ANDREYEV, [illegible]; [illegible]

Technological design and calculation of the stage of a dual temperature cascade. [illegible] '65.

(MIRA 18:8)

ACC NR: AR7004097 (N) SOURCE CODE: UR/0169/66/000/012/V014/V014

AUTHOR: Davidan, I. N.; Rozhkov, V. A.; Andreyev, B. M.; Lopatukhin, L. I.

TITLE: Results of investigations of oceanic wave conditions

SOURCE: Ref. zh. Geofizika, Abs. 12V87

REF SOURCE: Sb. 2-y Mezhdunar. okeanogr. kongress, 1966. Tezisy dokl. M., Nauka, 1966, 133-134

TOPIC TAGS: oceanography, ocean dynamics, ~~wave spectral structure~~ hydrographic survey, correlation function, stochastic process

ABSTRACT: Processed data from wave observations at the State Institute of Oceanography (more than 200 wave recordings, each comprising several "wavegrams", and close to 50 stereophotogrammetric sheets) are presented. The processing of observations from two ships with a base ranging from 1 cable length to 1 nm has yielded statistical characteristics which are adequate for practical purposes. In the case of steady swell at a sampling volume > 300 waves, the maximum divergence of one-dimensional distributions (of "visible" waves) does not exceed 5%. In two-dimensional distributions, similar divergencies occur at a

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UDC: 551.466.326

ACC NR: AR7004097

are specified and some relationships for calculating spectral functions of wave coordinates are established. Computational relationships reflect accurately the typical features of the waves spectrum. From the authors' summary. [Translation of abstract]
[DW]

SUB CODE: 08/

Card 3/3

21410
S/089/61/011/006/006/014
B102/B138

21.4200
AUTHORS: Katal'nikov, S. G., Revin, V. A., Andreyev, B. M., Minayev, V. A.

TITLE: Determination of the separation factor for lithium isotopes in ion exchange

PERIODICAL: Atomnaya energiya, v. 11, no. 6, 1961, 528 - 532

TEXT: Isotope separation factor α is determined in the exchange of LiOH and LiCl solutions of various concentrations with the cation-exchange resins СБС (SBS) and КУ-2 (KU-2), and with Dowex-50. The characteristic parameters of the ion exchangers were first determined, then α was found graphically from the difference in equilibrium concentrations. The greatest difference in equilibrium concentration occurs if the preparations are isotope-enriched up to 50%. In single-stage experiments, Li^6 in the hydroxide solution was enriched to 48.4%, which produced a concentration difference of about 0.25(α-1). Table 2 shows the results with 1N LiOH solution, Table 3 those with 1 and 5N LiCl (single-stage enrichment). The selective properties of the ion-exchange resins investigated are discussed in detail with respect to concentration in divinyl benzene

X

Card 1/4

21410
S/089/61/011/006/006/014
B102/B138

Determination of the...

and distribution factor K^H_{Li}. Conclusions: (1) Isotope exchange between SBS, KU-2 and Dowex-50 on the one side, and LiOH and LiCl solutions on the other, produced an accumulation of Li^6 in the cation exchanger and of Li^7 in the solution. α depends on the type of exchanger. (2) Within the limits of error α was the same for Li ion exchange in LiCl and LiOH solutions. In 1-5N LiCl solutions, α does not depend on concentration. (3) The distribution constants for Li^+-H^+ systems and α are interrelated. The cation exchanger with the least affinity to lithium has the greatest α. A similar K^H_{Li}/α dependence was found for cation exchangers for which the distribution coefficient depends on the molar fraction of Li in the exchanger (Dowex-50). For SBS, $\alpha = f(\log K^H_{Li})$. The authors thank Professor G. K. Boreskiy for his interest. G. M. Panchenkov is mentioned (G. M. Panchenkov et al., Atomnaya energiya, t. 7, vyp. 6, 556, 1959). There are 2 figures, 3 tables, and 13 references: 4 Soviet and 9 non-Soviet. The four most recent references to English-language publications read as follows: F. Menes, E. Saito, E. Roth. Proceedings of the International Symposium on Isotope Separation, p. 227, North-Holland Publishing

X

Card 2/

KATAL'NIKOV, S.G.; REVIN, V.A.; ANDREYEV, B.M.; PROKOPETS, V.Ye.

Determination of height, equivalent to the theoretical plate in countercurrent ion exchange. Zhur. prikl. khim. 34 no. 12:2669-2674 D '61.
(MIRA 15:1)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva.

(Ion exchange)

L 45878-66 EWT(m)/EWP(t)/EWP(k)/ETI JD/RM

ACC NR: AP6022177 SOURCE CODE: UR/0193/66/000/002/0040/0041

AUTHOR: Andreyev, B. N.

ORG: None

43

TITLE: Production of turbo-compressor wheels by using investment-casting, 14 process B

SOURCE: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 2, 1966, 40-41

TOPIC TAGS: ~~machine industry~~, steel, metal casting, turbine compressor, compressor rotor / ~~TKR-14~~, TKR-23 turbocompressor, ~~PSE pattern~~ wax, ~~PN-12 oven~~, EI-572 steel, steel

ABSTRACT: A description of a casting process used by the Sverdlovsk Turbomotor Plant for producing wheels of TKR-14 and TKR-23 turbocompressors is presented. The diameters of the wheels are 140 and 230 mm. The wheels are made of EI-572 steel. A PSE plastic wax mass containing paraffin, stearin and ethylcellulose is used for the wheel pattern. The percentages of their contents are given for both types of wheels. The patterns are invested in ceramic mold materials containing a solution of ethyl-silicate, marshalite (quartz powder), quartz sand and water glass. 6 The procedure of drying and baking of ceramic investment material is described. A PN-12 oven 0 is used for baking at a temperature progressively rising from 400 to 950 C. The molten metal is cast into the pattern cavities preheated at about 900 C. A centrifugal machine (about 320 rpm) is used for filling the mold. Finally, the wheel castings are cleaned and trimmed by removing ceramic material and cutting off the heads.

SUB CODE: 13/ SUBM DATE: None

Card 1/1 UDC: 621.74.045:621.515.5

AUTHORS: Andreyev, B.S., Chuchin, Ye.F. 119-58-5-6/11

TITLE: Automatic Production Line for Working on Wrist Watch Cases (Avtomaticheskaya liniya dlya obrabotki korpusov naruchnykh chasov)

PERIODICAL: Priborostroyeniye, 1958, Nr 5, pp 18-21 (USSR)

ABSTRACT: An automatic line put into operation in September 1956 in the watchmaking factory Nr 2 at Moscow [illegible] was developed by constructors of the factory itself. The following 10 instruments are used in this automatic system for the 10 working operations in order to produce the case ring for the wristwatch "Pobeda":

1.) Profile cutter
2.) Reamer
3.) Profile cutter
4.) Profile cutter
5.) Profile cutter
6.) Rasp for removal of the seam
7.) Drill
8.) Drill
9.) Drill
10.) Drill

The distance between the individual sections amounts to 470 mm. Additional organs are provided for the removal of shavings. This automatic system has been working with great stability since a long time. The following figures may serve as a

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Automatic Production Line for Working on Wrist Watch Cases   119-58-5-6/11

characteristic of the operational efficiency of the line: Whereas formerly 47.24 hours were needed for working on the 1000 parts, this period has been reduced to 5.4 hours since introduction of the automatic system. Besides, 30 qualified workmen became available for other jobs and a working space of 60 m^2 was saved. A rough estimate shows that this automatic line saves an amount of 420,000 rubles per annum. There are 2 tables.

AVAILABLE: Library of Congress

1. Industry—USSR 2. Industrial production—Automation

Card 2/2

ANDREYEV, Boris Sergeyevich; OZEROVA, Z.V., red.; TIKHONOVA, I.M., tekhn. red.

[Farming communist production relations]Formirovanie kommunisticheskikh proizvodstvennykh otnoshenii. Leningrad, Lenizdat, 1962. 68 p. (MIRA 16:2)
(Government ownership) (Collective farms)

L 44727-65 EWT(l)/EWT(m)/EWP(t)/EEC(b)-2/EED-2/EWP(b)/EWA(h) P[illegible]
IJP(c) JD/JG
ACCESSION NR: AP5010404 UR/0226/65/000/004/0050/0052

AUTHOR: Andreyev, B. S.; Bondarev, D. Ye. 35 B

TITLE: Production technology of scandium-containing ferrite cores 27 25

SOURCE: Poroshkovaya metallurgiya, no. 4, 1965, 50-52

TOPIC TAGS: ferrite core, scandium oxide, computer memory, hysteresis loop, sintered ferrite core, coercive force, magnetic flux, magnetic inductance, saturation inductance, spinel structure/MB ferrite core

ABSTRACT: The development of high-speed computer memories creates a need for improved ferrite cores, since the currently used ferrites of the Mn-Mg system, such as the American S-1, D-2, 1880T-B, 400M, M77 and the Soviet VT-1 and VT-6, with their high saturation inductance tend to overheat in the presence of high-frequency magnetization reversals, which adversely affects the operating stability of computers. This necessitates developing ferrites of the Mn-Mg system with lower inductances of the order of 900-1000 gauss. It has been established that the addition of small amounts of scandium oxide sharply reduces inductance, improves the linearity of segments of the hysteresis loop, and increases operating speeds.

Card 1/3

L 44727-65

ACCESSION NR: AP5010404

Accordingly the author describes the chemical composition and the process of manufacturing of ferrite cores of this kind, termed HS ferrite cores in the Soviet Union. The raw charge is pulverized in a conventional ball mill, and the resulting paste is dried with a radiant-heat lamp, screened through a fine sieve, sintered for 6 hr at 875°C and cooled in the air. The cooled powder is granulated on adding 10% aqueous solution of polyvinyl alcohol, whereupon it is compression-molded into ferrite cores. The molded cores are sintered at 900°C, with the temperature being subsequently raised to 1300°C. for 2 hr and hardened at 1000°C in air. Further, the author describes an experimental comparison of the characteristics of the coercive current and magnetic flux of ferrites with and without the admixture of scandium oxide, which shows that the addition of scandium oxide sharply affects the magnetic inductance and coercive force of ferrites of the Mn-Mg system. The concomitant sharp change in the resultant magnetic moment is attributed to the redistribution of the electrons of the 3d-shells of the magnetoactive ions Fe^{2+}, Fe^{3+} and the nonmagnetic ion Sc^{3+}, present in the octahedral and tetrahedral nodes of the spinal structure. Orig. art. has: 3 figures, 1 table.

ASSOCIATION: none

Card 2/3

L 44727-65

ACCESSION NR: AP5010404

SUBMITTED: 07Mar63

NO REF SOV: 002

ENCL: 00

OTHER: 001

SUB CODE: EC, DP

mlg

Card 3/3

Name:	ANDREYEV, Boris Vladimirovich
Dissertation:	Theoretical bases for raising the fertility of dark alkaline soils [solonetsi]
Degree:	Doc Agr Sci
Affiliation:	Saratov State U imeni Chernyshevskiy
Defense Date, Place:	13 Apr 56, Council of Omsk Agr Inst imeni Kirov
Certification Date:	23 Jun 56
Source:	BMVO 5/57

[redacted]

JPRS 824, 17 Oct. 55

Uncl.

ANDREYEV, B. V.

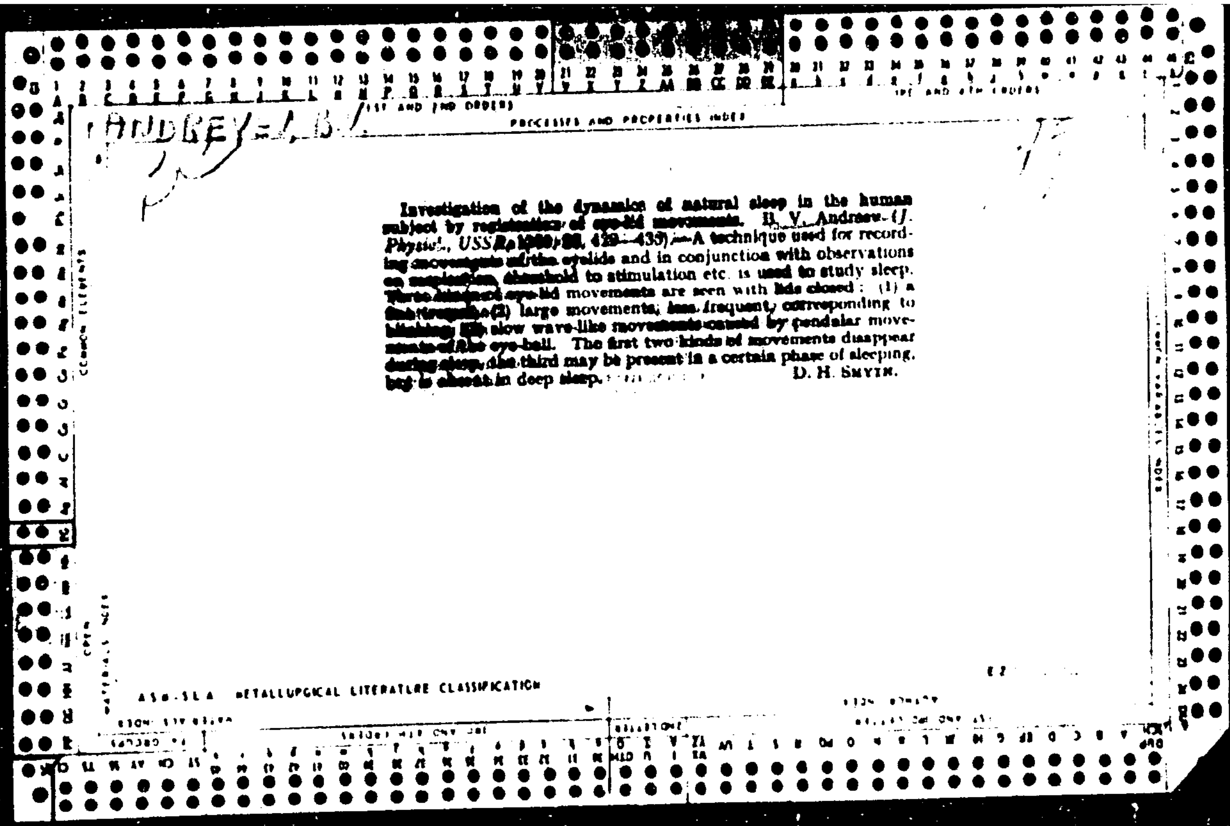
Cand Biol Sci - (diss) "Ecology of the carp in intensive pisciculture of the central black-earth band." Kiev, 1961. 22 pp; (Ministry of Agriculture Ukrainian SSR, Ukrainian Academy of Agricultural Sciences); 200 copies; price not given; (KL, 5-61 sup, 182)

ANDREYEV, B. V.

On the problem of narcolepsy. Nevropat. psikhiat., Moskva 19:6, Nov.-Dec. 50. p. 49-53

1. Of the Clinic for Neuroses (Head--Prof. B. N. Birman), Institute of Physiology of the Academy of Sciences USSR (Director--Academician K. M. Bykov).

CLML 20, 3, March 1951



ANDREEV, L. V.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Investigation of the dynamics of natural sleep in the human subject by registration of eye-lid movements. L. V. Andreev. (*J. Physiol., USSR*, [illegible], 429—435).—A technique used for recording movements of the eyelids and in conjunction with observations on respiration, threshold to stimulation etc. is used to study sleep. Three different eye-lid movements are seen with lids closed: (1) a fine tremor, (2) large movements, less frequent, corresponding to blinking, (3) slow wave-like movements caused by pendular movements of the eye-ball. The first two kinds of movements disappear during sleep, the third may be present in a certain phase of sleeping, but is absent in deep sleep.

D. H. SMYTH.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ANDREYEV, B.V.

Studies on dynamics of normal sleep in man with the method of
actography. Zh. vysshei nerv. deiat. Pavlova 1 no.4:500-505 July-
Aug. 1951. (CLML 23:2)

1. Laboratory of the Physiology and Pathology of Higher Nervous
Activity of the Institute of Physiology imeni I. P. Pavlov, Academy
of Sciences USSR.

ANDREYEV, B.V.; MAYOROV, F.P., zaveduyushchiy.

Investigating the dynamics of sleep in children by using an activity recorder. Trudy Inst.fiziol. 1:339-344 '52. (MLRA 6:8)

1. Laboratoriya fiziologii i patologii vysshey nervnoy deyatel'nosti.
(Sleep)

ANDREYEV, B. V.

In memory of B. N. Birman. Zh. nevropat. psikhiat., Moskva
52 no.5:78-79 May 1952. (CLML 22:2)

1. Obituary for former Head of the Sector of Nervous Diseases of the Institute of Physiology imeni I. P. Pavlov of the Academy of Sciences USSR, Doctor Medical Sciences, Professor.

ANDREYEV, B.V.; KARAPETYAN, Ye.A.; MAYOROV, F.P., zaveduyushchiy; **KRYSHOVA, N.A.**, zaveduyushchaya.

Peculiarities of nocturnal sleep in narcolepsy according to data obtained by the activity recorder. Trudy Inst.fiziol. 1:376-380 '53. (MLRA 6:8)

1. Laboratoriya fiziologii i patologii vysshey nervnoy deyatel'nosti (for Mayorov and Andreyev). 2. Sektor organicheskikh nervnykh rasstroystv (for Kryshova and Karapetyan). (Sleep)

ANDREYEV, B.V.

Certain data on dynamics of therapeutic sleep. Klin. med., Moskva
31 no.4:74-77 Apr 1953. (CLML 24:4)

1. Of the Institute of Physiology imeni Academician I. P. Pavlov (Director -- Academician K. M. Bykov), Academy of Sciences USSR.

USSR/Medicine - Sleep Therapy, Bromides — Sep 53

"Expediency of Administration of Bromides in Sleep Therapy," B. V. Andreyev (Leningrad), Lab of Physiol and Pathol of Higher Nervous Activity, Inst of Physiol im I. P. Pavlov

Klin Med, Vol 31, No 9, pp 64-67

It is difficult to select such doses of bromides above optimal which, in combination with sleep-producing doses of barbiturates, would produce the

270T56

best soporific effects without increasing intoxication with bromides. A combination of sleep-producing doses of barbiturates with optimal doses of bromides is inexpedient, because barbiturates produce sleep while bromides dissipate the hypnotic condition: instead of a cumulative action, the opposite effect is obtained. Sleep-producing doses of barbiturates were administered in combination with small doses of bromides (i.e. 0.45 - 0.9g) to 14 patients; in three patients the sleep-producing effect was only slightly intensified and in other patients either no effect or a negative effect was noted.

270T56

ANDREYEV, B.V. (Leningrad); **BYKOV, K.M.**, akademik, direktor.

Certain data on the dynamics of therapeutic sleep. Klin.med. 34 no.4: 74-77 Ap '53. (MLRA 6:7)

1. Institut fiziologii imeni akademika I.P.Pavlova Akademii nauk SSSR.
(Sleep--Therapeutic use)

ANDREYEV, B.V.; KRAYEVSKIY, Ya.M.

Data on the effect of combined use of barbiturates and analgetics upon the duration of therapeutic sleep. Zhur.nevr.i psikh. 53 no.5:362-369 My '53.
(MLRA 6:5)

1. Organicheskaya nervnaya klinika Instituta fiziologii imeni I.P. Pavlova Akademii nauk SSSR.

2. Laboratoriya fiziologii i patologii vysshey nervnoy deyatel'nosti Instituta fiziologii imeni I.P. Pavlova Akademii nauk SSSR.
(Sleep) (Sedatives)

ANDREYEV, B.V.

Study of the effect of conditioned reflex factors ("conditioned" soporifics) in sleep therapy. Zhur.nevr.i psikh. 54 no.1:9-13 Ja '54. (MLRA 7:1)

1. Laboratoriya fiziologii i patologii vysshey nervnoy deyatel'nosti i sektor nervnykh bolezney Instituta fiziologii im. I.P. Pavlova. (Sleep) (Conditioned response)

ANDREYEV, B. V. (Boris Vladimirovich)

ANDREYEV, B. V.: "Material on the investigation of sleep and the use of therapeutic sleep in the clinical treatment of neuroses." Acad Sci USSR. Inst of Physiology imeni I. P. Pavlov. Leningrad, 1956 (Dissertation for the Degree of Doctor in Medical Sciences)

Source: Knizhnaya letopis' No. 2 1956 Moscow

ANDREYEV, B.V.

Changes in vascular reactions of neurotics during sleep therapy.
Trudy Inst. fiziol. 7:44-50 '58. (MIRA 12:3)

1. Laboratoriya fiziologii i patologii vysshey nervnoy deyatel'nosti (zav. - F.P. Mayorov) i Sektor nevrozov i organicheskikh zabolevaniy nervnoy sistemy (zav. - N.A. Kryshova) Instituta fiziologii im. I.P. Pavlova AN SSSR.
(SLEEP--THERAPEUTIC USE) (PLETHYSMOGRAPHY)
(NEUROSES)

ANDREYEV, B.V.

Dynamics of verbal reactions in an associative experiment on sleep therapy in neuroses. Trudy Inst. fiziol. 7:51-57 '58. (MIRA 12:3)

1. Laboratoriya fiziologii i patologii vysshey nervnoy deyatel'nosti (zav. - F.P. Mayorov) i Sektor nevrozov i organicheskikh zabolevaniy nervnoy sistemy (zav. - N.A. Kryshova). Instituta fiziologii im. I.P. Pavlova AN SSSR.

(SLEEP--THERAPEUTIC USE) (NEUROSES)

ANDREYEV, Boris Vladimirovich

[Sleep therapy for neuroses] Lechenie snom pri nevrozakh.
Leningrad, Medgiz, 1959. 84 p. (MIRA 13:2)
(SLEEP) (NEUROSES)

ANDREYEV, B.V., doktor med.nauk

Pupils' sleep in boarding schools. Gig. i san. 26 no.10:82-84 O '61.
(MIRA 15:5)

1. Iz laboratorii fiziologii i patologii vysshey nervnoy deyatel'nosti Instituta fiziologii imeni I.P.Pavlova, Leningrad.
(SLEEP) (SCHOOL HYGIENE)

ANDREYEV, B.V.; ARTEM'YEV, S.P.; ARKHANGEL'SKIY, V.M; AFANAS'YEV, L.L.;
BABKOV, V.F.; BRONSHTEYN, L.A.; BURKOV, M.S.; BURYANOV, V.A..;
VARSHAVSKIY, I.L.; VELIKANOV, D.P.; VOINOV, A.N.; VYRUBOV, D.N.;
DORMIDONTOV, A.V.; D'YACHKOV, A.K.; YEFREMOV, V.V.; ZHABIN, V.M.;
ZELENKOV, G.I.; KALABUKHOV, F.V.; KALISH, G.G.; KRAMARENKO, G.V.;
KRASIKOV, S.M.; LAKHTIN, Yu.M.; MIKULIN, A.A.; ORLIN, A.S.; OSTROVSKIY,
N.B.; OSTROVTSOV, A.N.; RUBETS, D.A.; STEPANOV, Yu.A.; STECHKIN, B.S.;
KHACHATUROV, A.A.; KHOVAKH, M.S.; CHAROMSKIY, A.D.; SHARAPOV, K.A.

Nikolai Romanovich Briling; obituary. Avt.transp. 39 no.4:57
Ap '61. (MIRA 14:5)
(Briling, Nikolai Romanovich, 1876-1961)

[illegible]REYEV, B[illegible] [illegible], [illegible]; [illegible] [illegible]. [illegible];
[illegible]

[Ivan Petrovich [illegible]] Ivan Petrovich Pavlov
i religiia. Moskva, Izd-vo "Nauka," 1964. [illegible] p.
(MIRA 17:7)

ANDREYEV, B.V.

Effect of dimedrol on the higher nervous activity in man. Zhur. vys. nerv. deiat. 14 no.3:405-411 My-Je '64. (MIRA 17:11)

1. Laboratory of Physiology and Pathology of Higher Nervous Activity, Pavlov Institute of Physiology, U.S.S.R. Academy of Sciences, Leningrad.

ANDREYEV, B.Ya.

USSR.

62

Kinetics of the reduction of barium sulfate. V. A. Shushunov, G. I. Sadovnikova, and B. Ya. Andreev (State Univ., Gorki). *Zhur. Fiz. Khim.* ~~28, 1472-9~~(1954); cf. *C.A.* 44, 2833*d*.—The kinetics of reduction (r.) of $BaSO_4$ (I) to give BaS (II) at temps. between 712 and 900° was studied by means of a described and illustrated vacuum app. in which H or CO was driven for periods up to 2 hrs. by a circulating pump over the I, which was in a heated SiO_2 vessel. The conversion of $BaSO_3$ (III) to I and II between 580 and 800° was also studied. Data on degree of conversion are plotted with respect to time. The activation energies *E* for the r. of I by H and CO are about 47 and 56 kcal./mole, resp.; *E* for the reaction $4SO_3^{--} \rightarrow 3SO_4^{--} + S^{--}$ is 23.6 kcal./mole. The r. of I by ash-free C is most vigorous when the molar ratio of I to C is 1:4; the reaction is accelerated by CO or CO_2. The initial rate of r. of I by H is proportional to the H pressure. The conversion of III to I and II is very rapid at 700-900°; it is therefore not a rate-detg. step in the r. of I to II.

J. W. Lowenberg, Jr.

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5(4)

SOV/20-121-4-32/54

AUTHORS: Shushunov, V. A., Andreyev, B. Ya.

TITLE: The Kinetic Isotope Effect in the Reaction of Hydrogen and Tritium With the Oxides of Some Metals (Kineticheskiy izotopnyy effekt v reaktsii vodoroda i tritiya s okislami nekotorykh metallov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 4, pp 689-692 (USSR)

ABSTRACT: This paper reports on the investigation of the influence of the presence of various isotopes on the velocity of the reduction of the oxides of some metals by hydrogen and tritium. The experiments were carried out under dynamic conditions by means of an apparatus described in a previous paper. The carrying out of the experiments is discussed in a few lines. The mixture of hydrogen and tritium was produced by the chemical decomposition of water. The metal oxides were prepared according to several methods, after which they were fractionated by screening. Assuming that the oxides are reduced according to the first order with respect to H_2 and also with respect to HT, and on the basis of some other plausible assumptions,

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SOV/20-121-4-32/54

The Kinetic Isotope Effect in the Reaction of Hydrogen and Tritium With the Oxides of Some Metals

the authors found lg $A = ((1/\alpha) - 1)$lg $p + B$. This equation describes the dependence of the specific activity A of the gas on its pressure p. It is valid if the temperature and the volume of the system are constant. The kinetic isotope effect α is equal to the ratio of the velocity constant k_1 of the reaction of H_2 to the velocity constant k_2 of the reaction of HT with the metal oxides; the constant B characterizes the initial state of the gas. In all the investigated reactions lg A was an exact linear function of lg p and this confirms the correctness of the above-mentioned assumptions. The character of this function does not depend on the initial pressure of the gas, on the batch (naveska) of the oxide (which is to be reduced), and on the temperature. The authors plotted the values of lg A against those of lg p, and from the inclinations of the corresponding straight lines they calculated the values α of the kinetic isotope effect for the various experiments. The results of these calculations are given by a table. α does not depend on the initial pressure of the gas, on the batch of the oxides, and on their degree of dispersion. However, this effect

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SOV/20-121-4-32/54

The Kinetic Isotope Effect in the Reaction of Hydrogen and Tritium With the Oxides of Some Metals

depends very much on the temperature and on the nature of the oxides which are to be reduced. All the oxides investigated in this paper may be subdivided into 2 groups: The first (second) group consists of those oxides which react faster (more slowly) with hydrogen than with tritium. Ag_2O, Cu_2O, CuO, HgO, PbO_2, MnO_2, and Fe_2O_3 at high temperatures belong to the first group, but Mn_3O_4, Mn_2O_3, NiO, CoO, Fe_3O_4 belong to the second group. Also the possible existence of the reaction $HT + H_2O \rightleftarrows HTO + H_2$ has to be taken into account. This reaction may be catalyzed by the oxides and by the metals produced by their reduction. The oxides of the first group very slightly catalyze the above mentioned reaction. However, the catalysis by this reaction is very characteristic of the second group of oxides. The influence of this reaction on the experiments discussed in this paper can, however, be disregarded. The dependence of α on the temperature satisfies the Arrhenius (Arrenius) law. Finally,

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SOV/20-121-4-32/54

The Kinetic Isotope Effect in the Reaction of Hydrogen and Tritium With the Oxides of Some Metals

some anomalies are mentioned. There are 4 figures, 2 tables and 9 references, 3 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N. I. Lobachevskogo (Scientific Research Institute of Chemistry of the Gor'kiy State University imeni N. I. Lobachevskiy)

PRESENTED: April 2, 1958, by V. N. Kondrat'yev, Academician

SUBMITTED: March 27, 1958

Card 4/4

ANDREYEV, B. Ya., Candidate Chem Sci (diss) -- "The kinetic isotopic effect of hydrogen in reducing the oxides of certain metals". Gor'kiy, 1959. 21 pp (Min Higher Educ USSR, Gor'kiy State U im N. I. Lobachevskiy), 200 copies (KL, No 23, 1959, 161)

L 22534-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Po-4/Pr-4/Ps-4/Pt-10 RM/
WW

ACCESSION NR: AP4048040 S/0020/64/158/006/1348/1351

AUTHOR: Andreyev, B. Ya.; Dyagileva, L. M.; Feklisov, G. I.

TITLE: Thermal stability of ferrocene

SOURCE: AN SSSR. Doklady*, v. 158, no. 6, 1964, 1348-1351

TOPIC TAGS: ferrocene, thermal stability, isothermal decomposition, radical mechanism

ABSTRACT: The isothermal decomposition of ferrocene was studied at temperatures from 400-470C under static conditions using an initial ferrocene vapor pressure of about 2 atmospheres. At all the temperatures studied there was approximately a 20% decrease in ferrocene during the first 10-15 minutes of decomposition. This was followed by a delay period, which decreased with temperature, in which there was no appreciable decrease in ferrocene, and then by very rapid decomposition. The reactor was covered with a dark deposit of iron and carbon (~1:8 atoms) which increased with decomposition; deposition during the delay period was slow. No iron carbide was found. Somewhat over 3 moles of gaseous

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L 22534-65

ACCESSION NR: AP4048040

products were formed per mole of ferrocene: $(C_5H_5)_2Fe \longrightarrow Fe + 8C + 2CH_4 + H_2$. The decomposition proceeded via a combination of heterogeneous and homogeneous reactions. Addition of carbon did not affect the thermal decomposition process but increased delay time, while addition of iron affected the decomposition. The reaction rate was greater the larger the surface of the solid products. Thus active intermediate products which accelerated the decomposition reaction were formed in the gaseous and the solid decomposition products. A radical mechanism for the decomposition was proposed starting with the reaction $(C_5H_5)_2Fe \longrightarrow (C_5H_5)Fe(C_5H_4)^{\bullet} + H$, rather than with the heretofore proposed cyclopentadiene formation. Orig. art. has: 2 equations and 3 figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvyennom universitete im. N. I. Lobachevskogo (Scientific Research Institute of Chemistry at the Gorkov State University)

SUBMITTED: 15May64 ENCL: 00

SUB CODE: OC,TD NO REF SOV: 004 OTHER: 003

Card 2/2

ANDREYEV, D.

Training in aural reception under prevailing interference. Radio no.12:56-57 D '53. (MLRA 6:12)
(Radio operators)

ANDREYEV, D.

Training for aural reception of signals during interference.
Radio no.2:58 F '54. (MLRA 7:2)
(Telegraph, Wireless)

ANDREYEV, D.

USSR/ Miscellaneous - Radio telegraph training

Card 1/1 Pub, 89 - 24/27

Authors	: Andreev, D.
Title	: Training radio-telegraph operators to pick up Morse signals under interference conditions
Periodical	: Radio 2, page 50, Feb 1954
Abstract	: A method of training radio telegraph operators is described. The training is intended to teach the operators to pick up signals by ear, under various interference conditions.
Institution:	.....
Submitted:	.....

ANDREYEV, D.; POKRAS, A.

Concerning A.Z. Fradin's article "Square pyramidical horn antenna with equal directivity patterns in the E and H planes." Elektrosviaz' 16 no.8:71 Ag '62. (MIRA 15:9)
(Antennas (Electronics)) (Microwaves) (Fradin, A.Z.)

ANDREYEV, D. (Arkhangel'sk)

Excess in the personnel of agricultural enterprises. Fin. SSSR 37 no. 10:78-79 O '63. (MIRA 17:2)

BULGARIA/Human and Animal Physiology. Internal Secretion. T-8
The Pancrea.

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55888.

Author : Penchev, Iv., Popov, Al., Kolarov, Pan., Andreyev, Dim.
Inst :
Title : Our Experiences in Treating Diabets With Sulfonilic Urea.

Orig Pub: Sovrem. med., 1956, 7, No 10, 3-20.

Abstract: No abstract.

Card : 1/1

ANDREYEV, D.

(17)

[illegible]

12. "The Synthesis of [illegible]" [illegible] (In English with Russian summary) [illegible]

13. "On the Prevention of [illegible] Specific Action." [illegible] (In French with Russian summary) [illegible]

14. "The Influence of the [illegible] State of [illegible] Sensitivity [illegible]" [illegible] (In Russian [illegible] summary) pp [illegible]

15. "New Data on [illegible]" [illegible] (In German with Russian summary) [illegible]

16. "[illegible] Treated with [illegible]" [illegible] pp [illegible]

17. "[illegible] Effects and [illegible]" [illegible] (In English with Russian summary) [illegible]

18. "Investigations of [illegible]" [illegible]

19. "The Distribution of [illegible]" [illegible] Russian summary [illegible]

20. "On the Role of the [illegible]" [illegible] with Russian summary [illegible]

21. "The Effect of the [illegible]" [illegible] Russian summary [illegible]

22. "An Investigation of the [illegible] Effect of [illegible]"

PENCHEV, Iv., prof.; POPOV, Al.; KOLAROV, Pan.; ANDREYEV, Dim. (Sofiya)

Sulfanil urea therapy of diabetes mellitus [with summary in English]. Probl.endok. i gorm. 4 no.6:20-28 N-D '58. (MIRA 12:2)

1. Iz kliniki vnutrennikh bolezney s endokrinologiyey i bolezney obmena veshchestv Instituta usovershenstvovaniya i spetsializatsii vrachey (dir. prof. Iv. Penchev).

(ANTIDIABETICS, ther. use,
sulfanilylurea (Rus))

39472
S/106/62/000/008/009/009
A055/A101

9,1800

AUTHORS: Andreyev, D., Pokras, A.

TITLE: On the article of A.Z. Fradin "Square pyramidal horn with identical directivity patterns in the E and H planes"

PERIODICAL: Elektrosvyaz', no. 8, 1962, 71

TEXT: A.Z. Fradin (*Elektrosvyaz', no. 9, 1961) obtained a horn-feed with square aperture and with identical directivity patterns in planes E and H by introducing longitudinal metal plates into the horn. The authors of the present article suggest another method. The walls of the horn (Fig. 1) are provided with "windows" between the cross sections A and B. With vertical polarization of the radiated signal, currents, analogous to currents in horn walls without "windows", will be sustained in the lateral walls between sections A and B; in the upper and lower walls, no current will be sustained, the "windows" being perpendicular to the electric field lines of force. This means that, with vertical polarization, the directivity pattern in plane H will be determined by the size of the aperture in section A, and in plane E by the size of the aperture in

Card 1/8 * S/106/61/000/009/006/008
2

SOV/86-58-10-24/40

AUTHOR: Andreyev, D.A., Engr Lt Col, and Kon'kov, N.G., Engr Lt Col

TITLE: For Stricter Control of the Quality of Preparation of Aviation Materiel (Strozhe proveryat' kachestvo podgotovki aviatsionnoy tekhniki)

PERIODICAL: Vestnik vozdushnogo flota, 1958, 1958, Nr 10, pp 54-61 (USSR)

ABSTRACT: The authors in this article stress the importance of checking very strictly the quality of preparation of aviation materiel for flights. The authors then describe how Officer A.A. Kirichenko, the deputy commander in charge of aviation engineer service in a sub-unit, plans and organizes his work and that of his subordinates so that everything is accomplished in time and checked thoroughly.

Card 1/1

ZAKHAROV, I.S., red. Prinimal uchastiye ANDREYEV, D.G., starshiy inzh., red.; TIKHONOV, A.Ya., tekhn. red.

[Textile machinery(catalog-handbook); cotton machinery] Tekstil'nye mashiny (katalog-spravochnik); mashiny khlopchatobumazhnogo proizvodstva. Moskva, Mashgiz, 1951. 123 p. (MIRA 15:3)

1. Nauchno-issledovatel'skiy institut tekstil'nogo i legkogo mashinostroyeniya (for Andreyev).
(Cotton machinery)

PA 240T105

ANDREYEV, D. I.

USSR/Physics - Light Measurement

Dec 52

"Optical Method of Measuring Intensity of Light, Brightness and Flux," A. A. Volkenshteyn, D. I. Andreyev and V. I. Isayenko

"Zhur Tekh Fiziki" Vol 22, No 12, pp 2026-2037

Optical measuring method was tested theoretically and experimentally. Results showed adequate accuracy of measurements. The equipment may be used in plants and on expeditions. Received 22 Sep 52.

240T105

ANDREYEV, D. K.

"Wholesale Price List for Papermaking Equipment, Spare Parts, and Slate Equipment in USSR," Preiskurant Optovykh Tsen na Bumagodelatel'noye Oborudovaniye, Zapasnyye Chasti k Nemu i Shifernoye Oborudovaniye, 1949

Translation M-475, 31 May 55

ANDREYEV, D. K.

USSR/Chemical Technology - Chemical Products and Their Application. Dyeing and Chemical Treatment of Textiles, I-16

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62855

Author: Andreyev, D. K., Mednikova, L. N.

Institution: None

Title: On New Raw Material for the Production of Size

Original Periodical: Tr. Leningr. tekstil'n. in-ta, 1955, No 6, 53-55

Abstract: For the purpose of reducing the expenditure of starch for sizing it is proposed to utilize vegetable proteins contained in considerable amounts in the seed of oil-yielding and leguminous crops. The cheapest raw material are cottonseed and other grist and cake from which the adhesive agents are extracted with sodium alkalies or calcium hydroxide. The low solubility of the latter ensures a permanent slight alkalinity and lesser degradation of protein molecules. Combined use of aqueous solutions of lime and chloramine increases the yield of extracted substances up to 45%. The substances thus

Card 1/2

ANDREYEV, D.K.

In the pavilion "Public health and medical industry." Inform. biul. VDNKH no.8:37-38 Ag '63. (MIRA 17:8)

1. Glavnyy metodist pavil'ona "Zdravookhraneniye i meditsinskaya promyshlennost'" na Vystavke dostizheniy narodnogo khozyaystva SSSR.

USSR/Geology
Tectonics
Relief

Jul/Aug 48

"Rules of Relationships Between Relief and Structural Forms, and Their Role in Study of Tectonics of the Hills in the Volga Region," D. K. Andreyev, 4 pp

"Byul Mosk Obshch Ispy Prirody, Otdel Geolog"
Vol XXIII, No 4

Presents data on relationships between contemporary relief and tectonic structural forms in middle part of Ul'yanov-Saratov syncline. Gives examples of practical use of these relationships in tectonic study of region and outlines possibility of using them for studying the II and III order structural forms which are extensively developed on the Russian Platform.

[redacted]

17/49T48

ANDREYEV, D. K.

ANDREYEV, D.K.

Relation of the present relief of the Ul'yanovsk-Saratov depression to its tectonic structure. Trudy VNIGNI no.1:239-247 '49.
(Ul'yanovsk Province--Geology, Structural)
(Saratov Province--Geology, Structural)

ANDREYEV, D.K.

Tectonic structure and the historical formation of the middle Volga Valley. Trudy VNIGNI no.2:107-110 '51. (MLRA 10:4)

(Volga Valley--Geology, Structural)

ANDREYEV, D.K.

History of the formation and the age of the Sura-Moksha uplift region and Vyatka Uval. Biul.MOIP. Otd.geol. 31 no.4:99-101 Jl-Ag '56. (MLRA 9:12)

(Sura Valley--Geology, Stratigraphic)
(Moksha Valley--Geology, Stratigraphic)
(Vyatka Uval--Geology, Stratigraphic)

ANDREYEV, D K

11-9-2/14

AUTHOR: Andreyev, D.K. and Sycheva-Mikhaylova, A.M.

TITLE: On Some Paleogenic Structures in Middle Povolzh'ye Which Are Absent in More Ancient Strata (O nekotorykh paleogenovykh strukturakh v Srednem Povolzh'ye, otsutstvuyushchikh v boleye drevnikh sloyakh)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1957, # 9, p 19-31 (USSR)

ABSTRACT: Petroleum surveys in the Russian platform have produced cases in which local upheavals discovered in upper strata were not found in deeper ones. The author analyzes this phenomenon for two local upheavals located in the Tertiary sediments of the Ul'yanovsk-Saratov depression, in the basin of the upper stream of the Sura river, which were discovered during geologic-survey mapping: the Kozlyakovskoye and the Prudovskoye upheavals. The first of them is located north of Kuznetsk and is associated presumably with the western end of the Borlinskaya zone of upheavals. During the early Tertiary period, a local depression was formed there which was named by D.K. Andreyev the Kuznetsk Lower-Paleocene depression. Later on, during the pre-Eocene epoch, differential vertical shifts occurred. They caused the interruption of sediment

Card 1/2

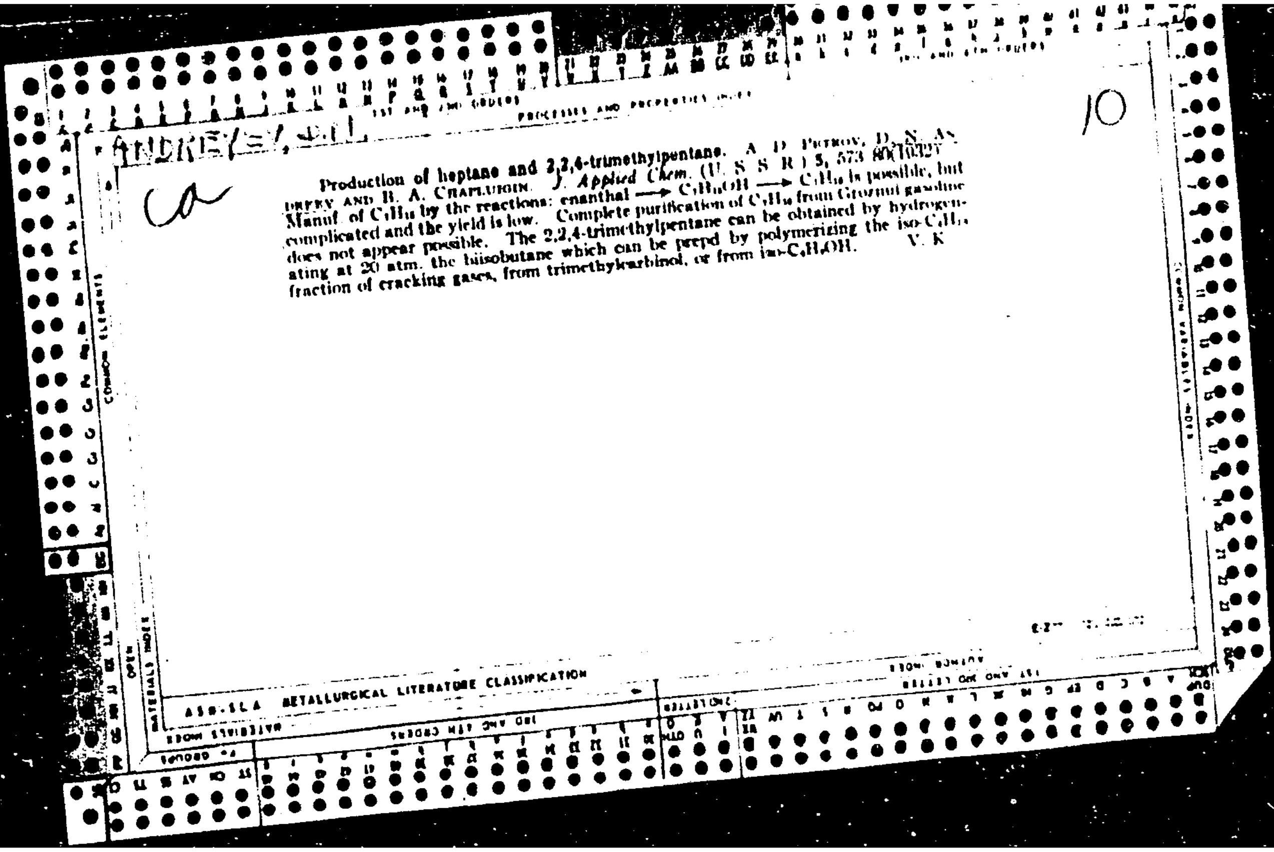
4

Y
ANDREEV, D.L.

ANDREEV, D.L.
Zamechatel'nye issledovateli gornoi Srednei Azii; pod red. N. G. Fradkina.
Moskva, Geografgiz, 1946. 95 p. (Russkie puteshestvenniki)
Bibliographical references included in "Primechaniia" (p.95-(96))
DLC: DK851.A5

~~CU MH NIO NjP NN NNC~~

SO: L.C, Soviet Geography, Part I, 1951, Uncl.

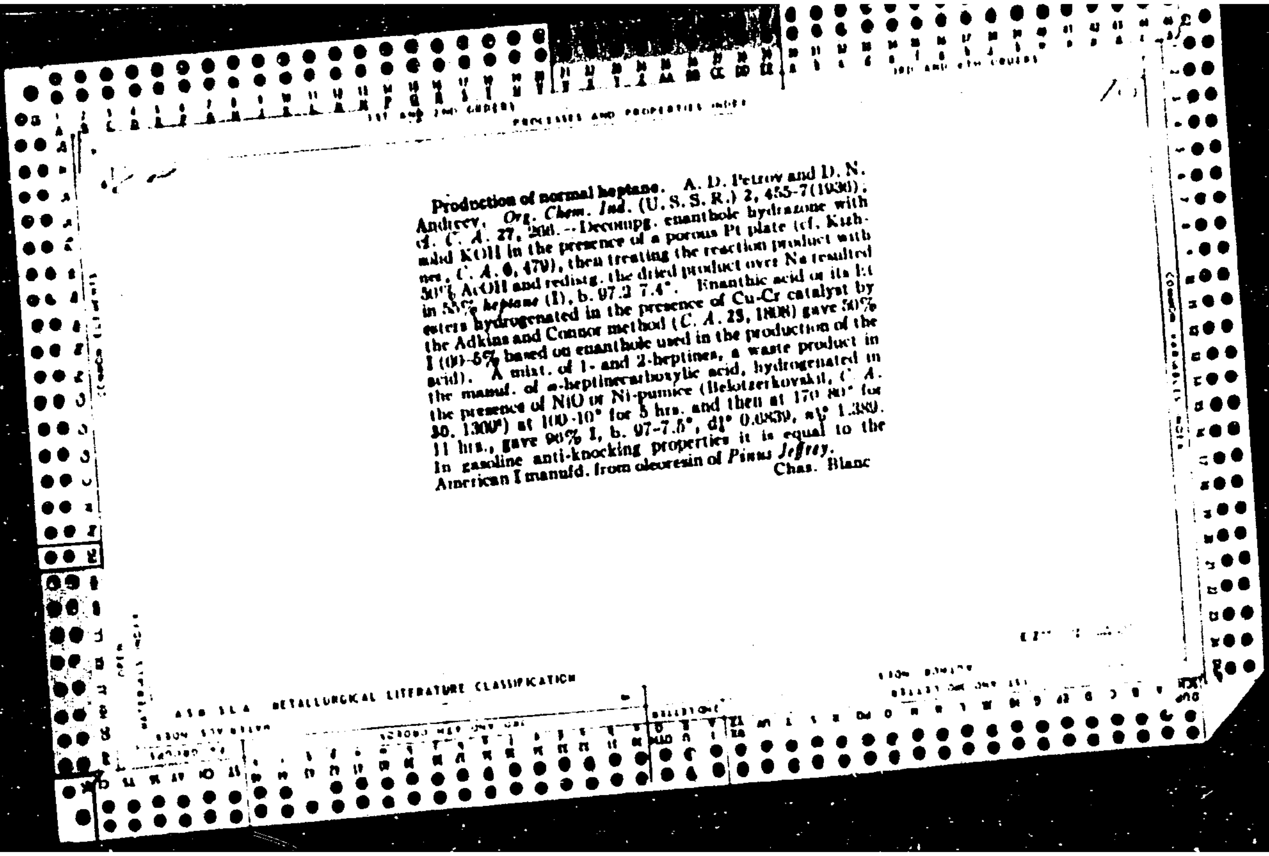


10

ANDREYEV, D.N.

ca

Production of heptane and 2,2,4-trimethylpentane. A. D. Petrov, D. N. Andreev and B. A. Chaplugin. *J. Applied Chem.* (U. S. S. R.) 5, 573-80(1932).—Manuf. of C_7H_{16} by the reactions: enanthal → $C_7H_{15}OH$ → C_7H_{16} is possible, but complicated and the yield is low. Complete purification of C_7H_{16} from Groznyi gasoline does not appear possible. The 2,2,4-trimethylpentane can be prepd. by hydrogenating at 20 atm. the diisobutene which can be prepd. by polymerizing the iso-C_4H_8 fraction of cracking gases, from trimethylcarbinol, or from iso-C_4H_9OH. V. K.

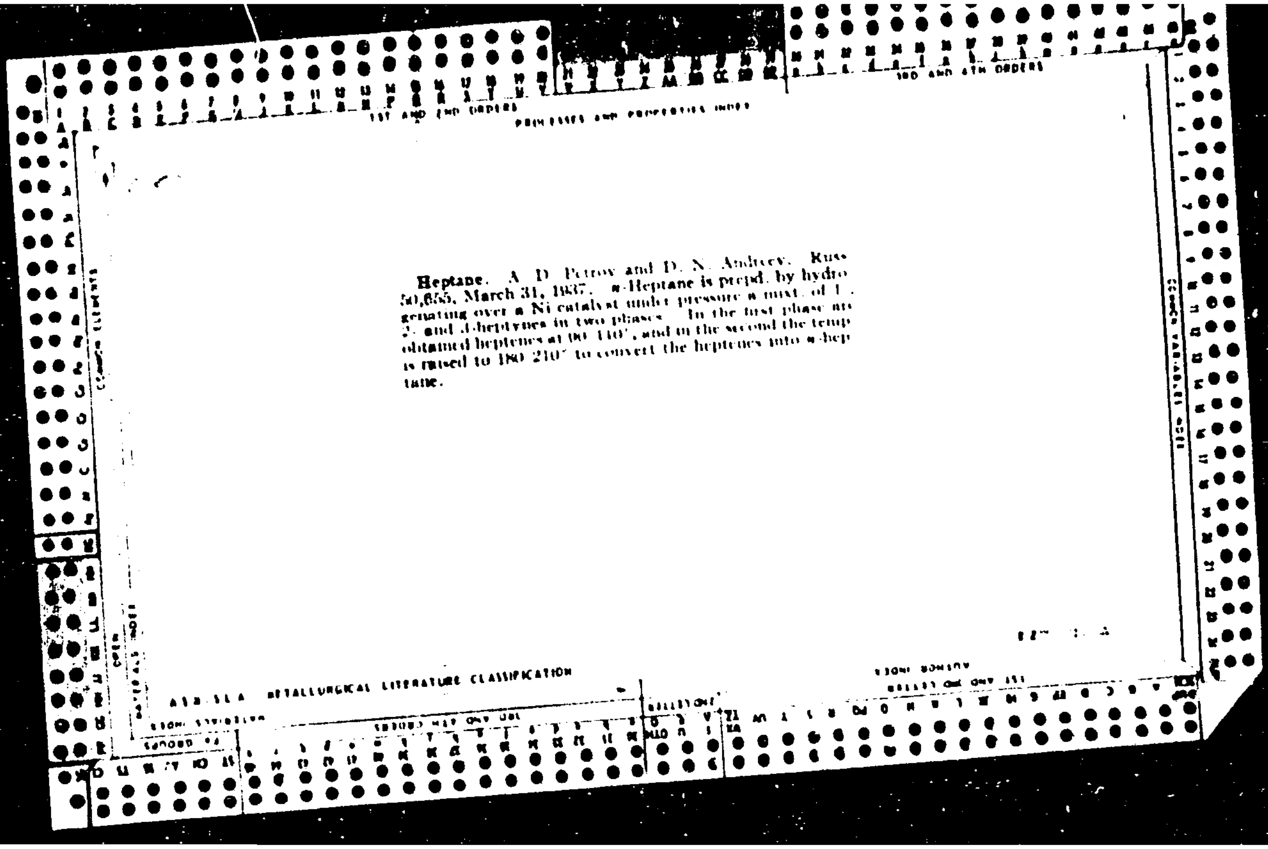


PROCESSES AND PROPERTIES INDEX

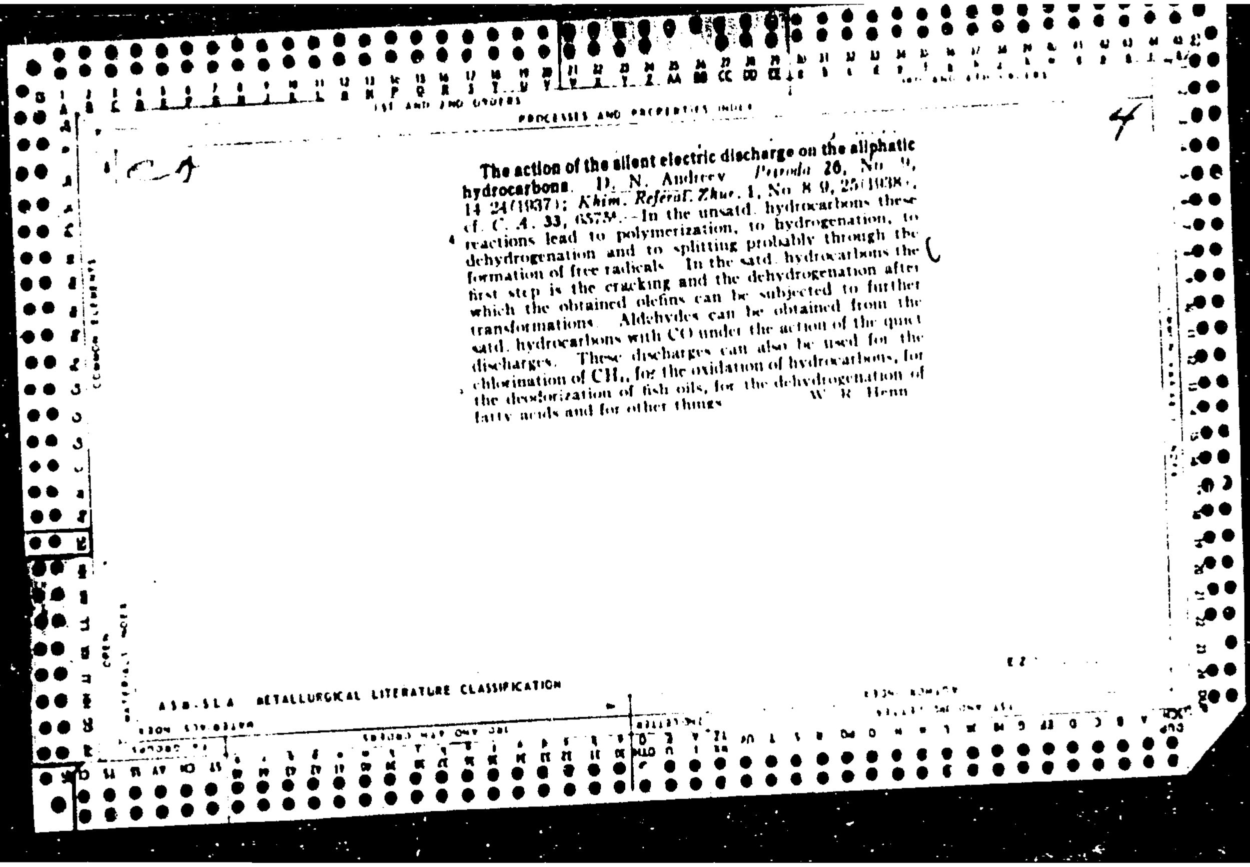
Production of normal heptane. A. D. Petrov and D. N. Andreev. *Org. Chem. Ind.* (U.S.S.R.) 2, 455-7(1936); cf. *C. A.* 27, 200.—Decompg. enanthole hydrazone with solid KOH in the presence of a porous Pt plate (cf. Kishner, *C. A.* 6, 479), then treating the reaction product with 50% AcOH and redistg. the dried product over Na resulted in 55% *heptane* (I), b. 97.2-7.4°. Enanthic acid or its Et esters hydrogenated in the presence of Cu-Cr catalyst by the Adkins and Connor method (*C. A.* 25, 1808) gave 50% I (60-5% based on enanthole used in the production of the acid). A mixt. of 1- and 2-heptines, a waste product in the manuf. of α-heptinecarboxylic acid, hydrogenated in the presence of NiO or Ni-pumice (Belotserkovskii, *C. A.* 30, 1300) at 100-10° for 5 hrs. and then at 170-80° for 11 hrs., gave 90% I, b. 97-7.5°, d_4^{20} 0.0839, n_D^{20} 1.380. In gasoline anti-knocking properties it is equal to the American I manufd. from oleoresin of *Pinus Jeffrey*.

Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Heptane. A. D. Petrov and D. N. Andreev. Russ. 50,655, March 31, 1937. n-Heptane is prepd. by hydrogenating over a Ni catalyst under pressure a mixt. of 1-, 2- and 3-heptynes in two phases. In the first phase are obtained heptenes at 90-110°, and in the second the temp. is raised to 180-210° to convert the heptenes into n-heptane.



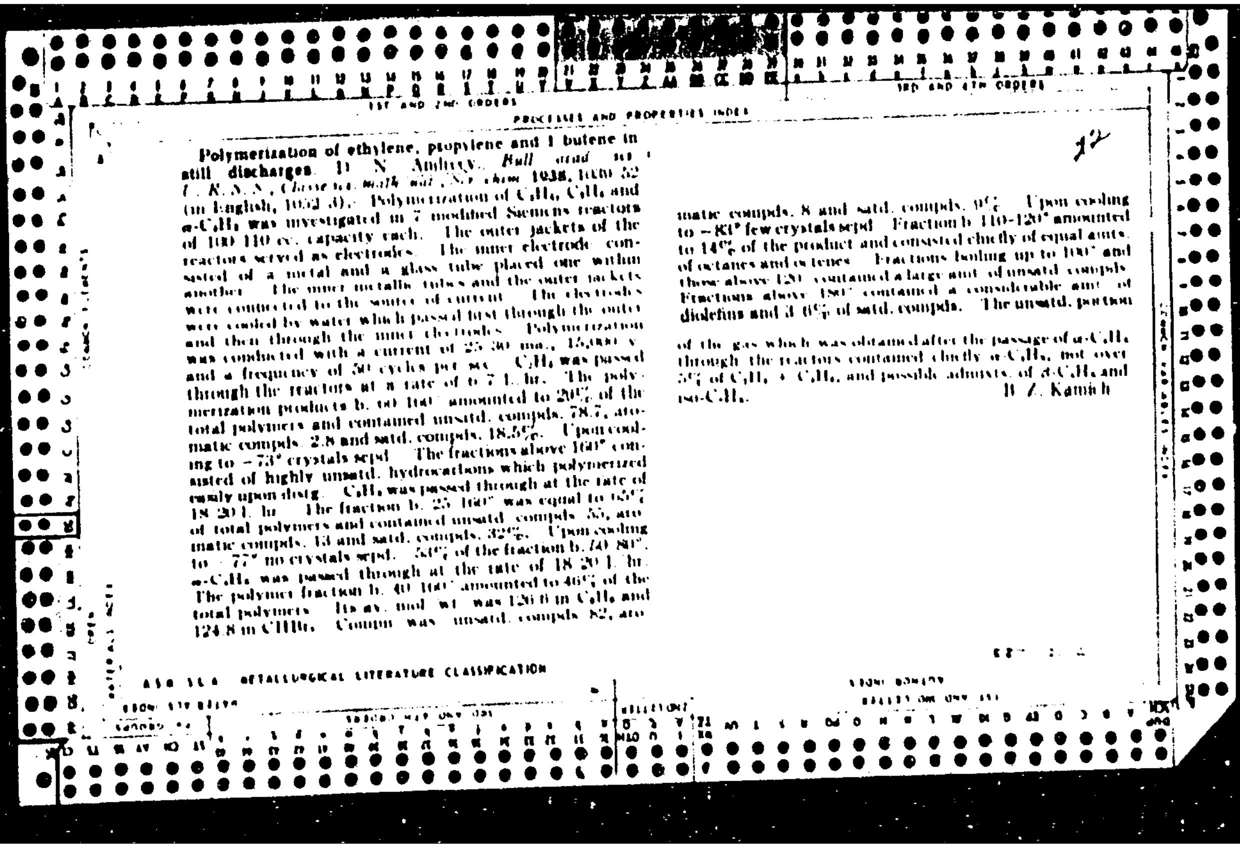
PROCESSES AND PROPERTIES INDEX

C-1

4

The action of the silent electric discharge on the aliphatic hydrocarbons. D. N. Andreev. *Priroda* 26, No. 9, 14-24(1937); *Khim. Referat. Zhur.* 1, No. 8-9, 25(1938); cf. *C. A.* 33, 6573⁴.—In the unsatd. hydrocarbons these reactions lead to polymerization, to hydrogenation, to dehydrogenation and to splitting probably through the formation of free radicals. In the satd. hydrocarbons the first step is the cracking and the dehydrogenation after which the obtained olefins can be subjected to further transformations. Aldehydes can be obtained from the satd. hydrocarbons with CO under the action of the quiet discharges. These discharges can also be used for the chlorination of CH_4, for the oxidation of hydrocarbons, for the deodorization of fish oils, for the dehydrogenation of fatty acids and for other things. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

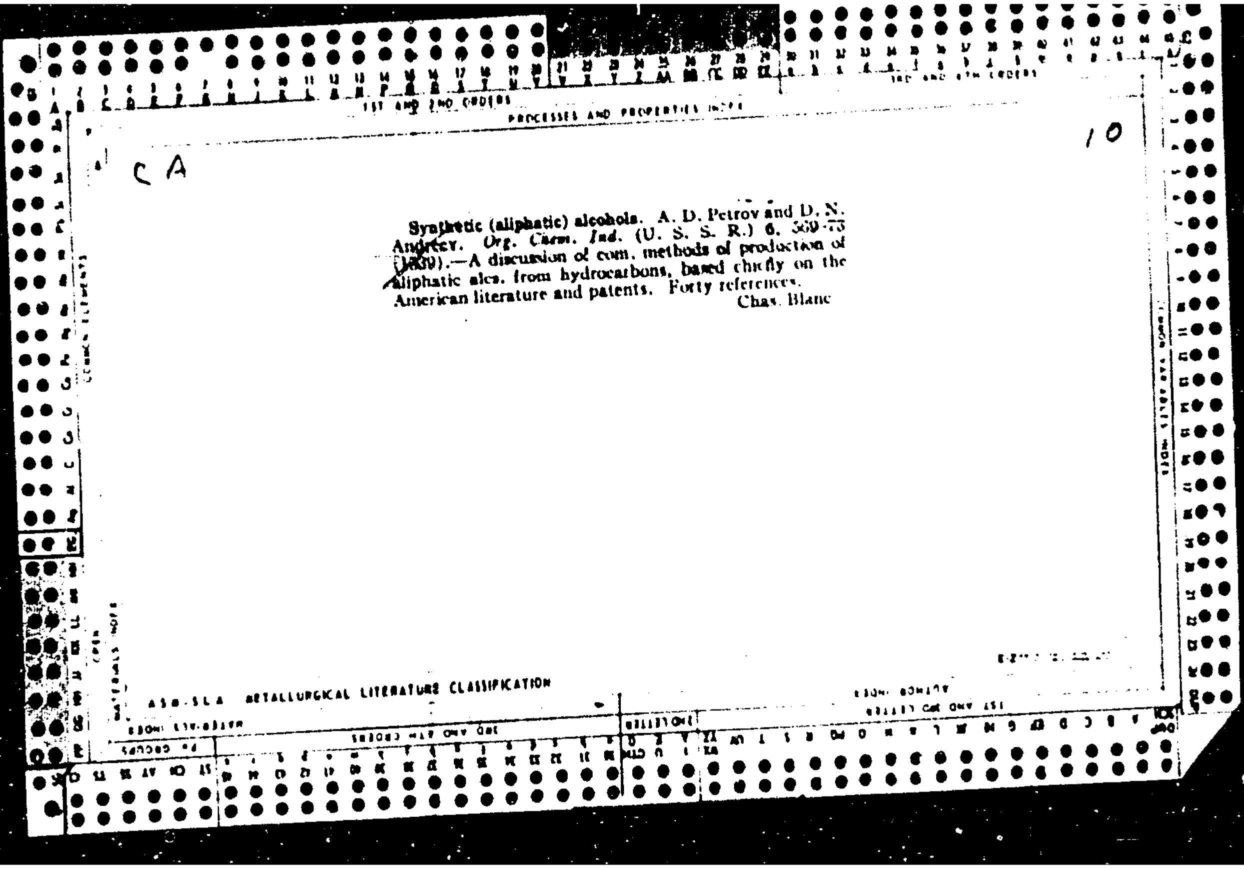


12

**Polymerization of ethylene, propylene and 1-butene in
still discharges.** D. N. Andreev. *Bull. acad. sci.
U. R. S. S., Classe sci. math. nat., Sér. chim.* **1938**, 1030-52
(in English, 1052-3).—Polymerization of C_2H_4, C_3H_6 and
α-C_4H_8 was investigated in 7 modified Siemens reactors
of 100-110 cc. capacity each. The outer jackets of the
reactors served as electrodes. The inner electrode con-
sisted of a metal and a glass tube placed one within
another. The inner metallic tubes and the outer jackets
were connected to the source of current. The electrodes
were cooled by water which passed first through the outer
and then through the inner electrodes. Polymerization
was conducted with a current of 25-30 ma., 15,000 v.
and a frequency of 50 cycles per sec. C_2H_4 was passed
through the reactors at a rate of 6-7 l./hr. The poly-
merization products b. 60-160° amounted to 20% of the
total polymers and contained unsatd. compds. 78.7, aro-
matic compds. 2.8 and satd. compds. 18.5%. Upon cool-
ing to −73° crystals sepd. The fractions above 160° con-
sisted of highly unsatd. hydrocarbons which polymerized
easily upon distg. C_3H_6 was passed through at the rate of
18-20 l./hr. The fraction b. 25-160° was equal to 65%
of total polymers and contained unsatd. compds. 55, aro-
matic compds. 13 and satd. compds. 32%. Upon cooling
to −77° no crystals sepd. 50% of the fraction b. 70-80°.
α-C_4H_8 was passed through at the rate of 18-20 l./hr.
The polymer fraction b. 40-160° amounted to 46% of the
total polymers. Its av. mol. wt. was 126.6 in C_6H_6 and
124.8 in C_6H_{12}. Compn. was: unsatd. compds. 82, aro-
matic compds. 8 and satd. compds. 10%. Upon cooling
to −80° few crystals sepd. Fraction b. 110-120° amounted
to 14% of the product and consisted chiefly of equal amts.
of octanes and octenes. Fractions boiling up to 100° and
those above 120° contained a large amt. of unsatd. compds.
Fractions above 180° contained a considerable amt. of
diolefins and 3-6% of satd. compds. The unsatd. portion

of the gas which was obtained after the passage of α-C_4H_8
through the reactors contained chiefly α-C_4H_8, not over
5% of C_2H_4 + C_3H_6, and possible admixts. of β-C_4H_8 and
iso-C_4H_8.

B. Z. Kamich

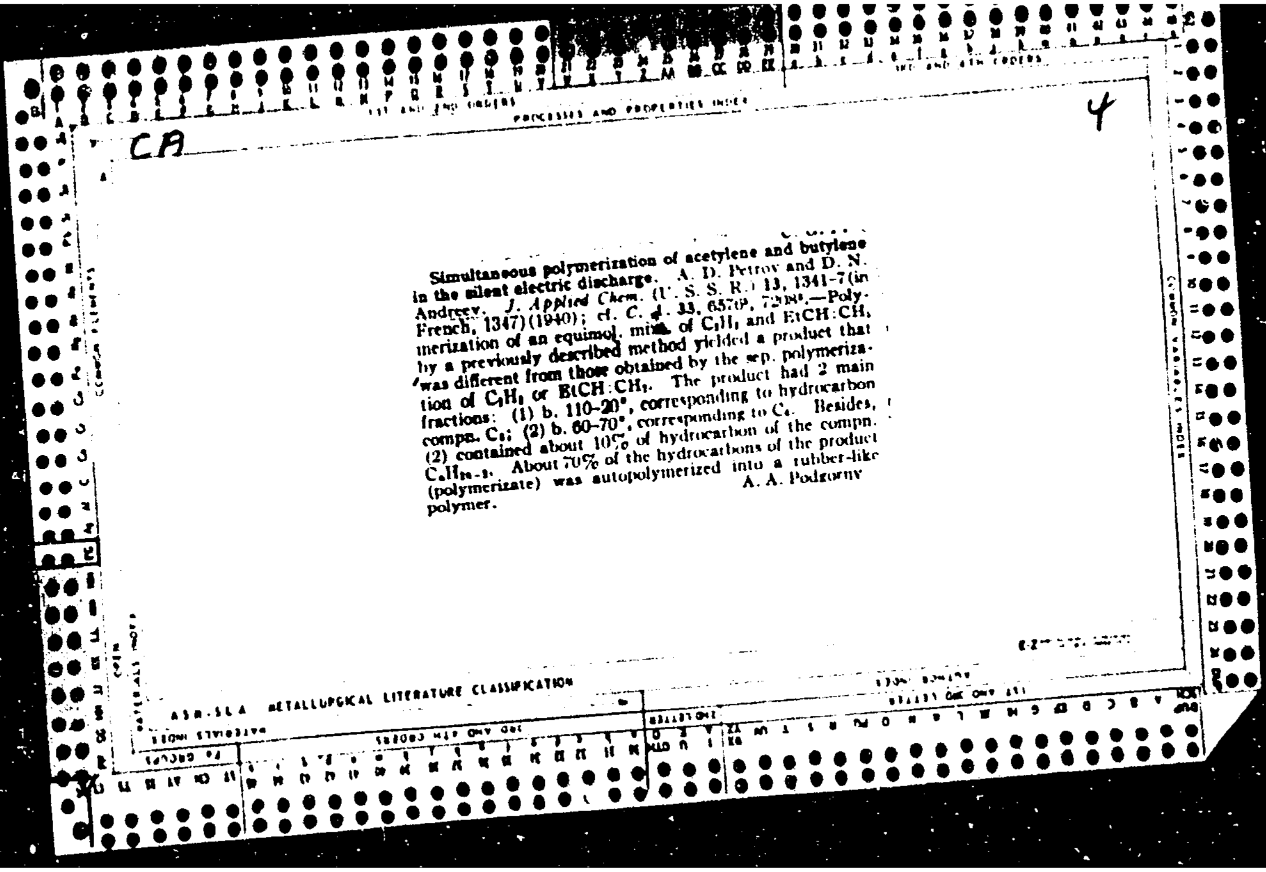


CA

10

Synthetic (aliphatic) alcohols. A. D. Petrov and D. N. Andreev. *Org. Chem. Ind.* (U. S. S. R.) 6, 569-73 (1939).—A discussion of com. methods of production of aliphatic alcs. from hydrocarbons, based chiefly on the American literature and patents. Forty references.

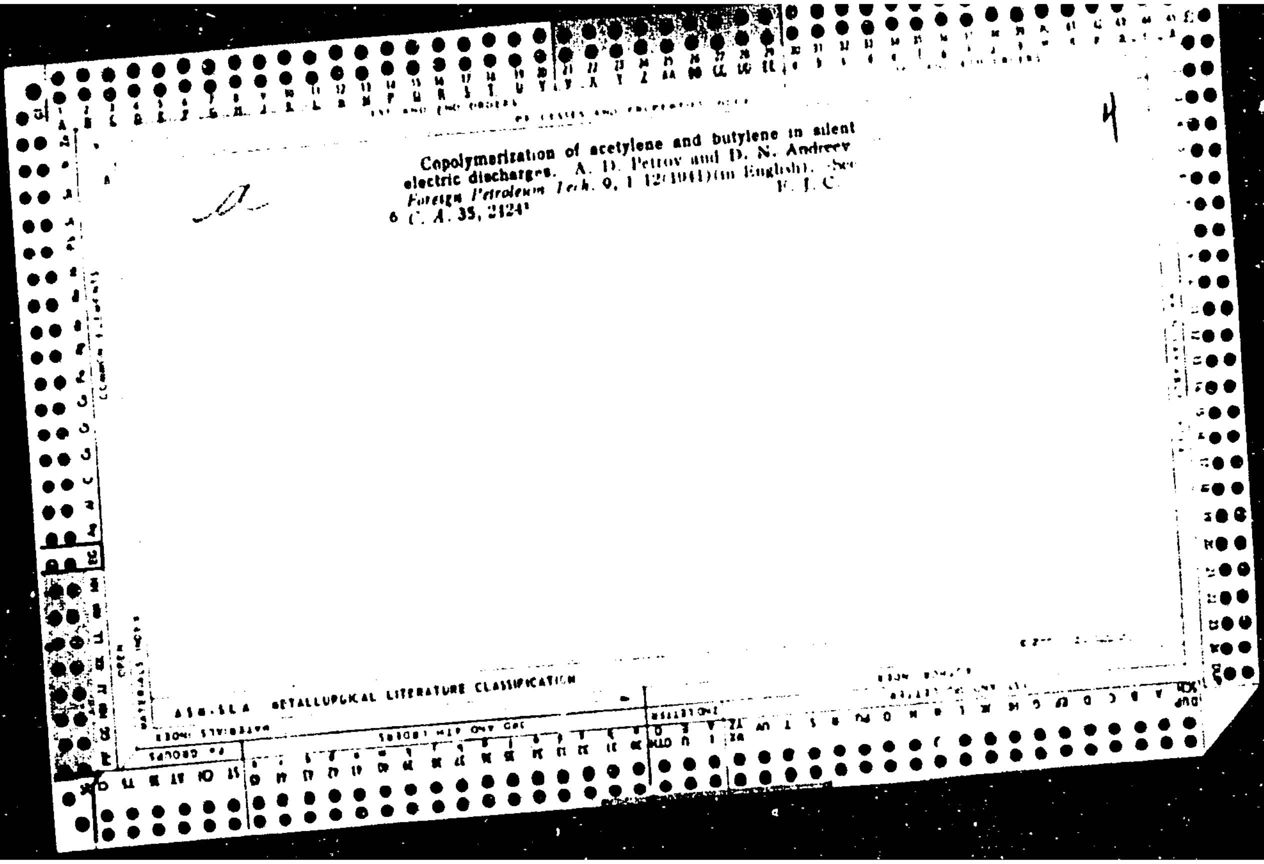
Chas. Blanc



CA

4

Simultaneous polymerization of acetylene and butylene
in the silent electric discharge. A. D. Petrov and D. N.
Andreev. *J. Applied Chem.* (U. S. S. R.) 13, 1341-7 (in
French, 1347) (1940); cf. *C. A.* 33, 6570, 7208.—Poly-
merization of an equimol. mixt. of C_2H_2 and $EtCH:CH_2$
by a previously described method yielded a product that
was different from those obtained by the sep. polymeriza-
tion of C_2H_2 or $EtCH:CH_2$. The product had 2 main
fractions: (1) b. 110-20°, corresponding to hydrocarbon
compn. C_8; (2) b. 60-70°, corresponding to C_6. Besides,
(2) contained about 10% of hydrocarbon of the compn.
C_nH_{2n-2}. About 70% of the hydrocarbons of the product
(polymerizate) was autopolymerized into a rubber-like
polymer. A. A. Podgorny



4

Copolymerization of acetylene and butylene in silent electric discharges. A. D. Petrov and D. N. Andreev. Foreign Petroleum Tech. 9, 1-12(1941)(in English). -See 6 C. A. 35, 2124^{3} F. J. C.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

A-3

BC

[illegible]naphthalenes and their hydro-derivatives. A. D. Petrov and D. N. Andreev (J. Gen. Chem. Russ., 1942, 12, 95—96).—The prep. [illegible] Friedel-Crafts synthesis followed by hydrogenation over Ni and physical properties (b.p., f.p., MR_D, cetane no.) of [illegible] and octyl-naphthalenes and -tetra- and -deca-hydronaphthalenes are determined. The decahydronaphthalenes have the best antiknock properties. n-Octylnaphthalene, b.p. 334—337°/760 mm.; n-octyl-tetra-, b.p. 334—336°/760 mm., and -deca-hydronaphthalene, b.p. 335—337°/746 mm., are new (no analytical data). E. A. B.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Ca

21

Components of safety fuels. D. N. Andreev, A. P. Meshcheryakov, and A. D. Petrov. *J. Applied Chem.* (U.S.S.R.) 19, 705-8(1946)(in Russian).—In the search for high-boiling, explosion-safe, high-octane hydrocarbons, the following were synthesized: (1) Dimer of diisobutylene (I) by boiling the latter for 30 hrs. with 25% $FeCl_3$ yield 25%; b. 213-6°, n_D^{20} 1.4510, d_4^{20} 0.7926, Br no. 73.0, f. p. −98°. (2) Isohexadecane (II) was prepd. by hydrogenation of I over Ni under pressure at 220°; b. 241-3°, n_D^{20} 1.4435, d_4^{20} 0.7846, f. p. below −70°. (3) Isopropylnaphthalene (III): a stream of $CH_2:CH.CH_3$ is led into concd. H_2SO_4 at 15-20° with air excluded; the isopropylsulfuric acid is then added gradually to a $C_{10}H_8$ soln. in paraffinic gasoline over 2-3 hrs. at 60-70° and the mixt. stirred for 6-8 more hrs. at the same temp.; 128 g. $C_{10}H_8$ yielded 72 g. of the fraction b. 250-270°; b. 260-5°, f. p. −88°, d_4^{20} 0.9852, n_D^{20} 1.5881. (4) Isopropyltetralin (IV), by the same method as III; 200 g. tetralin yielded 93 g. of the fraction b. 240-60° (37% of the theory); b. 245-55°, f. p. −78°, d_4^{20} 0.9437, n_D^{20} 1.5881. (5) Isopropylbenzene, by the same method. (6) A mixt. of a standard Baku gasoline, octane no. N 67.1, with 17% II, gave N 72.8; calcd. mixing N of II = 100.6. (7) Addn. of 10, 20, 40% III to gasoline of N 70.0, gave N 71.2, 73.3, 84.0, calcd. N' of III = 82.0, 90.5, 105.0; in comparison, addn. of 60% isooctane gave for the mixt. only N 81.9. (7) A mixt. of 75% gasoline (N 67.1) with 25% diisopropylbenzene (b. 175-210°, f. p. below −105°) gave N 80.2, calcd. N' 107; a mixt. of 70% gasoline with 30% polyisopropylbenzene (b. 220-50°, f. p. −88°) gave N 82.3, calcd. N' 108.6. N. Thon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

10

Synthesis of alkylnaphthalenes by means of organolithium compounds. D. N. Andreev. *J. Gen. Chem.* (U.S.S.R.) 17, 1645-50(1947)(in Russian).—$C_{10}H_8$ (64 g.), 250 g. dry Et_2O, and 23 g. powd. Na, treated with stirring with 140 g. BuBr over 2.5 hrs., keeping the soln. at reflux, then refluxed 2 hrs. and treated with 30 g. MeOH and 100 g. dil. HCl, gave 60% octane, 38 g. BuBr, 7.5 g. $BuC_{10}H_7$, b_{14} 170-200°, and 6 g. $Bu_2C_{10}H_6$, b_{14} over 200°. $C_{10}H_8$ (64 g.), 250 g. dry Et_2O, and 1.5 g.-atoms Li in small pieces were stirred in a N atm. 2 hrs. and the violet soln. was treated over 6 hrs. with 140 g. BuBr, keeping the soln. at gentle reflux; after 10 hrs. of heating the mixt. was cooled and treated cautiously with 70 g. MeOH, followed by 200 g. dil. HCl; the org. layer gave 16% octane and a little $C_{10}H_8$; the main products (50%) were alkylated naphthalenes (56 g.) which were sepd. into *1-BuC$_{10}$H$_7$*, b_{760} 288.5-90.5°, b_6 119.5°, f.p. −06°, d_4^{20} 0.9600, n_D^{20} 1.5770 (*picrate*, m. 61-2° (from EtOH)), and *Bu$_2$C$_{10}$H$_6$*, b_4 159-61°, f.p. −47°, d_4^{20} 0.9432, n_D^{20} 1.5498. The identity of $1\text{-}BuC_{10}H_7$ was proved as follows: 10 g. Na in 150 g. C_6H_6 in a N atm., treated with 70 g. BuBr and 104 g. $1\text{-}BrC_{10}H_7$ mixt. and kept 5 hrs. at 80° (the surface of the soln. has a strong white luminescence in the dark), yielded 40 g. crude $BuC_{10}H_7$, which on redistn. b_{760} 286-7°, and forms a *picrate*, m. 61-2°, identical with that of the product made by means of Li. $C_{10}H_8$ (64 g.), 200 g. dry Et_2O, and 1.5 g. atoms Li in small pieces in a N atm. were without signs of action even in 24 hrs.; slow addn. of $Me_2CClCH_2CMe_3$ (222.7 g.), keeping the mixt. at 20-30°, and the usual decompn. of the mixt. gave *1-(1,1,3,3-tetramethylbutyl)naphthalene*, b_4 134-5°, f.p. −13.5°, d_4^{20} 0.9571, n_D^{20} 1.5665; the amt. of crude product was 18 g.

G. M. Kosolapoff

USSR/Chemistry - Naphthalene, Polyalkyl Feb 1948
Chemistry - Synthesis

"Synthesis and Properties of Polyalkyl Naphthalenes, III," D. N. Andreyev, A. D. Petrov, Inst of Org Chem, Acad Sci USSR, 5 pp

"Zhur Prik Khim" Vol XXI, No 2

PA 64T11

Continuing the study of alkylation of naphthalene by the Friedel-Crafts reaction, it was shown that naphthalene reacts with olefins, as well as alkyl halides, at temperatures as low as -10°, giving relatively pure products. In the case of tetralin, side reactions take place. Alkylated compounds are mixtures of α- and β-substituted isomers. Crystalline substances were isolated only in two cases, and the X-ray analysis showed the compounds formed to be 2,6-dioctylnaphthalene, mp 182-183°, and one of its β,β' isomers, mp 126°. In addition to the physical constants listed below, n is also given at 50° and d at 50, 75, 100 and 125°. Submitted 28 Mar 1947.

64T11

ANDREYEV, D. N.

ANDREYEV, D.N.; PETROV, A.D., redaktor.

[Organic synthesis in electric discharges] Organicheskii sintez v elektricheskikh razriadakh. Red. A.D.Petrova. Vvodnaia stat'ia IA.T.Eidusa. Moskva, Izd-vo Akademii nauk SSSR, 1953. 334 p. (MLRA 7:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Petrov).
(Chemistry, Organic--Synthesis) (Electrochemistry)

ANDREYEV, D.N.

✓ Synthesis and properties of organosilicon esters of mono- and dibasic acids. D. N. Andreev and L. L. Shchukovskaya. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1953, 121-4(Engl. translation).—See *C.A.* 48, 3244*i*. H. L. H.

ANDREYEV, D.N.

Chemical Abst.
Vol. 48 No. 6
Mar. 25, 1954
Organic Chemistry

Synthesis and properties of organosilicon esters of mono- and dibasic acids. D. N. Andreev and [illegible]kaya. *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1953, 735-9.—Heating 20 g. Et_3SiCl with 53 g. $PrCO_2H$ 85 hrs. gave 53% $PrCO_2SiEt_3$; a 90% yield resulted from 37 g. Et_3SiCl and 98 g. $PrCO_2Na$ in boiling xylene in 26 hrs.; the product b_{15} 85-7°, n_D^{20} 1.4250, d_{20} 0.8850. Similarly Et_3SiCl and iso-$BuCO_2H$ in 40 hrs. gave 26% iso-$BuCO_2SiEt_3$, b_{12} 92.5-3.5°, n_D^{20} 1.4252. Heating 19 g. Et_3SiCl with 16 g. enanthic acid 40 hrs. gave 9 g. Et_3SiOH, 3 g. $(Et_3Si)_2O$, and 2 g. $C_6H_{13}CO_2SiEt_3$, b_7 127.5-9.0°, n_D^{20} 1.4303. Heating 50 g. Et_3SiCl with 13 g. $(CH_2CO_2H)_2$ 107 hrs., filtration of the unreacted acid, and distn. gave some Et_3SiOH and $(CH_2CO_2H)_2$ and a small amt. of $(CH_2CO_2SiEt_3)_2$, $b_{0.4}$ 172.5°, n_D^{20} 1.4450, d_{20} 0.9518; the low yield was caused by the necessity of an alkali wash before distn. Similarly adipic acid gave, in 60 hrs., 18% *bis(trimethylsilyl) adipate*, $b_{0.4}$ 153-4°, n_D^{20} 1.4275, d_{20} 0.9580; *bis(triethylsilyl) adipate*, obtained similarly in unstated yield, b_6 221-2°, n_D^{20} 1.4475, d_{20} 0.9496. Me_3SiCl and azelaic acid in 92 hrs. gave unstated yield of *bis(trimethylsilyl) azelate*, b_9 180-1°, n_D^{20} 1.4310; similarly was obtained 54% *bis(triethylsilyl) azelate*, b_8 240-1°, n_D^{20} 1.4500, d_{20} 0.9438. All the esters are readily hydrolyzed, the esters of dicarboxylic acids being especially sensitive. The Et derivs. are more stable than Me analogs.

G. M. Kosolapoff

ANDREYEV, D.N.

4

Raman spectra of some silicohydrocarbons. V. A. Kolesova, E. V. Kukharskaya, and D. N. Andreev. Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci. 1953, 261-70 (Engl. translation).—See C.A. 47, 9770c. H. L. H.

KOLESOVA, V.A.; KUKHARSKAYA, Ye.V.; ANDREYEV, D.N.

Combination scattering spectra of some silanes. Izv. AN SSSR. Otd.khim. nauk. no.2:294-297 Mr-Ap '53. (MLRA 6:5)

1. Institut khimii silikatov Akademii nauk SSSR.
(Silanes) (Spectrum analysis)

ANDREYEV, D. N.

USSR/ Chemistry Silicates

Card : 1/1 Pub. 40 - 19/27

Authors : Andreyev, D. N., and Zavorotnova, O. I.

Title : Silico-organic acetic and isobutyric acid esters

Periodical : Izv. AN SSSR. Otd. khim. nauk 4, 707 - 708, July - August 1954

Abstract : The synthesis and properties of four hitherto unknown silico-organic acetic and isobutyric acid esters of the $R_2R''SiOOCR'$ and $R_3SiOOCR'$ type, are described. The basic reaction products used in the synthesis of the above mentioned esters were Na-salts of acetic and isobutyric acids and alkylchlorosilanes. The intermediate products, obtained during this synthesis, are listed. Eleven references: 4 USSR; 5 USA and 2 German (1872 - 1953).

Institution : Acad. of Sc. USSR, Institute of Chemistry of Silicates

Submitted : July 17, 1953

ANDREYEV, D.N

✓ **Synthesis and properties of silico-organic esters of propionic and isobutyric acids.** D. N. Andreev, B. N. Dolgov, and E. V. Kukharskaya. *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1955, 528-30; *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1955, 465-7 (Engl. translation).—Adding chlorosilanes to a suspension of dry RCO_2Na in petr. ether and refluxing 8-12 hrs. gave the following *propionic esters* [R = *EtC(:O)O*; % yield, b.p., d_{20}, and n_D^{20} shown]: *Me_3SiR*, 41.1, b_{747} 122-3°, 0.8014, 1.3931; *Me_2SiR_2*, 61.7, b_{10} 83.5-4°, 1.0057, 1.4086; *$MeSiR_3$*, 50.9, b_{11} 139°, 1.0039, 1.4140; *Et_3SiR*, 63.8, b_{15} 83-5°, 0.8885, 1.4202; *Et_2SiR_2*, 45.9, b_{15} 108.5-9.5°, 0.9806, 1.4193; *$EtSiR_3$*, 51.5, b_4 119°, 1.0660, 1.4180. *Isobutyric esters* (R = *$OCOCHMe_2$*): *Me_3SiR*, 47.3, b_{30} 43.5-4°, 0.8601, 1.3950; *Me_2SiR_2* 72.9, b_{11} 95-5.5°, 0.9751, 1.4057; $MeSiR_3$, 36.3, b_{11} 126-7°, 1.0223, 1.4090; *Et_3SiR*, 65.8, b_{14} 85°, 0.8743, 1.4190; *Et_2SiR_2*, 53.2, b_{10} 123-5°, 0.9538, 1.4160; *$EtSiR_3$*, 35.9, b_4 129°, 1.0144, 1.4140. The esters are rapidly hydrolyzed by H_2O.

G. M. Kosolapoff

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Andreyev, D. N.

AID P - 3499

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 14/21

Author : Andreyev, D. N.

Title : Determination of silicon is easily hydrolyzed organic silicon compounds

Periodical : Zhur. prikl. khim., 28, 6, 641-643, 1955

Abstract : Ethyl alcohol (95-96%) was used to hydrolyze alkylchlorosilanes since the reaction with water is too violent. According to the data obtained, the error does not exceed ±0.25-30%. Two tables, one Russian reference (1954).

Institution : Institute of the Chemistry of Silicates of the Academy of Sciences, USSR

Submitted : Ap 8, 1954

ANDREYEV, D. N.

USSR/ Chemistry - silicates

Card 1/2 Pub. 22 - 18/52

Authors :	Andreyev, D. N.
Title :	The chain mechanixm of the condensation reaction of $SiCl_4$ with cyclohexane and benzene in silent discharges
Periodical :	Dok. AN SSSR, 100/2, 263-265, Jan 11, 1955
Abstract :	Two binary mixtures: $SiCl_4$+cyclohexane and $SiCl_4$+benzene were investigated to determine the chain mechanism of their condensation reaction in silent discharges. It was found that $SiCl_4$ in the vaporous phase experiences no changes and that the Si-Cl bond does not become dissociated under the H_2.
Institution :	Academy of Sciences USSR, Institute of the Chemistry of Silicates
Presented by:	Academician A. V. Topchiev, July 6, 1954

Periodical : Dok. AN SSSR, 100/2, 263-265, Jan 11, 1955

Card 2/2 Pub. 22 - 18/52

Abstract : The addition of cyclohexane to the $SiCl_4$ resulted in the formation of condensation products namely, different silico-organic compounds containing hydrolyzing Cl. The products obtained after the fractionation of the liquid condensate are identified. The very same results were obtained during the condensation of $SiCl_4$ with benzene. Nine references: 4 USA and 5 USSR (1946-1953).

ANDREYEV, D.N.

USSR/Chemistry - Silicates

Card 1/1 Pub. 22 - 23/60

Authors : Andreyev, D. N.

Title : Condensation of methyltrichlorosilane under the effect of silent discharges

Periodical : Dok. AN SSSR 100/4, 697-700, Feb. 1, 1955

Abstract : The results obtained by studying the effect of silent discharges on methyltrichlorosilane are analyzed. The formation of condensation products containing 3 and more Si atoms in the molecule is explained by the growth of the chain. It was found that the method of condensing under the effect of silent discharges makes it possible to obtain good yields of polymeric methylpolychlorosilanes containing Si and C atoms in the basic chain. Other products which can be derived by this condensation method are listed. Thirteen references: 4 USA, 2 French, 4 German and 3 USSR (1909-1953).

Institution : Academy of Scs., USSR, Institute of The Chemistry of Silicates

Presented by: Academician A. V. Topchiev, August 5, 1954

ANDREYEV, D.N.

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Condensation of methyldichlorosilane in a silent discharge. D. N. Andreev (Silicate Chem. Inst., Leningrad). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1957, 818-25; cf. *C.A.* 50, 15766.—Passage of silent discharge (24.5 kv. at 50 cycles) through refluxing vapor of MeSiCl$_2$ (detailed diagram of app. is shown) in an H stream gave C$_2$H$_6$, MeSiCl$_2$CH$_2$SiCl$_3$, b. 183-5°, *MeSiCl$_2$CH$_2$CH$_2$SiCl$_3$*, b. 199-203° [Raman spectrum 137(1), 153(1), 198(1), 202(2), 295(10), 405(8), 595(3), 780(3), 1263(9), 1401(0), 2906(15), 2964(15)]; m. about 5°. Higher boiling products were treated with MeMgBr and EtMgBr yielding Et$_4$Si, 2,2,4,4,6,6-hexamethyl-3,5,6-trisilaheptane, 2,2,5,5,7,7-hexamethyl-2,5,7-trisilaoctane, and a methylation product, C$_8$H$_{24}$Si$_4$O$_2$, b. 175-80°, n_D^{20} 1.4768, d_{20} 0.8886. The probable reaction mechanism is discussed on a chain basis with participation of H atoms and Me radicals. The possibility of prepn. of silanes with alternating Si-C atoms thus exists in this reaction.

O. M. Kosolapoff

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1-4E3d

1-4E2c(j)

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ANDREYEV, D.N.

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Silicoorganic esters of organosilicon acids. B. N. Dolgov, E. V. Kukharskaya, and D. N. Andreev (Silicate Chem. Inst., Leningrad). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1957, 968-71.—Heating 14.6 g. $Me_3SiCH_2CH_2CO_2H$ (cf. Sommer, *et al.*, *C.A.* 43, 5012i) with 24 g. Et_3SiO_2CH 5 hrs. at 190-200° gave 41.9% $Me_3SiCH_2CH_2CO_2SiEt_3$, b_4 112-4°, d_{20} 0.8812, n_D^{20} 1.4372. Similarly was prepd. 59.5% $(Me_3SiCH_2CH_2CO_2)_2SiMe_2$, b_3 151.5°, 0.9407, 1.4368; 76.1% $MeEt_2SiCH_2CH_2CO_2SiEt_3$, b_4 137.5°, 0.8905, 1.4473; 55.8% $(Et_2SiO_2CCH_2CH_2SiMe_3)_2O$, b_4 170-2°, 0.9213, 1.4405; and 37.1% $(Et_2SiO_2CCH_2CH_2SiEt_3)_2O$, b_3 178-81°, 0.9251, 1.4480. To di-Et sodiomalonate from 42.6 g. Na in 1 l. abs. EtOH was added 280 g. $MeEt_2SiCH_2Cl$ and the reaction mixture treated as described by Sommer, *et al.* (*C.A.* 43, 5003f), gave 63.2% $MeEt_2SiCH_2CH(CO_2Et)_2$, b_4 141°, 0.9681, 1.4408. This (314 g.) added dropwise in 1.5 hrs. to 255.4 g. KOH in 255 ml. H_2O at 90°, evapd., and treated with concd. HCl gave 75.3% $MeEt_2SiCH_2CH_2CO_2H$, b_4 138.5°, 0.9306, 1.4455. This (96.6 g.) added to 98 ml. concd. H_2SO_4 over 1 hr. and stirred 2 hrs. gave after treatment with ice 83.7% $(HO_2CCH_2CH_2SiEt_2)_2O$, b_4 164-5°, 1.0356, 1.4646.
G. M. Kosolapoff

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Andreyev, D. N.

ANDREYEV, D.N.

Condensation of methyltrichlorosilane in silent discharges.
Report No. 2. Izv.AN SSSR.Otd.khim.nauk. no.7:818-825 Jl '57.
(MIRA 10:10)

1.Institut khimii silikatov AN SSSR.
(Silane)

ANDREYEV, D. N.,

"Condensation of Methylchlorosilanes under the Influence of the Silent Discharge," paper submitted at the Symposium on Organic and Nonsilicate silicon Chemistry on the 12th-14th May 1958, Dresden.

It will be shown here that under the influence of the silent electric discharge, methyltrichloro- and dimethyldichlorosilane increase in (molecular) weight to the end that polymethylchlorosilanes are formed which in the (parent) chain contain alternating silicon and carbon atoms. The main products of there reactions are the compounds which form as a result of the condensation of two or three molecules of the original methylchlorosilane. A series of polymethylchlorosilanes can be isolated. A reaction mechanism is proposed, based on a chair reaction, which proceeds by the formation of free radicals and hydrogen atoms.

Abstract: B-3,106,944 (Encl.)

AUTHORS: Andreyev, D. N., Kukharskaya, E. V. SOV/62-58-6-8/37

TITLE: On Some Properties of the Bond Si-C_{aryl} in Silicon-Organic Compounds Which, in the γ-Position, Contain a Carboxylic or Ester Group (O nekotorykh svoystvakh svyazi Si-C_{aril} v kremneorganicheskikh soyedineniyakh, soderzhashchikh v γ-polozhenii karboksil'nuyu ili slozhnoefirnuyu gruppu)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 6, pp. 702-705 (USSR)

ABSTRACT: In the introduction the authors discuss the properties of trimethyl propionic acid, and in this connection the investigations carried out by Sommer (Ref 2) and Dolgov (Ref 3). They then discuss the possibility of synthetizing dibasic organic silicon compounds (with siloxan bond) by the hydrolytic cleavage of the bond Si-C_{aryl}. In this way the following compounds were synthetized: 4,6-dimethyl-4,6-diethyl-4,6-disila-5-oxonandicarboxylic acid. The presence of 2 phenyl radicals in malonate connected by a silicon atom considerably increases the stability of this compound. The

Card 1/2

On Some Properties of the Bond Si-C_{aryl} in Silicon-Organic Compounds Which, in the γ-Position, Contain a Carboxylic or Ester Group

SOV/62-58-6-8/37

methyldiphenylsilylpropionic acid separates benzene after condensation (200°). Besides, silicon-organic ester of silicon-organic acid is formed.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of the Chemistry of Silicates, AS USSR)

SUBMITTED: December 10, 1956

1. Silicon compounds (Organic)--Properties 2. Silicon compounds (Organic)--Synthesis 3. Molecular association 4. Propionic acid --Properties 5. Carboxylic acids--Synthesis 6. Phenyl radicals --Chemical effects

Card 2/2

5(3)

AUTHORS: Kukharskaya, E. V., Andreyev, D. N., Kolesova, V. A.

SOV/62-58-11-16/26

TITLE: On the Interaction of Trimethylsilylmethyl Magnesium Chloride With Esters (O vzaimodeystvii trimetilsililmetilmagniykhlorida so slozhnymi efirami)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 11, pp 1372-1375 (USSR)

ABSTRACT: In the present paper the authors investigated the interaction of trimethylsilylmethyl magnesium chloride with ethyl acetate, ethyl-n-butyrate, and ethyl isobutyrate. It was found that the reaction with the two mentioned first takes place normally in the direction of the formation of tertiary alcohols. It is, however, also accompanied by a β-decay, by a cleaving off of a radical $(CH_3)_3Si$- from the newly formed tertiary alcohol due to the rupture of the Si-C binding. This fact, however, was not surprising. A number of scientists had observed already earlier that in the case of organosilicic β-alcohols (Refs 3 and 6) as well as in the case of β-acids (Refs 3,5), of ketones (Ref 4), and of esters (Ref 7) a rupture of Si-O bindings takes place under the action of electrophilic

Card 1/2

On the Interaction of Trimethylsilylmethyl Magnesium Chloride With Esters SOV/62-58-11-16/26

and nucleophilic agents. In the case of an experiment with ethyl isobutyrate tertiary alcohol or olefin could not be separated. The branched structure of the acid apparently represented considerable steric hinderances which obstructed the course of the reaction. If organosilicic alcohols containing a hydroxyl group at the β-carbon atom are dehydrated unsaturated silicon carbides with a double bond in the β-position form. There are 10 references, 4 of which are Soviet.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences, USSR)

SUBMITTED: March 20, 1957

Card 2/2

5(3)

AUTHORS: Andreyev, D.N., Kukharskaya, E.V. SOV/62-58-11-23/26

TITLE: Preparation of Organo-Silicon Ketones by Dry Distillation of Salts of Organo-Silicic Acids (Polucheniye kremneorganicheskikh ketonov sukhoy peregonkoy soley kremneorganicheskikh kislot)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 11, pp 1597 - 1598 (USSR)

ABSTRACT: In this short paper the authors reported on the condensation of salts of organic acids. Formerly, this reaction was not used for the preparation of organo-silicon ketones. Calcium salts of 2 acids, the trimethyl-silyl propionic acid (I) and the methyl-diethyl-silyl propionic acid (II), were condensed. It has been ascertained that this reaction produces ketones with symmetric structure, if salts of organo-silicic acids are used. From the condensation of a mixture of salts of organo-silicic and organic acids ketones of asymmetric structure are obtained. As a result of the investigation carried out it has been ascertained that during this reaction γ-organo-silicic acids show a similar behaviour as the organic ones and that in the distillation of their calcium salts they develop ketones in an equally high yield.

Card 1/2

Preparation of Organo-Silicon Ketones by Dry Distillation SOV/62-58-11-23/26
of Salts of Organo-Silicic Acids

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR
(Institute of Silicate Chemistry, Academy of Sciences, USSR)

SUBMITTED: May 13, 1958

Card 2/2

SOV/79-28-7-62/64

AUTHORS: Korshak, V. V., Frunze, P. M.,
Andreyev, D. N., Kukharskaya, E. V.

TITLE: Letter to the Editor (Pis'mo v redaktsiyu). On the Properties of Polyamides With Siloxane Groupings (O svoystvakh poliamidov s siloksanovymi gruppirovkami)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 7, pp 1997 - 1998 (USSR)

ABSTRACT: The general interest prevailing in organosilicon compounds caused the authors to deal with the problem of whether the siloxane groupings in the chain of the initial dicarboxylic acid could exert an influence on the properties of the polyamides. For this purpose they synthesized polyamides from three dicarboxylic acids of the structure $HOOC-(CH_2)_2-Si(R_1R_2)-O-Si(R_1R_2)-(CH_2)_2-COOH$, where 1) $R_1=R_2=CH_3$, 2) $R_1=R_2=C_2H_5$, 3) $R_1=CH_3$, $R_2=C_2H_5$. From these acids polyamides were obtained by polycondensation with aliphatic and aromatic diamines, and from the mixtures of these acids as well as from the adipinic

Card 1/3

Letter to the Editor. On the Properties of Polyamides With Siloxane Groupings SOV/79-28-7-62/64

acid with hexamethylene diamine mixed polyamides were produced. It turned out that the introduction of siloxane compounds leads to the formation of polymers. They are of a rubber-like nature and have low melting points as compared to those produced from azelaic acid, which fact obviously depends on the influence of the siloxane grouping as well as on the presence of the side substituents at the silicon atom; also the lower melting point and other properties in the substitution of the methyl- by the ethylradical at the silicon atom tend to show this dependence.

ASSOCIATION: Institut elementarnoorganicheskikh soyedineniy Akademii nauk SSSR i Institut khimii silikatov Akademii nauk SSSR (Institute of **Elemental-organic** Compounds, AS USSR, and Institute of the Chemistry of Silicates, AS USSR)

SUBMITTED: April 10, 1958

Card 2/3

Letter to the Editor. On the Properties of Polyamides With Siloxane Groupings SOV/79-28-7-62/64

1. Amides--Synthesis 2. Amides--Properties 3. Silicones--Chemical effects 4. Carboxylic acids--Chemical reactions 5. Polymers--Properties

Card 3/3

ANDREYEV, D. N.

AUTHORS: Dolgov, B. N., Andreyev, D. N., Lyutyy, V. P. 20-3-23/59

TITLE: The Effect of the R-Value of Alkyl Radicals on the Si-R Bond Stability Against the Action of Concentrated Sulfuric Acid (Vliyaniye velichiny alkil'nykh radikalov R na ustoychivost' svyazi Si-R k deystviyu kontsentrirovannoy sernoy kisloty).

PERIODICAL: Doklady AN SSSR, 1958, Vol. 118, Nr 3, pp. 501-504 (USSR)

ABSTRACT: From the results of references 1-6 the authors draw the conclusion that the stability of the $\equiv Si-C\equiv$ bond to concentrated sulfuric acid must depend on the quantity (number of carbon atoms) and the structure of the radicals combined with this carbon atom. In order to check this assumption the authors synthesized 3 new monobasic β-silicium-organic acids (VII, VIII and IX) with a common formula $CH_3(R)_2SiCH_2CH_2COOH$ (where R = $n-C_3H_7$, $n-C_4H_9$ and $i-C_5H_{11}$). Their reaction to concentrated sulfuric acid under standard conditions was studied. Three 2-basic silicium organic acids were produced: 4,4,6,6-tetra-n-propyl-4,6-disila-5-oxancnan-dicarboxylic acid (X), 4,6-dimethyl-4,6-di-n-butyl-4-6-disila-5-oxanonan-dicarboxylic acid (XI) and 4,6-dimethyl-4,6-di-isoamyl-4,6-disila-5-oxanonan-dicarboxylic acid (XII). The structure of these acids points at

Card 1/2