

MEKHITIYEV, A. M.

Vascular revascularization of the kidney under experimental conditions. Izv. AN Azerb. SSR, Ser. biol. nauch. 1964, 12:4 (MIRA 12:4)

MEKHITIYEV, M.M.; KRYLOV, V.S.; ARABIDZE, G.G.; BELICHENKO, I.A.

Diagnosis of stenosing lesions of the renal artery. Vest. khir. no.7:
22-24 J1 '64. (MIRA 18:4)

1. Iz gospi'tal'noy khirurgicheskoy kliniki (zav. - prof. B.V.Petrovskiy)
1-go Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.
Adres avtora; Moskva, B.Pirogovskaya ul., d.2/6, gospi'tal'naya khirurgi-
cheskaya klinika.

MEKHITIYEV, M.M.

Methodology for producing experimental renal hypertension in dogs.
Eksp. khir. i anest. 9 no.2:53-55 Mr-Ap '64. (MIRA 17:11)

1. Gosptal'naya khirurgicheskaya klinika (dir. - deystvitel'nyy
chlen AMN SSSR prof. B.V. Petrovskiy) I Moskovskogo ordena Lenina
meditsinskogo instituta imeni Sechenova.

MEKHTIYEV, M.M.; REVZIS, M.G.; KRYLOV, V.S.

Vasorenal hypertension induced by fibromuscular hyperplasia
of the renal artery. Azerb. med. zhur. 41 no. 10:60-64 0 '64
(MIRA 19:1)

1. Iz nauchno-issledovatel'skogo instituta klinicheskoy i eks-
perimental'noy khirurgii i gosital'noy khirurgicheskoy kliniki
(direktor - deys'vitel'nyy chlen AMN SSSR B.V. Petrovskiy)
I Moskovskogo ordena Lenina meditsinskogo instituta imeni
Sechenova.

PETROVSKIY, B.V.; KRYLOV, V.S.; MEKHTIYEV, M.M.

Diagnosis and surgical treatment of renovascular hypertension.
Khirurgiya 40 no.11:3-9 N '65. (MIRA 18:7)

1. Nauchno-issledovatel'skiy institut klinicheskoy i eksperimental'noy khirurgii Ministerstva zdravookhraneniya RSFSR i gospi'tal'naya khirurgicheskaya klinika (dir. - prof. B.V.Petrovskiy) I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

ALIKHANOV, F.N.; ARUSHANOV, N.A.; AKHUNDOV, V.Yu.; ALIZADE, M.A.; AZIZBEKOV, S.A.; LAGIROV, M.A.; VEZIROV, S.A.; VOLOBUYEV, V.R.; BEMILOV, F.M.; GADZHIYEV, N.M.; GUSEYNOV, D.M.; GUSEYNOV, I.A.; DADASHEV, I.I.; DADASHZADE, M.A.; DALIN, M.A.; ISFENDEROV, M.A.; KAZIYEV, M.A.; KARAYEV, A.I.; KASHKAY, M.S.; KEL'DYSH, M.V.; KERIMOV, A.G.; LEMBERANSKIY, A.D.; MAMEDOV, G.K.; MEKHTIYEV, M.R.; MIRZOYEV, S.A.; NAGIYEV, M.F.; NESRULLAYEV, N.I.; ORUDZHEV, A.K.; RADZHANOV, R.A.; RUDNEV, K.N.; SADYKHOV, R.N.; SEMENOV, N.N.; TOPCHIEV, A.V.; TOPCHIBASHEV, M.A.; TAIROVA, T.A.; KHALILOV, Z.I.; AFENDIYEV, G.kh.; SHUKYUROVA, Z.Z.

IUsif Geidarovich Mamedaliev; obituary. Dokl. AN Azerb. SSR 17
no.12:1123-1126 '61. (MIRA 15:2)
(Mamedaliev, Iusif Geidarovich, 1905-1961)

MIRZOYAN, A.A.; MEKHTIYEV, M.V.

Heat exchange involved in the motion of two cylindrical
layers of viscous liquids in a circular cylindrical tube.
Izv.AN Azerb.SSR.Ser.fiz.-mat.i tekhn.nauk no.4:89-96
'59: (MIRA 13:2)
(Heat--Transmission) (Petroleum--Pipelines)

67632

15.6200

SOV/81-59-14-51087

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 14, p 457 (USSR)

AUTHORS: Kuliyev, A.M., Kuliyev, R.Sh., Dreyzina, M.M., Mekhtiyev, M.Z., Guseynov, F.I., Chikareva, N.I., Sanamova, R.A., Kevorkova, I.S.

TITLE: The Effect of the Conditions of Acidic Purification on the Filterability of Contacted Oil in the Preparation of Aircraft Oil MK-22 //

PERIODICAL: Sb. tr. Azerb. n.-i. in-t po pererabotke nefti, 1958, Nr 3, pp 181 - 193 (Azerbaijdzhan summary)

ABSTRACT: The effect of the temperature of acidic purification and settling, the duration of storing of the acidic oil, the concentration of H_2SO_4 and the method of its preparation, the consumption of acid and the addition of coagulator on the filterability of contacted oil has been studied. The contacting of a concentrate of Surakhany choice petroleum with $VU_{100} = 4.27^\circ C$, the coking capacity 2.58, was carried out in a laboratory contacting device with a charge of 750 g oil and 24% (based on the acidic oil) gumbrine at a final contacting temperature of $350^\circ C$. The filtering was carried out on a Büchner's funnel at $170 - 180^\circ C$ in a vacuum of 50 - 60 mm Hg; the time for the filtration of 500 ml filter discharge was

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The Effect of the Conditions of Acidic Purification on the Filterability of Contacted Oil in the Preparation of Aircraft Oil MK-22

taken as filterability index. It has been shown that the filterability of the contacted oil can deteriorate in the case of an oleum content in the used acid, a rise of the temperature above 70°C, and long storing of the acidic oil (2 days); the coagulator was a commercial contact agent and 43% H₂SO₄; although it permitted one to improve the filterability by 2-3 times, in the periods of bad filterability of the oil it does not restore the normal conditions of filtration. There are five references.

G. Margolina

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Card 2/2

MEKHTIYEV, N.N.

Some questions about the dynamics and morphology of the western shore
of the southern part of the Caspian Sea. Izv.AN Azerb.SSR.Ser.geol.-
geog.nauk no.5:151-162 '60. (MIRA 14:5)
(Caspian Sea—Coast changes)

SHIRINOV, N.Sh.; MEKHTIYEV, N.N.

Geomorphologic regionalization of the Caspian Sea coast of
Azerbaijan. Izv. AN Azerb. SSR. Ser. geol.-geog. nauk
no.4:95-102 '64. (MIRA 17:12)

MEKHTIYEV, N.N.; KHALILOV, A.I.; SHIRINOV, N.Sh.

Study of seashores. Izv.AN Azerb.SSR.Ser.geol.-geog.nauk i
nefti no.4:145-147 '62. (MIRA 16:2)
(Seashore)

LECNT'YEV, O.K.; KHALILOV, A.I.; MEKHTIYEV, N.N.; KUDUSOV, F.A.

Some characteristics of the present-day dynamics of the coasts
of Sulak Bay. Dokl. AN Azerb. SSR 21 no.2:39-43 '66.
(MIRA 18:5)

1. Institut geografii AN AzerSSR.

GUSEYNOV, G.A.; MEKHITIYEV, P.G.

Prospects for finding gas and oil in the Sumgait sediments in the northwestern extension of the Caspian Sea region tertiary monoclines. Neftegaz. geol. i geofiz. no.6:46-48 '64.
(MIRA 17:8)

1. Neftepromyslovoye upravleniye "Siazan'neft'".

~~MEKHTIYEV, R. A.~~

[The FD deep well pump] Glubokie nasosy FD. Baku, Azneft-
izdat, 1946. 131 p. (MIRA 8:2)
(Oil well pumps)

MEKHANIZM, R.A., izdat. KREPKOV, A.D., izdat.

Friction welding of the connecting ends of pipes.
Svar.prikl. no. 1020-22 D 195. (M.P. 1952)

1. Azerbaydzhanskij nauchno-issledovatel'skiy institut
nefteyanogo mashinostroyeniya.

L 04680-67 EWT(d)/EWT(m)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l) JH/HM

ACC NR: AR6020943

SOURCE CODE: UR/0137/66/000/002/E029/E029

AUTHOR: Abdullayev, A. A.; Kornev, T. N.; Mekhtiyev, R. A.; Sutovskiy, P. M. 4/1

TITLE: Experimental machine for welding compressed gas cylinders by means of an electric arc rotating in a magnetic field 14

SOURCE: Ref. zh. Metallurg, Abs. 2E219

REF SOURCE: Tr. Azerb. n.-i. in-ta neft. mashinostr., vyp. 3, 1965, 340-351

TOPIC TAGS: arc welding, welding equipment

TRANSLATION: The experimental machine was developed for arc welding in a magnetic field. The machine is intended for the welding of various joints in petroleum industry machinery and consists of the following basic components: right and left clamping devices mounted on guide frames. A description of the construction and operation of the machine is presented. F. Fomenko. 18

SUB CODE: 13,11

UDC: 621.791.75.037:624.074.7

Card 1/1

fv

37932

S/181/62/004/005/021/055
B125/B108

9.4177

AUTHORS: Mekhtiyev, R. F., and Paritskiy, L. G.

TITLE: Kinetics of the photoconduction in GaSe

PERIODICAL: Fizika tverdogo tela, v. 4, no. 5, 1962, 1222-1226

TEXT: The kinetics of the photocurrent in p-type GaSe single crystals (resistivity 25 ohm.cm) is examined. The relaxation curves have a "slow" component with the time constant ~40 sec and a "fast" component with a characteristic time of several milliseconds. With increasing light intensity, the slow component increases non-linearly and attains saturation; the fast component increases approximately linearly. An additional constant illumination of the crystal causes the slow amplitude to decrease to zero with increasing intensity of irradiation. The time constant of the slow component depends on the thermal ejection into the conduction band and on the recombination with the equilibrium holes of the valence band. At low temperatures, the time constant depends on recombination only. The thermal ejections prevail at high temperatures.

The concentration of the electron trapping levels (M) amounts to
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Kinetics of the photoconduction in ...

S/181/62/004/005/021/055

B125/B108

$(1-4) \cdot 10^{13} \text{ cm}^{-3}$. The capture coefficient of an electron or hole (to an M level) amounts to $\gamma = 4 \cdot 10^{-16} \text{ cm}^3/\text{sec}$ ($\sigma_n = 4 \cdot 10^{-23} \text{ cm}^2$) and $\gamma = 1.5 \cdot 10^{-18} \text{ cm}^3/\text{sec}$ ($\sigma_p = 1.5 \cdot 10^{-25} \text{ cm}^2$), respectively. The "fast" component consists of several "subcomponents". This structure causes, apparently, some trapping levels for electrons. The "fastest" component of photoconductivity does not depend on illuminance. There are 5 figures. The most important English-language reference is: P. Fielding, G. Fisher and E. Mooser. J. Phys. Chem., Sol., 8,434, 1959. j

ASSOCIATION: Institut fiziki AN Az SSR, Baku (Physics Institute of the AS Azerbaydzhan SSR, Baku); Fiziko-tekhnicheskii institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute imeni A. F. Ioffe AS USSR, Leningrad)

DATE: December 26, 1961

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40546
S/249/62/018/001/001/003
1017/1217

20.2420
AUTHORS: Mekhtiyev, R. F., Abdullayev, G. B, and Akhundov, G. A.

TITLE: The technique of growing single crystals of GaSe and the investigation of some of their properties

PERIODICAL: Akademiya nauk Azerbaydzhanskoy SSR. Doklady, v. 18, no. 1, 1962, 11-15

TEXT: A review is given of ten papers on the influence of Ga and Tl on the electrical conductivity of Se, on the photoelectric properties of Ga and other selenides, and on the preparation of GaSe single crystals. A new method is proposed for the preparation of GaSe single crystals. The molten components in stoichiometric proportions are heated in a quartz ampule at 600° for 20 hours. The mixture is heated to 1060°C (GaSe melts at 960°) for ten hours, then cooled slowly to room temperature. The X-ray patterns of the synthesized GaSe are identical with those described in the literature. A special apparatus for gradual cooling is described. The temperature is lowered first at the rate of 2°C per hour until complete solidification, then at 6°C per hour down to 900°C, and finally 25°C per hour down to 500°C. At all stages a constant temperature gradient is maintained. Heating can be regulated without disturbing the furnace or the sample. The crystals obtained are 10 mm in diameter and 10 cm long. For both vertical and horizontal positions of the ampule, the plane of growth was (001). At room temperature, the specific resistance and the concentration of holes and

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The technique of growing...

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their mobility for GaSe crystals are $\rho = 19 \text{ ohm.cm}$, $n = 2.10^{16} \text{ cm}^{-3}$, $u = 16 \text{ cm}^2/\text{sec}$, respectively. The spectral distribution of photoconductivity was measured at 300 and 78°K. Values of ΔE were 1.87 and 1.98 ev at room temperature and liquid nitrogen temperature, respectively. The maximum photoconductivity shifts toward shorter wavelengths with decreasing temperature. The dependence of optical density on wave length is shown. There are 4 figures.

ASSOCIATION: Institut fiziki (Institute of Physics)

SUBMITTED: November 12, 1961

Card 2/2

L 52717-65 EWT(1)/EWT(m)/EWQ(m)/T/EWP(t)/EEC(b)-2/EWP(b) Feb/P1-4 DIAAP/
LJP(c) RLW/JD/JG/GG

ACCESSION NR: AP5013431

UR/0233/65/000/001/0063/0065

AUTHOR: Guseynova, E. S.; Mekhtiyev, R. F.

TITLE: X-ray and Gamma conductivity of GaSe single crystals

SOURCE: AN AzerbSSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk, no. 1, 63-65

TOPIC TAGS: gallium selenide, single crystal, x ray conductivity, Gamma conductivity, light sensitivity

ABSTRACT: The article reports results of an investigation of the increased conductivity induced by x-rays and gamma rays in low-resistivity (100--200 ohm-cm) and high-resistivity (10^4 ohm-cm) p-GaSe single crystals. The samples were made by a procedure described earlier (DAN AzerbSSR v. 18, 11, 1962; Priory i tekhnika eksperimenta No. 2, 1964) and were in the form of parallelepipeds measuring 3--5 x x 2--4 x 0.1--0.4 mm. All measurements were made at room temperature. The x-rays were produced by a standard URS-70 apparatus with iron tube, and the gamma rays were from a Co^{60} source. For both types of radiation the increase in conductivity was 8--10 times for high-resistivity samples and several multiples of 10% for low-

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ACCESSION NR: AP5013431

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resistivity samples. The results also show that the effect of visible light is not additive with the effects of the x-rays or gamma rays. The reason for this is the presence of two different relaxation mechanisms for the x-ray or gamma ray conductivity, each responding differently to visible light. The results are compared with data by others and some of the differences explained. "Student G.S. Vartapetian of the Tbilisi State University participated in the measurements. The authors thank Professor G. B. Abdullayev for useful advice and for discussion of the results." Orig. art. has: 3 figures. [02]

ASSOCIATION: none

SUBMITTED: 12Oct64

ENCL: 00

SUB CODE: SS, OP

NO REF SOV: 007

OTHER: 001

ATD PRESS: 4012

284
Card 2/2

ACCESSION NR: AP4033143

S/0120/64/000/002/0179/0180

AUTHOR: Mekhtiyev, R. F.; Osmanov, E. O.; Rud', Yu. V. Bk

TITLE: Outfit for growing single crystals of semiconducting compounds

SOURCE: Pribery* i tekhnika eksperimenta, no. 2, 1964, 179-180

TOPIC TAGS: crystal, single crystal, semiconductor, single crystal semiconductor, crystal growing, semiconductor crystal growing

ABSTRACT: A special electric furnace for growing single crystals from substances with volatile components is briefly described. The substance, in a quartz ampul 10 cm long and 14 mm in diameter, is placed in an electric furnace 40 cm long which has two resistance-wire windings. At 2 amp in the main winding the "hot end" of the ampul is heated to 1150C; temperature gradients of 5-15C/cm are obtained by automatically adjusting the current (1-5 amp) in the auxiliary winding. A differential thermocouple is used as a

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ACCESSION NR: AP4033143

sensor for the electronic temperature controller which regulates the auxiliary-
winding current. Crystals of GaSe and other complex semiconductors,
8 x 10 x 60 mm in size were grown in the above furnace. "The authors wish to
thank G. B. Abdullayev and N. A. Goryunova for their attention to the project."
Orig. art. has: 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Physicotechnical
Institute, AN SSSR); Institut fiziki AN AzerbSSR (Institute of Physics,
AN AzerbSSR)

SUBMITTED: 02Apr63

ATD PRESS: 3082

ENCL: 00

SUB CODE: SS

NO REF SOV: 002

OTHER: 000

Card 2/2

GUSEYNOVA, E.S.; MEKHTIYEV, R.F.

X-ray conductivity and gamma conductivity of GaSe single crystals.

Izv. AN Azerb. SSR. Ser.fiz.-tekh. i mat.nauk no.1:63-65 '65.

(MIRA 18:6)

ACC NR: AP6021815

(A)

SOURCE CODE: UR/0413/66/000/012/0108/0109

INVENTOR: Kerimov, N. A.; Mekhtiyev, R. I.

ORG: none

TITLE: Flame-ignition and light-fuel-injection system for internal-combustion engines. Class 46, No. 182956

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 108-109

TOPIC TAGS: engine ignition system, fuel injection, internal combustion engine

ABSTRACT: An Author Certificate has been issued for a flame-ignition and light-fuel-injection system for internal-combustion engines, consisting of a fuel pump for the

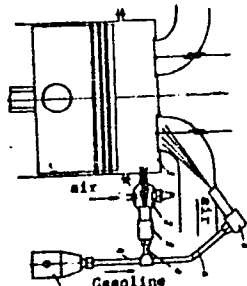


Fig. 1. Flame ignition and light-fuel-injection system

1 - Pump; 2 - precombustion chamber;
3 - cylinder; 4 - intake manifold; 5 - precombustion chamber injector; 6 - cylinder injector.

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UDC: 621.434.43.043.1

ACC NR: AP6021815

parallel feed of fuel to the injectors in the precombustion chamber and cylinder (in the intake manifold) (see Fig. 1). For the purpose of optimum carburetion under changing conditions, an open injector is used in the precombustion chamber, thus assuring constant fuel delivery under all operating conditions. A closed injector is used in the cylinder (in the intake manifold) to assure variable fuel feed relative to engine operating conditions. Orig. art. has: 1 figure. [WS]

SUB CODE: 21/ SUBM DATE: 02Apr65/ ATD PRESS: 5049

Card

ACC NR: AP7003516

(A, N)

SOURCE CODE: UR/0113/67/000/001/0008/0011

AUTHORS: Kerimov, N. A. (Candidate of technical sciences); Mekhtiyev, R. I. (Candidate of technical sciences)

ORG: Azerbaidzhan Polytechnic Institute (Azerbaydzhanskiy politekhnicheskii institut)

TITLE: An engine with fuel injection and forechamber jet ignition

SOURCE: Avtomobil'naya promyshlennost', no. 1, 1967, 2-11

TOPIC TAGS: internal combustion engine, engine combustion system, engine fuel system, engine ignition system, engine performance characteristic, engine test facility, engine, injector, fuel pump, test stand, gasoline, fuel injection, fuel ignition / 1 MCh 10.5-13 engine, FSh 1.5 x 15 degree injector, A-72 gasoline, TN8.5 x 10 fuel pump, KO 1508 test stand, Volga M-21 engine

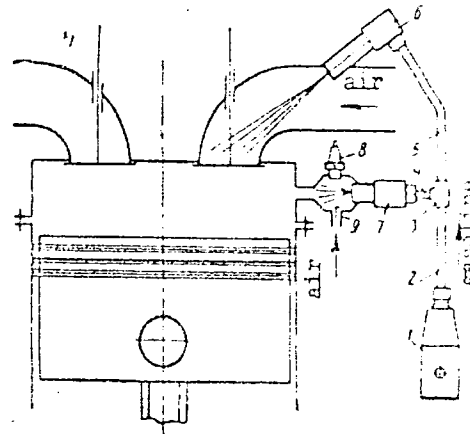
ABSTRACT: A system of fuel injection and forechamber jet ignition of a gasoline engine was studied. Figure 1 shows the injection-measuring piston pump. The main injector (6) is of a closed type while the secondary (forechamber) injector (7) is of the open type. The spark plug (8) ignites the forechamber, and the blow-through check valve (9) allows fresh air to sweep the gases out of the forechamber. The fuel consumption of the main injector (6) varies widely over the engine operating range, while the consumption of injector (7) hardly changes. Optimum conditions under full power call for a fuel consumption of 15-20% of the total by the forechamber injector (7). A 1 MCh 10.5/13 engine

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UDC: 621.43-43.043.

ACC NR: AP7003516

Fig. 1. Diagram of an engine fuel supply with gasoline injection and forechamber ignition



had one cylinder changed to this type fuel system so that it could be compared with a standard carburetor system in the other cylinders. A-72 gasoline was injected through a FSh 1.5 x 15° injector. The engine compression was 6.1, and the engine operation was monitored by an oscillograph, amplifier, and piezoquartz detector. Tests were run on a KO-1608 stand, using fuel pump TN8.5 x 10. The excess air coefficient ranged within

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ACC NR: APT000016

acceptable values. Tests at 1000, 1200, and 1500 rpm showed smoother operation with less sensitivity to the maximization of the engine parameters for the injection system. Fuel consumption for the injector was 230—235 g/hp while the carburetor system called for 240—260 g/hr. The injector also produced 15—20% more power. The system shows promise and will be tested further on the Volga M-21 automobile engine. Orig. art. has: 6 figures.

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 002

Core 3/3

MEKHTIYEV, R. M.

MEKHTIYEV, R. M. "The use of growth materials in grafting and in the struggle against the loss of plants", Izvestiya Azerbaydzh. s.kh. in-ta im. Nuriya, No. 3, 1949, p. 23-24, (Resume in Azerbaijani).

SO: U-4393, 19 August 53, (Letopis 'Zhurnal 'nykh Statey', No. 22, 1949).

DALEV, I.R. [Dalev, I.R.]; MEKHTIYEV, R.Z. [Mekhtiev, R.Z.]

Machine for cutting, sizing and pressing hat rims. Leh.prom.
no.1:14-16 Ja-Mr '62. (MIRA 15:9)

1. Chernovitskiy zavod "Legmash" (for Dalev). 2. Chernovitskaya
fabrika golovnykh uborov (for Mekhtiyev).
(Chernovtsy—Hats)

MEKHTIYEV, S.D.; NARIMANBEKOV, O.A.

Vapor phase reduction of carbonyl compounds with alcohols. Dokl.
AN Azerb. SSR 20 no.4:33-38 '64. (MIRA 17:7)

1. Institut nefi i khimii AzSSR.

MUSAYEV, M.R.; MEKHTIYEV, S.D.

Isomerization of cyclohexene to methylcyclopentenes during the
dehydration of cyclohexanol on aluminum oxide. Dokl. AN Azerb.
SSR 20 no.5:11-14 '64. (MIRA 17:8)

1. Institut neftekhimicheskikh protsessov AN AzSSR imeni
Yu.G.Mamedaliyeva.

15150-65 EWT(L)/EWG(k)/EWT(m)/E/EWP(t)/EWP(b)/EWA(h) Pz-6/Peb IJP(c)/
 ESD(t)/ESD/APWL/AS(m)-2 RDA/AT/L/JG
 S/0233/64/000/003/0107/0114
 ACCESSION NR: AP4046258

AUTHOR: Akhundov, T. A.; Abdullayev, G. B.; Guseynov, G. D.; Mekhtiyev, R. F.; Aliyeva, M. Kh.; Guseynova, E. S.; Gasanov, I. A.

TITLE: III_BVI semiconductors

SOURCE: AN AzerbSSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk, no. 3, 1964, 107-114

TOPIC TAGS: semiconductor single crystal, gallium chalcogenide, indium selenide, thallium selenide, electrical property, photo electric property, optical property

ABSTRACT: Electrical, photoelectric, and optical properties of the following III_BVI semiconductor single crystals have been investigated: gallium sulfide, selenide, and telluride; indium selenide; and thallium selenide. Several useful properties were previously detected in these semiconductors. The temperature dependence of electrical conductivity, Hall constant, Hall mobility, and thermal emf were determined experimentally in p- and n- type TlSe single crystals grown by horizontal or vertical zone melting. The discrepancy between the experimental

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ACCESSION NR: AP4046258

and theoretical value of the coefficient of thermal emf at low temperatures (below 160K) was explained as a phonon drag effect. The experimental temperature dependence of the phonon component of the thermal emf was found to be in good agreement with that calculated on the basis of the theory of the phonon drag effect in semiconductors of tetragonal symmetry. The basic electronic parameters of TlSe were calculated from experimental data. The spectral distribution of photoconductivity and fundamental optical absorption were determined at 300K in all five AIIIBVI crystals. Lux-ampere characteristics of intrinsic photoconductivity and its "slow" and "fast" components, as well as the temperature dependence of the "slow" photoconductivity decay, were determined in GaSe and TlSe crystals. The parameters of trapping levels for electrons and holes were calculated for both crystals. Considerable photosensitivity was detected in GaSe crystals in the region of extrinsic absorption (below 3μ), owing to the presence of three impurity levels. High-level photosensitivity was detected in both low-ohmic and high-ohmic samples of InSe. Light emission in the yellow and red ranges was observed in GaS, GaSe, InSe, and GaTe single crystals excited with electrons at room temperature. The

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ACCESSION NR: AP4046258

crystals were grown from a melt by the slow-cooling method. Orig. art.
has: 8 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 00

NO REF SOV: 007

ENCL: 00

SUB CODE: SS

OTHER: 003

Card 3/3

L 18000-63

EWI(1)/EWG(k)/EWP(q)/EWI(m)/BDS AFPTC/ASD/ESD-3/LFP(O)

Pz-l RDW/AT/JD

ACCESSION NR: AP3001286

S/0181/63/005/006/1649/1656

AUTHORS: Mekhtiyev, R. F.; Paritskiy, L. G.; Ry*vkin, S. M.

TITLE: Kinetics of impurity photoconductivity in crystals of GaSe

SOURCE: Fizika tverdogo tela, v. 5, no. 6, 1963, 1649-1656

TOPIC TAGS: impurity photoconductivity, emitter level, capture cross section, multiple capture, valence band, impurity absorption, Ga, Se

ABSTRACT: The purpose of this work was to study the spectrum of local levels responsible for impurity photoconductivity (emitter levels), to examine the parameters of these centers, and the role of the levels of capture by analyzing spectral dependence of standard photoconductivity and the structure of relaxation curves. In single crystals of GaSe the authors detected considerable photoconductivity in the region of impurity absorption up to about 3 microns, determined by the presence of 3 types of "emitter" levels lying at 0.4, 0.56, and 0.71 eV from the top of the valence band. Investigation of relaxation of photoconductivity permitted them to determine the capture cross sections of non-equilibrium holes, each of the levels of capture cross section of photons, and

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L 18000-63

ACCESSION NR: AP3001256

the concentration of levels. They established the presence of levels of multiple capture and showed that when emitter levels are nearly full and equilibrium conductivity is considerable the presence of capture does not affect the measured relaxation time. By comparatively simple measurements of the concentration of emitter levels and the capture cross sections of photons they found it possible to determine the basic parameters of local levels responsible for the impurity photoconductivity. Orig. art. has: 6 figures and 7 formulas.

ASSOCIATION: Fiziko-technicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physical and Technical Institute); Institut fiziki AN Az. SSR, Baku (Institute of Physics, Academy of Sciences, Azerbaijan SSR)

SUBMITTED: 29Jan63

DATE ACQ: 01Ju163

ENCL: 00

SUB CODE: PH

NO REF SOV: 012

OTHER: 002

Card 2/2

AKHUNDOV, G. A.; ABDULLAYEV, G. B.; GUSEYNOV, G. D.; MEKHITIYEV, R. F.; ALIYEVA, M. Kh.

"Preparation and investigation of A III B VI single crystals."

paper submitted for Intl Conf on Physics of Semiconductors, Paris, 19-24 Jul 64.

MEKHITIYEV, Sultan Dzhafarovich

"Polucheniye trotila iz prirodnogo toluola." Baku, 1943, 6lc., 17 tbl. Ekl.,
10 tbl.
Zashch. 1943, 29.5

Dissertation for degree of Candidate of Chemical Sciences, Defended at
Tbilisi State Univ.

(Мехтиеv Султан Джафарович)

MEKHTIYEV, S. D.

PA 22716

USSR/Chemistry - Cyclic Hydrocarbons 21 Sep 52

"Synthesis of Some Alkyl-Substituted Cyclohexanes,"
S. D. Mekhtiyev, Yu. G. Kambarov, and T. A. Zeynalova

DAN SSSR, Vol 86, No 3, pp 547-550

1,4-Diisopropylcyclohexane, 1,2,4-triisopropylcyclohexane, 1,4-di-sec-isopropylcyclohexane, and 1,4-di-ter-butylcyclohexane were synthesized for the first time from the corresponding alkylbenzenes by hydrogenation over Raney nickel and nickel-kieselguhr catalysts. 1,2,4,5-tetraisopropylbenzene does not hydrogenate. Presented by Acad B. A. Kazanskiy
15 Jul 52

24716

MEKHRIEV, S.D.

Mechanism of the reaction of isomerization of polymethyl-
ene hydrocarbons under the influence of aluminum chloride
S. D. Mekhtiev (Inst. Petroleum, Acad. Sci. Azerbaidzhan,
S.S.R.), *Doklady Akad. Nauk S.S.S.R.* 91, 849-52
(1953).—A study of the isomerization of isopropylcyclo-
hexane with $AlCl_3$ indicates that the reaction proceeds by
intramol. rearrangement with ring expansion and contrac-
tion until the most stable hydrocarbon structures are formed.
The concept of cleavage of side chains into discrete radicals
(cf. Pines and Ipatoff *CA*, 33, 53994) is in error; for such a
reaction should produce in the above instance a predomi-
nance of alkylated benzene derivs. since the C_6H_5 ring is
more prone to alkylations than the cyclic naphthenes; the
main product of the actual reaction is trimethylcyclohexane,
thus proving the former theory. Heating 100 g. mixt. of
isopropylcyclohexane with 71.5% C_6H_6 and 10 g. $AlCl_3$ 5
hrs. at 85° gave 98% catalyzer, which after fractionation
yielded 92% recovered C_6H_6 , along with a small amt. of un-
changed isopropylcyclohexane and 33% crude trimethyl-
cyclohexane. The same reaction, repeated without C_6H_6 ,
gave 97% isomerizate, part of which was fractionated,
and the rest dehydrogenated over Pt. The product was
shown to be 80% converted by the $AlCl_3$ treatment, being
largely composed of *trans*- C_6H_5Me , b. 156-60°, and Ph-
 $CHMe$, b. 151-4° (after the above dehydrogenation). The
phys. consts. indicate the probable formation of 1,1,3-
trimethylcyclohexane with some tetramethylcyclohexane.
G. M. Kosolapoff

MEKHTIYEV, S. D.

Investigation of the isomerization reaction of isopropylcyclohexane under the influence of aluminum chloride.
S. D. Mekhtiyev. Izvest. Akad. Nauk Azerbaidzhan. S.S.R. 1984, No. 8, 31-34 (in Russian); cf. C.A. 48, 10612a. The author's studies indicate that isomerization of alkyl substituted cycloalkanes constitute a case of intramolecular rearrangement involving expansion and contraction of the ring to produce equilibrium mixtures of the most stable configurations. This is in opposition to theories based on cleavage with formation of radicals. The strongest evidence for this is that addn. of C_6H_6 in a 1:1 molar ratio to isopropylcyclohexane (I) did not alter the reaction of I with $AlCl_3$ nor were any alkylated benzenes produced and the C_6H_6 was recovered unchanged. If the mechanism involved radical formation, substituted benzenes would be expected since the aromatic ring is the more easily alkylated. Further expts. showed that both I and 1,3,6-trimethylcyclohexane (II) when treated 5 hrs. at 85° with $AlCl_3$ yield equiv. mixts. composed of 60-5% II, and 20-5% 1,1,3-trimethylcyclohexane (III) with probably some tetramethylcyclopentane (IV). It is shown that III and IV are intermediates in the formation of II through isomerization of I.

John A. Krynitzky.

MEKHTIYEV, S. D.

MEKHTIYEV, S. D., MAEDALIYEV, YU. G.

"The Preparation of Ethyl Bromide by Catalytic Hydrobromination of Ethylene", Dokl. AN AzSSR, Vol 10, No 2, 1954, 75-77.

Prepared ethyl bromide by hydrobromic acid addition to ethylene in the presence of bismuth bromide. Reaction proceeded at 100% yield. (RZhKhim, No 12, 1954). SO: Sum. No. 443; 5 Apr. 55

MEKHTIYEV, S.D.

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

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

1. Institut nefti Akademii nauk Azerbaydzhanskoy SSR. Predstavleno deystvitel'nyy chlenom Akademii nauk Azerbaydzhanskoy SSR
M.F.Nagiyevym
(Aluminum silicates)

M. K. Karayev
MEKHTIYEV, S.D.; KASIMOVA, G.A.

Testing a petroleum by-product for root knot nematode control.
Dokl. AN Azerb. SSR 10 no.7:495-499 '54. (MLRA 8:10)

1. Institut nefiti i zoologii Akademii nauk Azerbaydzhanskoy SSR.
Predstavleno deystvitel'nyy Akademii nauk Azerbaydzhanskoy SSR
A.I.Karayevym.

(Nematoda) (Pesticides)

MEKHITIYEV, S.D.

MEKHITIYEV, S.D.; KHALILOV, A.Kh; RZAYEVA, S.Z.

Investigation of the hydrocarbon composition of isomerization products of some individual polymethylene hydrocarbons under the action of aluminum chloride. Dokl. AN A zerb.SSR 10 no. 10:677-681 '54. (MLRA 8:10)

1. Institut nefiti Akademii nauk Azerbaydzhanskoy SSR. Predstavleno deystvitel'nym chlenom Akademii nauk Azerbaydzhanskoy SSR Yu.G.Mamedaliyevym
(Hydrocarbons) (Isomers and isomerization)

MEKHTIYEV, S. D.

USSR/Chemistry - Conversion processes

Card 1/1 Pub. 22 - 28/56

Authors : Mekhtiev, S. D.; Aliev, A. F.; and Imamova, S. M.

Title : Method of direct conversion of cyclic ketones into homologous polymethyl hydrocarbons

Periodical : Dok. AN SSSR 99/5, 773-776, Dec 11, 1954

Abstract : A method for direct conversion of cyclic ketones into homologous polymethyl hydrocarbons, through catalytic hydrogenation, is described. The results obtained during the synthesis of cyclopentane and cyclohexane, during one phase of hydrogenation of homologous ketones in a running system at an atmospheric pressure over an Ni-catalyst, are listed. The results obtained from the distillation of the hydrogenation products and the chemical properties of the fractions derived are tabulated. Five USSR references (1924-1950). Tables.

As SSR - see same ref on HLRd card
Institution : Academy of Sciences USSR, Petroleum Institute

Presented by: Academician A. V. Topciev, July 5, 1954

MEKHTIYEV, S. D.

USSR/Chemistry - Isomerization

Card 1/1 Pub. 22 - 30/63

Authors : Mekhtiev, S. D.

Title : Reaction of isomerization of ethylcyclohexane and tertiary butylcyclohexane under the effect of $AlCl_3$

Periodical : Dok. AN SSSR 99/6, 999-1002, Dec. 21, 1954

Abstract : The results obtained during the isomerization reaction of ethylcyclohexane and tertiary butylcyclohexane, under the effect of $AlCl_3$, are tabulated. The results obtained from the fractionation of the isomerizate prior and after its dehydrogenation over a platinum catalyst, as well as the yield and physio-chemical properties of the fractions derived, are described. The mechanism of isomerization of alkylcyclohexanes in the presence of $AlCl_3$ is explained. One USSR reference (1953). Tables.

Institution: Academy of Sciences Azerb.-SSR, Petroleum Institute

Presented by: Academician A. V. Topchiyev, July 5, 1954

MEKHITIYEV, S. D.

"Investigating the Synthesis and Conversions of Cyclane Hydrocarbons." Dr Chem
Sci, Inst of Petroleum, Acad Sci USSR, Moscow, 1955. (KL, No 14, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended
at USSR Higher Educational Institutions (16).

MEKHTIYEV, S. D.

Foot Investigation of the hydrocarbons in the products from the conversion of isopropylcyclohexane over synthetic aluminosilicate. A. Kh. Khalilov, S. D. Mekhtiev, and S. Z. Rzueva. *Tr. Akad. Nauk Azerbaidzhan. S.S.R.* 1935, No. 10, 29-31 (in Russian). -- The fractions, b. 180-5° and 135-40°, obtained by distn. of the product from the conversion of isopropylcyclohexane over synthetic aluminosilicate at atm. and 22.5-24.5 atm. pressure and various temps., and dehydrogenated over Pt catalyst, were treated with 98% H₂SO₄, washed, dried over CaCl₂, filtered through silica gel, and analyzed spectroscopically. All the fractions investigated contain some quantities of 1,1,2-trimethyl-

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with 10% H₂SO₄, washed, dried over CaCl₂, passed through
silica gel, and analyzed spectroscopically. All the fractions
investigated contain large quantities of 1,1,3-trimethyl-

cyclohexane and 1,3,5-trimethylcyclohexane (30, 30, 25%
and 8, 12, 10%, resp.). This confirmed the hypothesis that
the aluminosilicate catalyst, in addn. to cracking, promotes
isomerization of the polymethylene hydrocarbons. The
presence of considerable units of paraffin hydrocarbons in
the conversion products is explained by the strong cracking
action of the catalyst under the conditions of the expts.

M. Zolotarev

FM FM

MEKHITIYEV, S.D.

Reaction mechanism of the isomerization of cyclane hydrocarbons due to the action of aluminum chloride. Dokl. AN SSSR 103 no.3:433-434 J1'55. (MIRA 8:11)

1. Institut nefiti Akademii nauk Azerb. SSR. Predstavleno akademikom A.V.Topchiyevym
(Cycloalkanes) (Aluminum chloride)

MEKHTIYEV, S.D.

MEKHTIYEV, S.D.; ALIYEV, A.F.; AGAYEV, U.Kh.

Studying the reaction of cyclohexane chlorination. Izv.AN Azerb.SSR
no.6:53-64 Je '57. (MIRA 10:10)
(Cyclohexane) (Chlorination)

Distr: 4E4j/4E3d/4E2c(j) 27

Nitration of isopropylcyclohexane by nitric acid. A. V. Kuchiev, S. D. Mekhtiev, and A. Sh. Novruzova. Doklady Akad. Nauk S.S.S.R. 115, 831-3 (1957). Nitration of isopropylcyclohexane by 11, 28, and 48% HNO₃ was studied at 50-5°, 80-5°, and 105-10° for 5, 10, 15, and 20 hrs. with reactant proportions of hydrocarbon to HNO₃ ranging from 1:1.25 to 1:2.5. Conversion rises with elevation of the temp., reaching 60.8% at 105° with 48% HNO₃ used in the proportion of 2.5:1 to the hydrocarbon. However, the yield of nitro deriv. reaches a max. at 80°. With 25.1% conversion at this temp. the max. yield of nitro deriv. was 72.8%. The optimum duration is 15 hrs.; a reactant proportion of 1:2.5 gives the best yield of nitrated product with 48% HNO₃. More dil. acid gives poorer yields. Addn. of small amts. of (NH₄)₂SO₄ to the mixt. prevented the formation of any nitro deriv. at the optimum conditions cited above. G. M. Krasnopolskiy 1/1

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MEKHTEYEV, S.D.; NOVORUZOVA, A.Sh.

Nitration of aromatic hydrocarbons. Report No.2: Nitration reactions of butylbenzene and tert-amylbenzene [in Azerbaijani with summary in Russian]. Izv. AN Azerb. SSR. Ser. fiz. tekhn. i khim nauk. no.4: 117-131 '58. (MIRA 11:11)

(Benzene)

(Nitration)

MEKHTIYEV, S.D.; FISHNAMAZZADE, B.P.; KOSHELEVA, L.M.; KYBATOVA, Sh.E.;
GASHIMOVA, F.A.

Separation of individual hydrocarbons from petroleum. Report no.1:
Separation of cyclohexane [in Azerbaijani with summary in Russian].
Izv. AN Azerb. SSR. Ser. fiz.-tekh. i khim. nauk no.5:53-65 '58.
(MIRA 12:1)

(Cyclohexane)

MEKHTIYEV, S.D.; ALIYEV, A.F.; AGAYEV, U.kh.

Investigation of the chlorination of cyclohexane hydrocarbons
[in Azerbaijani with summary in Russian]. Izv. AN Azerb. SSR.
Ser. fiz.-tekhn. i khim. nauk no.5:67-73 '58. (MIRA 12:1)
(Chlorination) (Cyclohexane)

MEKHITIYEV, S.D.; ALIYEV, A.F.; SAMEDOV, Z.D.

Liquid phase oxidation of methylcyclohexane by atmospheric oxygen
[in Azerbaijani with summary in Russian]. Izv. AN Azerb. SSR. Ser.
fiz.-tekhn. i khim. nauk no. 6: 137-146 '58. (MIRA 12:2)
(Cyclohexane) (Oxidation)

MEKHTIYEV, S D.

AUTHORS: Golovkin, N. N., Ignat'yev, O. S. SOV/30-58-9-37/51

TITLE: Development of Researches on Highly Molecular Compounds
(Razvitiye issledovaniy po vysokomolekularnym soyedineniyam)
In the Presidium of the Council for Co-Ordination of
Scientific Work of the Academies of Sciences of the Union
Republics and the Branches (V Prezidiume Soveta po koordi-
natsii nauchnoy deyatel'nosti akademi nauk soyuznykh respublik
i filialov)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, Nr 9, pp. 101 - 104 (USSR)

ABSTRACT: The session of the presidium of the council took place on
June 21st. A.V.Topchiyev, Vice-President of the AS USSR,
stressed the importance of these researches in order to
fulfil the resolutions of the plenary session of the TsK
KPSS in May. He mentioned that the scope of researches at
present carried out is insufficient. In order to prepare
a prospective plan for the years 1959 - 1965 a special
committee was set up. 42 main trends for researches on the
subject of highly molecular compounds were fixed. The chair-
man of the scientific council V.A.Kargin, Member, Academy of

Card 1/5

Development of Researches on Highly Molecular Compounds. SOV/30-58-9-37/51
In the Presidium of the Council for Co-Ordination of Scientific Work
of the Academies of Sciences of the Union Republics and the Branches

Sciences, USSR, reported about the activities of the council. Further addresses were given by:

M.F.Nagiyev, Vice-President of the AS Azerbaydzhan SSR, on the urgency to intensify researches on the field of technological phenomena.

S.D.Mekhtiyev, Head of the Petroleum-Institute of the AS Azerbaydzhan SSR, on the efforts in the field of petroleum chemistry.

V.I.Nikitin, Head of the Institute of Chemistry of the AS Tadzhikskaya SSR, requested assistance in training scientific caders.

A.Ye.Arbuzov, Chairman of the Kazan' Branch of the AS USSR, mentioned the problem of proper assignment of scientific staff.

Kh.U.Usmanov, Head of the Institut khimii rastitel'nykh veshchestv Akademii nauk Uzbekskoy SSR (Institute of Chemistry of Vegetable Materials of the AS Usbekskaya SSR), outlined the tasks of Uzbekistan scientists in connection

Card 2/5

Development of Researches on Highly Molecular Compounds. SOV/30-58-9-37/51
In the Presidium of the Council for Co-Ordination of Scientific Work
of the Academies of Sciences of the Union Republics and the Branches

with the rich supply of cellulose and natural gases.

R.D.Obolentsev, Chairman of the Bashkirskiy filial Akademii nauk SSSR (Bashkiriya Branch of the AS USSR), spoke about the urgency to intensify researches on the sulphurous petroleum deposits of Bashkiriya.

N.F.Yermolenko, Member, Academy of Sciences, Belorusskaya SSR, stressed the problems of development of the chemical industry of his country in connection with her deposits of turf and petroleum.

Yu.Yu.Matulis, President of the AS Litovskaya SSR, remarked that Lithuania (Litva) is rich in vegetable raw materials, thus has to intensify her research on this field.

S.A.Giller, Corresponding Member, AS Latviyskaya SSR, informed the assembly of the intention of Latvia (Latviya) scientists to carry out research on the use of natural polymers.

A.T.Kyll, Head of the Institute of Chemistry of the Academy of Sciences, Estonskaya SSR, mentioned problems in connection

Card 3/5

Development of Researches on Highly Molecular Compounds. SOV/30-58-9-37/51
In the Presidium of the Council for Co-Ordination of Scientific Work
of the Academies of Sciences of the Union Republics and the Branches

with the use of the slates of Estonia (Estoniya).
G.M.Shchegolev, Head of the Institute of Heat Energetics of
the Academy of Sciences, Ukrainian SSR, recommended to lay
more stress upon the use of coal and other solid fuels
for the production of polymeric material.

Card 4/5

SOV/30-58-9-37/51

Development of Research on Highly Molecular Compounds

In the Presidium of the Council for Co-ordination of Scientific Work of the Academies of Sciences of the Union Republics and the Branches

I.P. Bardin, Member, Academy of Sciences, USSR, Vice-President of the AS USSR, pointed out the importance of coal and wood as raw materials for the production of polymeric material. At last the chairman of the Council, A. N. Nesmeyanov, Member, Academy of Sciences, USSR, addressed the assembly and said that the whole scientific staff has to be employed for the development of chemistry. But it is necessary to recruit new scientists for the staff in order to avoid a removal of scientists from tasks likewise important. A resolution was passed to ask the Presidium of the AS USSR for its assistance in training adequate scientific personnel.

Card 5/5

MEKHTIYEV, S.D.; ISMAILZADE, I.G.; ALIYEV, A.F.; AGAYEV, U.Kh.; MAMEDOV, F.A.

Structure of 1-chloromethylcyclohexane isomers and the
composition of products of the photochemical monochlorination
of methylcyclohexane. Dokl. AN Azerb. SSR 14 no.12:985-990
'58. (MIRA 12:1)

1. Institut nefiti AN Azerb. SSR.
(Cyclohexane)

MAMEDALIYEV, Yu.G.; MEKHFIYEV, S.D.; SULEYMANOV, G.H.; ALIYEV, S.M.
AKHMEDLI, T.H.

Selecting a solvent for polyethylene. Azerb.khim.zhmr.
no.1:11-17 '59. (MIRA 13:6)
(Polyethylene) (Solvents)

SEIDOV, N.M.; BAKHSI-ZADE, A.A.; MEKHTIYEV, S.D.

Liquid phase oxidation of xylene isomers by atmospheric oxygen.
Azerb.khim.zhur. no.1:23-29 '59. (MIRA 13:6)
(Xylene) (Oxidation)

MEKHTIYEV, S.D.; PASHAYEV, T.A.

Catalytic cycloalkylation of aromatic hydrocarbons by
cyclohexene. Azerb.khim.zhur. no.2:39-47 '59.

(MIRA 13:6)

(Hydrocarbons) (Cyclohexene)

MEKHITIYEV, S.D.; ALIYEV, A.F.; KAMBAROV, Yu.G.; SHAROV, V.V.

Thermal decomposition of cyclohexane under conditions of extra
rapid pyrolysis. Azerb.khim.zhur. no.3:3-13 '59. (MIR. 14:9)
(Cyclohexane) (Pyrolysis)

MEKHTIYEV, S.D.; BAKHSI-ZADE, A.A.; SEIDOV, N.M.

Photochemical oxidation of xylene isomers [in Azerbaijani with
summary in Russian]. Azerb. khim. zhur. no. 4:9-14 '59. (MIRA 14:9)
(Xylene) (Ultraviolet rays)

MEKHITIYEV, S.D.; KAMBAROV, Yu.G.; AGAYEV, U.Kh.

Study of the extra rapid pyrolysis of fractions of the
Karadag gas condensate and of some individual paraffinic
hydrocarbons. Azerb. khim.zhur. no.4:59-70 '59. (MIRA 14:9)
(Karadag—Condensate oil wells)
(Paraffins)

MEKHTIYEV, S.D.; PISHNAMAZZADE, B.F.; KOSHELEVA, L.M.; EYBATOVA, Sh.E.

Separation of individual hydrocarbons from petroleum. Report
No.2: Separation of methylcyclopentane and methylcyclohexane.
Azerb.khim.zhur. no.6:3-12 '59. (MIRA 14:9)
(Cyclohexane) (Cyclopentane)

MEKHTIYEV, S.D.; KAMBAROV, Yu.G.; ALIYEV, A.F.

Investigating thermal decomposition of some cyclic hydrocarbons and petroleum fractions rich in them. Dokl. AN Azerb. SSR 15 no.2:125-129 '59. (MIRA 12:5)

1. Institut nefiti AN AzerSSR.
(Cyclohexane) (Cracking process)

S/081/61/000/006/013/015
B101/B201

AUTHOR: Mekhtiyev, S. D.

TITLE: Studies in the field of the synthesis and conversion of hydrocarbons. (Activity of the laboratoriya monomerov instituta neftekhimicheskikh protsessov Akademii nauk Azerbaydzhanskoy SSR = Laboratory for Monomers of the Institute of Petrochemical Processes, azerbaydzhananskaya SSR)

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1961, 512, abstract 6M196 (6M196) ("Azerb. khim. zh.", 1960, no. 2, 35-45)

TEXT: Extensive studies have been conducted at the abovementioned laboratory since 1950 on the chemical conversions of hydrocarbons of petroleum and natural gas intended as a base for obtaining products of organic synthesis for the benefit of national economy. The studies have involved a number of problems related to the catalytic conversion of hydrocarbons, their halogenation and hydrohalogenation, the synthesis of alkane and cyclane hydrocarbons, nitro and amino derivatives of cyclic hydrocarbons, isolation of cyclane hydrocarbons from benzene fractions,

Card 1/2

' Studies in the field of the synthesis and...

S/081/61/000/006/013/015
B101/B201

oxidation of hydrocarbons, high-speed pyrolysis of individual hydrocarbons and of petroleum fractions, etc. The main results yielded by the studies are indicated. [Abstracter's note: Complete translation.]

Card 2/2

30652

S/081/61/000/020/038/089
B140/B110

5 3300

AUTHORS: Mekhtiyev, S. D., Novruzova, A. Sh., Sharifova, S. M.

TITLE: Catalytic alkylation of cyclohexane and methyl cyclohexane with olefins

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1961, 157, abstract 20Zh66 (Azerb. khim. zh., no. 5, 1960, 9 - 15)

TEXT: Cyclohexane (I) and methyl cyclohexane (II) are alkylated with propylene and n-butylene in the presence of 12.5% $AlCl_3$ (referred to cyclane) at 50°C while stirring for 8 - 20 hrs. The unreacted I or II is distilled off in a column (22 theoretical plates), and the residue is fractionated in vacuo. The physicochemical properties of the separated fractions were determined. The nature of hydrocarbons obtained by alkylation of I with n-butylene or of II with propylene was not determined. Alkylation of I with propylene has shown that the yield in alkylate rises from 73.47% to 120.7% (referred to the weight of the cyclane used) as the molar ratio of I to C_3H_6 decreases from 3:1 to 1:1.5. A fraction boiling

Card 1/2

Catalytic alkylation of cyclohexane... 30652
S/081/61/000/020/038/089
B140/B110

at 91 - 94.5°C/13 mm Hg was separated from the main fraction (b.p. 85 - 95°C/10 mm Hg, n_D^{20} 1.4550, d_4^{20} 0.8350) obtained by alkylation of I with propylene. Dehydrogenation of this fraction gave 2,6-dimethyl naphthalene, m. p. 110 - 110.5°C (from CH_3OH), which indicates the presence of 2,6-dimethyl decalin in the alkylate. [Abstracter's note: Complete translation.] X

Card 2/2

MEKHTIYEV, S.D.; BAKHSI-ZADE, A.A.; MEKHTIYEV, S.I.

Synthesis of diatomic alcohols by the hydroxylation of olefins
with hydrogen peroxide. Azerb.khim.zhur. no.6:33-38 '60.

(MIRA 14:8)

(Alcohols) (Olefins) (Hydrogen peroxide)

MEKHTIYEV, S.D.; GUSEYNOV, M.G.

Converting xylenes into phthalic acid dinitriles. Dokl. AN Azerb. SSR
16 no.7:655-658 '60. (MIRA 13:9)
(Nitriles) (Xylene)

MEKHTIYEV, S.D.; MEKHTIYEV, S.I.; MEKHTIYEV, S.I.

Direct by condensation of low molecular weight olefins by
hydrogen peroxide. Mol. Cryst. Liq. Cryst. 11:109-109
'60. (11:14:0)

1. Initiation mechanism of polymerization of olefins.
(Olefin, Hydrogen peroxide, polymerization)

MAMEDOV, Shamkhal, doktor khim. nauk, prof.; MEKHTIYEV, S.D., red.;
KEGAMYAN, V., red. izd-va; ISMAYLOV, T., tekhn. red.

[Glycol ethers] Prostye efiry glikolei. Baku, Izd-vo Akad. nauk
Azərbaydzhanskoi SSR, 1961. 210 p. (MIRA 15:5)

1. Chlen-korrespondent Akademii nauk Azerbaidzhanskoy SSR (for
Mekhtiyev).

(Glycols)

MEKHITIYEV, S.D.; BAKHSI-ZADE, A.A.; SEIDOV, N.M.; KAMBAROV, Yu.G.

Separation of m- and p-xylenes by selective alkylation followed
by dealkylation. Neftekhimiia 1 no.1:54-59 Ja-F '61.
(MIRA 15:2)

1. Institut neftekhimicheskikh protsessov AN AzSSR.
(Xylene) (Alkylation)

MEKHTIYEV, S.D.; AGAYEV, U.Kh.; AKHMEDOV, S.M.; SULEYMANOVA, E.T.

Photochemical chlorination of aromatic hydrocarbons and
dehydrochlorination of their dichlorosubstituted derivatives.
Azerb.khim.zhur. no.2:17-24 '61. (MIRA 14:8)
(Hydrocarbons) (Chlorination)

S/081/61/000/019/068/085
B117/B110

11.0132

AUTHORS: Mekhtiyev, S. D.; Sharov, V. V., Pashayev, T. A.

TITLE: Calorific value of some aromatic cyclohexyl and dicyclohexyl hydrocarbons

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 424, abstract 19M182 (Azerb. неф. kh-vo, no. 2, 1961, 40-42)

TEXT: Data are given concerning the calorific value of aromatic cyclohexyl and dicyclohexyl hydrocarbons per weight and volume. These data were calculated starting from molar combustion heats and molar hydrocarbon volumes according to the method developed by V. M. Tatevskiy. (Abstracter's note: Complete translation] B

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MEKHTIYEV, S.D.; SHARIFOVA, S.M.; MAMEDOVA, B.A.

Esterification of terephthalic and isophthalic acids with
various alcohols. Azerb. khim.zhur. no.3:55-59 '61. (MIRA 14:11)
(Terephthalic acid) (Isophthalic acid) (Esterification)

22286

S/152/61/000/004/009/009
B126/B219

15.5540 2205 1372

AUTHORS: Mekhtiyev, S. D., Akhmedzade, D. A., Yasnopol'skiy, V. D.,
Zakharyan, G. S.

TITLE: The action of sulfuric acid on dinitrile of terephthalic acid

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 4,
1961, 121-122

TEXT: The authors learned from patent literature (Ref.2, Magat E., Chem. Abs., v. 47, no. 10, 5129, 1953) that on treatment with sulfuric acid, equimolecular quantities of the dinitriles of aliphatic and aromatic acids with dissecondary alcohols form polyamides suitable for fiber preparation. It was therefore decided to test this method in the reaction of terephthalic nitrile with ethylene glycol. The experiment was carried out according to the instructions of the patent, i.e. 1 g terephthalic nitrile and 1.5 g ethylene glycol were filled into a flask, and then 9 g concentrated sulfuric acid were added. After 24 hr, the acid was poured into ice water, the polymeric precipitate was rinsed and air-dried. A white powdery substance was obtained which neither melted nor softened up

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The action of sulfuric...

to 305°C. An analysis gave a composition of 67.20% C; 4.51% H; 19.10% N. Experiments without ethylene glycol yielded similar substances, which indicates that ethylene glycol does not participate in the formation of these substances and that the latter originate from the action of sulfuric acid on the dinitrile. The properties and composition of the substance permit concluding that it is a highly molecular polymerization product. Through the action of sulfuric acid, the hydration of only one nitrile group took place first: $\text{NC} - \text{C}_6\text{H}_4 - \text{CN} + \text{H}_2\text{O} \rightarrow \text{NC} - \text{C}_6\text{H}_4 - \text{CONH}_2$, and afterwards the polymerization of the obtained amidonitrile. The partial hydrolysis of dinitrile had been observed before by M. N. Bogdanov as well as by Ye. N. Zil'berman and A. Ye. Kulikova. There are 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: Magat E.Chem.Abs., v. 47, no. 10, 5129 (1953).

ASSOCIATION: Azerbaydzhanskiy institut nefi i khimii im. M. Azizbekova i INKhP AN Azerbaydzhanskoy SSR (Azerbaydzhani Institute of Petroleum and Chemistry imeni M. Azizbekov and INKhP AS Azerbaydzhani SSR)

SUBMITTED: February 15, 1961
Card 2/2

MEKHTIYEV, S.D.; BAKHSI-ZADE, A.A.; MEKHTIYEV, S.I.

Synthesis of glycerol by the direct hydroxylation of allyl
alcohol by hydrogen peroxide. Azerb.khim.zhur. no.5:47-58 '61.
(MIRA 15:5)

(Glycerol) (Allyl alcohol) (Hydrogen peroxide)

ALIYEV, A.F.; MAMEDOV, F.A.; ISMAILZADE, I.G.; MEKHITIYEV, S.D.

Composition of chlorination products of some chclohexane hydro-
carbons. Azerb.khim.zhur. no.6:73-86 '61. 'MIRA 15:5)
(Cyclohexane) (Chlorination)

ALIYEV, A.F.; MEKHTIYEV, S.D.; AGAYEV, U.Kh.

Studying the chlorination reaction of cyclohexane hydrocarbons:
Synthesis of individual monochlor substitution products of
dimethylcyclohexanes. Dokl.AN Azerb.SSR 17 no.4:283-287 '61.
(MIRA 14:6)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.
(Cyclohexane)

MEKHTIYEV, S.D.; ALIYEV, A.F.; AGAYEV, U.F.

Reaction of the chlorination of cyclohexane hydrocarbons. Dokl.
AN Azerb.SSR 17 no.7:579-583 '61. (MIRA 14:10)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.
(Chlorination) (Hydrocarbons)

MEKHTIYEV, S.D.; GUSEYNOV, M.G.

Production of aromatic nitriles from methyl-substituted benzenes.
Azerb. neft. khoz. 40 no.4:35-36 Ap '61. (MIRA 15:7)
(Nitriles) (Benzene)

MEKHTIYEV, S.D.; KALAUSHIN, A.Ye.

Molybdenum-tungsten catalysts in the reaction of chlorination of
paraffin hydrocarbons. Azerb. nef. khoz. 40 no.10:37-39 0
'61. (MIRA 15:3)

(Catalysts) (Paraffins) (Chlorination)

MEKHTIYEV, S.D.; KAMBAROV, Yu.G.; PIS'MAN, I.I., red.; MUSTAFAYEVA,
S.N., red. izd-va; MIRKISHIYEVA, S., tekhn. red.

[Olefinic hydrocarbons and their use in the petrochemical
industry] Olefinovye uglevodorody i ikh primeneniye v nefte-
khimicheskoi promyshlennosti. Baku, Azerbaidzhanskoe gos.
izd-vo, 1962. 182 p. (MIRA 15:12)
(Olefins) (Petroleum chemicals)

MEKHTIYEV, S. D.

PAUSHKIN, YA.M., TOPCHIEV, A.V., MEKHTIYEV, S.D.

Methods of synthesis of vinyl-cyclo-hexane

Report presented at the 12th Conference on high molecular weight compounds, devoted to monomers, Baku, 3-7 April 62

S/081/63/G00/004/016/051
B166/B186

AUTHORS: Topchiyev, A. V., Mekhtiyev, S. D., Sadykhov, Sh. G.,
Soldatova, V. A.

TITLE: Study in the field of vinyl-substituted cyclane hydrocarbon
synthesis

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 230 - 231, ab-
stract 4Zh102 (Azerb. khim. zh., no. 1, 1962, 51 - 61
[summary in Azerb.]

TEXT: An attempt was made to synthesize vinyl-substituted cyclane hydro-
carbons (VCH) by condensation of C_2H_4 with monochlorocyclohexane (I) and
commercially pure monochlormethylcyclohexane (II) in the presence of $AlCl_3$,
followed by conversion of the methyl- β -chloroethylcyclohexane (III) and
ethyl- β -chloroethylcyclohexane (IV) thus formed into the respective acetates,
which are partially converted into VCH on pyrolysis. At a temperature from
-40 to -45°C, a molar ratio of II to C_2H_4 of 1 : 1, 0.5 hr reaction time and
with $AlCl_3$, 5.5 - 7.5% of the weight of II, the yield of the condensation

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products is 75.5% of the converted II. For I the yield of condensation products is 56% of the converted I at a temperature between -30 and -35°C , with a 2 : 1 molar ratio of C_2H_4 to I, 0.5 hr reaction time and an AlCl_3 consumption of 8.5 - 10% of the I taken. The main condensation products of C_2H_4 with I and II are III (yield 60%, calculated on reacted I, b.p. $79 - 83^{\circ}\text{C}/10$ mm Hg, n_D^{20} 1.4702, d_4^{20} 0.9725) and IV, yield 48%, calculated on converted II, b.p. $93 - 94^{\circ}\text{C}/10$ mm Hg, n_D^{20} 1.4750, d_4^{20} 0.9610. Interaction of III and IV with CH_3COOK in CH_3COOH was carried out at atmospheric and elevated pressures. It was found that at $180 - 200^{\circ}\text{C}$, 15 - 20 atm, reaction time 5 - 6 hrs and molar ratios of CH_3COOH , CH_3COOK and chloride of 0.5 - 1.0 : 1 : 1 the yield of methylcyclohexylethylacetate (V) (b.p. $100 - 103^{\circ}/10$ mm Hg, n_D^{20} 1.4540, d_4^{20} 0.9506) and ethylcyclohexylethylacetate (VI) (b.p. $116 - 119^{\circ}\text{C}/10$ mm Hg, n_D^{20} 1.4574, d_4^{20} 0.9519) was 80 - 85% (calculated on converted chloride). V and VI were pyrolyzed at $500 - 520^{\circ}\text{C}$ in a quartz tube filled with Pyrex glass packing. It was shown spectrographically that

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the pyrolysis product of V (b.p. 140 - 142°C, n_D^{20} 1.4508, d_4^{20} 0.8168) and that of VI (b.p. 69 - 70°C/20 mm Hg, n_D^{20} 1.4588, d_4^{20} 0.8280) are mixtures of the respective VCH and alkylcyclohexenes. [Abstracter's note: Complete translation.]

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