L 13292-66 EWT(m)/EWP(j) RM

ACC NR: AP6000325 (A) SOURCE CODE: UR/0286/65/000/021/0012/0012

INVENTOR: Volkova, L. I.; Zaitova, A. Ya.; Ioakimis, A. A.; Mochal'nikova, T. P.; Nazarova, L. Yu.; Nazarov, V. I.; Pryakhina, M. S.; Petrov, V. N.; Rachkovskiy, E. E.; Savel'yev, A. P.; Syrova, A. A.; Tikhanovskaya, S. G.

32
B

ORG: none

7,44,55

TITLE: A method for producing normal butanol by synthesis from ethyl alcohol. Class 12, No. 175929 [announced by the Bashkir Scientific Research Institute for Petroleum Refining (Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 12

TOPIC TAGS: catalysis, butanol, ethyl alcohol

ABSTRACT: This Author's Certificate introduces: 1. A method for producing normal butanol by synthesis from ethyl alcohol on a catalyst. The process is done in a single stage by using a catalyst consisting of aluminum oxide, magnesium oxide, silicon oxide and a salt or oxide of an alkali metal. 2. A modification of this

Card 1/2 UDC: 66.097.3 : 547.264.07

2

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ACC NR: AP6000325

method in which the catalyst contains from 5 to 80 % aluminum oxide, from 95 to 10 % magnesium oxide, from 0 to 50 % silicon oxide and from 0 to 5 % of a salt or oxide of an alkali metal.

SUB CODE: 07/ SUBM DATE: 11Apr63/ ORIG REF: 000/ OTH REF: 000

jw

Card 2/2

NAZAROVA, L V.

B-8

USSR/Physical Chemistry, Thermodynamics, Thermochemistry,
Equilibriums, Phys-Chem. Anal. Phase-Transitions.

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22354

Author : L. V. Nazarova, A. V. Ablov.
Inst : Not given
Title : Study of Nickel Salt Pyridinates in Solutions. I. Nickel Nitrate-Pyridine-Acetone System.

Orig Pub : Uch. zap. Kishinevskogo un-ta, 1954, 14, 45-51.

Abstract : It is shown by method of determination of the optical density of solutions that in nickel nitrate (I)-pyridine (II)-acetone (III) system two complex compounds are formed; $Ni(NO_3)_2 \cdot Py$ (IV) AND $Ni(NO_3)_2 \cdot 2Py$ (V). It is found that the formation of (V) does not come directly from I and II but step-by-step through IV. An approximate value of instability constant of IV is determined as equal to $2.9 \cdot 10^{-3}$.

Card 1/1

ABLOV, A.V.; NAZAROVA, L.V.

Spectrophotometric analysis of nickel salt pyridinates in aqueous solutions. Zhur. neorg. khim. 2 no.1:53-59 Ja '57. (MLRA 10:4)

1. Kishenevskiy gosudarstvennyy universiter.
(Nickel nitrate) (Pyridine) (Systems (Chemistry))

NAZAROVA, L.V.

ABLOV, A.V.; NAZAROVA, L.V.

Spectrophotometric analysis of pyridinates of cobalt salts in aqueous solutions. Zhur. neorg. khim. 2 no.11:2575-2580 N '57. (MIRA 11:3)

1. Kishinevskiy gosudarstvennyy universitet.
(Spectrophotometry) (Cobalt salts)
(Pydridine)

NAZAROVA, L.V. Cand Chem Sci -- (diss) "Spectro-photometric study of complex nickel compounds and cobalt ~~compounds~~ with organic amines." Kishinev, 1958, 15 pp (Min of Higher Education USSR. Kishinev State Univ) 100 copies (KL, 28-58, 104)

NAZAROVA, L.V.

NAZAROV A L V

5(4)

AUTHORS:	Vasil'yev, V. P., Korableva, V. B., Yatsimirskiy, K. B.	SOV/153-58-3-30/30
TITLE:	Conference Discussion on the Methods of Investigating the Complex Formation in Solutions (Soveshchaniye-diskussiya po metodam izucheniya kompleksoobrazovaniya v rastvorakh)	
PERIODICAL:	Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 3, pp 173 - 174 (USSR)	

ABSTRACT: From February 18 to 21, 1958 a conference discussion took place at the town of Ivanovo; it dealt with the subjects mentioned in the title. It was called on a decision of the VIIth All-Union Conference on the Chemistry of Complex Formations. More than 200 persons attended the conference, among them 103 delegates from various towns of the USSR. At the conference methods of determining the composition of the complexes in solutions were discussed, as well as the methods of calculating the instability constants according to experimental data and problems concerning the influence of the solvent upon the processes of complex formation.

. . . . In the lecture by A. K. Babko and M. M. Tananayko, "Physical and Chemical Analysis of the Systems With 3 Colored Complexes in the Solution", the results of a systematic investigation in copper-quinoline-salicylate, as well as in copper-pyridine-salicylate systems by means of the optical method were dealt with. In the lecture by Ya. A. Fialkov the idea of a further investigation of the complex formation processes in solutions was developed. Besides the determination of the composition and stability of the complexes also the physical and chemical properties, the chemical nature and the structure of the complex compounds must be investigated . . . . .

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I. I. Alekseyeva and K. B. Yatsimirskiy in their lecture "Investigation of the Polymerization of Iso-Poly Acids in Solutions" mentioned experimental results of the investigation of the polymerization in solutions of molybdic acid. The authors proved that especially the molybdic acid within a certain range of the pH values and the concentrations exists as a number of compounds that can be expressed by an overall formula $MoO_4(HMoO_4)^{n-2}$. In the lecture by S. V. Aksel'rud and V. B. Spivakovskiy investigation results on basic salts taking into

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account the complex formation in solutions by means of the potentiometric method were mentioned for systems with zinc, cadmium and indium. In the evaluation of their results the authors employed the method of the table difference. The calculation of the consecutive constants was carried out according to the interpolation formula by Boston. N. A. Chernovskiy held a lecture on "pH Measurement Method of the Solutions in Combination With the System Analysis of the Solubility Diagram of the System Cu^{++}-HCl - H_2O in Investigating Complex Copper Compounds in Saturated Solutions". It was found that the substance at the bottom of the liquid is more basic than the solution; furthermore, the increased acidity of the solution from the viewpoint of the formation of hydroxy-chloro complexes in the solution was explained. V. I. Kuznetsov opened the discussion with his lecture; he pointed out the necessity of utilizing the concepts worked out in the investigations of the polymerization in organic chemistry in the chemistry of polynuclear complexes. A. A. Grinberg thinks that the new approach of the hydrolysis

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investigation as developed by the Scandinavian school is of high value. He also pointed to the necessity of studying the kinetics of the polymerization process and a quantitative determination of the strength of the polymers. A. K. Babko pointed out that the study of the polymer structure was necessary. S. P. Komar' mentioned in his lecture that the rather widely agreed polymerization type according to the scheme "nucleus + chain members" is not obtained in all cases. The following scientists took part in the discussion: V. S. Tolmachev, A. V. Ablov, I. S. Mustafin, I. V. Tananayev and K. B. Yatsimirskiy. A. K. Babko then discussed in his lecture "Methods of Determining the Dissociation Constant of the Complex Groups in Solutions" the main principles of determining the instability constants. S. P. Komar' discussed in his lecture "Calculation Methods of the Instability Constants of the Complex Compounds According to Experimental Data" the possibilities of using the known calculation methods of the instability constants for various cases of the complex formation in solution. If several mononuclear complexes are formed the displacement method by Abegg and Bodlender (completed by A. K. Babko) cannot be recommended for the calculation of the instability constant. The lecturer discussed the dissolution methods of the polynomials proposed by B'yerrum, Leden, Rossotti, Sketchard, Kinsley and other authors. The constants calculated in this way are not very accurate. It was proved that the method of successive approximations can lead to wrong conclusions as to the chemical processes taking place in the system investigated. The most probable value of the physical constants can be obtained by the method of the least squares. B. V. Ptitsyn, Ye. N. Tekster and L. I. Vinogradova described the determination methods of the instability constants of the oxalate complexes of niobium, uranium and iron which are based on the investigation of the equilibrium displacement of the complex formation by silver ions. N. K. Bol'shakova, I. V. Tananayev and G. S. Savchenko held a lecture on "The Role of the Time Factor in the Investigation of the Complex Formation". In the discussion on the lectures A. A. Grinberg mentioned that due to the slow adjustment of the equilibria the methods discussed of determining the instability constants (palladium and cobalt complexes) can often not be employed. A. V. Ablov pointed out the necessity of devising direct methods of proving the existence of intermediate forms in a step-wise complex formation. K. B. Yatsimirskiy mentioned that the instability constants of slowly dissociating complexes can be calculated from thermochemical data. L. P. Adamovich, A. M. Golub among others took part in the discussion on the lectures. A. K. Babko requested inclusion in the next conference on the chemistry of complex compounds a lecture in which various calculation methods of the instability constants should be discussed by the example of actual cases. This should clarify to which divergencies of the values of the constants different methods of evaluating the experimental data can lead. S. P. Komar' stressed that in the determination of the instability constants all chemical equilibria should be taken into account that render complex the complex formation process in the solution, especially the hydrolysis processes of the central ion and the addendum. In the lecture delivered by V. M. Peshkova and A. P. Zozulya "Application of the Distribution Method to the Investigation of the Stability Constants

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Conference Discussion on the Methods of Investigating the Complex Formation in Solutions SOV/153-58-3-30/30

of Some Thorium Complex Compounds" results obtained from the experimental investigation of the distribution of thorium compounds in the systems: acetylacetone - benzene - water, and 2-oxy-1,4,-naphthoquinone - chloroform - water were given. From these data the instability constants of the thorium complexes with acetyl-acetone and 2-oxy-1,4-naphthoquinone were calculated. I. V. Tananayev, G. S. Savchenko and Ye. F. Goncharov held a lecture on the application of the solubility method in the determination of the stability of complex compounds in solutions. In this lecture also other methods of investigating complex formation processes in the solution were discussed (pH measurement, measurement of the optical density, as well as of the heat of mixing). B. D. Berezin held a lecture on the "Application of the Solubility Method in Studying the Phthalocyanine Complexes of Metals". He used the determined quantitative characteristics of the reaction of the transition of the phthalocyanides of cobalt, nickel, copper and zinc, as well as of the free phthalocyanine into the sulfuric acid solution for the theoretical reasoning, and as an experimental proof of the existence of Card 9/16

π-bonds in the complexes investigated. These characteristics also served him as a proof of new electronic formulae of phthalocyanine and its complex derivatives. In the lecture delivered by I. L. Krupatkin on "The Method of the Two Solvents as a Method of Investigating the Formation and Properties of Organic Complexes" it was proved that this method makes it possible to determine the number of complexes formed in the system, their composition and relative stability. V. I. Kuznetsov, A. K. Babko, E. P. Komar', I. S. Mustafin and Ya. I. Tur'yan took part in this discussion. In the lecture delivered by A. A. Grinberg and S. P. Kiseleva on the complex palladium compounds (II) with a coordination number above four it was proved that in the case of a large chlorine and bromine ion excess complexes with the coordination number 5 are formed. The instability constants of these complexes were estimated. L. P. Adamovich mentioned a new manipulation in the spectrophotometric investigation of the complex compounds that can be used in systems with the formation (or predomination) of one single complex. This method makes it possible to determine the composition and instability constant Card 10/16

of the complex. In the lecture delivered by K. B. Yatsimirskiy and V. D. Korableva the application of the theory of crystalline fields for the determination of the composition and structure of the chloride complexes of cobalt, nickel and copper according to the absorption spectra of these complexes was discussed. It was proved that in a hydrochloric acid concentration above 5 mole/liter in the solution there exists an equilibrium between the tetrahedric and octahedric form of the cobalt chloro complexes. Yu. P. Nazarenko proved in his lecture "The Application of Radioactive Isotopes in the Investigation of the Solvation Equilibrium in Solutions of Complex Compounds" the possibility of using data on the isotope exchange to clarify the structure of the complex and mechanism of the hydration processes. V. Klimov mentioned in his lecture the use of radioactive isotopes in the study of tin and antimony complexes in non-aqueous solutions. A. V. Ablov, V. S. Tolmachev, V. I. Kuznetsov and A. M. Golub took part in the discussion of the lectures. The usefulness of employing the theory of the crystalline fields in explaining the results obtained from the absorption spectra of the com- Card 11/16 plex compounds was stressed. In the lecture delivered by I. A. Shek on "The Investigation of the Complex Formation by the Method of the Dielectric Permeability and the Polarization" the principles of the methods mentioned were presented. This method was employed for investigating the compounds of the type of the "affiliation" products. The lecture delivered by I. A. Shek and Ye. Ye. Kriss "Employing the Method of the Dielectric Constant for Investigating Complex Compounds of the Type of Crystal Solvates in Solutions" dealt with the investigation of the solvates of lanthanum and cerium chlorides with ketones, as well as with the study of the compounds formed in heterogeneous systems with tributyl phosphate and nitric acid. V. P. Toropova gave in her lecture "The Polarographic Method of Investigating the Complex Formation in Solutions" a survey of the applications of the polarographic method in the study of the complex compounds, and illustrated several fine characteristic features of this method. In the lecture delivered by T. N. Sumarokova "The Cryoscopic Method of Investigating the Complex Formation Reactions" a survey of

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the possibilities of the cryoscopic method was given, and its applicability in the study of several complex compounds of stannic chloride with organic substances was proved. A. M. Golub described the results of his investigations of thiocyanate complexes of several metals. A vivid discussion took place on the lectures held. Ya. A. Fialkov and Yu. Ya. Fialkov considered the cryoscopic method of investigating complex compounds to be of considerable value. K. B. Yatsimirskiy pointed out that the publication of the surveys on individual methods of investigating the complex formation reactions would be desired: this concerns especially the polarographic method. The cryoscopic method should be brought to a level that makes the calculation of the equilibrium constants of the processes to be investigated possible. The problem of the method of evaluating the experimental results becomes more and more important. Many scientists use the instability constants without taking into account the way in which they had been obtained. The calculation methods employed by A. M. Golub are one step back, as compared to those employed at present. In his lecture N. P. Komar' pointed out the extremely great importance of the mathematical

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evaluation of the results obtained, as well as of the plotting of curves. A. K. Babko suggested selecting one or two systems that are experimentally well investigated, and to evaluate the results obtained according to different methods so that it is possible to check and evaluate them. Ya. I. Tur'yan took part in the discussion. Ya. A. Fialkov discussed in his lecture "The Effect of the Solvent on the Complex Formation Process as Well as on the State of Equilibrium in the Solutions of Complex Compounds" the influence exerted by the solvents upon the molecular state, upon the solvation of the system components, upon the stabilization of the complexes formed in the system, upon the step-wise dissociation of the complexes and upon a number of other processes. The influence exercised by the dielectric constant upon the complex formation process was discussed. It was concluded that a direct relation does not exist, and that the chemical nature of the solvent must be taken into account. A. V. Ablov and L. V. Nazarova held a lecture on "The Spectroscopic Investigation of Nickel Cobalt 'Pyridinates' in Various Solvents". The instability constants of the complexes were determined and it was proved that the

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stability of the 'pyridinates' is changed in dependence on
the solvent. Ya. I. Tur'yan in his lecture "The Influence
of the Solvent Upon the Composition and Stability of Complex
Ions" discussed the polarographic investigation method of
the chloride and thiocyanate complexes of lead in aqueous
ethanol solutions at different content of the non-aqueous
solvent and at a constant ionic strength. A step-wise
character of the complex formation was found as well as the
instability constants of the complexes. The influence of
the dielectric constant of the solution on the stability of
the investigated complexes was proved. In the lecture by
V. P. Vasil'yev on the "Investigation of Aquo Complexes in
Mixed Solvents" the main attention was devoted to the neces-
sity of the qualitative recording of the solvation effects
in the complex formation. The applicability of the polaro-
graphic method in the determination of the composition and
stability of the aquo complexes in mixed solvents was proved
and experimental material on the thermodynamics of the
dissociation of the cadmium-aquo complexes in aqueous ethanol
solutions was mentioned. V. B. Tolmachev, V. I. Kuznetsov

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and I. V. Tananayev stressed in their lectures the necessity
of a more complete and general investigation of the solvation
processes. A. K. Babko and A. M. Golub pointed out the
great importance of the investigations of the complex forma-
tion equilibria in non-aqueous solutions, and made several
critical comments on the lecture by Ya. I. Tur'yan. The
following scientists took part in this discussion: L. P.
Adamovich, O. I. Khotsyanovskiy, A. P. Moskvin and A. G.
Mostakhov. At the final meeting of the conference A. A.
Grinberg, Corresponding Member, AS USSR, said in his speech
that such a conference was very urgent. A detailed discus-
sion of the determination methods of the composition of the
complexes, as well as of the method used in the study of the
quantitative characteristics of the stepwise complex forma-
tion was extremely useful for all who attended this conference.

Card 16/16
USCOMM-DC-60976

05860

SOV/78-4-11-13/50

5(2)

AUTHORS: Ablov, A.V., Nazarova, L.V.

TITLE: A Spectrophotometric Analysis of the Pyridinates of Nickel and Cobalt in Various Solvents

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11, pp 2480-2484 (USSR)

ABSTRACT: This article was read at the "Conference and Discussion of Methods Used to Study the Complex Formation in Solutions" held in Ivanovo on February 21, 1958. The effect of the solvent on the composition and stability of complex compounds has been little investigated so far. Mention is made of articles by A.K. Babko (Refs 1,2), A.M. Golub (Ref 4) and Ya.I. Tur'yan (Refs 5,6). The authors investigated the pyridinates of Ni and Co in methanol, ethanol, n-propanol, n-butanol and acetone. In all solutions, the optical density of the nickel nitrate solutions changes when adding pyridine (Fig 1), and the absorption maximum is shifted toward the short-wave spectrum range. In cobalt nitrate only the optical density changes (Fig 2), while the absorption maximum is not shifted. The highest degree of stability is exhibited by pyridine complexes in acetone,

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A Spectrophotometric Analysis of the Pyridinates of Nickel and Cobalt in Various Solvents

whereas it increases in alcoholic solutions from methanol to butanol. The composition of the pyridinates and their stability in acetone were analyzed spectrophotometrically according to J. Bjerrum (Ref 10) with the assistance of F. Sheyn and I. Istratiy. The following values were obtained for the nickel compound: $K_1 = 3.6.10^{-4}$, $K_2 = 5.6.10^{-3}$, $K_3 = 1.6.10^{-2}$. In alcoholic and aqueous solution, the authors found a linear dependence of K_1 on the reciprocal value of the dielectric constant (Fig 4). The resultant data are in agreement with the results published by N.A. Izmaylov (Refs 12,13). The stability of the pyridinates is greatly reduced by a small addition of water. In accordance with A.I. Rivkind (Ref 16) this indicates that alcohols and acetone are displaced by water out of the solvate sheath. There are 4 figures, 2 tables, and 16 references, 11 of which are Soviet.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State

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05860
SOV/78-4-11-13/50

A Spectrophotometric Analysis of the Pyridinates of Nickel and Cobalt in Various Solvents

University)

SUBMITTED: July 20, 1958

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ABLOV, A.V.; NAZAROVA, L.V.

Effect of substituents in the molecule of the ligand on the stability of complex nickel salts. Zhur. neorg. khim. 5 no.8: 1735-1737 Ag '60. (MIRA 13:9)

1. Kishinevskiy gosudarstvennyy universitet.
(Nickel compounds)

ABLOV, A.V.; NAZAROVA, L.V.

Stability of copper pyridinates in various solvents. Zhur.neorg.-khim. 6 no.9:2043-2047 S '61. (MIRA 14:9)

1. Kishinevskiy gosudarstvennyy universitet.
(Copper compounds) (Pyridine)

NAZAROVA, L.V.; ABLOV, A.V.

Determination of stepwise stability constants from potentiometric measurements of corresponding solutions. Zhur.neorg.khim. 7 no.6:1305-1308 Je '62. (MIRA 15:6)

1. Kishinevskiy gosudarstvennyy universitet.
(Complex compounds)

KRYUKOV, A.I.; NAZAROVA, L.V.

Spectra and photochemistry of alcohol solutions of trivalent iron salts. Part 1: Absorption spectra of iron salts in methanol and ethanol. Ukr. khim. zhur. 29 no.8:806-812 '63. (MIRA 16:11)

1. Institut fizicheskoy khimii im. L.V. Pisarzhevskogo AN UkrSSR.

KRYUKOV, A.I.; NAZAROVA, L.V.; DAIN, B.Ya.

Spectra and photochemistry of alcohol solutions of trivalent iron salts. Part 2: Photoreduction of iron (111) salts in alcohols. Ukr. khim. zhur. 29 no.8:812-819 '63.
(MIRA 16:11)

1. Institut fizicheskoy khimii im. L.V. Pisarzhevskogo AN UkrSSR.

NAZAROVA, L.V., dotsent

Potentiometric study of cadmium pyridinates by the method of corresponding solutions. Uch.zap.Kish.un. 68:20-23 '63 [cover '64]. (MIRA 18:12)

MALAP[illegible], [illegible]; [illegible]; DAGA[illegible], [illegible].

Stability of complex cadmium salts with aniline and its mon substituted derivatives. Zhur. neorg. khim. [illegible] 210-213 [illegible] '64. [illegible]

DUBEYKOVSKIY, N.V.; NAZAROVA, V.

Advanced technology of train and freight operation in the zone. Zhel. dor. transp. 47 no.7:26-30 Jl '65. (MIRA 18:7)

1. Nachal'nik stantsii Perm'-2 Sverdlovskoy dorogi (for Dubeykovskiy). 2. Glavnyy inzh. stantsii Perm'-2 Sverdlovskoy dorogi (for Nazarova).

NAZAROVA, L.V.

Silver and cadmium pyridinates in water-ethanol solutions. Zhur.neorg.khim. 10 no.11:2509-2512 N '65.

(MIRA 19:1)

1. Kafedra neorganicheskoy khimii Kishinevskogo gosudarstvennogo universiteta. Submitted May 30, 1964.

MA[illegible]ROVA, M.A.

Gynecology - Bibliography, Obstetrics-Bibliography

Russian Literature in the field of obstetrics and gynecology for the end of 1950 and first and second quarters of 1951. Akush. i gin., [illegible]

Monthly List of Russian Accessions, Library of Congress, June 1952. Uncl.

NAZAROVA, M. A.

Obstetrics - Bibliography

Russian literature on obstetrics and gynecology for the third quarter of 1951. Akush. i gin., No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress October 1952 UNCLASSIFIED.

[illegible] - [illegible]

Russian literature in the field of [illegible]
[illegible] A[illegible]

Monthly List of Russian Accessions, [illegible]
December 19[illegible]. UNCLASSIFIED

NAZAROVA, N.A.

Russian literature on obstetric and gynecology in the second quarter of 1952. Akush.i gin. no.2:79-90 Mr-Ap '53. (MLRA 6:5)
(Gynecology--Bibliography) (Bibliography--Gynecology) (Obstetrics--Bibliography) (Bibliography--Obstetrics)

NAZAROVA, M.A.

Russian literature on obstetrics and gynecology in the third quarter of 1952. Akush.i gin. no.2:83-90 Mr-Ap '53. (MLRA 6:5)

(Gynecology--Bibliography) (Obstetrics--Bibliography)

NAZAROVA, M.A.

Russian literature on obstetric andgynecology in the second quarter of 1952. Akush. gin. no.2:79-90 Mar-Apr 1953. (CLML 24:3)

NAZAROVA, M.A

VINOGRADOV, S.A., kandidat meditsinskikh nauk

"Diseases of the cardiovascular system; a bibliography of Russian literature, 1917-1949." M.A.Nazarova. Reviewed by S.A.Vinogradov. Terap. arkh. 26 no.2:89-91 Mr-Ap '54. (MLRA 7:8)

(BIBLIOGRAPHY--CARDIOVASCULAR SYSTEM--DISEASES)
(CARDIOVASCULAR SYSTEM--DISEASES--BIBLIOGRAPHY)
(NAZAROVA, M.A.)

KOTKINA, M.A.; DOBKINA, B.M.; Prinimali uchastiye: NAZAROVA, M.G.; AKSENOVA, Z.V.; RASTOPCHINA, A.P.

Spectrochemical method for determining the impurities present in strontium and barium. Zav.lab 26 no.10:1126-1128 '60. (MIRA 13:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti.
(Strontium--Analysis) (Barium--Analysis)

NAZAROVA, M. M.

Horticulture

Dissertation: "On the Vegetative Hybridization of the Tomato with the Cyphomandra." Cand Biol Sci, Moscow Oblast Pedagogical Inst, 18 Mar 54 (Vechernyaya Moskva, Moscow, 8 Mar 1954)

SO: SUM 213, 20 Sept 1954

NAZAROVA, M.M.

Treatment of pulmonary tuberculosis in pregnant women. Akush. i gin. no.6:32-35 N-D '55 (MLRA 9:6

1. Iz kafedry tuberkuleza I Moskovskogo ordena Lenina meditsinskogo instituta (zav.-prof. F.V. Shebanov)

(TUBERCULOSIS, PULMONARY, in pregn.
ther.)
(PREGNANCY, in various dis.
tuberc. pulm.,ther.)

VASIL'YEVA, [illegible]; [illegible], F.F.

[illegible] [illegible] [illegible] [illegible] [illegible]
no.3: [illegible] '57.

1. Biolog[illegible] [illegible] [illegible]
Sibirskogo [illegible] AN SSSR.

44437
S/120/62/000/006/006/029
E192/E382

92150

AUTHORS: Nazarova, M.N. and Pereyaslova, N.K.

TITLE: Temperature-dependence of the parameters of a scintillation transducer

PERIODICAL: Pribory i tekhnika eksperimenta, no. 6, 1962, 49 - 51

TEXT: Crystals of NaI(Tl) and CsI(Tl), 40 x 40 mm^2, with photomultiplier tubes ФЭУ-1С (FEU-1S), ФЭУ (FEU)-24, FEU-13, FEU-15 and FEU-16 were used in this experimental investigation of the temperature-dependence of the pulse-amplitude energy resolution and flash time over the range of temperatures from 20 - 90 °C. The photomultipliers were high-stability tubes with an amplitude spread of less than 5% per 40 hours. The scintillator was placed in a thermostat where the temperature could be kept constant to within 1 °C. The pulse-amplitude A and the energy resolution R were measured by the amplitude analysor type АИ-100 (AI-100), using the isotope Cs^{137}. The flash time τ of the scintillators was measured by a fast oscilloscope. The decrease in the pulse-amplitude when using NaI(Tl) crystals and various types of photomultipliers amounted to 30 - 50% at 90 °C and this was accompanied

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E192/E382

Temperature-dependence of ....

by a corresponding deterioration in the energy resolution. This can be explained by the reduction in the quantum yield of the photocathode and by the change in the radiation spectrum of the scintillator and the spectral sensitivity of the photocathode. The temperature variation appeared to have the least effect on the pulse-amplitude energy resolution when using transducers with CsI(Tl) crystals and the photomultipliers type FEU-15, FEU-16 and FEU-13; A and R did not change more than about 3% between 20 and 60 °C. The reduction in τ was roughly proportional to the temperature and amounted to about 30% at 90 °C. There are 5 figures and 1 table.

ASSOCIATION: Institut prikladnoy geofiziki AN SSSR (Institute of Applied Geophysics of the AS USSR)

SUBMITTED: February 19, 1962

Card 2/2

L 3233-66 FSS-2/EWT(1)/FS(v)-3/FCC/EWA(d)/EWA(h) TT/GS/GW

ACCESSION NR: AT5023630 UR/0000/65/000/000/0510/0510

AUTHORS: Avdyushin, S. I.; Kogan, R. M.; Nazarova, M. N.; Pereyaslova, N. K.; Petrenko, I. Ye.; Svidskiy, P. M.

TITLE: Recording of cosmic rays on the satellite Kosmos-17

30 [illegible]

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 510

TOPIC TAGS: artificial earth satellite, cosmic ray, scintillation counter, Geiger counter/Kosmos 17 satellite, Kosmos 7 satellite, Explorer 7 satellite

ABSTRACT: In May 1963 scintillation and Geiger counters were used to measure the intensity of cosmic radiation outside the Van Allen belt at altitudes of 260–780 km. The dependence of radiation intensity on the invariant coordinate L was determined. The flux of charged particles was observed to change from 0.5 particles per cm^2 per sec in the equatorial region to 3.0 particles per cm^2 per sec in high latitudes. The gamma-quanta flux in the energy range from 0.1 to 3 Mev was found to range from 9 to 22 quanta per cm^2 per sec. The edge of the high-latitude plateau of cosmic ray intensity lies at $L = 3.0$. Results were compared with data from other

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ACCESSION NR: AT5023630

satellites. Various combinations of scintillation and Geiger counters were used. On the assumption that particle density has the form $f(n)dn = Ae^{-\lambda n}dn$, where $A = 1.3 \cdot 10^2$ per cm^2 per sec and $\lambda = 26$ cm^2, all results are in agreement. The ratio of gamma quanta to charged particles does not depend on n; its value is 11.3. An absence of any latitudinal relationship in number of cosmic ray showers indicates that the recorded showers are generated chiefly by particles with energies exceeding 30 Bev. The total number of recorded showers leads to the conclusion that the energy threshold for generation of showers is below 60 Bev. The average gamma-quantum energy in the showers is 4.6 Mev. Considering that the contribution of a shower is 0.3 the total counting rate of a single Geiger counter, comparison of counting rates in different areas indicates a particle density in the equatorial region of 0.01, the number of showers to be 15 per cm^2 per sec, and the divergence of particles in the shower to be 15—20°. [04]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: AA, SV

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4106

Card 2/2

L 3095-66 FSS-2/EWT(l)/EWT(m)/FS(v)-3/FCC/EWA(d)/EWA(h) TT/GS/GW
ACCESSION NR: AT5023620 UR/0000/65/000/000/0464/0465

72

AUTHORS: Kidrina, G. A.; Kulagin, Yu. M.; Malyshev, A. B.; Nazarova, M. N.; Svidskiy, P. M.; Yudkevich, I. S. 8+1

TITLE: Investigation of the radiation intensity in Van Allen belts by the Kosmos-17 satellite 12

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 464-465

TOPIC TAGS: satellite, satellite data analysis, radiation intensity, Van Allen belt, charged particle, 12 Geiger counter, scintillator, nuclear explosion, electron, proton, solar cycle, solar activity, magnetic activity, geomagnetism 19

ABSTRACT: Data on the streams of charged particles registered by Geiger counters and scintillators at the elevation of 260-780 km for May 22-30, 1963 are presented. Results obtained with Geiger counters in the inner Van Allen belt are plotted in B, L-coordinates. Simultaneous determinations obtained with scintillators and with variously screened Geiger counters showed that in the interval of $1.15 \leq L \leq 1.6$ the major part of the registered intensity was related to the electrons from the high-altitude nuclear explosion of July 9, 1962. The 1-order increase of protons with

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L 3095-66
ACCESSION NR: AT5023620

0

energy of $E_p \geq 30$ Mev since 1958 is explained by the lowering of the solar activity in the 11-year solar cycle. During magnetically quiet days the maximum of intensity in the outer belt was recorded at $L = 4.7 - 4.8$; during increased magnetic activity the maximum was transposed toward lower valued of L. In the inter-belt space a narrow zone was discovered in which electrons with energy $0.1 \leq 1.5$ mev were recorded. Here, the radiation intensity and the maximum location are related directly to the magnetic activity. Stable corpuscular streams, apparently of electrons with energies of 50-100 kev, were registered below the inner belt. Their global distribution indicates that the corpuscles are trapped by the earth's geomagnetic forces. These streams reach a magnitude of $10^5 - 10^6$ cm^{-2}.sec^{-1}. [047]

ASSOCIATION: none

SUBMITTED: 02Sep65
ENCL: 00
SUB CODE: ES, SV
NO REF SOV: 000
OTHER: 000
ATD PRESS: 4106

Card 2/2

L 23431-66 FSS-2/EWT(1)/FCC/EWA(d)/EWA(h) TT/GW

ACC NR: AP6012831 SOURCE CODE: UR/0293/66/004/002/0257/0267

44
B

AUTHOR: Kirdina, G. A.; Kulagin, Yu. M.; Malyshev, A. B.; Nazarova, M. N.; Svidskiy, P. M.; Yudkevich, I. S.

ORG: none

TITLE: Study of the emission intensity in the Earth's radiation belts by the Cosmos-17 satellite

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 2, 1966, 257-267

TOPIC TAGS: cosmic radiation, radiation belt, corpuscular radiation, radiation intensity measurement, spaceborne measurement/Cosmos-17

ABSTRACT: Four independently operating Geiger and scintillation counters were used on Cosmos-17 to record charged-particle fluxes in the Earth's radiation belts at altitudes of 260—780 km from 22 to 30 May 1963. The counters differed only in their shielding and radiation detectors. Simultaneous measurements of the counting rates made it possible not only to determine the level of the fluxes but also to reach certain conclusions on the composition of the trapped radiation and to establish the hardness of the energy spectrum of the penetrating particles. Based on the composition of particles penetrating a shielding of 1 g/cm^2, it was found that the inner radiation belt can be divided into two regions. At L = 1.15—1.6, the main portion of the fluxes is produced by electrons from nuclear explosions, at L = 1.6—2.5, it

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Card 1/2 UDC: 537.591

L 23431-66

ACC NR: AP6012831

is produced by protons. The flux of protons with energies greater than 30 Mev has increased since 1958. A third narrow region was detected between the inner and outer radiation belts in which electrons with energies of 0.1—1.5 Mev were recorded. Below the lower boundary of the inner belt, stable streams of soft corpuscules, i.e., electrons with energies between 50 and 100 kev, were detected. Orig. art. has: 1 table and 7 figures. [JR]

SUB CODE: 04/ SUBM DATE: 19Apr65/ ORIG REF: 003/ OTH REF: 008/ ATD PRESS: 4235

Card 2/2

L 23432-66 FSS-2/EWT(1)/FCC/EWA(d)/EWA(h) TT/GW

ACC NR: AP6012832 SOURCE CODE: UR/0293/66/004/002/0268/0279

33

B

AUTHOR: Avdyushin, S. I.; Kogan, R. M.; Nazarova, M. N.; Pereyaslova, N. K.; Petrenko, I. Ye.; Svidskiy, P. M.

ORG: none

TITLE: Recording cosmic rays by the Cosmos-17 satellite

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 2, 1966, 268-279

TOPIC TAGS: cosmic ray, cosmic ray measurement, cosmic ray shower/Cosmos 17

ABSTRACT: Scintillation counters, STS-5 Geiger counters, and SBT-9 end-window Geiger counters were used on Cosmos-17 to record the intensity of cosmic radiation beyond the Earth's radiation belts as a function of L coordinates. The average radiation intensity was found to vary from 0.5 to 3.0/cm^2/sec for charged particles and from 9 to 22/cm^2/sec for gamma quanta. A high-latitude chopping of the cosmic ray spectrum was observed for hardness R = 1.8. A cosmic ray "equator" was constructed for altitudes of 400—600 km. Cosmic ray showers produced by the interaction of high-energy particles with the satellite body at angles of divergence exceeding 60° were also recorded. The showers had the following average characteristics: particle density, 0.038/cm^2; total number of particles, 10^2; ratio of the number of photons to the number of corpuscles, 11.3. Orig. art. has: 4 figures and 2 tables. [JR]

2

SUB CODE: 07/ SUBM DATE: 19Apr65/ ORIG REF: 010/ OTH REF: 005/ ATD PRESS: 4235

Card 1/1 dda UDC: 537.591:629.19

KAZANSKIY, B.A.; DOROGOCHINSKIY, A.Z.; ERGIGOV, G.D.; LYUTER, A.V.;
DMITRIYEVSKIY, M.L.; NAZAROVA, M.F.; RE[illegible]VIASHVILI, A.N.

Studying the dehydrogenation of isopentane on K-544 and K-
finely divided catalysts. Trudy GrozNII no. 15:241-253 '63.
(MIRA 17:5)

ACCESSION NR: AT4040420 S/0000/64/000/000/0168/0176

AUTHOR: Bokshteyn, S. Z.; Nazarova, M. P.; Svetlov, I. L.

TITLE: Growing of sapphire fiber crystals

SOURCE: Protsessy* diffuzii, struktura i svoystva metallov (Diffusion processes, structure and properties of metals); sbornik statey. Moscow, Izd-vo Mashinostroyeniye, 1964, 168-176

TOPIC TAGS: aluminum oxide crystal, aluminum oxide whisker, aluminum oxide, whisker growth, whisker

ABSTRACT: Equipment and techniques for growing sapphire whiskers are described. The equipment consists of a tubular electric furnace with an alundum tube and a hydrogen supply source with purification and feed systems. The initial charge, aluminum powder mixed with 3—6% aluminum oxide, is placed in corundum boats and held for 1—2 hr at 1360—1390C at atmospheric pressure in a current of purified hydrogen containing water vapor at a partial pressure of 10^{-3} atm. The boat, with reaction products, is then cooled to 500C in a current of hydrogen. There are three distinct zones along the boat length.

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ACCESSION NR: AT4040420

In the first zone, facing the hydrogen current, relatively large microcrystals grow, mostly in the form of elongated plates, needles, or tetragonal prisms. The longer the boat, the greater the number of such microcrystals. The whiskers grow in the next zone, on the bottom and sides of the boat. They are 10—15 mm long with a diameter between 1 and 15 μ. Most of them have a smooth shiny surface. The rest of the boat is filled with a loose, fluffy deposit topped with a multitude of very fine, short fibers. Whiskers grown in porcelain boats have many branches and a rough surface. Whiskers were also found on the walls of the alundum tube, which proves that the whiskers grow from the vapor phase. As proved earlier, the growth proceeds by the mechanism of screw dislocation. Orig. art. has: 7 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 09Dec63 DATE ACQ: 28May64 ENCL: 00

SUB CODE: SS NO REF SOV: 000 OTHER: 007

Card 2/2

ACCESSION NR: AP4034900 S/0181/64/006/005/1261/1266

AUTHORS: Bokshteyn, S. Z.; Kishkin, S. T.; Nazarova, M. P.; Svetlov, I. L.; Umantsev, E. L.

TITLE: Growth of sapphire whisker

SOURCE: Fizika tverdogo tela, v. 6, no. 5, 1964, 1261-1266

TOPIC TAGS: whisker crystal, crystal growth, sapphire, sapphire whisker

ABSTRACT: Whisker crystals of Al_2O_3 were grown by high-temperature oxidation of powdered metallic Al in an atmosphere of moist hydrogen. The reaction temperature was 1350—1400C. The authors describe a special apparatus used for growing these crystals, which consists of three essential parts: a tubular furnace, a hydrogen source, and a system for purification and control of hydrogen feed. The whisker crystals ranged from 1 to 30 μ in diameter and from 3 to 15 mm in length. Microcrystals ranged from 30 to 350 μ in diameter, and 0.5 to 3 mm in length. Capillaries were observed along the growth axes of some crystals.

~~Card~~ 1/2

ACCESSION NR: AP4034900

Growth of the whisker crystals is explained on the basis of Franck's theory of crystal growth by screw dislocations. Hexagonal crystal nuclei form in sites where the screw axes emerge with Burgers vector [0001]. Since the dislocations are at right angles to the basal planes, all the whiskers grow parallel to each other in the [0001] direction. Because of a high modulus of elasticity (52,000 kg/mm^2) and a large Burgers vector of dislocations along the [0001] direction, the elastic energy of the dislocation nuclei exceeds the bonding energy of atoms in the crystal lattice. This fact leads to rupture of the lattice, which is then manifested in capillaries along the growth axes of the crystals. Laue patterns and immersion studies show the crystals to belong to the alpha modification of Al_2O_3 (sapphire). "In conclusion, we thank Ye. V. Kolontsov and I. V. Telegin for their aid in the interpretation of the x-ray patterns." Orig. art. has: 5 figures, 1 table, and 3 formulas.

ASSOCIATION: none

SUBMITTED: 08Feb63

ATD PRESS: 3048

ENCL: 00

SUB CODE: SS

NO REF SOV: 001

OTHER: 006

Card 2/2

KOLBINA, Ye.M. [deceased]; BARBANEL', Yu.A.; NAZAROVA, M.V.; ARIYA, S.M.

Thermodynamics of lower cobalt sulfides. Vest. LGU 15 no.4:122-129 '60. (MIRA 13:2)

(Cobalt sulfide) (Thermodynamics)

POLYAK, M.A.; TERMER, V.Yu.; NAZAROVA, M.V.

"Information bulletin on the foreign chemical industry." Kauch. i res. 22 no.5:61 My '63. (MIRA 16:7)
(Tires, Rubber)

YASHUNSKAYA, F.I.; NAZAROVA, M.V.; EPSHTEYN, V.A.; [illegible]LIYAN, M.A.

In the D.I.Mendeleyev All-Union Chemical Society. [illegible]
[illegible] no.[illegible]:50-52 [illegible] '64. [illegible]

NAZAROVA, M. V.

Hytridization, Vegetable

Asexual hybridization of ligneous and herbaceous varieties of the Solanaceae. Biul.Glav.bot.sada, No. 9, 1951.

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

Review of Applied Mycology

Goldin (M. I.) & Nazarovna (Mme M. Z.). Реакция *Cyphomandra betacea* на вирус мозаики табака и стрика. [Reaction of *Cyphomandra betacea* to Tobacco mosaic and streak viruses.]—Микробиология (*Microbiology*), 20, 4, pp. 340-342, 1 fig., 1951.

In work on the resistance of *Cyphomandra betacea* to tobacco mosaic and tomato streak [a strain of tobacco mosaic] viruses [*R.A.M.*, 30, p. 590] at the Microbiological Institute of Sciences, Moscow, U.S.S.R., three leaves of young plants, grown from seed and free from tobacco mosaic virus, were infected by rubbing with sap from tomato plants infected with tobacco mosaic. A month later three out of six plants showed mosaic symptoms, with deformity of the leaves and the presence of inclusion bodies. The remaining three became diseased only after a second inoculation. However, 13 out of 24 control plants not rubbed developed conspicuous mosaic symptoms during the summer. Tomato scions, severely infected with mosaic and streak, were grafted on to 50 *C. betacea* plants, but seven of these remained quite healthy. It was found that while *C. betacea* could be infected, though less easily than tomato and tobacco, with various strains of tobacco mosaic virus both by grafting and sap rubbing, infection was not always possible, for some reason still unknown.

Inst. Microbiol, AS USSR

1. NAZAROVA, V.Z.

2. Ussr (600)

4. Grafting

7. Grafting of the tropical fruit solanum muricatum ait. on the tree tomato [Cyphomandra betacea Sendtn.]. Biul. Glav. bot. sada no.11, 52

9. *Monthly List of Russian Accessions*, Library of Congress, February 1953. Unclassified.

TSITSIN, N.V.; NAZAROVA, M.Z.

Experiments with remote vegetative-sexual hybridization of plants. (MLRA 6:3)
Izvest. Akad. Nauk S.S.S.R., Ser.biol. '53, 20-35.
(CA 47 no.15:7602 '53)

1. Glavnyy Botan. Sad, Akad. Nauk S.S.S.R.

NAZAROVA, Nina A.

Our efforts for the maintenance of equipment. Moskva Pravda 1951. 14 p.

[illegible] ; MAKAROVA, N.A.

[redacted]

On the problem of the organization of specialized medical help for children. Pediatriia no.3 62-67 Mr '57. (MIRA

(CHILDREN--HOSPITALS AND ASYLUMS)

BORISOV, B.I.; IGNATOVA, V.A.; KABANOV, N.P.; TERMAN, V.B.; SHUMILINA, V.I.;
NAZAROVA, N.A.; OKAL'NIK, G.N.; POPOV, M.I.

Improving the quality of the surface of sheet glass by electric heating of the air in the chamber under the vertical drawing machinery. Stek. i ker. 19 no.2:11-14 F '62. (MIRA 15:3)
(Glass furnaces)

NAZAROVA, N.A., inzh.; ZAMANSKIY, D.N., inzh.; [illegible]TOYEVA, I.[illegible], inzh.

Protective coatings for valve and gate rods. Mashinostroenie no.3:15-16 My-Je '65. (MIRA 18:6)

NAZAROVA, N.G.

NAZAROVA, N.G.

Compound treatment of poliomyelitis under hospital conditions.
Vop.kur., fizioter. i lech.fiz.kul't. 22 no.3:32-35 My-Je '57.
(MIRA 11:1)

1. Iz fizioterapevticheskogo otdeleniya (zav. N.G.Nazarova)
Voroshilovogradskoy oblastnoy bol'nitsy (glavnyy vrach I.D.
Vashchenko)
(POLIOMYELITIS)

The mechanism of oxidation of coal. B. V. Tronov, G. V. Kharitonov, and N. I. Nazarova. *Trudy Khim. Inst., Kirgiz. Filial Akad.* ~~*Nauk S.S.S.R.*~~ No. 4, 39-66 (1961).—The oxidation of coal was studied in the light of T.'s phenol theory of oxidation of coal (*C.A.* 35, 1066^4), in order to det. the cause of spontaneous combustion of coal. Samples I and II, dull lignite, predominantly fuso-xylain, gave a powdery button. III, a semibright, ligno-bituminous coal, predominantly clarain, gave a coherent button. IV, a semibright, fat coking coal, containing vitrain and homogeneous matrix 71.5-79% and nodular matrix 0.5-3.5%, gave a hollow sintered button. V, a hard, fat complex-striated coking coal, gave a tight-packed sintered button. VI, a dry, hard, semidull coking coal, contg. vitrain and homogeneous matrix 0.0-17.5%, nodular matrix 38.0-46.7%, and xylaino-vitrain material 10.0-16.25%, gave a loosely sintered, friable button. VII, a hard, complex-striated gas coal with a conchoidal "birdseye" fracture, gave a sintered, puffy button. VIII was apparently the same as VII, with a slightly different analysis. IX is a massive, very hard oil shale, giving a coherent but friable button. I contained H_2O 13.01, ash 15.84, total S 1.70, and volatile matter 32.40%; II 13.50, 13.02, 0.70, 28.50; III 4.85, 17.52, 2.35, 34.85; IV 1.67, 4.90, 0.45, 31.36; V 1.15, 7.19, 0.41, 26.62; VI 1.18, 5.54, 0.31, 18.67; VII 1.56, 6.20, 1.08, 37.53; VIII 0.80, 10.90, 0.80, 44.68; IX 0.66, 54.05, 0.58, 56.18. Samples I-III, known to be frequently subject to spontaneous combustion, were oxidized in a dry-box with atm. oxygen for 728 hrs. at 105 ± 0.5°; the others, at 134.5 ± 0.5° for 1310-1314 hrs. The gain in mass was detd. at intervals, and analyses were made for carboxyl plus phenolic groups (titration with KOH reacted in alcoholic soln.), for carboxyl groups (detn. of HOAc liberated from $Ca(OAc)_2$ soln.), for carbonyl groups (reaction with $PhNHNH_2$ in alc. soln.), and iodine no. (Hübl's soln.). Also were detd. the amts. of $K_2Cr_2O_7$ (in acidic soln.) and $KMnO_4$ (in basic soln.) which are reduced by samples of the coal. The carboxyl plus phenol content of I and II rises fairly rapidly from 4.6-4.8 mg.-equiv. per g. of combustible C to a max. of 5.8-6.8 after 240 hrs., then drops slowly to 5.4-6.2. III rises fairly rapidly from 3.6 to 4.8 after 240 hrs., then slowly to 6.0 at 728 hrs. The coking coals are similar to III, but start at nearly zero and rise to 3.7-4.4. VII, VIII, and IX are similar to III, rising from 1.3 to 4.2, 4.2, and 7.1, resp. The phenolic hydroxyl content of I and II 3.9-4.1, rises rapidly from 3.0-4.1 to 4.3-5.3 after [illegible] 300 hrs., then decreases slowly to 4.7 after 728 hrs. For IV, V, and VI the curves are almost identical to those for carboxyl plus phenol, indicating practically no carboxyl groups at any time. The carboxyl content of I, II, and III rises fairly rapidly from 0.3-0.8 to 0.4-1.4 after 240 hrs., then slowly to 0.7-1.7. The greater the initial content of carboxyl the faster is the initial increase in carboxyl groups. The carbonyl content of I, II, and III increases fairly rapidly from 0.4-0.8 to 1.1-1.7 after 240 hrs., then slowly [illegible] 1.7 at 728 hrs. IV, V, and VI rise almost linearly from 0.1 to 1.2-1.8 after 1314 hrs. VII, VIII, and IX start at 0.25, 0.16 and 0.20, rise fairly rapidly for 500 hrs., then slowly to 2.2, 2.5, and 3.0, resp. The rapid initial increase in carbonyl groups for I, II, and III is attributed to the high phenolic OH content. The fact that there is no decrease in

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B.V. T[illegible] 2

rate of formation of carbonyl groups in IV, V, and VI is attributed to the lack of carboxyl groups. A study of 18 monohydric phenols showed that the presence of carboxyl groups slowed their oxidation by $KMnO_4$. The iodine no. of I, II, IV, V, and VI increased slightly for the first 24–150 hrs., then gradually decreased. III and VII were almost const. for a comparable time, then slowly decreased. VIII and IX showed an initial and over-all decline, but with a small max. after 72-148 hrs., and a slight rise toward the end. The initial increase is attributed to the increased content of phenolic hydroxyl groups. The amount of dichromate reduced by I, II, and III gradually declined over the 724-hr. period; IV to VIII increased 2.5- to 10-fold in 1300 hrs. The permanganate reduced by IV to VIII also increased. Gains in wt. of I and II go through a max. at about 800 hrs.; all the rest gain in wt. for the entire oxidation period. The fraction of combining oxygen is indicated which goes into the formation of phenolic, carboxyl, and carbonyl groups at various times during the air oxidation. IV, V, and VI were tested for peroxides after 1300 hrs. by use of KI, $TiCl_3$, and $Na_2S_2O_3$ solns. The apparent peroxide was considerably less than the functional groups, and much of the reaction was attributed to quinoid groups. In V and VII the contents of phenolic and carbonyl groups, $KMnO_4$ reduced and total S increased as the density increased in the fresh samples, and with some exceptions after oxidation. During the course of oxidation of IV, V, and VI the heating value dropped steadily, while the content of volatile matter rose steadily. In VII the heating value also decreased steadily, but the content of volatile matter fluctuated.

R. T. Myers

- for degree of Doctor of Technical Sciences

MAKAROVA, N.I.

1323. CHANGE IN COMPOSITION AND CHEMICAL AND TECHNOLOGICAL PROP[illegible]IES ON [illegible] OF COALS FROM THE [illegible] [illegible], D.V. and MAKAROVA, N.I. 2

[illegible]

KHARITONOV, G.V.; AMMOSOV, I.I.; NAZAROVA, N.I.

Relation between the petrographic and chemical composition and the chemical and technological properties of coals of the Tuyuk deposit in the Uzgen Basin. Trudy IGI 8:45-50 '59. (MIRA 13:1)
(Uzgen Basin--Coal)

NAZAROVA, N.I.; KHARITONOV, G.V.

Relation between the sorption capacity of coals and the functional groups they contain. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 2 no.5:3-8 '60. (MIRA 13:9)
(Sorption) (Coal)

NAZAROVA, N.I.; MAKEYEVA, R.I.; ZABAVIN, V.I.

Tendency toward the self-oxidation, spontaneous heating, and self-ignition of the coals of Kirghisistan fields. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 2 no.5:9-20 '60.
(MIRA 13:9)

(Kirghizstan--Coal)

NAZAROVA, N.I.; LUYK, A.A.; YAKOVENKO, R.T.; LEBEDEVA, V.M.

Chemical and technological study of the coals of the Karakichi
deposit. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 2 no.5:21-25
'60. (MIRA 13:9)
(Karakichi--Coal)

NAZAROVA, N.I.; MOZHAYEVA, V.I.

Mechanism of coal oxidation by nitric acid. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 3 no.2:83-88 '61. (MIRA 16:7)

(Nitric acid) (Coal) (Oxidation)

NAZAROVA, N.I.; MOZHAYEVA, V.I.; KARYMSHAKOV, M.

Utilization of oxidized coal of Kirghizistan in the national economy. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 3 no.2: 89-92 '61. (MIRA 16:7)

(Kirghizistan—Coal)

NAZAROVA, N. I.; MOZHAYEVA, V. I.

Composition and properties of coals from Kara-Kiche fields.
Izv.AN Kir.SSSR.Ser.est.i tekh.nauk 4 no. 6:71-76 '62.
(MIRA 17:5)

PETRIK, G. K.; YASYNOVA, A. A.; MAKAROVA, N. I.

Chemical-technological study of coals from the Kavak brown coal basin. Izv.AN Kir.SSSR.Ser.est.i tekh.nauk 4 no. 6: 77-82 '62. (MIRA 17:5)

NAZAROVA, N. M.

USSR/Chemistry - Ether, Phenol　　　　Jan/Feb 49
Chemistry - Pyrolysis, of Anisole and Phenetol

"Study of the Cleavage of Ether Bonds in Simple Phenol Ether: I, Low Temperature Decomposition of Anisole and Phenetol in Glass Tubes," L. Kh. Freydlin, A. A. Balandin, N. M. Nazarova, Inst Org Chem, Acad Sci, USSR, 8 pp

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 1

Investigates low-temperature pyrolysis of anisole and phenetol in wide temperature range. Considers basic trends of process: formation of phenol, fixation of intermediately forming alkylidene radicals and isomerization, with the allied carbinol. Submitted 13 Feb 48

PA 27/49T20

NAZAROVA, N. M.

USSR/Chemistry - Bonds
Chemistry - Phenols

Mar/Apr 49

"Study of the Decomposition of the Ether Bond in Simple Phenol Ethers: Article II, Catalytic Disintegration of Anisole and Phenetole," L. Kh. Freydlin, A. A. Balandin, N. M. Nazarova, Inst of Org Chem, Acad Sci USSR, 7 pp

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 2

Investigates catalytic decomposition of somple ether bond on the example of phenetole and anisole over a wide range of temperatures. Basic trends of process are formation of phenol and fixation of intermediate alkylidene radicals. Catalyst selectively accelerates decomposition of simple ether bond, lowers temperature of reaction, and produces a sharp increase in yield of phenols. Submitted 13 Feb 48.

PA 43/49T8

NAZAROVA, N.M.

USSR

Alkylation of butane by propylene in the presence of aluminum oxide. L. Kh. Freidlin, A. A. Balandin, and N. M. Nazarova (N. D. Zelinskii Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* **96**, 1011-14(1954).—Alkylation of butane with C_3H_6 over Al_2O_3 was studied in a flow-type app., the diagram of which is supplied. Reactions run at 400-500° at 300-1500 atm. pressure gave fractions corresponding to those of C_5-C_{10} hydrocarbons. Most of the products (60-70%) boil under 175°, the main reactions being alkylation and polymerization. At 400° the latter predominates, giving but 11% of a heptane fraction. At 500° the alkylation yields rise to 29-30%. The level of the pressure used does not appear to alter the reaction course. Heptane fraction tends to rise with increase of space velocity from 2.6 to 4, but reduction of concn. of C_3H_6 does not affect the yield of olefins, although it does raise somewhat the yield of the heptane fraction and lowers the yield of high-boiling residues. The heptane fraction is mostly (50%) 3-methylhexane, as shown by Raman spectrum. G. M. Kosolapoff

FREYDLIN, L.Kh; BALANDIN, A.A., akademik; NAZAROVA N.M.; YEGOROV, Yu.P.

Alkylation of propane and n-pentane with propylene at high temperatures, under high pressures, and in presence of aluminum oxide. Dokl. AN SSSR 105 no.6:1270-1273 D '55. (MLRA 9:4)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo Akademii nauk SSSR.
(Alkylation) (Hydrocarbons)

NAZAROVA, N. M.

NAZAROVA, N. M.: "Catalytic alkylation of n-paraffines by olefins at high pressures." Acad Sci USSR. Inst of Organic Chemistry imeni N. D. Zelinskiy. Moscow, 1956. (DISSERTATION FOR THE DEGREE OF CANDIDATE IN CHEMICAL SCIENCE).

Knizhnaya letopis'
No35, 1956, Moscow

Nazarova, N.M.

BUTYLENE AT HIGH TEMPERATURES AND PRESSURES, Froidlin, L.Kh., Balandin, A.A. JULY

is subjected ... of the

PA - 2875

AUTHOR: Not given

TITLE: Dissertations (July-December 1956) Department for Chemical Science. (Otdeleniie khimicheskikh nauk, Russian)

PERIODICAL: Vestnik Akademii Nauk SSSR, 1957, Vol 27, Nr 4, pp 132-133 (U.S.S.R.)

Received: 5 / 1957 Reviewed: 7 / 1957

ABSTRACT: At the Institute for General and Nonorganic Chemistry the following dissertations were submitted for the purpose of obtaining the Academic degree of "Candidate of Chemical Science":

E.F.SHUBOCHKINA: "On the Velocity of Reactions of Innerspherical Exchange in Some Platinum Compounds".

At the Institute for Organic Chemistry:

N.M.NAZAROVA: "Catalytic alkalization of Paraffin and of Olefines at High Pressure".

V.M.SHULIN: "Research of Thermal Transformations of Tetramethylene and Tetrachlorethylene at High Pressure".

At the Institute for Physical Chemistry:

N.N.KAVTARADZE: "The Absorption of Hydrogen in Condenses Metal Layers".

Card 1/2

PA - 2875

Dissertations (July-December 1956) Department for Chemical Science.

At the Radium Institute:

The following dissertation was submitted for the purpose of obtaining the Academic degree of "Doctor of Physical and Mathematical Sciences":

W.F.LIVIN: "The Determination of the Quantum Characteristics of the Resulting Nuclei from the Reactions of the type (d,p) by the Analysis of the Products of the Reactions".

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress

Card 2/2

AUTHORS: Nazarova, N. M., Balandin, A. A., [illegible]
Member, Academy of Sciences, USSR, **Freydlin**, L. Kh.

TITLE: Catalytic Alkylation of n-Butane by Means of Ethylene at High Temperatures and High Pressures (Kataliticheskoye alkilirovaniye n-butana etilenom pri vysokikh temperaturakh i davleniyakh)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. [illegible], Nr [illegible], pp. 365-368 (USSR)

ABSTRACT: The authors already previously found (Refs 1 - 4) that a catalytic alkylation of normal paraffin hydrocarbons by olefins is possible at increased temperatures (450°) and increased pressure (500 atmospheres of excess pressure). This work is a continuation of those referred to above. The tests were carried out under flow conditions. The equipment, the methods of both test and analyses have been described already previously (Ref 1). The results have shown that the reaction referred to in the title yields a complicated mixture of hydrocarbons. The expected hexane fraction (affiliation of n-butane to ethylene) was more considerable than [illegible]

Card 1/4

Catalytic Alkylation of n-Butane by Means of Ethylene at High Temperatures and High Pressures

SOV/20-12[illegible]

fractions of the alkylate, whereas the number of the [illegible] bonds was considerably smaller than that of other fractions. Table 1 gives the test results, yields of alkylate and the characteristic of the obtained fractions. Approximately [illegible] half ([illegible] volume percent) could be distilled off [illegible]. It follows from the test results that ethylene is mainly affiliated to the 2nd C-atom of butane and that it forms 3-methyl pentane. There is less affiliation to the first C-atom and n-hexane is formed. During the alkylation [illegible] carbons boiling at higher temperatures are also formed besides those to be expected. It could be assumed that they are mainly products obtained by a re-alkylation of the developed 3-methyl pentane (Fig 1,II). The affiliation in this stage however, takes place mainly to the first and not [illegible] C-atom. Yu.P. Yegorov and G.K. Gayvoronskaya have [illegible] the spectra of the fraction and deciphered them. [illegible] and V.A. Zharov took part in this work. There are 2 figures, 2 tables, and 7 references, 5 of which are Soviet.

Card 2/3

Catalytic Alkylation of n-Butane by Means of
Ethylene at High Temperatures and High Pressures

SOV/20-121-5- [illegible]

ASSOCIATION: Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N.D. Zelinskiy, AS USSR)

SUBMITTED: April 26, 1958

Card 3/3

.3500

[illegible]

AUTHORS: Nazarova, N. M., Freydlin, L. Kh., [illegible], I. K.

TITLE: Brief Communications. Alkylation of Propane and Isopentane With Ethylene at High Temperature Under Pressure

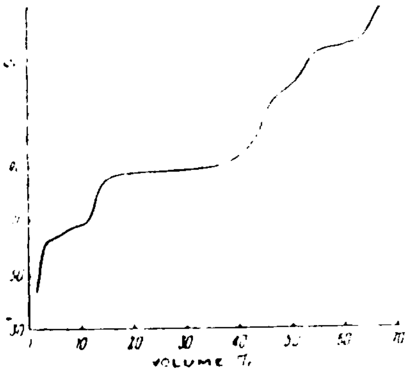
PERIODICAL: Izvestiya Akademii Nauk SSSR. Otdeleniye khimicheskikh nauk, 19[illegible], Nr 1, pp 12[illegible]-131 (USSR)

ABSTRACT: This is a continuation of the study of alkylation of [illegible]. Propane and isopentane were alkylated with ethylene in the presence of Al[illegible] [illegible] pressure. The method of experimentation and analysis were described previously (L. Kh. Freydlin, A. A. Balandin, N. M. Nazarova, Dokl. AN SSSR [illegible], 1[illegible]11, 19[illegible]). The results are shown in Fig. 1 and in Table 1.

Card 1/[illegible]

Brief Communications. Alkylation of Propane [illegible]
and Isopentane With Ethylene at High [illegible]
Temperatures Under Pressure

SOV/[illegible]-2-[illegible]



Fi . 1. [illegible]
[illegible]
2).

Card 2/

Brief Communications. A[illegible]
Preparation and Properties [illegible]
High Temperature [illegible]

Table 1. [illegible]

a	[illegible]	[illegible]	[illegible]	[illegible]	f	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	[illegible]	[illegible]	1000	[illegible]	[illegible]	8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	18.[illegible]	1000	77	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	16.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	12		17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Card 3/4

Brief [illegible] Al [illegible] [illegible]
Properties and Interaction With [illegible] [illegible]
High Temperatures Under [illegible]

Key [illegible] Table 1. In experiment Nr 1 an initial sample of Al [illegible] was used; in experiment Nr [illegible] Al [illegible] with [illegible] [illegible] was [illegible]; in experiment Nr 3 Al [illegible] with [illegible] K [illegible] was [illegible], experiment [illegible] ( ) [illegible] content in the initial mixture in %; ( ) [illegible] in liters [illegible] per liter [illegible]; ( ) [illegible] H [illegible]; [illegible] in % by weight; ( ) characteristics [illegible] in % by weight; ( ) [illegible] [illegible].

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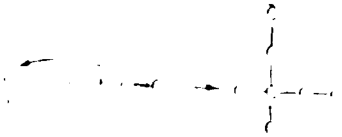
form [illegible] [illegible] collimated with
the part[illegible] [illegible] primary [illegible]
[illegible]
[illegible]
[illegible] primary [illegible]

[illegible] with [illegible] part[illegible]
[illegible]

Card [illegible]

Brief Communications. Alkylation of
Propane and Isopentane With Ethylene at
High Temperatures Under Pr[illegible]

[illegible]
SOV/[illegible]



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are [illegible]
Sov[illegible]
J. H[illegible] E. [illegible]
A. A. [illegible]
[illegible] (1[illegible]).

ASSOCIATION: N. D. Zelinsk[illegible]
[illegible]

SUBMITTED: J[illegible], 1[illegible]

S/062/60/000/03/02/007
B008/B006

AUTHORS: Freydlin, L. Kh., Balandin, A. A., Nazarova, N. M.

TITLE: Catalytic Alkylation of Isobutane by Ethylene at High Temperatures and Under Pressure

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 3, pp. 409-412

TEXT: The alkylation of isobutane in the presence of aluminum oxide at high temperatures was investigated. The experiments were carried out in the continuous-flow unit described in Ref. 5. The reaction conditions, degree of ethylene transformation, and alkylate yields are given in Table 1. The characteristics of the various alkylate fractions obtained in experiments No. 2 and 4 are shown in Table 2. The fractionation curve of the catalyzate obtained in experiment No. 4 is represented in Fig. 1. Experimental results show that ethylene and propylene react mainly with the tertiary carbon atom of isobutane, and only to a lesser extent with its primary carbon atoms. In these reactions, 2,2-dimethyl butane and

Card 1/2

Catalytic Alkylation of Isobutane by Ethylene at High Temperatures and Under Pressure

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2-methyl pentane, respectively, are formed. An octane fraction was also obtained, which was identified to consist mainly of an alkylation product of 2,2-dimethyl butane. Alkylation at this stage, however, proceeds via the primary carbon atom at the unbranched end of the carbon chain. This fact confirms the stepwise character of the alkylation process established previously (Ref. 8). It was found that in the presence of aluminum oxide an olefin (ethylene, propylene) is added to the tertiary carbon atom of isobutane less easily than to the secondary carbon atom of n-butane. Yu. P. Yegorov and K. G. Gayvoronskaya analyzed the fractions by means of their Raman spectra. There are 1 figure, 2 tables, and 11 references, 6 of which are Soviet.

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

SUBMITTED: July 16, 1958

Card 2/2

FREYDLIN, L.Kh.; NAZAROVA, N.M.; PALIY, A.I.

'Alkylation of normal paraffins by olefins at high temperatures and pressures. Izv.AN SSSR Otd.khim.nauk no.4:709-714 Ap '61.
(MIRA 14:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Ether) (Cyclopentadiene)

25046
S/062/61/000/006/008/010
B119/B220

5.3300

AUTHORS: Freydlin, L. Kh., Nazarova, N. M., and Litvin, Ye. F.

TITLE: Thermal alkylation of cyclopentane with olefins

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 6, 1961, 1146-1148

TEXT: Up to the present time, the alkylation of cycloparaffin hydrocarbons has hardly been studied. H. Pines and N. Ipatieff (see below) studied the alkylation of methyl cyclopentane with olefins in the presence of H_2SO_4 (100 %) or HF. The reaction proved to be very complicated. Yu. G. Mamedaliyev and A. Kuliyev (Dokl. AN SSSR, [illegible], 471 (19[illegible])) as well as Yu. G. Mamedaliyev and Z. A. Mamedova (ibid., 11[illegible], 19[illegible], 1[illegible]) alkylated methyl, ethyl, and isopropyl cyclohexane with propylene and butylene under similar conditions. In the present study, the direct alkylation of cyclopentane with ethylene and propylene at elevated temperatures and under pressure was achieved for the first time. The main reaction products were isolated and identified. The [illegible] of

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B1[illegible]/B2[illegible]

Thermal alkylation of cyclopentane...

temperature and pressure on the course of reaction was studied. The alkylation with ethylene proceeds already at a temperature of [illegible]°C and under a pressure of 200 atm. At elevated temperatures and pressures, the yield in alkylates and the degree of conversion increase. At [illegible]°C, the ethylene was completely consumed. Diagram 1 shows the chromatogram of one of the catalyzates with carbons up to C_9, and also its distillation curve. The main reaction products were ethyl cyclopentane (peak III), the diethyl cyclopentanes (peaks IV and V), and butyl cyclopentane (peak VI). A horizontal section on the distillation curve corresponds to each of these peaks. After elimination of the cyclopentane from the alkylate by fractional distillation, the following fractions were obtained: I) monoethyl cyclopentane and II) diethyl cyclopentane. The unsaturated character of the alkylate is not strongly marked. The yield in ethyl cyclopentanes amounts to 36 % (related to the weight of the alkylate) and to 65 % (related to the weight of the large fraction). Alkylation with propylene is more difficult. On distillation under pressures between 200 and 450 atm, easily boiling cracking products, the fraction of propyl cyclopentane, and the higher boiling residue were separated from the

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25046
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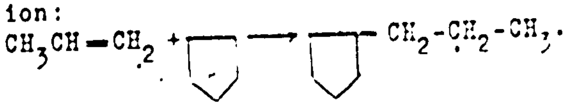
B118/B220

Thermal alkylation of cyclopentane...

alkylates. Cyclopentane reacts with propylene like cyclohexane according to the equation:



On thermal alkylation, the cyclopentane adds to the outer unsaturated C-atom of the propylene. There are 2 figures, 1 table, and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: H. Pines, N. Ipatieff, J. Amer. Chem. Soc. 67. 1631 (1945).

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

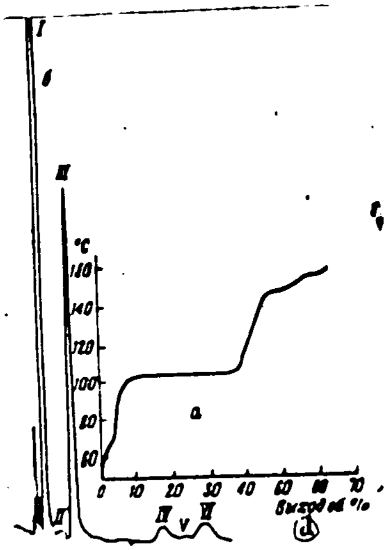
SUBMITTED: November 11, 1960

Card 3/5

25046
S/062/61/000/006/008/010
B118/B220

Thermal alkylation of cyclopentane...

Legend to Fig. 1: a) fractionation curve of the alkylate from cyclopentane and ethylene (450°C, 200 atm); d) yield, % by volume; б) chromatogram of the alkylation product of cyclopentane with ethylene. I) Cyclopentane; II) methyl cyclopentane; III) ethyl cyclopentane; IV), V) diethyl cyclopentanes; VI) butyl cyclopentane.



Card 4/5

33584
S/204/61/001/005/002/008
E075/E484

11.0132

AUTHORS: Nazarov, N.M., Freydlin, L.Kh., Shafran, R.N., Litvin, Ye.F.

TITLE: Thermal alkylation of methylcyclohexane with olefins under pressure

PERIODICAL: Neftekhimiya, v.1, no.5, 1961, 613-618

TEXT: The authors reported recently that alkylation of cyclohexane and cyclopentane can be achieved thermally (350 to 450 °C) under pressure (50 to 200 atm). Further work on alkylation of methylcyclohexane with olefins was carried out to elucidate the influence of side chains on the direction and ease with which the reaction proceeds. The reaction was carried out in a reactor filled with quartz rings. Molar ratios of methylcyclohexane to ethylene were from 2.5 to 3.6 and for propylene 1.4 to 3.2. The space velocity varied between 0.81 and 0.99 litre/hour for ethylene and 0.52 to 1.43 litre/hour for propylene. All experiments with propylene were carried out at 450 °C, whereas for ethylene the temperatures varied from 350 to 450 °C. Results show that the main product of the reaction of methylcyclohexane with

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E075/E484

Thermal alkylation ..

ethylene is a mixture of methylethylcyclohexanes, the proportions of various isomers differing from their equilibrium concentrations. With propylene the reaction proceeds with more difficulty and the yield of alkylate is lower than that obtained for ethylene (155% of propylene taken and 316% of ethylene respectively). Comparison with previous work (Ref.7: N.M.Nazarova, L.Kh.Freydlin, Dokl AN SSSR, 137 1961 1125) shows that the alkylation of methylcyclohexane proceeds more easily than that of unsubstituted cyclohexane The reaction begins at a lower temperature (350°C) and pressure (50 atm) The expected formation during the reaction of 1-methyl-1-ethylcyclohexane was not observed which is explained by thermal instability of hydrocarbons with quaternary carbon atoms. It is postulated that 1 3 and 1 4-isomers are formed by an internal rearrangement of 1,1-isomer or via an intermediate stage of migration of free valency of methylcyclohexyl radical from position 1 1 to positions 1,3 and 1,4 Acknowledgments are expressed to A.L Liberman and T.V.Vasina for supplying the methylethylcyclohexane samples. Yu G.Mamedaliyev Aladdin Kuliyev and Z.A Mamedova are mentioned in the article in connection with

Card 2/3

33584

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E075/E484

Thermal alkylation

their contributions in this field There are 2 figures 5 tables and 11 references 6 Soviet bloc and 5 non-Soviet blo The four references to English language publications read as follows

Ref 2 V J Komarowsky J Amer Chem Soc no 59 1937 2715.
Ref 3 H Pines, W Ipatieff J. Amer Chem Soc v 67 1945 1631
Ref 4 A Schneider J Amer Chem Soc v 76 1954 4938
Ref 9 H D Orloff Chem Rev no 54 1954 347

ASSOCIATION Institut organicheskoy khimii AN SSSR
im N D Zelinskogo (Institute of Organic Chemistry
AS USSR imeni N D Zelinskiy)

SUBMITTED August 7 1961

Card 3/3