

L 14416-63
ACCESSION NR: AP3004421 EWP(g)/EWT(1)/EWT(m)/BDS AFFTC/ASD/ESD-3 GG/IJP(C)/JD/HM
S/0020/63/151/004/0829/0832

AUTHOR: Oding, I. A. (Corr. Member, AN SSSR); Aleksanyan, I. T.

65
64

TITLE: Mechanical properties of copper films 21

SOURCE: AN SSSR. Doklady*, v. 151, no. 4, 1963, 829-832

TOPIC TAGS: thin copper film, vacuum-deposited copper film, electrolytic copper film, size effect, tensile strength, creep copper film, thin film, thin copper film strength, thin copper film creep, copper film size effect

ABSTRACT: A study has been made of the tensile strength and creep characteristics of copper films vapor-deposited on cold smooth glass substrates in a vacuum of 6×10^{-4} to 6×10^{-5} mm Hg or deposited electrolytically on polished stainless steel electrodes. The strength of vacuum-deposited films was found to drop sharply with increasing film thickness (e.g., strength dropped from about 90 to 45 kg/mm² as film thickness increased from 1.7 μ to 4.5 μ). Film strength decreases also with increasing film width and with increasing pressure during vacuum deposition. The maximum strength of the vacuum-deposited films was 80-90 kg/mm². Electrolytic films are less thickness-sensitive: their strength

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ABSTRACT
ASSOCIATION NO: AP100001

was, on the average, twice as high as that of the solid copper. The stress-strain curves of vacuum-deposited films have a sawlike shape, which is probably associated with the periodic discharge of dislocation groups accumulated at various obstacles. The creep curves of vacuum-deposited films also have a sawlike shape, which is especially marked in films aged at room temperature for 20 hr. Such films show deformation jumps twice as high as those of fresh films. Twisting or straightening of loose films observed during aging indicates the partial removal of internal stresses. Orig. art. has: 4 figures.

ASSOCIATION: Institut metallurgii im. A. A. Baykova (Institute of Metallurgy)

SUBMITTED: 25Apr63

DATE ACQ: 21Aug63

ENCL: 00

SUB CODE: ML

NO REF SOV: 000

OTHER: 008

Card 2/2

AIEKSANYAN, I.V., dotsent, polkovnik meditsinskoy sluzhby

Role of Soviet aviation in the medical support of the
troops during the Great Patriotic War. Voen. med. zhur.
no.10:82-83 0 '65. (MIRA 18:11)

YEROSHENKO, Ye. G.; DOLGINOV, Sh. Sh.; ZHUZGOV, L. N.; FASTOVSKIY, U. V.; ALEKSANYAN,
L. M.

"Magnetic Investigations on the Electron 2 Satellite."

report presented at the 5th Intl Symp on Space Science, Florence, Italy, 12-16
May 64.

L 23434-66 FSS-2/EWI(i)/FCC IT/GW

ACC NR: AP6012835 SOURCE CODE: UR/0293/66/004/002/0302/0310

AUTHOR: Aleksanyan, L. M.; Yeroshenko, Ye. G.; Zhuzgov, L. N.; Fastovskiy, U. V.

44
38
B

ORG: none

TITLE: Magnetometric apparatus of the Electron-2¹² space station

SOURCE: Kosmicheskaya issledovaniya, v. 4, no. 2, 1966, 302-310

TOPIC TAGS: magnetometer, magnetic field measurement

ABSTRACT: Two search-coil magnetometers¹² capable of independently measuring three components of the magnetic field in the outer radiation belt were mounted on Electron-2. One had a measurement range of $\pm 120 \gamma$, and the other, a range of $\pm 1200 \gamma$. A block diagram of the basic magnetometer is shown in the figure. It consists of a 2-kc signal generator with associated low-pass filter for suppressing the second harmonic, a tuned amplifier (voltage gain, 12×10^3 , bandwidth at 3 db, ± 100 cps) tuned to the second harmonic with associated input filter to attenuate the first and third harmonics by 40 db, a synchronous phase detector, and a d-c current amplifier (gain, 20). Two telemetry channels are utilized for each magnetic-field coordinate, one channel for positive values and the other for negative values. A diode gate

2.

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L 23434-66

ACC NR: AP6012835

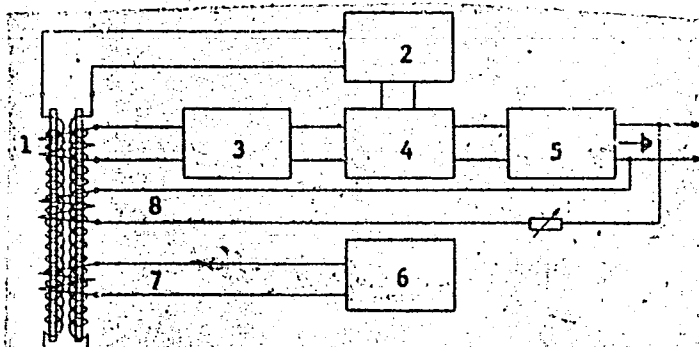


Fig. 1. Magnetometer

1 - Search coil; 2 - generator; 3 - amplifier;
4 - phase detector; 5 - dc amplifier; 6 - reference
voltage; 7 - calibration loop; 8 - feedback loop.

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L 23434-66

ACC NR: AP6012835

in the d-c amplifier unit diverts the information to the appropriate channel. The inclusion of a heavy voltage feedback confines the magnetometer nonlinearity to 2—3%. The sensitivities of two magnetometers are 2—3 γ and 20—30 γ ; the temperature stability measured at -3C, +18C, and +55C did not exceed 0.2 γ /C for the first and 0.7 γ /C for the second. A special unit for sensitivity calibration with the use of a reference voltage source is also included. The average error in measuring the scalar magnetic field was $\pm 4 \gamma$ and $\pm 40 \gamma$. The zero drift did not exceed 2—3 γ per day. The 14-v power supply for the magnetometers was stabilized by a P203 transistor and a D811 Zener diode. All other transistors used were the P103 type. Power consumption for each magnetometer was 2.2 w. "In conclusion, the authors are indebted to A. V. Klimovskiy, A. I. Konnov, Ye. Ye. Kanonidi, L. I. Ulanov, V. M. Agafonnikov, and V. G. Ryzhov for their active participation during the manufacturing, calibration, and testing of equipment." Orig. art. has: 1 formula and 4 figures. [BD]

SUB CODE: 09, 17/ SUBM DATE: 05Jun64/ ORIG REF: 003/ ATD PRESS:

4235

Card 3/3 *data*

ATANESYAN, Ye.; SARKISYAN, A.; ALEKSANYAN, R.

Electroconductivity of the system: diethylamine - benzoic acid in organic solvents. Nauch.trudy Brev.un.no.53:111-126 '56.

(MLRA 9:10)

1.Kafedra fizicheskoy khimii.
(Diethylamine) (Benzoic acid)

ALEKSANDRYAN, R.A.

Derivation of a complete set of solutions to the homogeneous Dirichlet problem for the equation of string vibrations. Dokl. AN SSSR 162 no.2:247-250 My '65. (MIRA 18:5)

1. Institut matematiki i mekhaniki AN ArmSSR. Submitted January 19, 1965.

ALEKSANYAN, R.A.

Pharmacological properties of fubromegan. Izv. AN Arm. SSR. Biol.
nauki 13 no.3:55-62 Mr '60. (MIRA 13:8)

1. Sektor farmakologii Instituta tonkoy organicheskoy khimii Akademii
nauk ArmSSR.

(PHARMACOLOGY)

(FURAN)

AKOPYAN, N.Ye.; ALEKSANYAN, R.A.

Pharmacological characteristics of quateron. Farm.i tokg. 23
no.4:316-321 JI-Ag '60. (MIRA 14:3)

1. Sektor farmakologii Instituta tonkoy organicheskoy khimii AN
Armyanskoy SSR (dir. - akademik AN Armyanskoy SSR A.L.Mndzhoyan).
(BENZOIC ACID)

SAFRAZBEKYAN, R.R.; AKOPYAN, N.Ye.; PARASADANYAN, R.G.; ALEKSANYAN, R.A.

Studying some pharmacological properties of the series of dialkylamino-
alkanol esters of furan-2-carboxylic acids. Izv. AN Arm. SSR. Biol.
nauki 14 no.5:51-59 My '61. (MIRA 14:7)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.
(FUROIC ACID) (PHARMACOLOGY)

MNDZHOYAN, A.L.; AFRIKYAN, V.G.; OGANESYAN, A.N.; KHORENYAN, G.A.;
ALEKSANYAN, R.A.; S'JPANYAN, N.O.

Derivatives of p-alkoxybenzoic acids. Report No.22:
 α, β -Dimethyl- γ -methylpropyl-, and γ -dipropylaminopropyl esters
of p-alkoxybenzoic acids. Izv.AN Arm.SSR. Khim.nauki 16 no.4:
365-372 '63. (MIRA 16:9)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.

MENDYKHOYAN, A.L.; AKOPYAN, H.Ye.; ALEKSANYAN, R.A.

Some pharmacological characteristics of amino esters of
p-(β -alkyl mercapto ethyl) hydroxybenzoic acid. Izv. AN
Arm. SSR. Biol. nauki 16 no.6:3-10 Je '63.

(MIRA 17:10)

1. Institut tonkey organicheskoy khimii AN ArmSSR.

GALOYAN, A.A.; ALEKSANYAN, R.A.

Effect of neurohormone, isolated from the hypothalamus, on the venous blood circulation in coronary spasm. Dokl. AN ~~SSR~~ SSR 37 no.3:157-160 '63. (MIRA 17:1)

1. Institut biokhimi AN Armyanskoy SSR. Predstavleno akademikom AN Armyanskoy SSR G.Kh. Bunyatyanom.

AKOPYAN, N.Ye.; ALEKSANYAN, R.A.; KHECHUMYAN, L.Kh.

Pharmacological characteristics of some amino ester of p-alkoxy-
benzoic acids. Izv. AN Arm. SSR. Biol. nauki 17 no. 13-22 J1 '64.
(MIRA 17:10)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.

ALEKSANYAN, R.A.

Transection of the spinal cord below the medulla oblongata.
Biul. eksp. biol. i med. 56 no.9:122-123 S '63.

(MIRA 17:10)

1. Iz Instituta tonkoy organicheskoy khimii (dir. - akademik AN
Armyanskoy SSR A.L. Mndzhoyan) AN Armyanskoy SSR. Predstavlena
deystvitel'nym chlenom AMN SSSR A.V. Lebedinskiy.

MNDZHOYAN, A.L.; AFRIKYAN, V.G.; KHORENYAN, G.A.; ALEKSANYAN, R.A.;
STEPANYAN, N.O.

Derivatives of p-alkoxybenzoic acids. Part 23: Synthesis
of aminoesters of 3-methoxy-4-alkoxybenzoic acids. Izv. AN
Arm.SSR. Khim. nauki 18 no.2:193-199 '65. (MIRA 18:11)

1. Institut tonkoy organicheskoy khimii AN ArmSSR. Submitted
April 18, 1964.

L 53931-65 EWT(1)/EWA(j)/T/EWA(b)-2 BW/RO

ACCESSION NR: AP5017352

UR/0298/64/017/007/0013/0022

AUTHOR: Akopyan, N. Ye.; Aleksanyan, R. A.; Khechumyan, L. Kh.

TITLE: Pharmacological characteristics of some amine esters of *p*-alkoxy-benzoic acids

SOURCE: AN ArmSSR. Izvestiya. Biologicheskiye nauki, v. 17, no. 7, 1964, 13-22

TOPIC TAGS: pharmacology, experiment animal, biochemistry, organic nitrogen compound, ester, halogenated organic compound

Abstract: Forty compounds comprising hydrochlorides, iod-ethylates, brom-ethylates, iod-ethylates, and brom-ethylates of amine esters with the *p*-alkoxy-benzoic acids were synthesized. The pharmacological activity of these compounds was studied in experimental animals. It was found that the activity of these compounds is dependent on the structure of the *p*-alkoxy group and the nature of the amine group. The highest activity was exhibited by compounds with *R* = alpha, beta, gamma.

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L 53931-65

ACCESSION NR: AP5017352

dimethyl-beta-methyl-gamma-dialkylaminopropyl. Transfer of one of the alpha-
Me groups into the beta-position reduced the activity. The diethylemino
derivatives had as a rule a higher activity than the corresponding dimethyl
mino derivatives. The quaternary ammonium halides had a higher activity
than the hydrochlorides, but were more toxic. Orig. art. has 6 figures and
5 formulas.

ASSOCIATION: Institut tonkoy organicheskoy khimii AN ArmSSR (Institute of Fine
Organic Chemistry, AN ArmSSR)

SUBMITTED: 28Apr63

ENCL: 00

SUB CODE: 00, LS

NO REF SOV 004

OTHER: 000

ST AS

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Card 2/2

ALEKSANYAN, R.A.

Mechanism of coronary vasodilative action of quaterone. Dokl. AN
Arm. SSR 38 no.4:239-242 '64. (MIRA 17:6)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.
Predstavleno akademikom AN Armyanskoy SSR A.L.Mndzhoyanom.

Change in the phosphorus and calcium contents of the grass stand in the virgin steppes of the national reserve. Sh. V. Aleksanyan. *Kormovaya Baza* 1933, No. 5, 22-5, *Referat Zhur. Khim.* 1933, No. 6741. — In the plants of the *Festuca sulcata-Stipa* group, which makes up the bulk of the reservation Askaniya-Nova, the Ca content in May and June increases from 0.38 to 0.41% and by the middle of September decreases to 0.107%. The quantity of P in all cuts gradually decreases from 0.197 to 0.025%. For the same time, the P content of the *Aster* type vegetation of the level water sheds (plateaus) decreases by 61% while the N content increases in later cuts: April 0.27, October 0.53%. The changes in N content of the sage-quack grass type growing in the lowlands is analogous to that of the vegetation growing on plateaus. The quantity of P in the 3 types of vegetation declines during the vegetative period. Low N and P contents were found also in the hay of the virgin reservation steppe. The ratio of N:P in virgin vegetation varies from 1.28:1 to 10.02:1. M. Hosh.

ALEXANDER JAN. SA. I

USSR/Cultivated Plants - Fodders.

M-4

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29864

Author : Aleksanyan, Sh.V., Isichko, M.P., Belaya, O.P.

Inst : The "Askaniya-Nova" Institute, The All-Union Scientific Research Institute for Corn, The Institute for Genetics and Selection of the Ukrainian Academy of Sciences.

Title : Carotene and Prussic Acid Accumulation in Sorghum and Sudan Grass Hybrids and Initial Forms.

Orig Pub : Vestn. s.-kh. nauki, 1957, No 6, 113-118 (resume in Eng. and German)

Abstract : A study was made at the plots of the Experimental Field of the "Askaniya-Nova" Institute of the chemical composition of the sorghum and sudan grass hybrids (variety 19-58, developed by the All-Union Scientific Research Institute for Corn, and No 5, developed by the Institute for

Card 1/2

- 46 -

ALEKSANYAN, Sh.V., kand.biolog.nauk; ISICHKO, M.P., aspirant;
LOGVINOVA, R.A., mladshiy nauchnyy sotrudnik

Comparative evaluation of Sorgho-Sudan grass hybrids and their parental
plants on the basis of chemical composition and hydrocyanic acid
content. Trudy "Ask.-Nov." 8:251-262 '60. (MIRA 14:4)
(Sorghum) (Sudan grass)

ASLANYAN, M. M.; ALEKSANYAN, S. V.; GALITSKAYA, A. A.; LOGVINOVA, R. A.

"Reproductive function of Askania merino ewes in connection with feeding type."

report submitted for 5th Intl Cong, Animal Reproduction & Artificial Insemination,
Trent, Italy, 6-13 Sep 64.

GULYANOVA, V.; ALEKSANYAN, T.

Teaching combine in a plant. Prom.Arm. 5 no.8:47-48 Ag '62.
(MIRA 15:8)

(Armenia—Electric equipment industry)
(Employees, Training of)

ALEKSANYAN, T.

Struggling for progress. Prom.Arm. 5 no.10:57-58
0 '62. (MIRA 15:11)
(Armenia--Research, Industrial)

ALEKSANYAN, V. I.

AUTHOR GONIKSBERG N.G., ZHULIN V.M., ALEKSANYAN V.I., PA - 2917
STERIN Kh.E.

TITLE The polymerization of 2,3-Dimethylbutene - 2, 2,3-Dimethyl-
butene - 1 and 3,3-Dimethylbutene-1 at pressures up to 4.000
atm. (Issledovaniye polimerizatsii 2,3-dimetilbutena-2, 2,3-
dimetilbutena-1 i 3,3-dimetilbutena-1 pri davleniyakh do 4.000
atmosfer - Russian)

PERIODICAL Doklady Akademii Nauk SSSR 1957, Vol 113, Nr 1, pp 123 - 126
(U.S.S.R.)
Received: 6/1957
Reviewed: 7/1957

ABSTRACT In a previous paper it was shown that high pressure accelerates
the polymerization of 2,3 dimethyl-butan-2 (henceforth refered
as DMB) considerably. In the present paper the authors intended
to study the cinetics of 2,3 DMB-2 and of related compounds at
high pressure and to investigate the properties of the polymers.
This reaction takes place gradually under a pressure of 3660-3680
atm and at a temperature of 290-292°C and passes through a dimer
state (which has its maximum yield after about 16 hrs). The dimer
fraction is able to undergo further polymerization. The degree
of polymerization after 32 hrs is still low (9,1-17,7%). Under
the same conditions 2,3-DMB-1 and 3,3-DMB-1 are polymerzated

CARD 1/3

PA - 2917

The polymerization of 2,3-Dimethylbutene-2, 2,3-Dimethylbutene-1 and 3,3-Dimethylbutene-1 at pressures up to 4.000 atm.

much faster and form products of a high molecular weight. The polymers of the three hexanes under discussion, which are similar with respect to their molecular weight, show considerable differences among themselves and with regard to the products of ion polymerization. Since the present of 2,3 DMB-1 was established in the monomer fraction of the polymerization product 2, 3 DMB-2, the authors carried out polymerization experiments with a mixture of both substances. If they were mixed with a ratio of 1 : 1, 2,3-DMB-2 reacted much faster than 2,3-DMB-1 in comparison to separate polymerization of either hexane. In the case of small admixtures of the latter hexane to the former these effects are not observed. This is indicative of a co-polymerization, a fact, which is confirmed by the values of the diffraction coefficient and by the specific weight. No formation takes place, therefore, of a simple mixture of the polymers of both hexanes. Consequently the polymerization of 2,3-DMB-2 does not pass through a preceding stage of isomerization of the 2,3-DMB-1. From the investigation of the dimer fraction, which consists at least of

CARD 2/3

PA - 2917

The polymerization of 2,3-Dimethylbutene-2, 2,3-Dimethylbutene-1 and 3,3-Dimethylbutene-1 at pressures up to 4.000 atm.

two olefines, it appears that, in the case of the polymerization of the three hexames under consideration, as structural polymerization takes place. Without this process the formation of Cis-dalkylethylenes could not be expected. They predominate, however, in the dimer fraction. Moreover, the formation of mono-alkylethylenes would not be imaginable without the assumption that in the case of the polymerization of 2,3 DMB-2 it is not the molecules or the radicals of the monomers that are subject to a structural isomerozation, but dimer molecules or the radicals $C_{12}H_{23}$. Results show that the reaction of thermal

polymerization accelerated by pressure is slowest in the case of 4-substituted ethylenes. This is apparently due to the important spatial difficulties under consideration.

(With 3 tables and 5 citations from other publications.)

CARD 3/3

ASSOCIATION: Institute for Organic Chemistry "N.D. Zelinskiy" and the Commission for Spectroskopy of the Academy of Sciences of the USSR.

PRESENTED BY: B.A. KAZANSKIY.

SUBMITTED: 21.9. 1956.

AVAILABLE: Library of Congress.

ALEKSANYAN, V. T.

"Determination of the Individual Hydrocarbon Composition of Gasolines," Iz. Ak. Nauk SSSR, Otdel. Tekh. Nauk, 6, pp 1053-66, 1954, with KAZANSKIY, B.A., LANDSBERG, G.S., PLATE, A.F., LIBERMAN, A.L., MIKHAYLOVA, E.A., STERLIN, Kh.E., BULANOVA, T.F., TARASOVA, G.A. of the Inst. of Organic Chemistry im. Zelinskiy.

The individual hydrocarbon composition of straight run gasolines with 150° end point obtained from Karachukhursk crude oil, was investigated by means of a combination method. The content of all individual hydrocarbons found in the gasoline was calculated in percentages by weight with consideration of the initial and end points. The gasoline from the above-mentioned source was found to contain large amounts of aromatic hydrocarbons (16.37%). The paraffinic and naphthenic hydrocarbons were in approximately equal amounts (35.5 and 33.5%). Two fifths of the paraffinic hydrocarbons were composed of normal structure paraffins. The ratio between cyclopentane and cyclohexane hydrocarbons was set at 0.44. Five USSR references (1951-54). Table; graphs.

ATIV abstract

ALEKSANYAN, V. T.

USSR/Physics - Spectral analysis

Card 1/1 Pub. 43 - 34/62

Authors : Aleksanyan, V. T.; Lukina, M. Yu.; Sterin, Kh. Ye.; and Kazanskiy, B. A.

Title : Combined diffusion spectra of certain hydrocarbons of the cyclobutane series

Periodical : Izv. AN SSSR. Ser. fiz. 18/6, 699-702, Nov-Dec 1954

Abstract : The results obtained in studying the spectra of nine cyclobutane hydrocarbons are analyzed. An interpretation of the various frequencies and their forms (trans-cis, etc.) is given. Two references: 1 USA and 1 USSR (1943-1954). Table.

Institution : Acad. of Sc., USSR, The N. D. Zelinskiy Inst. of Organ. Chem. and the Commission on Spectroscopy

Submitted :

Aleksanyan, V. T.

USSR/ Physics - Spectral analysis

Card 1/1 Pub. 43 - 36/62

Authors : Kazanskiy, B. A.; Landsberg, G. S.; Aleksanyan, V. T.; Bulanova, T. F.; Liberman, A. L.; Mikhaylova, Ye. A.; Plate, A. F.; Sterin, Kh. Ye.; and Ukholin, S. A.

Title : Analysis of aromatic ligroin parts by the combined diffusion spectra

Periodical : Izv. AN SSSR. Ser. fiz. 18/6, 704-706, Nov-Dec 1954

Abstract : Brief report is presented on the method and some results obtained during individual and close-group analysis of primary and secondary aromatics of ligroin. Analysis of results obtained showed that the basic ligroin (taken from the Embensk Petroleum Source) contained alkyl substitutes of benzene and cyclohexane with short term substituting radicals. Three references: 1 USA and 2 USSR (1947-1953). Tables.

Institution : Acad. of Sc., USSR., The N. D. Zelinskiy Inst. of Organ. Chem. and the Commission on Spectroscopy

Submitted :

Aleksander, V. T.

Liberman, T. F. Bulanova, V. T. Akker, and Kh. E.

Aleksanyan

USSR
Catalytic cyclization of isobutane with formation of a five-membered ring. B. A. Kazanckii, A. L. Liberman, V. T. Aleksanyan, and Kh. B. Steina (Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 93: 281-4 (1954); cf. *ibid.* 77-80. --isooctane (84 g.) passed over 20% Pt-C at 310° yielded a catalyzate which was freed from the aromatic content with silica gel. The aromatic portion consisted of 55% MePh, 35% p-xylene, and 50% m-xylene. Refractometry showed that the residue contained some 30% cyclic hydrocarbons. Fractionation of the material gave about 5.5 g. 1,1,3-trimethylcyclopentane, identified by the Raman spectrum (cm.⁻¹). Traces of 1,1-dimethylcyclohexane were detected by the presence of Raman lines. ZDS. cm.⁻¹. G. M. Kosolapoff

ALEKSANYAN, V.T.; STERIN, Kh.Ye.; LIBERMAN, A.L.; MIKHAYLOVA, Ye.A.
PRYANISHNIKOVA, M.A.; KAZANSKIY, B.A.

Report no.8. Raman spectra of a few aromatic hydrocarbons.
Izv.AN SSSR.Ser.fiz.19 no.2:225-233 Mr-Apr '55. (MLRA 9:1)

1.Komissiya po spektroskopii i Institut organicheskoy khimii
imeni N.D.Zelinskogo Akademii nauk SSSR.

(Tartu--Spectrum analysis--Congresses)

ALEKSANYAN, V. T.

Chem

Isomerization of ethylcyclopropane on silica gel under conditions of chromatographic analysis. B. A. Kazanskiĭ, V. T. Aleksanyan, M. Yu. Lukina, A. I. Malyshev, and Kh. E. Sterin (N. D. Zelinskii Inst. Org. Chem., Acad. Sci., Moscow). Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk 1955, 1118-19.---Passage of carefully purified ethylcyclopropane through a column with silica gel at 1.7° (cooling jacket) gave a product which instantly decolorized Br water and had a Raman spectrum indicative of the presence of 68% starting material, 12% cis-2-pentene, 17% trans-2-pentene and 3% 1-pentene.

G. M. Kosolapoff

(Clipped ahead)

Pm *2/21*

И. П. КРАСНОВА И Т.

"APPROVED FOR RELEASE: 03/20/2001

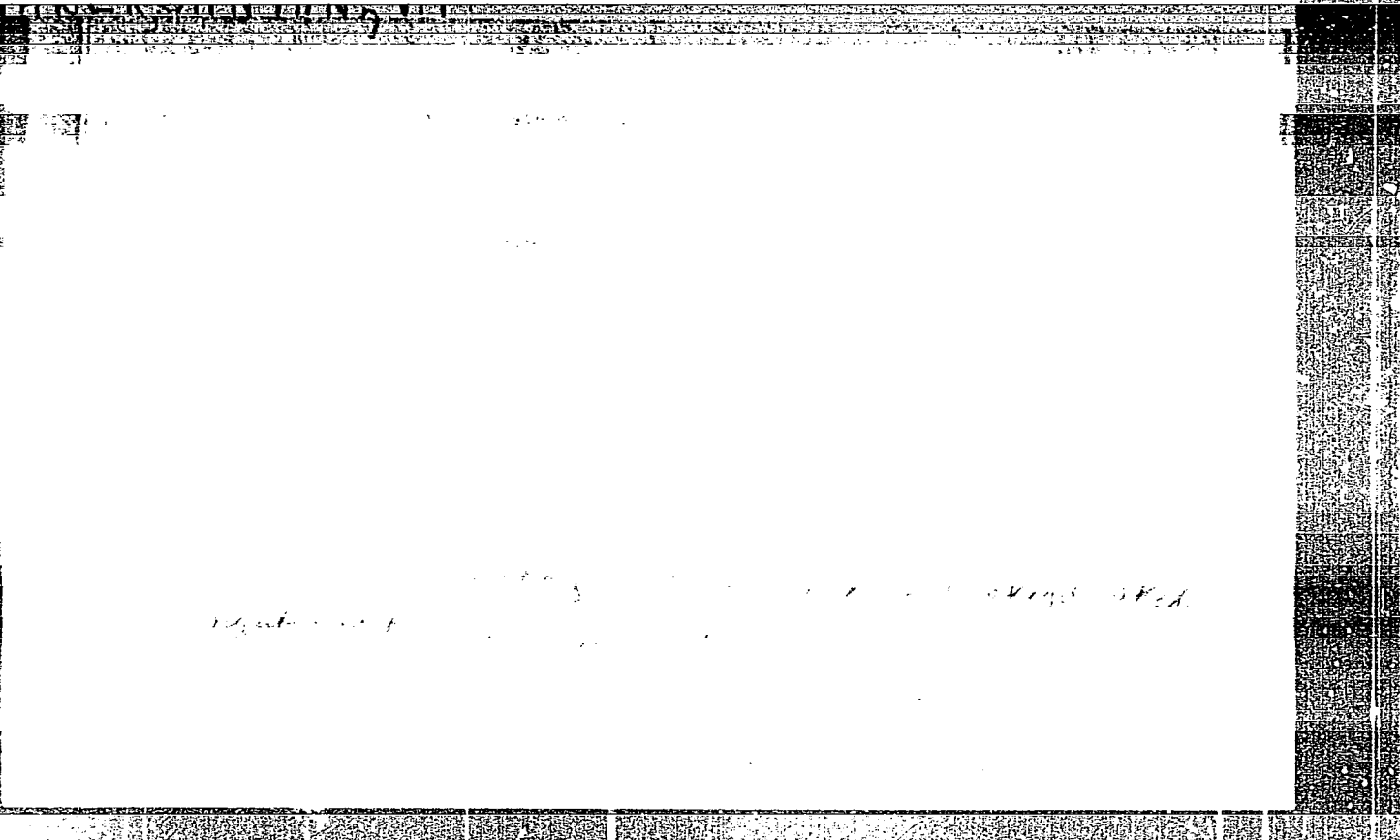
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APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000100910016-3"

Aleksa vyan, U. S.

the intermediate 2-methyl-1-pentene and 2-methyl-3-pen-



ALEKSANYAN, V. T.

PRIKHOT'KO, A. F.

24(7) 63 PHASE I BOOK EXPLOITATION NOV/1965

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizicheskyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Jaser, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Lavsterg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Pabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Pashikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Milyanohuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Aleksanyan, V.T., and Kh. Ye. Sterin. Raman Spectra of Bicyclo-2,2,1-heptane, Bicyclo-2,2,1-heptane-5, Bicyclo-2,2,1-heptadiene-2,5, and of Their Homologs	59
Aleksanyan, V.T., Kh. Ye. Sterin, M. Yu. Lukina, et al. RAMAN SPECTRA OF CERTAIN CYCLOPROPANE HYDROCARBONS and the Double-bond Conjugation of a Three-membered Ring	64
Aleksanyan, V.T., Kh. Ye. Sterin, M. Yu. Lukina, and L.A. Makhapetyan. Raman Spectra of Certain Monoalkyl Cyclobutanes and of Cyclobutylbromide	68
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Skripov, F.I. Temperature Dependence of the Frequencies of the Nuclear Quadrupole Resonance	75
Borodin, F.M., F.I. Skripov. Chemical Displacement and the Fine Structure of the Nuclear Magnetic Resonance of Fluorine in a Series of Compounds	80

ALEKSANYAN, V. T. Cand Chem Sci -- (diss) ^{Spectra of} "Absorption ~~spectra~~ of certain compounds of tetravalent uranium at low temperatures." Mos, 1957. 13 pp (Commission on Spectroscopy under ^{the} OFMN [Division of Physical and Mathematical Sciences], Acad Sci USSR. Order of Labor Red Banner Sci Res Phys-Chem Inst im L. Ya. Karpov. Min of Chem Industry USSR), 120 copies (KL, 42-57, 91)

AUTHOR: Aleksanyan, v.T. and Sterin, Kh.Ye. 51-5-3/26
TITLE: The Intensities of Lines in Raman Spectra of Standard Substances. (Intensivnosti liniy v spektrakh kombinatsionnogo rasseyaniya veshchestv-etalonov)
PERIODICAL: Optika i Spektroskopiya, 1957, Vol. 2, No.5, pp. 562 - 567 (USSR).

ABSTRACT: This paper reports accurate measurements of the Raman spectrum intensities of the standard substances: cyclohexane, methylcyclohexane, toluene and of other substances which can be used as standards: cyclopentane, benzene and carbon tetrachloride.

Experimental technique: Mercury lamps ПPK-2 were used and the Raman spectra excited with the 4358 Å line. The standard liquids were not thermostatted at room temperature. A spectrograph with a camera of $f = 270$ mm was used. Two arrangements were employed giving 150 and 100 cm^{-1}/mm linear dispersion (with 0.04 mm wide slit in both cases) Effects of variation of the source - lamp current and of the dispersion on the Raman spectra of cyclohexane are given in Table 1. Lowering of the lamp current from 2.9 A to 2.2 A affected the line intensities but an increase of the dispersion from 150 to 100 cm^{-1}/mm had Card1/3no practical effect.

51-5-3/26

The Intensities of Lines in Raman Spectra of Standard Substances.

Results are given in Table 2 (cyclohexane, 6 lines from 427 to 1445 cm^{-1} , averaged from 85 measurements); Table 3 (methylcyclohexane, 12 lines from 408 to 1460 cm^{-1} , averaged from 140 measurements); Table 4 (toluene, 8 lines from 521 to 1605 cm^{-1} , averaged from 40 measurements). The relative intensities of the lines (in cm^{-1}) 802 of cyclohexane, 770 of methylcyclohexane and 786 of toluene are given in pairs (802/786, 802/770, 786/770) in Table 5. The results for cyclopentane (3 lines, 889, 1031 and 1449 cm^{-1} averaged from 30 measurements) are given in Table 6. In the benzene spectrum, the strong line at 992 cm^{-1} was compared with the following lines: 786 cm^{-1} of toluene, 802 cm^{-1} of cyclohexane and 1004 cm^{-1} of toluene. The results of these comparisons are given in Table 7 and they yield a value of 1200 for the intensity of the 992 cm^{-1} line referred to an arbitrary level of intensity of 250 for the 802 cm^{-1} of cyclohexane. The results for carbon tetrachloride are given in Table 8 (5 lines from 217 to 790 cm^{-1} , averaged from 35 measurements) and show isotopic broadening and fine structure. In all these tables, the intensities are quoted relative to an arbitrary value of 250 for the 802 cm^{-1} line of cyclohexane; this

Card 2/3 value was proposed by P.A. Bazhulin and co-workers, at the

ALEKSANYAN, V.T.; STERIN, Kh. Ye.

Raman spectra of cyclo-2,2,1-heptane, bicyclo-2,2,1-hept-5-ene,
bicyclo-2,2,1-hepta-2,5-diene and their homologous. Fiz. sbor.
no.3:59-63 '57. (MIRA 11:8)

1. Komissiya po spektroskopii AN SSSR.
(Narcaradiene--Spectra)
(Bicycloheptene--Spectra)
(Bicycloheptadiene--Spectra)

ALEKSANYAN, Y.T.; STERIN, Kh.Ye.; LUKINA, M.Yu.; SAL'NIKOVA, L.G.; SAFONOVA, I.L.

Raman spectra of various cyclopropane hydrocarbons and conjugation of three-member ring with double bonds. Fiz. sbor. no. 3:64-68 '57.
(MIRA 11:8)

1. Komissiya po spektroskopii AN SSSR i Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

(Cyclopropane--Spectra) (Raman effect)

ALEKSANYAN, V.T.; STERIN, Kh.Ye.; LUKINA, M.Yu.; NAKHAPETYAN, L.A.

Raman spectra of various monoalkylcyclobutanes and cyclobutyl
bromide. Fiz. sbor. no.3:68-71 '57. (MIRA 11:8)

1. Komissiya po spektroskopii AN SSSR i Institut organicheskoy
khimii im. N.D. Zelinskogo AN SSSR.
(Cyclobutane---Spectra)

ALEKSANYAN, V. I.

GONIKBERG, M.G.; ZHULIN, V.M.; ALEKSANYAN, V.T.; STERIN, Kh.Ye.

Polymerization of 2,3-dimethylbutene-2; 2,3-dimethylbutene-1 and 3,3-dimethylbutene-1 at pressures up to 4000 atm. Dokl. AN SSSR 113 no.1:123-126. Mr-Apr '57. (MIRA 10:6)

1. Institut organicheskoy khimii im. N.D. Zelinskogo i Komissiya po spektroskopii pri Otdelenii fiziko-matematicheskikh nauk Akademii nauk SSSR. Predstavleno akademikom B.A. Kazarskim.
(Polymerization) (Butene) (High pressure research)

ALEXANDER
AUTHOR

ALEKSANYAN, V.T.

20-2-38/62

TITLE

The Absorption Spectra of some Tetravalent Uranium Compounds at the Liquid Nitrogen Temperature.
(Spektry poglosheniya nekotorykh soyedineniy chetyrekhvalentnogo urana pri temperature zhidkogo azota.- Russian)

PERIODICAL

Doklady Akademii Nauk SSSR 1957, Vol 115, Nr 2, pp 333-335 (U.S.S.R.)

ABSTRACT

1. A number of peculiarities of the absorption spectra of lanthanoid compounds in the solid and the liquid state, as e.g. the extreme narrowness of absorption bands, is explained by the presence of free electrons in the 4 f - shell of these elements. The bands in the infrared, visible and in the near ultraviolet region are interpreted as transitions within the 4 f-shell. The nature of the absorption spectra of compounds of the actinoid series apparently is of the same kind, since the latter above all are very similar to the lanthanoids in this respect. But this similarity, according to the scarce published data, is not so striking for the first elements of the actinoid series, especially uranium, which markedly differs in

CARD 1/4

20-2-38/62

The Absorption Spectra of some Tetravalent Uranium Compounds at the Liquid Nitrogen Temperature.

$Ba_2/U(C_2O_4)_4 \cdot 8H_2O$ at -196° consist of a great number of predominantly narrow bands which are grouped in individual spectral sections. At room temperature, however, they are broad. Three groups of this kind were observed, a fourth can be assumed.

4. The author states that the more intensive bands in every group correspond to purely electronic transitions from the ground state of the uranium ion. Such transitions were noticed in the absorption spectra of lanthanoid compounds. The data on ν_{kol} in the spectra of $Ca_2/U(C_2O_4)_4 \cdot 4 \cdot 6H_2O$ and $Ba_2/U(C_2O_4)_4 \cdot 8 H_2O$ are in satisfactory agreement with those of the infrared absorption spectrum of a related compound $(NH_4)_4/U(C_2O_4)_4 \cdot 6H_2O$

5. According to calculations by Jorgensen the occurrence of bands in the red, green and light blue region of U(IV) solutions band groups I, II and III in the crystal spectra) is connected with the transitions from the fundamental level of 3H_4 U(IV) $5 f^2$ to the excited levels

CARD 3/4

AUTHORS:

Gavrilova, A. Ye., Gonikberg, M. G., Aleksanyan, V. T.,
Sterin, Kh. Ye. SOV/62-58-8-11/22

TITLE:

The Investigation of the Homogeneous Destructive Tetralin
Hydration at High Hydrogen Pressure (Issledovaniye gomogenogo
destruktivnogo gidrirovaniya tetralina pri vysokikh davleniyakh
vodoroda)

PERIODICAL:

Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk,
1958, Nr 8, pp. 981-989 (USSR)

ABSTRACT:

The present paper is the continuation of a number of preliminary
papers on the homogeneous destructive hydration of aromatic
hydrocarbons at high hydrogen pressure. Among the various papers
by other authors Darwent (Darvent, Ref 5) must be mentioned
especially; he assumed that the compound of atomic alkyl benzene
with the simultaneous formation of the unstable free radical
is based on the last of several reactions. This radical then
decomposes at the binding $C_{arom} - C_{aliph}$. After further ex-
planations of this process the authors mention that the break
of the C - C bond in the binding of the hydrogen atom with the

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The Investigation of the Homogeneous Destructive Tetralin Hydration at High Hydrogen Pressure SOV/62-58-8-11/22

carbon atom of the ring is to be assumed as probable. With respect to the break of the C - C bond and the processes connected with it it was of special interest to the authors to investigate the homogeneous destructive tetralin hydration. This hydration took place at 440-462°C and at up to 1200 atmospheres of absolute pressure. Based on the investigation of the reaction products by means of rectification methods and the taking of combination-dispersion spectra of light (as well as by means of kinetic data) the authors suggested a general scheme of the tetralin reactions on the conditions mentioned. The data obtained agree with the assumptions mentioned in the present paper with respect to the radical and chain mechanism of the homogeneous destructive hydration of aromatic hydrocarbons. There are 1 figure, 4 tables, and 17 references, 8 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo. Komissiya po spektroskopii pri OFMN Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy, AS USSR; Committee of Spectroscopy OFMN, AS USSR)

Card 2/3

The Investigation of the Homogeneous Destructive Tetralin Hydration at High Hydrogen Pressure SOV/62-58-8-11/22
"APPROVED FOR RELEASE: 03/20/2001" CIA-RDP86-00513R000100910016-3"

SUBMITTED: January 25, 1957

AUTHORS: Kazanskiy, B. A., Lukina, M. Yu., SOV/62-58-10-24/25
Safonova, I. L., Aleksanyan, V. T., Sterin, Kh. Ye.

TITLE: Letter to the Editor (Pis'ma redaktoru)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1958, Nr 10, pp 1280 - 1280 (USSR)

ABSTRACT: The authors succeeded for the first time to distribute
1,2-diphenyl cyclopropane and 1-phenyl-2-cyclopropyl
cyclopropane to stereoisomers. The properties were:
1,2-diphenyl cyclopropane (cis-form); boiling point 131,
6-131, 7°, (4,8mm); melting point 36,7°; n_D^{20} 1,5887;
 d_4^{20} 1,0290. The trans-form: Boiling point 144,1-144,2°
(5,2 mm); melting point 15,3°; n_D^{20} 1,5997; d_4^{20} 1,0346;
1-phenyl-2-cyclopropyl cyclopropane: cis-form:boiling
point 100,2-100,5 (11 mm); n_D^{20} 1,5330; d_4^{20} 0,9574; trans-
form: Boiling point 111,3-111,5° (13,8 mm); n_D^{20} 1,5371;
 d_4^{20} 0,9585. The spectra of the combination dispersion

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Letter to the Editor

SOV/62-58-10-24/25

of both stereoisomer pairs were investigated and a considerable increase of the integral intensities of the characteristic bands of the benzene ring were found. This effect proves the presence of a considerable linkage of the phenyl nuclei with the 3-membered nucleus. This linkage is less intense in the spectra of the isomers with low boiling point. The authors explain this phenomenon by the presence of steric hinderances that disturb the situation favorable to the phenyl nuclei. There are 2 references, which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im.N.D.Zelinskogo Akademii nauk SSSR i Komissiya po spektroskopii pri Otdelenii fiziko-matematicheskikh nauk Akademii nauk SSSR (Institute of Organic Chemistry imeni N.D.Zelinskiy AS USSR and the Commission for Spectroscopy at the Department of Physical Mathematical Sciences AS USSR)

SUBMITTED:
Card 2/2

July 19, 1958

AUTHORS: Aleksanyan, V. T., Sterin, Kh. Ye., SOV/48-22-9-16/4o
Mel'nikov, A. A., Plate, A F.

TITLE: Raman Spectra of Some Unsaturated Cyclic Hydrocarbons
(Spektry kombinatsionnogo rasseyaniya nekotorykh nepredel'nykh tsiklicheskikh uglevodorodov)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958,
Vol 22, Nr 9, pp 1073 - 1078 (USSR)

ABSTRACT: This paper is a report on the investigation of the Raman spectra of hydrocarbons with a double bond in the nucleus: 1-ethyl cyclopentene, 1-n-propyl cyclopentene-1, and 1-n-butyl cyclopentene (1. series), also of such compounds with a semicyclic double binding: ethylidene cyclopentane, n-propylidene cyclopentane and n-butylidene cyclopentane (2. series). It was also attempted to determine the correlation between the characteristic frequency of the C = C binding and the structural features of the olefines. The method which was used in the recording and in the measurement of the spectra were described already earlier (Refs 8,9). The spectra

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Raman Spectra of Some Unsaturated Cyclic Hydrocarbons SOV/48-22-9-16/40

of the hydrocarbons of the first mentioned series are known already from pertinent publications (Refs 13,14). The spectra of cyclopentane and of 1-methyl cyclopentene-1 (Refs 7,14)(1.series) and of methyl cyclopentane (Ref 14) (2.series) represent a substantial supplement to existing information. The characteristic frequencies in the spectra of both series are given in tables 1 and 2. The qualitative considerations given in this respect are without doubt only of a preliminary nature and necessitate a comparison with further experimental and theoretical evidence. There are 3 tables and 24 references, 14 of which are Soviet.

ASSOCIATION: Laboratoriya Komissii po spektroskopii Akademii nauk SSSR (Laboratory of the Committee of Spectroscopy, AS USSR)
Kafedra khimii nefi Moskovskogo gos. universiteta imeni M.V.Lomonosova (Chair of Petroleum Chemistry at the Moscow State University imeni M.V.Lomonosov)

Card 2/2

ИЛЕКСАВЯН, В.Т.

21(0),24(0) PHEME I BOOK EXPLOITATION: SOV/32.0
Akademiya nauk SSSR. Fizicheskiy Institut
Izledovaniya po eksperimental'noy i teoreticheskoj fizike; (sbornik) (Studies on Experimental and Theoretical Physics; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 304 p. Errata slip inserted. 2,300 copies printed.

Ed.: I. L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; Eds. of Publishing House: I. Chernyak and V. G. Barkaus, in Memory of Grigoriya Samuilovich Landberg; I. Ye. Tamn (Chairman), Academician; M. A. Leontovich, Academician; F. A. Bazhulin, Doctor of Physical and Mathematical Sciences; S. L. Mandul'man, Doctor of Physical and Mathematical Sciences; I. L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; F. S. Landberg-Baryshanskaya, Candidate of Physical and Mathematical Sciences; and G. F. Molevich (Secretary), Candidate of Physical and Mathematical Sciences.

PURPOSE: This book is intended for physicists and researchers engaged in the study of electronic transitions in materials. In investigating the structure and composition of materials. CONTENTS: The collection contains 30 articles which review investigations in spectroscopy, molecular physics, conductor physics, nuclear physics, and other branches of physics. The introductory chapter gives a biographical profile of G. S. Landberg. Professor and Head of the Department of Optics of the Division of Physical Technology at Moscow University, and reviews his work in Rayleigh scattering, combat gases, spectral analysis of metals, etc. No personalities are mentioned. References accompany each article.

Razhulin, F. A., V. V. Kilyshov, and M. N. Sushchinskiy. The Work of G. S. Landberg in the Field of Molecular Spectroscopy 17

Abvason, L. S., and A. M. Mokilavskiy. Investigation of Transformation Processes in an Activated Discharge Generator Operating Under Conditions of Low Arc Currents 27

Aleksanyan, V. S., Kh. Ye. Stepin, A. L. Averbman, I. M. Kurnetov, M. M. Klyamkin, and B. A. Kazanik. The Possibility of Changing the Configuration of Stereoisomeric Dialkylcyclohexane on the Basis of a Combined Scattering Spectrum 43

Andreyev, M. M. Standing Sound Waves of Large Amplitude 53

Bazhulin, F. A. and A. I. Sckolozakova. Investigation of the Relation of the Width of Combined Scattering Lines to Temperature 56

Bulyayev, P. A. and V. A. Fambikant. A Medium With Negative Absorption Coefficient 62

Vladimirovskiy, V. V. Nuclear Transitions in Nonspherics I Nuclei 71

Vol'kenshteyn, M. V. Optical Properties of Substances in the Vitreous State 80

Vul, B. M., V. S. Vozilov, and A. P. Sholov. The Question of Impact Ionization in Semiconductors 95

Vul'fson, K. S. New Methods of Increasing the Effectiveness of Radiation Thermocouples 100

Ginsburg, V. L., and A. F. Layanuk. Scattering of Light Near Points of Phase Transition of the Second Type and the Critical Curie Point 104

Isakovich, M. A. Irradiation of an Elastic Wall Vibrating Under the Action of Statistically Distributed Forces 117

Levin, L. M. The Dimming of Light by a Cloud 121

Mazink, M. A., S. L. Mandallabian, and V. G. Kolesnikov. The Broadening and Shifting of the Spectral Lines of a Gas Discharge in Plasma 128

Malyshov, V. I., and V. M. Kuzel'm. Investigation of the Hydroxyl Ion Bond in Substances Whose Molecules Contain Two Hydroxyl Groups 134

AUTHORS: Gonikberg, M.G., Sterin, Kh.Ye., Ukholin, S.A., Opekunov, A.A. and
Aleksanyan, V.T. SOV/51-6-1-21/30

TITLE: Production of the Raman Scattering Spectra at High Pressures
(Polucheniye spektrov kombinatsionnogo rassseyaniya pri vysokikh
davleniyakh)

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 1, pp 109-110 (USSR)

ABSTRACT: To obtain the Raman spectra at pressures up to 2500 kg/cm^2 the authors used apparatus shown in a figure on p 110. A scattering cell consisted of two steel cylinders one on top of the other. The external diameter of the outer cylinder was 160 mm and the diameter of the cell proper was 20 mm. The substance placed in the cell was illuminated through three windows which were at right angles to the cell. These windows are marked 2 in the figure. A fourth window (marked 3) was used to observe the scattered light. Construction of the windows follow Bridgeman's technique described in Ref 5. The smallest diameter of the conical apertures at each window was 7 mm; the angle ψ was 45° . The Raman spectra were excited with the blue line of mercury, $\lambda = 4538 \text{ \AA}$, produced by a PRK-type lamp. Three diaphragms (marked 5 in the figure) were used to cut out the light reflected by the internal walls of the

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Production of the Raman Scattering Spectra at High Pressures

SOV/51-6-1-21/30

cell. A spectrograph ISP-51 was used to obtain the Raman spectra of toluene and isopropylbenzene at pressures of 1000 and 2000 kg/cm² at room temperature. The photographic plates were exposed for 4-6 hours. No displacement of the Raman frequencies of toluene and isopropylbenzene was observed at these two pressures. The apparatus described may be used also to obtain the Raman spectra of compressed gases. There are 1 figure and 5 references, 4 of which are English and 1 translation of an English work into Russian.

SUBMITTED: July 7, 1958

Card 2/2

5 (3)

AUTHORS:

Kazanskiy, B. A., Liberman, A. L.,
Loza, G. V., Kuznetsova, I. M.,
Aleksanyan, V. T., Sterin, Kh. Ye.

SOV/62-59-6-19/36

TITLE:

Catalytic Cyclization of n-Octane With Formation of the Homologs of the Cyclopentane (Kataliticheskaya tsiklizatsiya n. oktana s obrazovaniyem gomologov tsiklopentana)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 6, pp 1071 - 1078 (USSR)

ABSTRACT:

By the action of a platinum catalyst n-octane forms the cyclic compounds: 1-methyl-2-ethylcyclopentane and n-propylcyclopentane. The present investigation dealt with the cyclization process and the spatial structure of the compounds produced by cyclization. For the purpose of this cyclization n-octane was for five hours passed through platinated coal with a passage rate of 0.2/hour at 310°. Two samples of the catalyst were used in parallel. In contrast to ramificated isomers cyclization of n-octane is fairly difficult. The yield on both catalysts was only 2.2 and 4.5%, respectively. The cyclic product could be enriched by distilling the catalysate. An investigation by means of the Raman spectrum showed that there was trans-1-methyl-2-

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Catalytic Cyclization of n-Octane With Formation of the Homologs of the Cyclopentane SOV/62-59-6-19/36

ethylcyclopentene in the lower boiling fraction, and n-propylcyclopentene in the residue. The cis-form of the first mentioned compound could not be discovered. Apart from the compounds mentioned, there were still small quantities of 4-methylheptane to be observed. Furthermore, a line (762 cm^{-1}) was discovered, which was assigned to the pentalane bicyclo-[0,3,3]-octane. This could, however, not yet be proved owing to the difficulties that arise in the production of the pentalane. Since the Raman spectra of the two cyclic compounds obtained are yet hardly known, the single compounds were synthesized in pure form and plotted separately. The synthesis was carried out according to a method which was worked out in the institute mentioned in the Association, with the only difference that instead of aluminum oxide, silica gel was used for isomerisation. In the experimental part the production of the different substances is described in detail. The properties of and the yield in catalysates, obtained from n-octane, are compiled in table 1. Table 2 gives the data concerning the substances produced by distillation. When analyzing the catalysates, distillates,

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Catalytic Cyclization of n-Octane With Formation of the Homologs of the Cyclopentane SOV/62-59-6-19/36

and residues from n-octane it is shown that about the same portions are obtained for both compounds. There are 2 tables and 12 references, 10 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR i Komissiya po spektroskopii Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR, and Committee for Spectroscopy of the Academy of Sciences, USSR)

SUBMITTED: August 15, 1957

Card 3/3

SOV/51-7-2-6/34

AUTHORS: Aleksanyan, V.T., Sterin, Kh.Ye., Lukina, M.Yu., Safonova, I.L. and Kazanskiy, B.A.

TITLE: A Spectroscopic Investigation of the Effect of Mutual Orientation of Cyclopropane and Phenyl Rings on their Conjugation (Spektroskopicheskoye issledovaniye vliyaniya vzaimnoy orientatsii tsiklopropanovykh i fenil'nykh kolets na ikh sopryazheniye)

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 2, pp 178-186 (USSR)

ABSTRACT: The paper describes results of the study of Raman spectra of stereoisomers of 1,2-diphenylcyclopropane and 1-phenyl-2-cyclopropylcyclopropane. These hydrocarbons were prepared following the technique described by Kizhner (Ref 4) and Smith and Rogier (Ref 16). Stereoisomers were separated out by fractional distillation under vacuo. The Raman spectra were recorded by means of a spectrograph ISP-51. The frequencies and intensities were measured following a technique described earlier (Ref 17). The frequency scatter did not exceed $\pm 1 \text{ cm}^{-1}$ and the intensity scatter was $\pm 10\%$. The integral intensities were determined by direct microphotometry of the line shape. The 802 cm^{-1} line in the spectrum of cyclohexane was used as a standard and its molar integral intensity was taken to be 500. The

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A Spectroscopic Investigation of the Effect of Mutual Orientation of Cyclopropane and Phenyl Rings on Their Conjugation

results obtained are tabulated on pp 180-1. The intensities of the lines at ~ 1200 and ~ 1600 cm^{-1} of the two compounds studied were stronger than those of alkyl benzenes; this indicates a strong conjugation of cyclopropane and phenyl rings. The conjugation is shown less clearly in the spectra of stereoisomers with lower boiling points. This is due to steric obstacles which prevent the most favourable arrangement of the phenyl rings with respect to the cyclopropane ring. Such steric obstacles exist only in cis-isomers. This circumstance was used to identify the cis- and trans-isomers of both hydrocarbons. For 1,2-diphenylcyclopropane the isomer with a boiling point of 131.6 - 131.7°C (4.8 mm Hg) and a freezing point of 36.7°C was identified as the cis-form, while the isomer with a boiling point of 144.1 - 144.2°C (5.2 mm Hg) and a freezing point of 15.3°C had the trans-form. The cis-isomer of 1-phenyl-2-cyclopropylcyclopropane had a boiling point of 100.2 - 100.5°C (at 11 mm Hg) and the trans-isomer

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SOV/51-7-2-6/34

A Spectroscopic Investigation of the Effect of Mutual Orientation of Cyclopropane
and Phenyl Rings on Their Conjugation

boiled at 111.3-111.5°C (at 13.8 mm Hg). There are 2 figures, 2 tables
and 21 references, 9 of which are Soviet, 8 English, 1 French, 1 German,
1 translation from English into Russian and 1 from an international
journal.

SUBMITTED: September 23, 1958

Card 3/3

5.4)

AUTHORS:

Kazanskiy, B. A., Landsberg, G.S. (Deceased), SOV/62-59-9-15/40
~~Aleksanyan, V. T.~~, Bulanova, T. A.,
Lieberman, A. L., Mikhaylova, Ye. A., Plate, A. F., Sterin, Kh.Ye.,
Ukholin, S. A.

TITLE:

Investigation of the Composition of the Fraction With a Boiling
Point Between 150 and 250° of the Emba Crude Petroleum

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1959, Nr 9, pp 1612 - 1622 (USSR)

ABSTRACT:

An attempt is being made to apply the combined investigation method for benzines (Ref 1) to the investigation of the petroleum fraction with a boiling point between 150 and 250° of the Emba crude petroleum. The petroleum investigated came from the Koschagylskoye deposit. It was proved that this fraction contains 12.6% of aromatic and 13.0% of hexahydroaromatic hydrocarbons. In the aromatic fraction 29 different hydrocarbons were identified. The quantitative division in groups of the aromatic hydrocarbons boiling in this range was carried out with characterization of the arrangement of the side-chains on the benzene ring or the corresponding cyclohexane ring and that for the multi-cyclic according to the arrangement of the rings. By this method

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Investigation of the Composition of the Fraction With SOV/62-59-9-15/40
a Boiling Point Between 150 and 250° of the Emba Crude
Petroleum

the authors succeeded in establishing the composition of the aromatic compounds up to 70% and that of the hydroaromatic compounds up to 46%. In the paraffin-naphthene part of the fraction the presence of naphthene with two different substituents in the same carbon atom of the cyclohexane could be established (mixed substitution). The limiting into narrower fractions was possible at the paraffin-naphthenes by investigating the specific gravities, the refractive index and the aniline point of these fractions. In figures 1 and 2 the paraffin-naphthene fractions are identified and tables 1-6 contain the results of the analysis. Table 7 gives the results of the distillation of the paraffin-cyclopentane fraction of the Ligroin applying the coefficient proposed by P. S. Maslov (Ref 11). There are 2 figures, 7 tables, and 11 references, 10 of which are Soviet.

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Investigation of the Composition of the Fraction With SOV/62-59-9-15/40
a Boiling Point Between 150 and 250° of the Emba Crude
Petroleum

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

SUBMITTED: January 4, 1958

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24(7), 11(4)

SOV/48-23-10-2/39

AUTHORS: Aleksanyan, V. T., Sterin, Kh. Ye., Ukholin, S. A.

TITLE: The Analysis of Hydrocarbon Mixtures According to the Raman Spectra of Light

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 10, pp 1177-1178 (USSR)

ABSTRACT: Raman spectra are frequently used in the authors' laboratories for the purpose of analyzing natural hydrocarbon mixtures, especially gasoline fractions. The analytical investigations forming the subject of the present paper were carried out in close cooperation of the laboratory of the Komissiya po spektroskopii (Spectroscopy Commission) and the Laboratoriya kataliticheskogo sinteza Instituta organicheskoy khimii AN SSSR (Laboratory for Catalytic Synthesis of the Institute of Organic Chemistry of the AS USSR). The first part of this paper gives a short report on the catalytic cyclization of n-octane with formation of homologs of cyclopentane. In low-boiling fractions trans-1-methyl-2-ethyl cyclopentane (~1.4%) and in later fractions n-propyl cyclopentane (also ~1.4%) was found. Also 4-methyl heptane was found. In the spectrum of the distillation residue the line 762 cm^{-1} was found, which may be attributed to pentalane (which might have been

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The Analysis of Hydrocarbon Mixtures According to the Raman Spectra of Light SOV/48-23-10-2/39

produced by the second cyclization of n-propyl cyclopentane or 1-methyl-2-ethyl cyclopentane). The second part of the paper gives some details concerning the homogeneous destructive hydrogenation of tetralin at high hydrogen pressures. At pressures of up to 1200 atm and temperatures of 440-462° the hydrogenation was carried out. In the reaction products (with the boiling point of 136.1 - 183.9°) the following hydrocarbons were found: Ethyl benzene - 16%, isopropyl benzene - 9%, n-propyl benzene - 10%, secondary butyl benzene - 12%, n-butyl benzene - 43%, indan - 4%, α -methyl indan - 2-4%, as well as others the content of which amounts to less than 1%. In higher boiling fractions (185 - 190°) α -methyl indan was the main component, and further n-butyl benzene, β -methyl indan (5 - 10%) and trans-decalin (1 - 3%) was found. The scheme of hydrogenation and of the isomerization of tetralin is given. There are 1 figure and 3 Soviet references.

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5.3300

78069
SOV/62-60-1-15/37

AUTHORS: Aleksanyan, V. T., Sterin, Kh. Ye., Liberman, A. L.,
Lukina, M. Yu., Tayts, G. S., Tarasova, G. A.; Terent'eva,
Ye. M.

TITLE: Investigation of Hydrocarbons by Optical Method. XII.
Raman Spectra of Some Hydrocarbons of Various Series

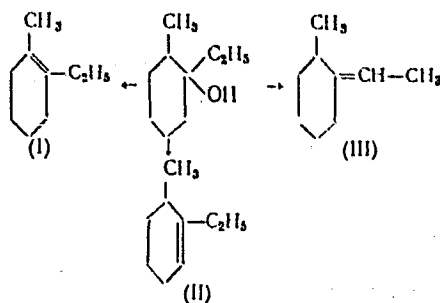
PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh
nauk, 1960, Nr 1, pp 84-89 (USSR)

ABSTRACT: The Raman spectra of the following hydrocarbons were
studied: n-dodecane; 5,5-dimethylundecane; 1,1,2-tri-
methylcyclopropane; sec-butylcyclopentane, 2-cyclopentyl-
octane, n-propylcyclohexane, 1-methyl-2-ethylcyclo-
hex-1-ene. Combination of the chemical and spectro-
scopic data confirm that 1,2-dialkylcyclohexan-1-ol
on dehydration yields 1,2-dialkylcyclohexenes with
double bond predominantly in position (I).

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Investigation of Hydrocarbons by
Optical Method. XII

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SOV/62-60-1-15/37



There are 26 references, 16 Soviet, 6 U.S., 4 German.
The 5 most recent U.S. references are: Mosher,
W. A., J. Am. Chem. Soc., 62, 552 (1940); Fenske, M. R.,
Anal. Chem., 19, 700 (1947); Signaigo, F. K., Cramer,
P. L., J. Am. Chem. Soc., 55, 3326 (1933); Foehr,
F. G., Fenske, M. R., Industr. and Engng. Chem., 41,
1956 (1949); Kelso, R. G., Greenlee, K. W., Derfer,
J. M., Boord, C. E., J. Am. Chem. Soc., 74, 287 (1952).

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Investigation of Hydrocarbons by
Optical Method. XII

78069
SOV/62-60-1-15/37

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

SUBMITTED: May 30, 1958

Card 3/3

69837

5.3100

051/60/008/03/008/038

201/E191

AUTHORS: Aleksanyan, V.T., Sterin, Kh.Ye., Mel'nikov, A.A. and
Plata, A.F.

TITLE: Raman Spectra of 1,2-dialkylcyclopentane Stereoisomers

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 3,
pp 324-327 (USSR)

ABSTRACT: The authors investigated the Raman spectra of stereo-
isomers of three 1,2-dialkylcyclopentanes:

1-ethyl-2-n-propylcyclopentane (I);

1-ethyl-2-n-butylcyclopentane (II);

1,2-di-n-butylcyclopentane (III).

The methods of preparation and recording of the spectra
were as described earlier (Ref 3). It was found that
the Raman spectra had certain features which could be used
to identify reliably the type of the stereoisomer. These
features were lines in the regions 1133-1147 cm^{-1} and
885-910 cm^{-1} in the spectra of the isomers with lower
boiling points, and lines in the regions 1107-1120,
1144-1160 and 882-893 cm^{-1} in the spectra of the isomers
with higher boiling points. The isomers with the lower
boiling points (72.9, 91.0 and 122.6 $^{\circ}\text{C}$ for I, II and III

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E201/E191

Raman Spectra of 1,2-dialkylcyclopentane Stereoisomers

respectively) had cis-structure.

There are 1 table and 6 Soviet references.

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2/2

SUBMITTED: May 14, 1959

5(3)

S/020/60/130/03/019/065
B011/B016

AUTHORS: Kazanskiy, B. A., Academician, Nakhapetyan, L. A., Aleksanyan,
V. T., Sterin, Kh. Ye., Podkhalyuzin, A. T.

TITLE: Dehydration¹ of Dimethyl-cyclopentyl-carbinol¹ in the Presence of
Sulfuric Acid

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 3, pp 552-555
(USSR)

ABSTRACT: The authors carried out the reaction mentioned in the title with 0.1% concentrated H_2SO_4 , in order to clarify in what way a five-membered ring acts on the course of the reaction. The reaction conditions were the same as in one of their previous papers (Ref 1). The authors also this time obtained a mixture of unsaturated hydrocarbons, from which the following individual hydrocarbons were separated by distillation: isopropyl-cyclopentene-1, isopropenyl-cyclopentane (produced for the first time), and isopropylidene-cyclopentane. Herefrom the authors conclude that the reaction had proceeded according to the scheme (cf Fig). The structure of the separated compounds was

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Dehydration of Dimethyl-cyclopentyl-carbinol in
the Presence of Sulfuric Acid

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B011/B016

confirmed by the agreement of the constants of two of them with data available in publications. The Raman spectra offered further proof of their structure. While the present investigation was being carried out, a paper by G. Chiurdoglu and S. Van Walle (Ref 4) was published, who investigated the dehydration of cyclic carbinols by distillation with 0.01% H_2SO_4 .

The authors carried out the reaction mentioned in the title also under these conditions. By means of the Raman spectra of the dehydration products they found that with 0.01% H_2SO_4 also

a mixture of isopropyl-cyclopentene-1, isopropenyl-, and isopropylidene-cyclopentane results. The quantitative ratio of these components, however, varies according to the quantity of H_2SO_4 . With increasing quantity the content of isopropenyl-cyclopentane decreases from 68-63% to 40-35%. At the same time, the quantity of the other two hydrocarbons increases. Also the yield of dehydration products increases from 66% to 91%. Thus, the results obtained by the authors are not in agreement with those of reference 4. The authors point out that the constants

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Dehydration of Dimethyl-cyclopentyl-carbinol in
the Presence of Sulfuric Acid

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of isopropenyl-cyclobutane and isopropenyl-cyclopentane of
reference 4 deviate considerably from those obtained by them-
selves. They assume that in reference 4 no individual hydro-
carbons, but mixtures of unsaturated hydrocarbons with a dif-
ferent position of the double bond were under consideration.
There are 1 figure, 1 table, and 5 references, 4 of which are
Soviet. ✓

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

SUBMITTED: November 13, 1959

Card 3/3

S/020/60/131/06/40/071
B004/B007AUTHORS: Aleksanyan, V. T., Sterin, Kh. Ye.TITLE: Orientation of the π -Electron Cloud¹ in the Cyclopropane¹ Ring

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 131, No. 6, pp. 1373 - 1375

TEXT: The authors investigated the conjugation of π -bonds on 1,2-diphenyl- and 1-phenyl-2-cyclopropyl-cyclopropane by means of the Raman spectrum (Refs. 1,2). The question remained unanswered as to whether the cis-form had the configuration A or B (Fig. 1). This has now been clarified by investigating the Raman spectrum of 1,1-diphenyl-cyclopropene. In this compound only configuration A is possible for stereochemical reasons. This is proved by comparing the intensity of the 1600 cm^{-1} line of the Raman spectra (Table 1) of various phenyl-cyclopropanes. The relatively low conjugation between cyclopropane- and phenyl ring in this compound is confirmed also chemically. Among all diphenyl-cyclopropanes investigated, 1,1-diphenyl-cyclopropane has the lowest hydrogenation rate under cleavage of the three-membered ring. The 1,1-diphenyl-cyclopropane spectrum has the intensive line of valence oscillations of C-H-bonds at 3005 cm^{-1} , which is characteristic

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Orientation of the π -Electron Cloud in the Cyclopropane Ring S/020/60/131/06/40/071
B004/B007

of the cyclopropane ring. There are 1 figure, 1 table, and 8 references, 4 of which are Soviet.

ASSOCIATION: Komissiya po spektroskopii pri Otdelenii fiziko-matematicheskikh nauk Akademii nauk SSSR (Commission on Spectroscopy at the Department of Physical and Mathematical Sciences of the Academy of Sciences, USSR)

PRESENTED: January 4, 1960, by B. A. Kazanskiy, Academician

SUBMITTED: December 25, 1959

Card 2/2

KAZANSKIY, B.A., akademik; LIBERMAN, A.L.; KUZNETSOVA, I.M.;
ALEKSANYAN, V.T.; STERIN, Kh.Ye.; LOZA, G.V.

C₅-Dehydrocyclization of alkyl cyclopentanes into bicyclic hydrocarbons. Dokl.AN SSSR 133 no.2:364-366 J1 '60.
(MIRA 13:7)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR i Komissiya po spektroskopii Akademii nauk SSSR.
(Cyclopentane) (Cyclization)

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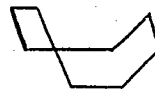
S/O20/60/133/005/032/034/XX
B016/B060

AUTHORS: Kazanskiy, B. A., Academician, Shokova, E. A., Khromov, S. I.,
Aleksanyan, V. T., and Sterin, Kh. Ye.

TITLE: Contact Conversions of Cyclooctane in the Presence of
Platinized Coal

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 5,
pp. 1090 - 1093

TEXT: The authors wanted to find out the behavior of polymethylenes of average ring size on platinized coal at lower temperatures than those applied by V. Prelog (Ref. 1). Moreover, they wanted to repeat the incomplete work of N. D. Zelinskiy and G. I. Freyman (Ref. 3). According to the latest notions, cyclooctane can principally exist in two most stable forms:



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Contact Conversions of Cyclooctane in the
Presence of Platinized Coal

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B016/B060

The amount of (II) in cyclooctane is probably very small. In the centrosymmetric form (I), the four equatorial hydrogen atoms are placed higher than the central ring plane, whereas other four of them are placed below this plane. When any pair of these atoms in 1,5-position separates, the transannular C-C bond may form and cis-bicyclo-(0,3,3)-octane-(cis-pentalane) may result. In this work, the authors examined the conversions of cyclooctane on platinized coal at 310° in the presence and in the absence of hydrogen. A quantitative conversion of cyclooctane took place in both cases. In the absence of hydrogen, cis-bicyclo-(0,3,3)-octane-(cis-pentalane) developed in an amount of about 51 wt% of the catalyzate. Appreciable amounts were also obtained of trans-1-methyl-2-ethyl cyclopentane (about 23%) and n-propyl cyclopentane (about 20%), as well as smaller amounts (about 6%) of 4-methyl heptane. Basing on the reaction products, the authors set up a scheme of this reaction. Apparently, the first stage is the formation of cis-pentalane which then undergoes hydrogenolysis under the action of the resulting hydrogen. Trans-1-methyl-2-ethyl cyclopentane and n-propyl cyclopentane thus result. 4-methyl-1-heptane is formed by the hydrogenolysis of the latter. The same substances were formed in the presence of hydrogen, but the quantitative proportion was different. This

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Contact Conversions of Cyclooctane in the
Presence of Platinized Coal

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is explained by a more intense hydrogenolysis of the five-membered ring in the presence of hydrogen. At the same time, the hydrogenolysis of pentalane and n-propyl cyclopentane takes place more smoothly than that of 1-methyl-2-ethyl cyclopentane. The authors were not able to detect methyl cycloheptane in the reaction products (as conversely stated in Ref. 3). About 1 - 2% of aromatic hydrocarbons were obtained: toluene, ethyl benzene, and o-xylene. Tables 1 - 4 collect the results of distillation, the individual fractions together with their constants, and the quantitative proportions of the resulting substances. They were determined from the Raman spectra (monograph by G. S. Landsberg, B. A. Kazanskiy, and others, Ref. 9) of the fractions. A paper by A. L. Liberman and others (Ref. 10) is mentioned. There are 4 tables and 11 references: 6 Soviet, 3 US, 1 Swiss, and 1 French. X

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov). Komissiya po
spektroskopii Akademii nauk SSSR (Commission for Spectro-
scopy of the Academy of Sciences USSR)

SUBMITTED: May 11, 1960

Card 3/3

Contact Transformations of Cyclohexane in the
Presence of Pistillized Charcoal. 5/023/60/195/002/020/036
3016/3032

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova
(Moscow State University Institut M.V. Lomonosov). Komissiya
po spektroskopii Akademii nauk SSSR (Commission of
Spectroscopy of the Academy of Sciences USSR). Institut
kharakterizatsii i sinteza organicheskikh soedineniy
Imeni N.S. Zhdanovskogo (Institute of Organic Chemistry Akademi
nauk SSSR (Institute of Organic Chemistry Institut
I. P. Zhdanovskiy of the Academy of Sciences USSR)

SUBMITTED: July 20, 1960

Card 4/4

ALEKSANYAN, V.T.; STERIN, Kh.Ye.; UKHOLIN, S.A.; BRAGIN, O.V.;
LIBERMAN, A.L.; MIKHAYLOVA, Ye.A.; SMIRNOVA, E.N.; TYUN'KINA, N.I.
KAZANSKIY, B.A.

Raman spectra of certain hydrocarbons of the benzene series
having one or two side chains. Izv. AN SSSR. Otd.khim.nauk
no.8:1437-1443 Ag '61. (MIRA 14:8)

1. Komissiya po spektroskopii AN SSSR i institut organicheskoy
khimii im. N.D. Zelinskogo AN SSSR.
(Hydrocarbons—Spectra)

STERIN, Kh.Ye.; ALEKSANYAN, V.T.; UKHOLIN, S.A.; BRAGIN, O.V.;
GAVRILLOVA, A.Ye.; ZOTOVA, S.V.; LIBERMAN, A.L.; MIKHAYLOVA, Ye.A.
SMIRNOVA, E.N.; STERLIGOV, O.D.; KAZANSKIY, B.A.

Raman spectra of some tri- and tetraalkylbenzenes and condensed
aromatic hydrocarbons. Izv. AN SSSR. Otd.khim.nauk no.8:1444-
1450 Ag '61. (MIRA 14:8)

1. Komissiya po spektroskopii AN SSSR i Institut organicheskoy
khimii im. N.D. Zelinskogo AN SSSR.

(Benzene--Spectra)

(Hydrocarbons--Spectra)

STERIN, Kh.Ye.; ALEKSANYAN, V.T.

Investigation of the composition of products of catalytic transformations
of hydrocarbons based on Raman spectra. Izv. AN SSSR Ser. fiz. 26 :
no.10:1319-1320 0 '62. (MIRA 15:10)
(Hydrocarbons) (Catalysis) (Spectrum analysis)

ALEKSANYAN, V.T.; BARINOVA, Z.B.; ZHIZHIN, G.N.; STERIN, Kh.Ye.;
BELIKOVA, N.A.; PLATE, A.E.

Vibrational spectra of some endo- and exoderivatives of the series bicyclo(2,2,1)heptane and bicyclo(2,2,1)-2-heptene.
Zhur.strukt.khim. 4 no.1:28-36 Ja-F '63. (MIRA 16:2)

1. Komissiya po spektroskopii AN SSSR i Moskovskiy gosudarstvennyy universitet imeni M.M. Lomonosova.

(Bicycloheptane—Absorption spectra)
(Norborene—Absorption spectra)

SOBOLEV, Ye.V.; ALEKSANYAN, V.T.; MIL'VITSKAYA, Ye.M.; PRYANISHNIKOVA, M.A.

Vibrational spectra of cyclic hydrocarbons with conjugate double bonds. Zhur.strukt.khim. 4 no.2:189-193 Mr-Apr '63. (MIRA 16:5)

1. Komissiya po spektroskopii AN SSSR.
(Hydrocarbons--Spectra) (Conjugation (Chemistry))

SOBOLEV, Ye.V.; ALEKSANYAN, V.T.; NARYSHKINA, T.I.

Conformational state of 2,4-dimethyl-1,3-pentadiene and 3-methyl-1,3-pentadiene. Zhur.strukt.khim. 4 no.3:354-357 My-Je '63.
(MIRA 16:6)

1. Komissiya po spektroskopii AN SSSR, Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR i Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Pentadiene) (Stereochemistry)

SOBOLEV, Ye.V.; ALEKSANYAN, V.T.; KARAKHANOV, R.A.; BEL'SKIY, I.F.;
OVODOVA, V.A.

Raman spectra of some alkyl-substituted furans. Zhur.strukt.khim.
4 no.3:358-363 My-Je '63. (MIRA 16:6)

1. Komissiya po spektroskopii AN SSSR.
(Furan--Spectra)

SOBOLEV, Ye.V.; ALEKSANYAN, V.T.

Vibrational spectra of aliphatic conjugated dienes. Zhur.strukt.khim.
4 no.4:527-534 J1-Ag '63. (MIRA 16:9)

1. Komissiya po spektroskopii AN SSSR i Institut neorganicheskoy
khimii Sibirskogo otdeleniya AN SSSR.
(Unsaturated compounds--Spectra)

SOBOLEV, Ye.V.; ALEKSANYAN, V.T.

Some anomalies in vibrational spectra of α, β -unsaturated ketones.
Izv. AN SSSR. Ser.khim. no.7:1336-1339 J1 '63. (MIRA 16:9)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR
i Komissiya po spektroskopii AN SSSR.
(Ketenes—Spectra)

ALEKSANYAN, V.T.; BARINOVA, Z.B.; VLEDUTS, G.E.; SHEVYAKOVA, L.A.

Chemical code for retrieval of spectrochemical information. NTI
no.9:17-21 '63. (MIRA 16:12)

ALEKSANYAN, V.T.; BARINOVA, Z.B.

Some problems of documentation for molecular spectra with the
aid of punched card systems (survey). Zav.lab. 29 no.7:849-856
'63. (MIRA 16:8)

(Punched card systems--Molecular spectra)

ALEKSANYAN, V.T.; SOBOLEV, Ye.V.

Certain particularities of the vibration spectra of conjugated dienes and the effect of the diene configuration on the interaction of double bonds. Dokl. AN SSSR 150 no.5:1062-1065 Je '63.

(MIRA 16:8)

1. Komissiya po spektroskopii AN SSSR. Predstavleno akademikom I.V.Obreimovym.

(Unsaturated compounds—Spectra) (Double bonds)