max. adsorption of bulky dye mols., e.g., methylene blue and Congo red. I. W. Perry

COMMON ELEMENTS

OPEN

MATERIALS INDEX

COMMON VARIABILITY INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

7

Determination of active hydrogen with the Grignard reagent in an atmosphere of carbon dioxide. II. A. P. Terent'ev and K. D. Shcherbakova (Lab. Organicheskoi Khimii im. N. D. Zelinskogo Moskov. Gosudarst. Univ.). *J. Gen. Chem.* (U.S.S.R.) 15, 86-9(1945); cf. C. I. 35, 4308[1].—Various alcs., glycols, phenols, acids, and amino derivs. were analyzed by the method previously described. The method yielded good results with all the above compds., except tertiary alcs. and compds. insol. in ether. The former gave higher results, presumably because water was split off in the presence of MeMgI. The latter do not react with MeMgI because of their insoly. in EtO.

A. A. Podgorny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSES AND PROPERTIES INDEX

CA

7

Determination of active hydrogen by the Grignard reagent in carbon dioxide atmosphere. III. A. P. Terent'ev and K. D. Sherbakova (Moscow State Univ.). *J. Gen. Chem.* (U.S.S.R.) 16, 855-8(1946); cf. *C.A.* 40, 1120[8]. It was shown that active H can be detd. by the new method in acids, amines, and phenols with the following solvents: C_6H_6, xylene, $CHCl_3$, and $(CH_3)_2O$. In all cases MeMgI was used as the reagent. G. M. K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

2

Adsorptive properties and structure of adsorbents. I. Limiting adsorption from solutions on activated charcoal. A. V. Kiselev and K. D. Shcherbakova (Moscow State Univ.). *Acta Physicochim. U.R.S.S.* 21, 539-54(1946) (in English); cf. *C.A.* 50, 5150[a].—Investigation of the adsorption from aq. soln. by ash-free charcoal of the homologous series of acids from acetic to caprylic and alcs. from butyl to heptyl showed that the limiting adsorbed vols. are const. at about 0.28 cc. per g. Adsorption defined as the difference between the amt. of adsorbate in the adsorption space and in the same vol. of the surrounding soln. passes through a max. for adsorbates of high soly. Dimethylethylcarbinol, cyclohexanol, phenol, benzoic acid, salicylic acid, methylene blue, and Congo red yielded adsorption vols. of 0.2, 0.24, 0.27, 0.22, 0.19, 0.20, and 0.04 cc. per g., resp., which indicate screening effects or poorer packing in comparison with the straight-chain homologous series. Paul H. Emmett

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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CA

10

Determination of active hydrogen by Grignard reagents in a carbon dioxide atmosphere. IV. A. P. Terent'ev, K. D. Shcherbakova, and N. V. Kremenskaya (Moscow State Univ.). *J. Gen. Chem.* (U.S.S.R.) 17, 100-4 (1947)(in Russian); cf. C.A. 41, 1575g. The use of MeMgBr and MeMgCl, in place of the usual MeMgI, in the active H detn. in CO_2 atm. as described previously was investigated. MeMgBr is suitable on the basis of trials with the following substances: BuOH, borneol, pyrocatechol, MeEtC(OH)Ph, $Ph_2C(OH)Et$, PhCH(OH)Et, BzOH, *o*-$AcOC_6H_4CO_2H$, mandelic acid, citraconic acid, $PhNH_2$, *p*-$MeC_6H_4NH_2$, 1-(1-piperidyl)-3-aminopropane, HCONHPh, and 2-acetylpyrrole. The deviations noted were: EtPhCHOH gave 1.11 and Et_2PhCOH 1.25 H atoms, evidently because of the dehydrating action of the reagent. Primary amines gave figures slightly lower than theoretical ($PhNH_2$ 1.94, 1-(1-piperidyl)-3-aminopropane 1.8 H) due to interaction of CO_2 with the primary reaction product, so that the 2nd stage does not go quite to completion for the less sol. bromides, while the sol. iodides are able to go to completion. MeMgCl gave consistently good results with 1- and 2-naphthols, salicylic acid, borneol, *p*-nitrophenol. Hydroquinone, because of poor solv., gave low results (1.50-1.63). 2-$C_{10}H_7NH_2$ gave 0.99 H at Et_2O reflux, and 1.08 H at 100°. Benzidine gave 2.0 H at low and high (100°) temps. $AcCH_2CO_2Et$ gave 1.01 H. When the reaction was run in C_6H_6, thymol gave 1.03 H, salicylic acid 2.0, and Ph_2NH 1.0 H. Generally, MeMgCl was less active than the Br compd. and tended to lose its titer more rapidly than the latter on standing.

G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

KISELEV, A.V.; MIKOS, N.N.; ROMANCHUK, M.A.; SHCHERBAKOVA, K.D.

Thermodynamic properties of adsorption films on silica gel. Zhur.fiz. khim. 21 no.10:1223-1236 O '47. (MLRA 7:1)

1. Moskovskiy gosudarstvennyy universitet, Laboratoriya adsorotsii kafedry fizicheskoy khimii, Moscow.
(Adsorption) (Silica)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, K. D.

USSR/Chemistry - Adsorbents
Chemistry - Carbons, Active

Jan 1948

"Adsorption Properties and the Structure of Adsorbents: II, Adsorption in Active Carbon Solutions of Widely Varying Concentrations," O. M. Dzhigit, A. V. Kisselev, N. G. Terekhova, K. D. Shcherbakova; Moscow State U; Lab of Adsorption, Acad Sci USSR; Inst of Phys Chem, Moscow, 11 pp

"Zhur Fiz Khim" Vol XXII, No 1

Study general types of adsorption isotherms of surface active substances found in solutions of weak adsorbent soluble materials. Adsorption of mixtures of water and acid or alcohols passes through maximum and decreases. Subdivision and cyclization of the adsorbent molecules decreases the degree to which they can fill the micropores of the carbon being studied. Submitted 14 May 1947.

PA 65T8

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

[illegible], [illegible], KIS[illegible], [illegible], [illegible], [illegible],
SH[illegible], [illegible].

[illegible]

Automatic calorimeter [illegible] constant heat exchange for measuring [illegible] of absorption of gas[illegible] liquids. Trudy Inst.Fiz.[illegible] AN SSSR, no. 1, 1952.

[illegible], [illegible] 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOYA, K. D.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
General and Physical Chemistry

Adsorption properties of montmorillonite clays. B. P. Bering, V. P. Dreving, A. V. Kiselev, V. V. Serpinskii, M. D. Surova, and K. D. Shcherbakova. Colloid J. (U.S.S.R.) 14, 433-41(1952)(Engl. translation).—See C.A. 47, 3080c. H. L. H.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, K. D.

USSR/Chemistry - Adsorption Jul 52

"Peculiarities of Adsorption of Different Vapors on Silica Gel, "N. N. Avgul', O. M. Dzhigit, A. V. Kiselev, K. D. Shcherbakova, Moscow State U imeni M. V. Lomonosov; Inst Phys Chem Acad Sci USSR

Zhur Fiz Khim, Vol 26, No 7, pp 977-985

The isotherms of adsorption of n-heptane, methyl alcohol and water vapor on coarsely porous pure silica gel were studied. All these isotherms have a reproducible hysteresis under high vapor pressures and, in the case of the adsorption of vapors of polar substances, a nonreproducible hysteresis when the vapor tension is low. The reproducible sorption hysteresis at comparatively high pressures is solely dependent on the capillary condensation of the vapors in the silica gel pores and is independent of the nature of the vapor. The nonreproducible hysteresis at comparatively low pressures, noted in the adsorption of methyl alcohol and water vapors, occurs when there is partial chemosorption. During the adsorption of heptane vapors there is no such hysteresis; because the adsorption is purely physical. The isotherms obtained for primary adsorption correspond in all instances essentially to physical adsorption.

PA 248T9

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

USSR/Chemistry - Adsorption Jul 52

"The Dependence of the Heat of Wetting of Silica Gel by Water on the Degree of Filling of the Surface," A. V. Kiselev, K. G. Krasil'nikov, N. L. Pokrovskiy, N. N. Avgul', G. [illegible] Zhigit and K. [illegible] Shcherbakova, Moscow State Univ. M. V. Lomonosov.

Zhur Fiz Khim, Vol 26, No 7, pp 986-997

This [illegible] both theoretical and practical value. The dependence of the heat of wetting [illegible] gel by water, on the quantity of previously adsorbed water, was measured on a homogeneous, coarsely porous silica gel made from SiCl4 and having a known specific surface. Results of the measurements established the abs dependence of the heat of wetting by water and the differential heat of adsorption of the water vapor on amount of water adsorbed per unit of surface. The differential heat of adsorption of water vapor decreases in proportion to the increase in the degree of filling of the surface.

[illegible]

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, K. D.

Newsletter Sci Abs. V-8 Jan 15, 1954 Chemistry

DETERMINATION OF ACTIVE HYDROGEN BY GRIGNARD'S REAGENT IN AN ATMOSPHERE OF CARBON DIOXIDE. (Opredelenii activnogo vodoroda reaktivom Grin'yara v atmosfere uglekislogo gaza.) A. P. Terent'ev and K. D. Shcherbakova. Translated by G. Belkov from Zhur. Obshchey Khim. 10, 2041-6(1940). 1953. 17p. (TT-376)

A method has been developed for determining active H with a Grignard reagent in an atmosphere of CO_2. The methane is liberated in the reaction vessel and transferred to an azotometer with a stream of CO_2. The amount of CH_4 is measured with an eudiometer. The results of the analysis of organic compounds for activated H are tabulated. (J.S.R.)

NF 7-27-54

Lab Org Chem. im. Zelinsky, Moscow State U.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, K.D.

CH

Determination of the adsorption isotherm and the differential heat of adsorption of water on carbon black. N. N. Avgul, O. M. Dzhigit, A. V. Kiselev, and K. D. Shcherbakova (M.V. Lomonosov State Univ., Moscow). *Doklady Akad. Nauk S.S.S.R.* 92, 105-8(1953); cf. *C.A.* 49, 15350*h*.—Carbon black (C 97.0, H 0.7%, O 1.4%) was evacuated to a pressure of 5×10^{-6} mm. at 280°, and the adsorption and desorption isotherms and heats of adsorption were detd. at 19°. The adsorption and desorption isotherms did not coincide and were characterized by two points of inflection at $p/p_s \cong 0.5$, $a \cong 1.1$ millimol./g. and $p/p_s = 0.84$, $a = 1.97$ millimol./g., resp. (p/p_s is the relative pressure, a is the quantity adsorbed per g. of C black). Values of adsorption were also calcd. in terms of $\alpha = a/s$, where $s = 125$ sq. mm./g. The noncoincidence of adsorption and desorption isotherms was attributed to a slow process of swelling. Calorimetric detn. of the differential heat of adsorption Q_a (cf. Kiselev, *et al.*, *C.A.* 43, 6871*d*) gave values of $Q_a = 10.75$ kcal./mol. ($a < 1.97$ millimol./g.) and $Q_a = 10.55$ kcal./mol. ($a > 1.97$ millimol./g.). The latter value is identical with the heat of condensation $L = 10.6$ kcal./mole. The quantity $a = 1.97$ millimol./g. corresponds to a mean area of 10.5 sq. A. for a H_2O mol. in a unimol. layer (the calcd. value is 10.6 sq. A.). The adsorption capacity of C-black samples decreased with increasing ignition temp. during evacuation prior to adsorption expts. The surface interaction of H_2O with C black appears to be due to H-bond formation with oxides or hydroxides contained in the surfaces investigated. I. P.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, K.D.

Isotherm and heat of adsorption of methanol on carbon black. N. N. Avgul, O. M. Dzhigit, A. V. Kuselev, and K. D. Shcherbakova (*Doklady Akad. Nauk. SSSR*, 1953, 92, 1185—1188).—Isotherm and heat of absorption of MeOH on C black are determined at 19° and pressures up to the saturated v.p. of MeOH. The curves obtained are of complicated character and can be divided into several parts separated by inflexion points and breaks. The explanation of this phenomenon is given in terms of adsorption stages accompanied by abrupt thermal changes. The stages are: adsorption on highly active centres, formation of a "mobile" monolayer, formation of a "compact" monolayer and of a second layer, and formation of the third and further layers with heat of adsorption approaching heat of condensation of MeOH.

S. K. LACHOWICZ.

Moscow State U. im. Lomonosov, Inst. Phys. Chem., AS USSR

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SCHERBAKOVA, K. D.

USSR/ Chemistry - Physical chemistry

Card 1/2 Pub. 22 - 24/51

Authors : Avgul', N. N.; Dzhigit, O. M.; Kiselev, A. V.; and Shcherbakova, K. D.

Title : The isotherm and the heat of adsorption of water vapors over carbon

Periodical : Dok. AN SSSR 101/2, 285-288, Mar 11, 1955

Abstract : The isotherm and the heat of water vapor adsorption were investigated for a finely porous sugar carbon activated in a CO_2 stream at 1000°. Results indicate that the monomolecular water adsorption on the oxidized surface is followed by capillary condensation in the pores.

Institution : Acad. of Sc. USSR, Inst. of Phys. Chem. and the M. V. Lomonosov State Univ. Moscow.

Presented by: Academician M. M. Dubinin, October 5, 1954

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

Periodical : Dok. AN SSSR 101/2, 285-288, Mar 11, 1955

Card 2/2 Pub. 22 - 24/51

Abstract : The pore structure of the carbon was found to have a specific effect on the water vapor adsorption. The monomolecular adsorption and the capillary water vapor condensation apparently superimpose on each other because of the small pore dimension of this carbon. Thirteen references: 7 USSR and 6 USA (1927-1954). Graphs.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, K.D.; SLOVETSKAYA, K.I.

Adsorption properties of silica gel as influenced by a chemical modification of its surface. Dokl.AN SSSR 111 no.4:855-858 D '56.
(MLRA 10:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova. Predstavleno akademikom M.M.Dubininym.
(Silica gel)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

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SHCHERBAKOVA, K. D.

3

Methylated silica gel and its adsorbing properties. K. D. Shcherbakova (M. V. Lomonosov State Univ., Moscow). *Poverkhnost. Khim. Soedinen. i Roli v Yavleniyakh Adsorbtsii, Sbornik Trudov Konferents. Adsorbtsii* 1957, 175-7.—Finely ground silica gel was treated at room temp. with diazomethane in ether according to the reaction: $\left\{-\overset{|}{\underset{|}{Si}}-OH\right\} + CH_2N_2 \rightarrow \left\{-\overset{|}{\underset{|}{Si}}-OCH_3\right\} + N_2$. After standing overnight, silica gel was filtered, washed with ether, and dried *in vacuo* at 150-200°. From analysis the amt. of methoxy groups was 0.6 meq./g., whereas the no. of OH groups of silicic acid in the starting material was 5 meq./g. Adsorption isotherms of MeOH were obtained by means of a capillary vacuum microburet (cf. Dreving, *et al.*, *C.A.* 47, 2011*b*). The isotherms of the modified adsorbent became considerably diminished: at P_{CH_3OH} 5 × 10^{-4} mm. the adsorption of MeOH on methylated silica gel was 1/4th that of the untreated silica gel. Thus, even partial loss of the electron-accepting property of silica gel resulted in lowering the adsorbing properties with respect to MeOH. A. P.

1/1

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5(0)

AUTHORS: Gerasimov, Ya. I., Shcherbakova, K. D. SOV/76-33-3-41/41

TITLE: Andrey Vladimirovich Kiselev (On His 50th Birthday)(K 50-letiyu so dnya rozhdeniya)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 3, pp 740-741 (USSR)

ABSTRACT: On November 28, 1958 A. V. Kiselev celebrated his 50th birthday. He holds the title of Doctor of Chemical Sciences and Professor of Moskovskiy gosudarstvennyy universitet (Moscow State University), is a great expert in physical chemistry and devotes himself primarily to the investigation of adsorption. In 1943 he founded the laboratoriya adsorbtsii na khimicheskom fakul'tete MGU (Laboratory for Adsorption at the Chemical Department of MGU) where scientific research work is performed in two principal directions: the development of methods for investigating the structure of highly disperse substances and their application as adsorbents and catalysts as well as investigations of the dependence of adsorption and energy of adsorptive forces on the chemical nature of the surface and structure of adsorbents as well as the study of the properties of the substances to be adsorbed.

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Andrey Vladimirovich Kiselev (On His 50th Birthday) SOV/76-33-3-41/41

Besides a large number of scientific papers (about 150) published by A. V. Kiselev, mention is to be made of his scientific and organizing activities. Several All-Union conferences were held on his initiative: on adsorption in 1949, on methods of the chemical investigation of highly disperse and porous bodies in 1951 as well as on the chemistry of surface compounds in 1955. He participated in the reorganization of Moskovskiy universitet (Moscow University) as a chairman of the Tsentral'naya komissiya po stroitel'stvu i oborudovaniyu (Central Committee for Construction and Equipment) and of the Nauchno-tekhnicheskiy sovet MGU (Scientific-technical Council of MSU) and the Khudozhestvennaya komissiya (Committee for the Arts). For his fruitful work he was awarded the orden Trudovogo Krasnogo Znameni (Red Labor Banner two medals and gratitude was repeatedly expressed to him coram publicam. Further, he was awarded the pervaya premiya im. M. V. Lomonosova (First Prize imeni M. V. Lomonosov), the vtoraya premiya im. D. I. Mendeleyeva (Second Prize imeni D. I. Mendeleyev) and the premiya Prezidiuma Akademii nauk SSSR (Prize of the Presidium of the Academy of Sciences USSR). There is 1 figure.

Card 2/2

USCOMM-DC-60,918

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

5(4) SOV/20-124-3-35/67

AUTHORS: Kiselev, A.V., Kovaleva, N. V., Korolev, A. Ya., Shcherbakova, K.D.

TITLE: The Chemical Modification of the Surface of Adsorbents and Its Influence on Adsorption Properties (Khimicheskoye modifitsirovaniye poverkhnosti adsorbentov i yego vliyaniye na adsorbtsionnyye svoystva)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 3, pp 617-620 (USSR)

ABSTRACT: The present report deals with the chemical modification and variation of the adsorption properties of silica and graphite bodies. Highly dispersive silica aerosil and gas-black are used for this purpose. This modification was carried out for the purpose of rendering silica hydrophobic and of making soot hydrophilic. The first part of this paper deals with the modification of silica. Silica with a hydrated surface adsorbs polar substances well. By a reaction with silicon-organic compounds it is possible to modify the nature of their surface essentially in the direction of attaining a stable hydrophobic state, which is of practical interest for the application of silica as filling media for polymeric materials and as a thickening medium for lubricants. The modification consisted of a reaction of silica hydroxyl with trimethyl chlorosilane according to the scheme

Card 1/4

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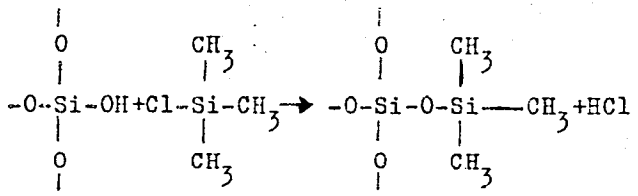
SOV/20-124-3-35/67

The Chemical Modification of the Surface of Adsorbents and Its Influence on Adsorption Properties



Aerosil with a surface of about 150 m^2/g was treated for eight days at a temperature of 20° with saturated trimethyl chlorosilane vapor or with its solution in benzine. The greatest difference in the isothermal lines of adsorption is observed in steam. The adsorption of steam on a modified sample is several dozens of times lower than in the case of a normal sample. The isothermal line of the adsorption of steam on a modified sample is reversible, and it is not modified even after several months of contact with water, which is indicative of the strength of the surface compound formed. The second part of this paper deals with the formation of carbon black. The adsorption proper-

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The Chemical Modification of the Surface of Adsorbents and Its Influence on Adsorption Properties

ties of soot with respect to many adsorbed substances, especially with respect to polar ones, depend on the quantity of oxygen they contain. The authors modified gas black for the purpose of further graphitization. By annealing at more than 1500° the acid surface compounds are destroyed, the growth of graphite crystallites is promoted (chemical and crystallo-chemical modification) and the adsorption of the vapors of water, methanol, ammonia, methylamine, sulfur dioxide and other polar substances is considerably reduced. Thermal treatment, especially at temperatures of more than 2500°, makes the soot surface more homogeneous and prevents the adsorption of non-polar substances. Such a treatment of soot also increases its hydrophobic properties. An increase of the affinity of soot to polar substances, especially water, is of practical interest for polygraphical pigments and also for other polygraphically important cases. Also the nature of the surface and the colloid-chemical properties of soot are considerably modified by the oxide-treatment. The modi-

Card 3/4

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SOV/20-124-3-35/67

The Chemical Modification of the Surface of Adsorbents and Their Influence on Adsorption Properties

fication of soot also modifies the adsorption of steam considerably. The variations of the corresponding isothermal lines are discussed. The double hysteresis found on this occasion is typical of the superposition of two phenomena, viz chemosorption and capillary condensation. The thermal treatment of soot and its oxidation in the liquid phase is able to modify soot to such an extent that the adsorption of steams on it is modified by dozens and hundreds of times of its amount. There are 2 figures and 25 references, 12 of which are Soviet.

PRESENTED: September 6, 1958, by M. M. Dubinin, Academician

SUBMITTED: September 5, 1958

Card 4/4

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

SHCHERBAKOVA, K. D.

~~5 (4)~~ 5.1115

66489

SOV/20-129-1-36/64

AUTHORS: Babkin, I. Yu., Vasil'yeva, V. S., Drogaleva, I. V., Kiselev, A. V., Korolev, A. Ya., Shcherbakova, K. D.

TITLE: The Effect of the Degree of Surface Modification of Silica by Trimethylchlorosilane on Its Absorptive Properties

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 1, pp 131-134 (USSR)

ABSTRACT: In previous papers (Refs 1, 2) the authors showed that the physico-chemical surface properties of highly dispersed materials, such as carbon black or silica, can be influenced to a considerable degree by chemical reactions. The present paper reports on experiments carried out under the cooperation of L. I. Doroshina, M. G. Kuz'mina, G. M. Lyulina, and L. F. Pavlova, with the aim of reducing the adsorbing capacity of highly dispersed non-porous silica (aerosil) for hydrocarbons. To attain this, the aerosil surface was occupied with $Si(CH_3)_3$-groups. Since complete occupation is only possible on previously hydratized silica, the following samples were investigated: (1) the original aerosil -

Card 1/3

sample A1, (2) original aerosil, modified by treatment with trimethylchlorosilane - sample A1M, (3) aerosil hydratized in an autoclave - sample A1H, and (4) aerosil, hydratized in an autoclave, and then modified by treatment with trimethylchlorosilane - sample A1HM. The amount of trimethylsilyl-groups adhering to the silica surface was determined by means of microelementary analysis. The degree $\theta_{Si(CH_3)_3}$ to which the surface area is occupied is calculated from the size of the trimethylsilyl-groups (42 Å²). The specific surface, its carbon content, and the degree to which it is occupied by trimethylsilyl-groups are shown in table 1. The effect of these groups lies in the fact that the interspaces between the groups, even when the surface is not occupied completely, but only in the manner of a mosaic - become so small that the larger hydrocarbon molecules are not able to penetrate to the surface. The adsorption isotherms for vapors of n-hexane, benzene, and methanol are given in figure 1, those for water in figure 2. The adsorption of hydrocarbons is decreased less than that of water on a 50% modified

Card 2/3

surface. 93% Modification produces a sharp decrease in the adsorbing capacity of the surface. The isotherm for heavy hydrocarbons becomes practically linear. This phenomenon may be of value for the chromatographic separation of hydrocarbon mixtures by means of gas adsorption. There are 2 figures, 1 table, and 11 references, 9 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov). Vsesoyuznyy nauchno-issledovatel'skiy institut aviatsionnykh materialov (All-Union Scientific Research Institute for Aviation Materials)

PRESENTED: June 13, 1959, by M. M. Dubinin, Academician

SUBMITTED: June 11, 1959

Card 3/3

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

S/069/60/022/006/002/009
B013/B060

AUTHORS: Kiselev, A. V., Korolev, A. Ya., Petrova, R. S., and Shcherbakova, K. D.

TITLE: Effect of the Degree of Chemical Modification of the Silica Surface With Tetramethyl Chloro Silane on the Adsorption of Nitrogen- and Krypton Vapors

PERIODICAL: Kolloidnyy zhurnal, 1960, Vol. 22, No. 6, pp. 671-679

TEXT: The authors of the present paper studied the effect of the silica surface modification on the adsorption of nitrogen- and krypton vapors. They achieved a considerable reduction of the interaction energy adsorbate - adsorbent by substituting trimethyl silyl groups for the hydrogen of the hydroxyl groups on the silicon dioxide surface. The adsorption of nitrogen- and krypton vapors was studied on five Aerosil samples. Aerosil is a non-porous, highly disperse silica which was treated with trimethyl chloro silane vapor or solution in benzine. To obtain samples modified as completely as possible, Aerosil is hydrated for 19.5 hours in the autoclave at 350°C and 169 atm with water, and then treated

Card 1/4

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Effect of the Degree of Chemical Modification of the Silica Surface With Tetramethyl Chloro Silane on the Adsorption of Nitrogen- and Krypton Vapors

S/069/60/022/006/002/008
B013/B066

A

with $ClSi(CH_3)_3$. This led to an up to 90% occupation of the Aerosil surface with $Si(CH_3)_3$ groups. The adsorption isotherms of nitrogen and krypton vapors were plotted at temperatures of liquid nitrogen. The adsorption of the two substances was found to be reduced by modifying the silica surface with trimethyl silyl groups. The krypton adsorption considerably decreases at a high degree of modification. Also the shape of the adsorption isotherms varies i.e., they are less bent. The isotherms for the above vapors are plotted in coordinates of the BET equation. It may be seen from it that owing to the reduction of the absolute adsorption quantity the BET equation is less satisfied, because with the less intense interaction of adsorbate - adsorbent, the interaction of adsorbate - adsorbate must not be neglected any longer. The specific surface for non-modified silica samples may be determined by the BET method, e.g. on the basis of the nitrogen vapor adsorption. For modified samples, however, the values obtained by the BET method are too low. It was found that the adsorption of nitrogen- and krypton vapors depends on the degree

Card 2/4

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Effect of the Degree of Chemical Modification of the Silica Surface With Tetramethyl Chloro Silane on the Adsorption of Nitrogen- and Krypton Vapors

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B013/B066

of modification to such an extent that the BET method is not applicable for determining the specific surface of considerably modified samples. The adsorption isotherms obtained for the nitrogen and krypton vapors were compared with the isotherms previously obtained (Refs. 6,7,10) for vapors of n-hexane, benzene, methanol, and water (Fig. 3). Modification was shown to effect a considerable reduction of adsorption in all adsorbents. Fig. 4 illustrates the approximate course of the adsorption decrease at $p/p_s = 0.1$ with increasing occupation θ of the surface by $Si(CH_3)_3$ groups. V. P. Dreving is thanked for developing a volumetric apparatus, and B. G. Aristov for plotting the adsorption isotherms of nitrogen. There are 4 figures, 3 tables, and 35 references: 22 Soviet, 5 British, 4 US, and 3 German.

ASSOCIATION: Moskovskiy universitet im. M. V. Lomonosova Khimicheskiy fakul'tet, Laboratoriya adsorbtsii (Moscow University imeni M. V. Lomonosov, Chemical Division, Adsorption Laboratory)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

KALMANOVSKIY, V.I.; KISELEV, A.V.; LEBEDEV, V.P.; SAVINOV, I.M.; SMIRNOV, N.Ya.; FIKS, M.M.; SHCHERBAKOVA, K.D.

Gas chromatography in glass capillary columns with a chemically modified surface. Zhur.fiz.khim. 35 no.6:1386-1388 Je '61. (MIRA 14:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova i Dzerzhinskiy filial opytno-konstruktorskogo byuro avtomatiki Goskhimkomiteta.

(Gas chromatography)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

S/076/61/035/008/016/016
B110/B101

AUTHORS: Vasil'yeva, V. S., Kiselev, A. V., Nikitin, Yu. S., Petrova, R. S., and Shcherbakova, K. D.

TITLE: Graphitized carbon black as adsorbent in gas chromatography

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 8, 1961, 1889 - 1891

TEXT: In the work under consideration, the authors made use of geometrically and chemically modified silica gel as the carrier of another solid body. Thermal types of carbon black annealed at ~ 3000°C are high-disperse bodies with a very homogeneous surface. Their absolute adsorption values are much greater than those of other adsorbents. Tablets are difficult to produce without binding agents. Therefore, the carbon black is introduced into the large pores of the solid carrier. Thus, a powdery adsorbent with homogeneous surface may be introduced into the column. The carrier should be a large-porous body with thermally and chemically stable and very poorly adsorbing surface. In the present case, the authors used large-porous silica gel with a very small surface covered by chemically grafted trimethyl silyl groups. A 2-hr hydrothermal treatment in the

Card 1/3

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autoclave at 350°C reduced the silica gel surface to 15 m^2/g; the enlargement of skeleton globules and pores was established by electron microscopy. Further grafts of trimethyl silyl groups on the silica gel surface according to I. V. Borisenko led to a sharp decrease of adsorption. ~18% blown out and sieved graphitized thermal carbon black T-1 (T-1) (3000°C) was then introduced into the pores. The silica gel was thereupon introduced into the column chromatograph, where it was heated for 2 hr in the nitrogen flow at 150°C. Graph a) in the figure shows chromatograms of vapor mixtures of benzene, acetone, and n-hexane on geometrically modified silica gel with hydrated surface; б) shows chromatograms of these three individual vapors on silica gel modified with trimethyl silyl groups; and в) chromatograms of the mixture on silica gel modified with carbon black at different temperatures. The succession of peaks was, however, the inverse compared with silica gel with hydrated surface. The acetone peak had a pronounced tail due to reaction between carbonyl groups and accessible hydroxyl groups of the silica gel carrier. The form of benzene- and n-hexane peaks corresponds to the form of curves illustrating the adsorption heats as functions of the form of adsorption isotherms. The peaks become narrower at higher temperatures. According to theory, the

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Graphitized carbon black... S/076/61/035/008/016/016
B110/B101

ratio between band width and retardation time is conserved. A study of chromatograms of individual benzene and hexane vapors at five temperatures allowed estimating their adsorption heats on carbon black from the dependence of logarithm of retardation time versus inverse temperature; results were consistent with calorimetric data. The combination described is well suited for gas chromatography as well as for a rapid physico-chemical analysis of the utilized powders alike. Silica gels modified in this way can also serve as carriers of steady liquid phases. There are 1 figure and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The two references to English-language publications read as follows: Ref. 3: J. Bohemen, Stanley H. Langer, R. H. Perett, J. H. Purnell, J. Chem. Soc., 2444, 1960. Ref. 5: F. T. Eggertsen, H. S. Knight, S. Groennings, Analyt. Chem., 28, 303, 1956.

ASSOCIATION: Laboratoriya adsorptsii i gazovoy khromatografii khimicheskogo fakul'teta Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Laboratory for Adsorption and Gas Chromatography of the Chemistry Division of Moscow State University imeni M. V. Lomonosov)

Card 3/6
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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

S/020/61/136/004/018/026
B028/B060

AUTHORS: Vasil'yeva, V. S., Drogaleva, I. V., Kiseleve, A. V., Korolev, A. Va., and Shcherbakova, K. D.

TITLE: Geometrical and Chemical Modifications of Silica Gel for Purposes of Gas Chromatography

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 4, pp. 852-855

TEXT: The present paper deals with the crystalline and the chemical modifications of SiO_2. Silica gel of the type ШСК (ShSK) served as the initial material. Industrial silica gel was washed with diluted hydrochloric acid (1:1) for the purification of iron and other metal ions (up to the negative reaction with ammonium thiocyanate, and with distilled water for the purification of Cl ions (up to the negative reaction with silver nitrate). This purified СИ(SI) silica gel had an inhomogeneous surface and constituted the initial material for the further modification experiments. For the crystalline modification, SI

Card 1/3

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was heated with water in the autoclave at 275°C for 19.5 hours. The resulting product was СГ (SG) silica gel. Type СГМ (SGM) was obtained by treating SG with liquid trimethyl chloro silane. The analysis of SGM for C content showed that 100 A of the SGM surface contained 1.22% C, i.e., on an average, 2.7 trimethyl chloro silyl groups. This corresponds to a coating by organosilicone film of an almost maximum density. Prior to the adsorption experiments, the samples were heated for a fairly long time in vacuum adsorbers in small suspended quartz crucibles at 150°C and a pressure of $1 \cdot 10^{-5}$ mm Hg. In the range of pressure ratios of p/p_s from 0 to 1, isothermal lines were obtained for the adsorption and the desorption of benzene vapor. In the case of SG the isothermal line deviates sharply toward the lower right side. With the beginning of the capillary condensation the hysteresis curve shifts from $p/p_s = 0.2$ for SI to $p/p_s = 0.75$ for SG. At $p/p_s = 0.1$, the benzene adsorption a on SI and SG equals 2 μmole/m^2, whereas a = 0.1 μmole/m^2 for SGM. In other words, the benzene adsorption drops to the 20th part with the chemical modification (SGM). Experiments with SGM were conducted jointly with R. S. Petrova, N. Ya. Smirnov, V. I. Kalmanovskiy, N. Balakhnina, and Ya. I. Yashin.

Card 2/3

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

Geometrical and Chemical Modifications of Silica Gel for Purposes of Gas Chromatography

S/020/61/136/004/018/026
B028/B060

Experiments concerning the possibilities of application of SGM for chromatography were made with a chromatograph of the firm Griffin and George, featuring a column 4mm in diameter and 1m in length. Benzene was kept in the column at normal temperature for 30 min. At 82°C, the time for benzene was 12'40", and 1'50" for hexane. For benzene-hexane separations by gas-adsorption chromatography, the silica gels used were impregnated with silicon E-301 (Ye-301). As may be seen from Fig. 2 (2Б and 2 В) benzene-hexane mixtures are more quickly distributed by the method of gas adsorption than by the gas-liquid method. There are 2 figures, 1 table, and 9 Soviet references.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, Academy of Sciences USSR). Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: December 28, 1960, by D. I. Shcherbakov, Academician

SUBMITTED: July 25, 1960

Card 3/3

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

KHRAMOVA, Ye. V.; KISELEV, A. V.; PETROVA, L. S.;
SHCHERBAKOVA, N. D.; VASIL'YEVA, V. S.

"The physico-chemical characteristics of the adsorption process at phase boundaries through gas chromatography."
Report to be submitted for the Fourth International Symposium on Gas Chromatography, Hamburg, West Germany, 13-16 June 1962

Chemical Faculty, University of Moscow

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KISELEV, A.V.; SAKODYNSKIY, K.I.; SHCHERBAKOVA, K.D.

Fourth International Symposium on Gas Chromatography in Hamburg. Neftekhimiia 2 no.5:804-814 S-O '62. (MIRA 16:1)
(Hamburg--Gas chromatography--Congresses)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

KISELEV, A.V.; [illegible], [illegible].V.; [illegible], K.D.

Chromatographic determination of the heat of the adsorption of lower hydrocarbons on 5A zeolites. Neftekhimiia 2 no.6:877-884 N-D '62. (MIRA 17:10)

1. Khimicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. Lomonosova, laboratoriya adsorbtsii i gazovoy khromatografii.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

AKSHINSKAYA, N.V.; KISELEV, A.V.; NIKITIN, Yu.S.; PETROVA, R.S.; CHUYKINA, V.K.; SHCHERBAKOVA, K.D.

Geometric and chemical modification of silica gel for the adsorption separation of hydrocarbons by gas chromatography. Zhur.fiz.khim. 36 no.5:1121-1123 My '62. (MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Silica) (Hydrocarbons) (Gas chromatography)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

KISELEV, A.V.; PETROVA, R.S.; SHCHERBAKOVA, K.D.

Gas chromatographic characteristics of the surface unit of an adsorbent. Kin. i kat. 5 no.3:526-532 My-Je '64. (MIRA 17:11)

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

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548910003-0

KISELEV, A.V.; PASKONOVA, Ye.A.; PETROVA, R.S.; SHCHERBAKOVA, K.D.

Study of the adsorption properties of carbon blacks by means of gas chromatography. Zhur. fiz. khim. 38 no.1:161-167 Ja'64. (MIRA 17:2)

1. Khimicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni Lomonosova.

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(Krivoy Rog--Rocks)

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1. Dnepropetrovskaya akspeditsiya Ukrainskogo nauchnoissledovatel'skogo geologorazvedochnogo instituta, Dnepropetrovsk.
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(Krivoy Rog Basin--Mining geology)
(Krivoy Rog Basin--Iron ores)

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1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut, Kiyev.

(Belozerka region(Zaporozh'ye Province)—Rocks, Igneous)
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