"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

5(4)

AUTHORS: Mayranovskiy, S. G., Faynzil'berg, A. A., Novikov, S. S., Klimova, V. A.

SOV/20-125-2-31/64

TITLE: On the Influence of Negative Groups on the Electrochemical Reduction of the Bond Carbon - Halogen in Organic Compounds (O vliyanii otritsatel'nykh grupp na elektrokhimicheskoye vosstanovleniye svyazi uglerod - galoid v organicheskikh soyedineniyakh).
The Polarographic Behavior of Halide-nitroalkanes (Polyarograficheskoye povedeniye galoidnitroalkanov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 2, pp 351-353 (USSR)

ABSTRACT: The present paper deals with the influence exercised by the nitro groups in α-position on the easiness of the electrochemical reduction of the carbon-halide bond. Even though the nitro group itself is easily polarographically reduced, its presence (as the experiment shows) facilitates the electrochemical breaking of the C-Hal bond to such an extent that the wave corresponding to its reduction becomes a wave of the reduction of the nitro group. The investigation was carried out by means of the recording polarograph of the TsLA

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On the Influence of Negative Groups on the Electrochemical Reduction of the Bond Carbon - Halogen in Organic Compounds. The Polarographic Behavior of Halide-nitroalkanes SOV/20-12[illegible]-2-31/64

Energochermet (State All-union Trust for the Design, Planning, Assembly and Adjustment of Power Installations and Control- and Measuring Instruments of the Ministry of Ferrous Metallurgy, USSR). Measures for increasing measuring accuracy are discussed in short. A comparison between the polarograms of the halogenized nitro-compounds and the waves of the analogous nitroproducts containing no halide shows that the first wave of nitrohalide alkanes corresponds to the reduction of the C-Hal bond. This is proved by the independence of $E_{1/2}$ of the first wave of the pH of the solution. The second wave, which corresponds to the reduction of the nitro group, shifts with increasing pH of the solution towards negative potentials. The experimental data corresponding to the reduction of the C-Hal bond are given in a table. In irreducible processes (including the electrochemical reduction of the bond carbon - halide) the potential of the semiwave is only an approximated criterion

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On the Influence of Negative Groups on the Electrochemical Reduction of the Bond Carbon - Halogen in Organic Compounds. The Polarographic Behavior of Halide-nitroalkanes

SOV/20-125-2-31/64

of the easiness of the reduction of the C-Hal-bond. The existence of a nitro group in α-position facilitates the reduction of the carbon - halide bond considerably, and the influence exercised by the nitro groups also increases with an increase of their number. As expected, bromides are reduced more easily than the corresponding chlorides. Of the iodides only iodotrinitromethane was investigated. Interest is caused by the variation of the product αn_a of the number n_α of electrons participating in the potential-determining stage of the process and the conversion coefficient α in some substances in which the polarity of the C-Hal-bond varies. The influence exercised by the structure of the investigated substance upon αn_a of their waves will be investigated in the course of a future investigation. There are 1 table and 10 references, 6 of which are Soviet.

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

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

On the Influence of Negative Groups on the Electrochemical Reduction of the Bond Carbon - Halogen in Organic Compounds. The Polarographic Behavior of Halide-nitroalkanes SOV/20-125-2-31/64

Zelinskiy of the Academy of Sciences, USSR)

PRESENTED: November 10, 1958, by A. N. Frumkin, Academician

SUBMITTED: November 10, 1958

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

5(3) SOV/20-125-3-26/63

AUTHORS: Novikov, S. S., Babiyevskiy, K. K., Korsakova, I. S.

TITLE: The Synthesis of Aci-nitro-alkanes (Sintez atsi-nitroalkanov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 560-561 (USSR)

ABSTRACT: Several examples of the addition of simplest mononitro-alkanes (Refs 1,2) as well as of the 1,1-dinitro-ethane (Ref 3) to the 2-nitro-alkanes are known. The authors assume that trinitro-methane will react with the last mentioned substances more easily than other nitro-alkanes since its hydrogen is more mobile. It was found that this reaction leads to the formation of white crystalline substances in aqueous methanol below 0° if the reaction products are quickly separated by dilution with ice-water. For in this case aci-1,1,1,1-tetranitro-alkanes are produced in an almost quantitative yield. Reliable data on the formation of the aci-form of the free aliphatic nitrohydro-carbons have hitherto been lacking. Their structure was now confirmed by an infrared spectrum. The obtained substances yield characteristic color reactions of the aci-nitro compounds: their solutions in ether turn lightblue under the action of acetyl

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chloride (Ref 7) and red in the case of additions of $FeCl_3$ (Ref 8). They may be stored at the temperature of dry ice. Aci-1,1,1,3-tetranitro-butane reacts quickly with bromine in a volatile solution (in the absence of alkalies) and forms 3-bromo-1,1,1,3-tetranitro-butane. An assumed reaction mechanism is illustrated in a diagram. An experimental part gives the usual data. There are 8 references, 1 of which is 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)

PRESENTED: November 13, 1958, by A. V. Topchiyev, Academician

SUBMITTED: November 12, 1958

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

AUTHORS: Novikov, S. S., Korsakova, I. S., Bulatova, N. N.

S/153/60/003/01/036/058
B011/B005

TITLE: On the Addition of Nitroalkanes to β,β-Dimethyldivinylketone

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol 3, Nr 1, pp 132-134 (USSR)

TEXT: Although β,β-dimethyldivinylketone contains 2 double bonds, substances with one single mobile hydrogen atom are mainly added to one single nonsubstituted vinyl group under experimental conditions (in accordance with I. N. Nazarov, Ref 2). The presence of double bonds in the addition products of the substances mentioned in the title was proved by hydrogenation of 7-nitro-2-methyl-octen-2-one-4 on Pt-black (see Scheme). Trinitromethane adds easily to β,β-dimethyldivinylketone at room temperature. 7,7,7-trinitro-2-methyl-hepten-2-one-4 (I) is formed here. Dinitromethane reacts with the same ketone at 30-35°. 1,1-dinitroethane reacts slowly with the ketone at room temperature. Diethylamine used as a catalyst accelerates the reaction considerably so that it may be finished within 1-2 h. Nitroethane reacts with ketone at 80° in the presence of diethylamine within 8 h. In consequence of the reaction of nitromethane with β,β-dimethyldivinylketone, a mixture of 2 nitroketones forms in the presence of diethylamine at 75-80° (within 7 h): 7-nitro-2-methyl-hepten-2-one-4 (V) (the reaction product of nitromethane with one ketone molecule) and 7-nitro-2,12-dimethyl-tridecadiene-2,11-dione-4,10 (VI) (the reaction product with 2 ketone molecules). Even with the use of a tenfold excess of nitromethane, a mixture of the two ketones (V and VI) is formed. Besides

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

On the Addition of Nitroalkanes to β,β-Dimethyldivinylketone. S/153/60/003/01/036/058
B011/B005

the nitroalkanes mentioned, the authors investigated the addition of nitroacetic and dinitroacetic ester to β,β-dimethyldivinylketone. Ethyl ester of nitroacetic acid may add to the ketone in the presence of diethylamine at room temperature. Dinitroacetic ester reacts with the ketone without a catalyst under strong development of heat. The yields and properties of the substances obtained are given in a table (p 133). There are 1 table and 3 Soviet references.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Institute of Physics and Engineering)

SUBMITTED: March 18, 1959

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

S/153/60/003/02/18/034
B011/B006

5.3200

AUTHORS: Peredreyeva, M. A., Denisenko, Ya. I., Novikov, S. S.

TITLE: Investigation of the Nitration of Hydrocarbons of the Cyclopentane Series in the Vapor Phase. III Nitration of Propyl Cyclopentane

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskay tekhnologiya, 1960, Vol. 3, No. 2, pp. 312-315

TEXT: The present paper is a continuation of the authors' investigations on the subject mentioned in the title. The nitration of propyl cyclopentane, which was prepared synthetically, was carried out at 340-400°C using 68% HNO_3. Details are given in Ref. 1. In the present paper, the authors clarified the dependence of the yield of nitro compounds on the reaction temperature, the hydrocarbon / HNO_3 ratio, and the time of contact of the reagents. Results are shown in Table 1. From this it is evident that the highest yield at molal ratios of propyl cyclopen-

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

Investigation of the Nitration of Hydrocarbons of the Cyclopentane Series in the Vapor Phase. III. Nitration of Propyl Cyclopentane

S/153/60/003/02/18/034
B011/B006

tane/HNO_3=2.1 - 2.5 and contact times of 1.2 - 1.3 sec slowly increases with rising temperature. The maximum yield is obtained at 385°C. At higher temperatures, yields decrease owing to pyrolysis of the nitro compounds. At the above-mentioned optimum conditions, the maximum yield is 76%, calculated for initial hydrocarbon. As main reaction products, a tertiary and a secondary nitro compound are formed. It is seen in Table 2, that the latter is obtained in much greater quantity than the former compound (nearly 40 times as much at 385°C, less at lower temperatures). From the physical constants determined and the results of chemical analysis the authors conclude that the tertiary compound obtained by them is pure 1-nitro-1-propyl cyclopentane. It is a colorless oil with a weak smell of camphor, easily soluble in alcohol and other organic solvents. It is insoluble in bases and does not react with HNO_2. The constants of the secondary nitro compound show it to be 2-nitro-1-propyl cyclopentane. Freshly distilled in vacuum, it is a colorless oily liquid which becomes yellow on standing in light. Its

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

Investigation of the Nitration of Hydrocarbons of the Cyclopentane Series in the Vapor Phase . III. Nitration of Propyl Cyclopentane

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B011/B006

smell is that of nitro-paraffin, and it is soluble in the same solvents as the tertiary compound. The secondary nitro compound however, is soluble in concentrated aqueous alkali solutions and gives the characteristic color reaction with HNO_2. The corresponding ketone was prepared from the secondary nitro compound and transformed to its semicarbazone The nitro compounds were reduced to the amines 1-amino-1-propyl cyclopentane and 2-amino-1-propyl cyclopentane($C_8H_{15}NH_2$). The latter substances are colorless, mobile liquids which can be distilled at atmospheric pressure without decomposition, smell intensely of armonia, and are difficultly soluble in water. They are well soluble in ether and other organic solvents, and form volatile carbonates - colorless crystelline substances - with atmospheric CO_2. The hydrochloride of 2-amino-1-propyl cyclopropane, obtained in a dry HCl atmosphere, is also a colorless crystalline substance. The chloroplatinate of 2-amino-1-propyl cyclopropane is a yellow crystalline substance There are 2 tables, and 4 references, 2 of which are Soviet

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

Investigation of the Nitration of Hydrocarbons of the Cyclopentane Series in the Vapor Phase. III. Nitration of Propyl-Cyclopentane

S/153/60/003/02/18/034
B011/B006

ASSOCIATION: Artilleriyskaya inzhenernaya akademiya im. F. E. Dzerzhinskogo, Kafedra khimii (Institute for Artillery Engineers imeni F. E. Dzerzhinskiy, Chair of Chemistry)

SUBMITTED: July 11, 1958

Card 4/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; GODOVIKOVA, T.I.; TARTAKOVSKIY, V.A.

Synthesis of organomercury nitro compounds. Report No.3: Reactions of the mercuric salt of trinitromethane with nitro derivatives of aromatic compounds. Izv.AN SSSR Otd.khim.nauk no.5: 863-865 My '60. (MIRA 13:6)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo Akademii nauk SSSR.
(Methane) (Nitro compounds) (Mercury compounds)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; KORSAKOVA, I.S.; BABIYEVSKIY, K.K.

Syntnesis of 1,4-dinitro-1,3-butadiene. Izv.AN SSSR Otd.khim. nauk no.5:944-945 My '60. (MIRA 13:6)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo Akademii nauk SSSR.

(Butadiene)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; SAFONOVA, E.N.; BELIKOV, V.M.

Chemistry of nitropyrroles. Report No.5: Synthesis of substituted derivatives of dinitropyrroles. Izv.AN SSSR.Otd. khim.nauk no.6:1053-1056 Jl '60. (MIRA 13:7)

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

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

S/[illegible]
B[illegible]/B[illegible]4

AUTHORS: Belikov, V. M., Mayr[illegible], [illegible] G., Korchemnaya, [illegible] B., Novikov, S. S., and Klimova, V. A.

TITLE: Tautomerism of Nitro Compounds. Communication [illegible] Study of the Mechanism of Tautomeric Conversions of Phenyl Nitromethane

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. [illegible], pp. [illegible]

TEXT: The authors investigated the tautomeric conversions of the nitro compounds as thoroughly as possible by the polarographic method. They used phenyl nitromethane because its tautomeric conversions proceed comparatively slowly. They determined the constant (K_N) of the acidic dissociation of phenyl nitromethane in water [illegible] potentiometrically and polarographically, and obtained K_N = [illegible] mole [illegible]. The dissociation kinetics of phenyl nitromethane was investigated in buffer solutions at pH between 7 and 12. The constants of the rate of dissociation were

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

Tautomerism of Nitro Compounds [illegible]
Study of the Mechanism of Tautomeric Conversions BO[illegible]
of Phenyl Nitromethane

experimentally determined with [illegible] the buffer [illegible] The rate of interaction of phenyl nitromethane [illegible] $k_{NI}^{H_2O} \approx$ [illegible] $\times 10^{-7}$ [illegible] mole sec. The kinetics of the transition from the [illegible] the nitro form was also studied at pH between [illegible] It is found that the rate of isomerization is independent of the hydrogen ion concentration at pH < 2, and may be expressed by the equation

$$C_6H_5CH + NOOH + H_2O \xrightarrow{k_{AI}^{H_2O}} C_6H_5CH \quad NO_2^- + H_2O$$

The rate of isomerization increases at a further increase of pH. In general the rate of isomerization is determined by the stage of dissociation of the aci form. The constants were [illegible] in the determination of the dissociation rate of the nitro form [illegible] determined with all components of the buffer mixtures. The aci form is a stronger acid than the nitro form. The behavior of the phenyl nitromethane [illegible] buffer solutions at pH [illegible] showed that in the pH range of from [illegible] the rate of development of nitro forms is practically independent of the pH [illegible]

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

Tautomerism of Nitro Compounds. Communication 1. S/062/60/000/009/015/021
Study of the Mechanism of Tautomeric Conversions B023/B064
of Phenyl Nitromethane

of other tautomeric compounds. G. [illegible] Sulyamov and Ya. S. Bobovich (Ref. [illegible]) are mentioned. V. I. Slovetskiy and V. A. Shlyapochnikov have taken the spectra. There are 1 table and 12 references: 3 Soviet, 6 US, 1 German, 1 Danish, and 1 Swedish.

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: March 24, 1959; completed June 8, 1960

$$C_6H_5CH_2NO_2 + H_2O \underset{k_{NR}^{H_3O^+}}{\overset{k_{ND}^{H_2O}}{\rightleftharpoons}} C_6H_5\overset{H_3O^+}{C}{-}HNO_2 \qquad K'_N$$

$$k_1 \uparrow\downarrow k_2 \qquad K$$

$$C_6H_5CH{=}NOOH + H_2O \underset{k_{AR}^{H_3O^+}}{\overset{k_{AD}^{H_2O}}{\rightleftharpoons}} C_6H_5CHNOO^-H_3O^+ \qquad K_A$$

$K'_N \approx 2\cdot10^{-7}$ M/л $k_{ND}^{H_2O} = 8\cdot10^{-7}$ л/M·сек $k_{NR}^{H_3O^+} = 200$ л/M·сек.

Card 4/4 $K_A = 1{,}3\cdot10^{-4}$ M/л $k_{AD}^{H_2O} = 4{,}14\cdot10^{-8}$ л/M·сек $k_{AR}^{H_3O^+} = 18$ л/M·сек.

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Tautomerism of Nitro Compounds. Communication 1. S/[illegible]
Study of the Mechanism of Tautomeric Conversions B002/B064
of Phenyl Nitromethane

further increase of pH, the rate of formation of the nitro form decreases in proportion with the reduction of the acid concentration. In this stage, the rate of formation of the nitro form is determined by the stage of recombination of the anion under the formation of a non-dissociated nitro form. The rates of dissociation and recombination of the nitro form as well as the rate of dissociation of the aci form were experimentally determined. On the basis of the kinetic analysis of tautomeric conversions of phenyl nitromethane it is found that the anion may appear in two forms: as aci anion and as nitro anion. As a result of the kinetic investigations the authors obtained a picture of tautomeric transformations of phenyl nitromethane in aqueous solution for the special case in which only H_2O^+ occurs as a base. See Scheme. Thus, it may be concluded that the duality of the reactivity of the phenyl nitromethane ion is apparently due to the coexistence of ions of two types. The interaction of these ions proceeds at low rates. These rates determine under certain conditions the direction of the reaction to the one or the other side. This phenomenon may, in the authors' opinion, contribute to clarify the duality of the reactivity

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84853

S/[illegible]/[illegible]/000/010/006/018
[illegible]/B064

111360

AUTHORS: Novikov, S. S., Khmel'nitskiy, L. I., and Lebedev, O. V.

TITLE: Reaction of N_2O_4 with Organic Compounds. Information 4. Conversion of the Nitromethyl Group into the Trinitromethyl Group

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk. [illegible], No. [illegible], pp. [illegible]

TEXT: The authors showed by experiments that a reaction of m-nitrobenzonitrolic acid with an N_2O_4 excess (in dichloromethane at 50-60°C) yields m-nitrophenyl trinitromethane (80% yield). Herefrom it is concluded that aryl nitrolic acids are formed as intermediate products in the formation of aryl trinitromethanes from salts of aryl nitromethanes under the action of N_2O_4. On this basis it was possible to establish reaction conditions that permit an essential increase in the yield of aryl trinitromethanes obtained from aryl nitromethane salts. The method is based on the addition of N_2O_4 in two portions. The first portion

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

84853

Reaction of N_2O_4 With Organic Compounds. Information 1. Conversion of the Nitromethyl Group Into the Trinitromethyl Group

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B018/B064

is added under conditions warranting a maximum yield of nitrolic acid, and the second portion is added under the optimum conditions for the conversion of nitrolic acid to aryl trinitromethane. Thus, a 58-60% yield of m-nitrophenyl trinitromethane could be attained, and the p-nitrophenyl trinitromethane hitherto not described could be obtained. The latter can be converted, under the action of an alcoholic leaching solution, into p-nitrophenyl dinitromethane which has hitherto been unknown. The conversion of the nitromethyl group into the trinitromethyl group can also be assumed to take place under the formation of the dinitromethyl group (intermediate stage). In the present investigation, also the salt of m-nitrophenyl dinitromethane was found to give derivatives of trinitromethyl. A formation of the aci-form of aryl dinitromethane as an intermediate stage in the formation reaction of the trinitromethyl derivative from the nitromethyl derivative could not be established, while in the normal form the aryl dinitromethanes do not react with N_2O_4. The individual methods of synthesis are described.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

84853

Reaction of N_2O_4 With Organic Compounds. Information 4. Conversion of the Nitromethyl Group Into the Trinitromethyl Group

S/062/60/000/010/006/018
B015/B064

There are 9 references: 3 Soviet, 2 Italian, 2 US, 1 German, and 1 British.

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: May 27, 1959

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

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S/062/60/000/010/007/019
B015/B064

11/360

AUTHORS: Zaytsevskiy, S. Z., Belikov, V. M., Korchemnaya, Ye. K., Kiseleva, V. A., and Shvedov, S. S.

TITLE: Tautomerism of Nitro-methanes. Information 2. Polarographic Investigation of the Kinetics of Tautomeric Conversions of Phenyl Nitro-methane

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 10, pp. 1787-1793

TEXT: In a previous investigation (Ref. 1), the polarographic activity of the aci-form of phenyl nitro-methane was determined. The present paper describes the technique applied and gives the experimental data obtained. The polarographic behavior of the aci- and nitroforms of phenyl nitro-methane was investigated, i.e., the kinetics of the transformation of the aci-form into the nitro-form at pH 1-4, the nitro-form into the anion at pH 7-10, and the anion into the nitro-form at pH 4-6. Moreover, the dissociation constants of the aci- and nitro-forms were

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polarographically and potentiometrically determined. The experiments were conducted in an optical polarograph, and the current was measured with an M-91 (M-91) micrometer. The potential of the dropping electrode was checked with an ЛП-1 (LP-1) voltmeter, and determined with a П-4 (P-4) potentiometer. The experiments were carried out at 25±0.1°C using various buffer solutions, and the pH was determined with glass electrodes and ЛП-5 (LP-5) or ЛП-59 (LP-59) potentiometers. The potentials of the half waves at pH 1-13 are $E_{1/2}$ = -0.52 v for the nitro-form and $E_{1/2}$ = -0.102 v for the aci-form. Investigations of the dissociation kinetics showed that the ionization of phenyl nitro-methane in buffer solutions can be described by an equation of the first order. The ionization rate was investigated in the presence of various bases. The rate of transformation of the aci-form into the nitro-form was found to follow the equation of a reaction of the first order throughout the pH range investigated. Investigations on the recombination kinetics of phenyl nitro-methane showed that at pH 4-5 the dissociation of the aci-form and the recombination of the nitro-form take place simultaneously. The values for the dissociation

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constants of the aci- and nitro-forms under the action of bases and acids were computed with the help of Brönsted's equation. The values [illegible] The authors thank Z. I. Kovrre for advice. There are [illegible] figures, 1 table, and 5 references: 4 Soviet and 1 US.

ASSOCIATIONS: 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: March 24, 1959

Card 3/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

S/062/60/000/010/025/031/XX
ROCC/BOOC

RS: Novikov, S. S., Shvekhgeymer, G. A. and Dudinskaya, A. A.

[illegible]: Condensation of Hexachloro Cyclopentadiene With Unsaturated Nitro Compounds

[illegible]: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 10, pp. 1858-1860

TEXT: Two types of nitro compounds may be used for the condensation of hexachloro cyclopentadiene with unsaturated nitro compounds: 1) $CH_2=CHR$ (where R [illegible] NO_2 or COOR [illegible] NO_2 [illegible] $CH=CHR''$ where R'' may be hydrogen, alkyl, aryl or COOCH [illegible]). For steric reasons, a condensation with unsaturated hydrocarbon compounds is scarcely possible. It is believed on the [illegible] studies of 1-nitro-propylene-1 (Ref. [illegible]) that the reaction with [illegible] unsaturated nitro compounds is likewise hardly possible, while [illegible] though slow [illegible] with [illegible] substituted unsaturated nitro [illegible]. Experimental results have fully confirmed these theoretical [illegible]

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

Condensation of Hexachloro Cyclopentadiene With Some [illegible] Unsaturated Nitro Compounds [illegible]

predictions: 5-nitro-1,4,5,6,7,7-hexachloro bicyclo-[2,2,1]-heptene-5 was synthesized in a good yield by 14 hours' heating a solution of nitro-ethylene and hexachloro cyclopentadiene in chloro benzene at 100-102°C. The condensation products of hexachloro cyclopentadiene with 2-nitro-ethyl ester of acrylic acid, 2,2-dinitro-propyl ester of acrylic acid, 2,2,2-trinitro-ethyl ester of acrylic acid, and 2,4,6-trinitro-phenyl ester of acrylic acid were synthesized in a similar manner. On the other hand, it was not possible to perform a reaction of hexachloro cyclopentadiene with ω-nitro-styrene, 2-nitro-acrylic acid methyl ester, 1-nitro-propylene-1, 2-nitro-propylene-1, or β-nitro-acrylic acid nitrile. A toxicological study initiated by N. M. Permyakova showed that all of the condensation products have an irritating effect. There are 4 non Soviet references.

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

SUBMITTED: May 15, 1959

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

S/062/[illegible]/000/010/[illegible]/031/XX
[illegible]

[illegible]ORS: Novikov, S. S., Burmistrova, M. S., and Gorelik, V. P.

[illegible]E: Condensation of Nitroalkanes With 2,2-Dimethyl-β-hydroxy Propionaldehyde and 2,2-Dimethyl β-hydroxy Butyraldehyde

[illegible]IODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, [illegible], No. 10, pp. [illegible]

TEXT: The condensation of CH_3NO_2, $C_2H_5NO_2$, and $CH_3C_2H_5NO_2$ with acetaldol has been dealt with by the authors in a previous paper (Ref. 1). The corresponding mononitrodiols and, by dehydration, the corresponding nitrodienes were obtained in the presence of $Ba(OH)_2$. The article under consideration deals with attempts made at the condensation of nitroalkanes with 2,2-dimethyl-β-hydroxy propionaldehyde (P) and 2,2-dimethyl-β-hydroxy butyraldehyde (B). Nitromethane was condensed with (P) by adding drops of aldehyde dissolved [illegible] to a mixture of nitromethane and $Ba(OH)_2$ at 20°C. Dilution was performed after two days, followed by neutralization with H_2SO_4, and extraction [illegible]

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Condensation of Nitroalkanes With 2,2-Dimethyl [illegible] 027/031/XX
β-hydroxy Propionaldehyde and 2,2-Dimethyl [illegible]
β-hydroxy Butyraldehyde

with ether. 1-nitro-3,3-dimethyl butanediol-2,4 was obtained by recrystallization from ether; colorless crystals, melting point [illegible] 7.5°C. 2) Bubbling of the ethereal solution of this compound with ketene, and distillation of the acetylation product in vacuum gave 1-nitro-3,3-dimethyl-4-acetoxy butene-1 (melting point 135°C at [illegible] mm Hg). 3) Condensation of 1,1-dinitro ethane with (B) performed in the same manner gave a viscous oil from which no substances could be crystallized or distilled off. Treatment of this oil with acetanhydride in the presence of H_2SO_4 led to an unidentifiable mixture. 4) The same negative results were obtained by condensation of dinitro methane with (B). Condensation of CH_3NO_2 with (B) in methanol solution and in the presence of $Ba(OH)_2$, performed as under 1), yielded 1-nitro-3,3-dimethyl pentanediol-2,4; boiling point 83-85°C at 2 mm Hg. Saturation of this compound with ketene and cooling with ice water led to 1-nitro-3,3-dimethyl-4-acetoxy pentene-1 (boiling point 85.5°C at 1.5 mm Hg). 1-nitro-3,3-dimethyl-2,4-diacetoxy pentane was separated at the same time (boiling point 134-135°C at 1.5 mm Hg).

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[illegible]ensation of Nitroalkanes With 2,2-Dimethyl- [illegible] pi[illegible]naldehyde and 2,2-Dimethyl- [illegible]x[illegible] B[illegible]tyr[illegible]dehyde

S/062/[illegible]/000/010/027/031/XX
B004/B0[illegible]

[illegible] attempt of converting these compounds into 1-nitro-3,3-dimethyl penta-[illegible]e-1 [illegible] distillation with CH_2COONa was not successful. There is 1 Soviet [illegible]erence.

[illegible]OCIATION: 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: March 3, 1960

[illegible]

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

S/062/60/000/011/009/016
B014/B078

AUTHORS: Khmel'nitskiy, L. I., Novikov, S. S., Lebedev, O. V.

TITLE: Reaction of N_2O_4 With Organic Compounds. 9. Aryl Nitrolic Acids, Preparation of Aryl Nitro Methanes From Them, Single-stage Synthesis of Aryl Nitro Methanes From Aryl Aldoximes

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 11, pp. 2019 - 2025

TEXT: The investigation of aryl nitrolic acids as well as of the methods of preparation of aryl nitro methanes is continued in this paper. A new method of preparation of aryl nitrolic acids through the action of N_2O_4 on aryl nitro methane salts has been found. It was shown that aryl nitrolic acids may exist in two types which differ according to their physical and some chemical properties. The formation of one or the other type as well as both types simultaneously depends on the method of preparation. These phenomena were thoroughly investigated in the case of p-nitro

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Reaction of N_2O_4 With Organic Compounds. S/062/60/000/011/009/016
5. Aryl Nitrolic Acids, Preparation of Aryl B013/B078
Nitro Methanes From Them, Single-stage Synthesis of Aryl Nitro
Methanes From Aryl Aldoximes

benznitrolic acid. Type (I) is a pale-yellow substance with a melting point at 60°-61°C (under decomposition). It is easily soluble in alkalis and alkali carbonate solutions. (I) forms, when acidifying a solution of p-nitrophenyl nitro methane potassium salt and -nitrate with oxalic acid. Type (II) is an almost colorless crystalline substance with a melting point at 52°-53°C. In alkalis or alkali carbonate solutions it is immediately converted into a high meltable product without passing into solution. It forms under the action of N_2O_4 upon a suspension of p-nitrophenyl nitro methane potassium salt in ether. By the action of 0.5 M N_2O_4 upon the ether solution of p-nitro benzaldoxime there forms an almost inseparable mixture from both forms. When applying the first mentioned two methods, m-nitro benznitrolic acid will only be obtained in type (I). From the oxime it will be separated like p-chloro benznitrolic acid as a mixture of both forms. With a repeated recrystallization of the mixture of (I) and (II) of p-chloro benznitrolic acid one

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Reaction of N_2O_4 With Organic Compounds. S/[illegible]
5. Aryl Nitrolic Acids, Preparation of Aryl Nitro Methanes From Them. Single-stage Synthesis of Aryl Nitro Methanes From Aryl Aldoximes B013/B076

obtains type (II) with a melting point at 76°-79°C. Type (I) was obtained by acidification of the alkaline mixture solution after this had been filtered off from the decomposition products of (II). o-nitro benzaldoxime with N_2O_4 gives rise to type (I) only. The existence of two types of aryl nitrolic acids can be explained by syn-anti-isomerism. Melting points of the obtained aryl nitrolic acids and their benzoyl derivatives are mentioned in the table. The conversion of nitrolic acid into aryl nitro methane in the presence of N_2O_4 was investigated with p-chloro-, o-nitro-, and p-nitro benznitrolic acids. p-chloro- and p-nitro benznitrolic acids (I and II) with N_2O_4 give rise to respective aryl nitro methanes in good yields. o-nitrophenyl trinitro methane could not be obtained by the action of N_2O_4 upon o-nitro benznitrolic acid. Based on findings, the method of a single-stage synthesis of aryl nitro methanes from aryl aldoximes was developed. It consists in adding N_2O_4 twice.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

Reaction of N_2O_4 With Organic Compounds. S/062/60/000/011/009/016
B013/B078

5. Aryl Nitrolic Acids, Preparation of Aryl Nitro Methanes From Them, Single-stage Synthesis of Aryl Nitro Methanes From Aryl Aldoximes

The first portion is added under the condition that it guarantees the maximum yield of nitrolic acid. The addition of the second portion takes place under the optimum conditions for the conversion of nitrolic acid into aryl nitro methane. There are 1 table and 6 references: 3 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: May 27, 1959

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; SHVEKHGEYMER, G.A.

New steps in the synthesis of β-halonitroalkanes. Izv. AN SSSR. Otd. khim. nauk no.11:2026-3021 '60. (MIRA 13:11)

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

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; FAYNZIL'BERG, A.A.; SHVEDOVA, S.N.; GULEVSKAYA, V.I.

Condensation of gem-dinitroalkanes with aliphatic aldehydes and amines. Izv. AN SSSR.Otd. khim. nauk no.11:2056-2058 N '60. (MIRA 13:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Paraffins) (Aldehydes) (Amines)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; SHVEYKHGEYMER, G.A.

Synthesis of aromatic nitro ketones and nitro nitriles by the Wittig reaction. Izv. AN SSSR.Otd. khim. nauk no.11:2061-2063 N '60. (MIRA 13:11)

1. Institut organicheskoy khimii im.N.D.Zelinskogo AN SSSR.
(Ketones) (Nitriles)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

S/(3)

AUTHORS: Novikov, S. S., Shvekhgeymer, G. A., Dudinskaya, A. A. S/074/60/029/02/003/007 B008/B001

TITLE: Nitro Compounds in Diene Synthesis

PERIODICAL: Uspekhi khimii, 1960, Vol 29, Nr 2, pp 187-219 (USSR)

ABSTRACT: This is a survey of the papers on diene synthesis with special attention to the problems of stereochemistry and the chemical properties of adducts obtained from unsaturated nitro compounds. Tables are enclosed which show all papers on diene synthesis of nitrodienes and nitrophylodienes published until 1959 inclusive. The mechanism of the reaction discovered by Diels and Alder is explained (Refs 12-25). The effect of the nitro group on the diene system was treated in the papers (Refs 21, 26-30). The presence of the nitro group, conjugated with the double bond, in phylodiene facilitates the diene synthesis. The following unsaturated nitro compounds were used as phylodienes in the reaction according to Diels-Alder: nitroethylene, its homologs and derivatives, β-nitro-styrene, its homologs and derivatives, and 1-1-dinitroethylene (Refs 1,4,7-9, 31-53). Adducts, which

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Nitro Compounds in Diene Synthesis S/074/60/029/02/003/007
B008/B001

are formed on condensation of nitroolefins with dienes, contain one nitro group and one double bond. Thus, it is possible to obtain three different products on hydrogenation of the adduct: saturated nitro compound, saturated and unsaturated amines. Since the synthesis of these products is of importance in proving the configuration, methods for the selective hydrogenation of the adducts being formed are included in this paper. These methods are treated in references 2, 52-54. Ye.G. Katayev, and P. S. Matveyeva are mentioned. There are 3 tables and 56 references, 8 of which are Soviet.

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

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

5.36.0

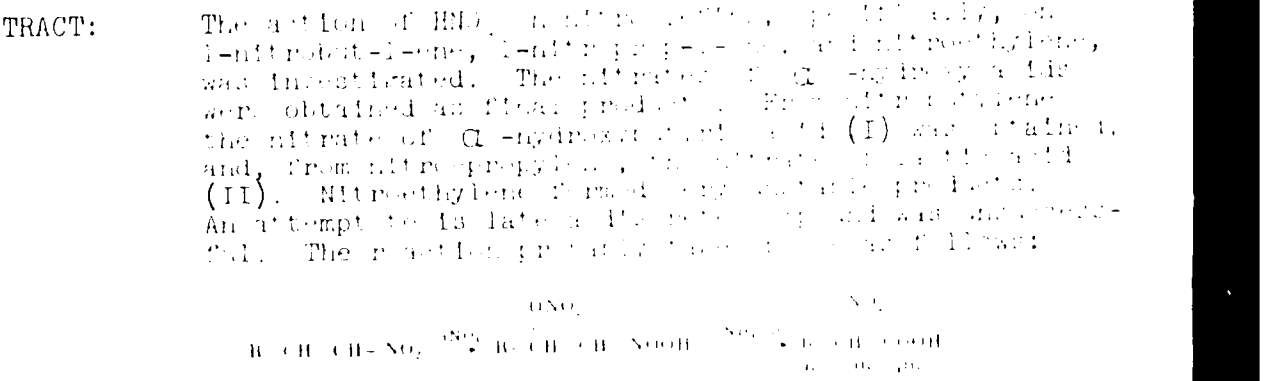
AUTHORS: Belikov, V. M., [illegible]

TITLE: Concerning the Action of Nitr[illegible]

PERIODICAL: [illegible] (USSR)

ABSTRACT: The action of HNO_3 [illegible] 1-nitrobut-1-ene, 1-nitr[illegible] and nitroethylene, was investigated. The nitrates of α-hydroxy acids were obtained as final products. From nitrobutylene the nitrate of α-hydroxybutyric acid (I) was obtained, and, from nitropropylene, the nitrate of lactic acid (II). Nitroethylene formed [illegible] products. An attempt to isolate a [illegible] was unsuccessful. The reaction probably [illegible] as follows:

$$R-CH=CH-NO_2 \xrightarrow{HNO_3} R-CH(ONO_2)-CH(NOOH) \xrightarrow{NO_2} R-CH(NO_2)-COOH$$



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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

Concerning the Action of Nitric Acid on Nitroolefins

Compound (I) was obtained in [illegible] yield, [illegible], n_D^{20} 1.4[illegible], d_4^{20} 1.[illegible], and (II) [illegible] yield, [illegible] mm, n_D^{20} [illegible]. There are [illegible] references, 1 U.S., 1 French, [illegible] U.K. The U.S. and U.K. references are: [illegible], 23, 494 (1958); F. Pattison, [illegible], Can. J. Chem., 34, 879 (1956).

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

SUBMITTED: January 14, 1959

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

S/020/60/132/04/31/064
B011/B003

5.3610

AUTHORS: Novikov, S. S., Faynzil'berg, A. A., Shevelev, S. A., Korsakova, I. S., Babiyevskiy, K. K.

TITLE: Isomerization of Tetranitroalkanes

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 4, pp. 846-849

TEXT: In the article under review the authors found that 1,1,1,3-tetranitropropane is isomerized to a symmetrical tetranitropropane (II) not only in the presence of ammonia but also by the action of some other alkaline agents such as potassium acetate and -methylate. The nature of the solvent determines the course of reaction. In alcohol the reaction of 1,1,1,3-tetranitropropane leads to isomerization with potassium acetate, thus forming 1,1,3,3-tetranitropropane (yield 35.4 per cent). Isomerization does not occur in an alcohol-acetone mixture; only the nitro group is split off, and 1,1,3-trinitropropane is obtained. In the presence of potassium methylate (in methanol), 1,1,1,3-tetranitropropane (I) is isomerized to the symmetrical

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tetranitropropane (II) in a yield of 10.8 per cent. The authors wanted to see whether isomerization is only characteristic of 1,1,1,3 tetranitropropane. For this purpose they studied the behavior of 1,1,1,3-tetranitrobutane and 1,1,1,3-tetranitropentane toward bases. Unlike 1,1,1,3-tetranitropropane, these two tetranitroalkanes occur in two stable forms, a true and an acy form (see Scheme). The authors found that the acy form of tetranitrobutane (IIIa) may be easily isomerized to 1,1,3,3-tetranitrobutane (V) by the action of potassium acetate in alcohol (yield 34.5 per cent). Potassium methylate in methanol (yield 36.7 per cent) and alcoholic caustic potash (yield 12.1 per cent) have a similar effect. Isomerization also occurs in the presence of dimethylamine, but its yield does not exceed a few per cent. The true form of 1,1,1,3-tetranitrobutane (III b) is isomerized to 1,1,3,3-tetranitrobutane by the action of potassium acetate (yield 34.5 per cent); but unlike the acy form, not in the presence of potassium methylate. The acy form of 1,1,1,3-tetranitropentane (IV a) may be isomerized in the way described above, but only in the presence of potassium acetate. Thus, 1,1,3,3-tetranitropentane (VI) (yield 14.5

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Isomerization of Tetranitroalkanes

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B011/B003

per cent) is formed. The true form of 1,1,1,3 tetranitropentane (IV b) cannot be isomerized in the presence of alkaline agents. 1,1,1,3 tetranitrobutane and 1,1,1,3-tetranitropentane (both acy and true forms are not isomerized either in the presence of ammonia. The authors establish that the acy forms isomerize more readily than the true forms. For this reason they assume that the isomerization of 1,1,1,3 tetra nitroalkanes passes through the stage of the acy form. The isomerization products of (II), (III), and (VI) were obtained as potassium salts. By the action of bromine they were converted into the corresponding bromides. On the strength of the results obtained the authors draw the conclusion that isomerization accompanied by a shift of the nitro group represents a general reaction of the 1,1,1,3-tetranitroalkanes having a straight chain of carbon atoms. There are 3 references, 2 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)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

Isomerization of Tetranitroalkanes

S/020/60/132/04/31/064
B011/B003

PRESENTED: January 9, 1960, by A. V. Topchiyev, Academician

SUBMITTED: January 9, 1960

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

81417

S/020/60/132/06/42/068
B004/B005

5.4130

AUTHORS: Shidlovskaya, A. N., Syrkin, Ya. K., Corresponding Member AS USSR, Novikov, S. S., Faynzil'berg, A. A., Sevost'yanova, V. V., Gulevskaya, V. I.

TITLE: Dipole Moments of Some Halogen Polynitroalkanes

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 6, pp. 1376 - 1377

TEXT: To investigate the effect of an accumulation of nitro groups for polarity and chemical properties, the authors measured the dipole moments of the compounds $CCl(NO_2)_3$, $CBr(NO_2)_3$, $CI(NO_2)_3$, $CH_3C(NO_2)_3$, $CH_3CH(NO_2)_2$, $CH_3CBr(NO_2)_2$, $CH_3CCl(NO_2)_2$, and $CH_3CHBr(NO_2)$ in benzene at 25°C by the heterodyne method. Table 1 lists the investigated concentrations of substances, the sum of atomic and electron polarization, and the dipole moments. A comparison of the dipole moments of CH_3X and $CX(NO_2)_3$ (X = halogen) shows, for the halogen trinitromethanes, a small negative

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81417

Dipole Moments of Some Halogen Polynitroalkanes S/020/60/132/06/42/068
B004/B005

charge in the chlorine compound, a small positive charge in the bromine-, and a strong positive charge in the iodine compound. In the C-I bond, the iodine is the positive end of the dipole. This is explained by the fact that in the presence of three $C-NO_2$ bonds the interaction between I and C is not limited to the formation of the $C^{\bullet}-I^{\circ}$ bond. Iodine acts here as a donor of its undivided p-electron pair, and effects a further shift of electrons, and a partial transition of nitro groups into nitrito groups. This explains the chemical properties of halogen trinitromethanes described in Refs. 2-5. Besides, the methyl group becomes more positive by the vicinity of the three NO_2 groups which circumstance explains the behavior of 1,1,1-trinitroethane which is easily transformed (Ref. 6) into 1,1-dinitroethylene. The dipole moments of some geminal dinitro compounds are calculated from the experimental data. Also here a considerable decrease of the dipole moment of the carbon-halogen bond results in agreement with the experiment. There are 1 table and 6 references: 2 Soviet, 1 British, 1 German, and 2 American.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

31417

Dipole Moments of Some Halogen Polynitroalkanes S/020/60/132/06/42/068
B004/B005

ASSOCIATION: Institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Institute of Fine Chemical Technology imeni M. V. Lomonosov). 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: February 14, 1960

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

DUDINSKAYA, A....; SHVEKHGEYMER, G....; NOVIKOV, S.S.; SLOVETSKIY, V.I.

Influence of the configuration of the nitrophilodienes R-CH=CH-NO_2 on their condensation with cyclopentadiene. Izv. AN SSSR. Otd. khim. nauk no. 1:182-184 Ja '61. (MIRA 14:2)

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

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

SLOVETSKIY, V.I.; SHLYAPOCHNIKOV, V.A.; SHEVELEV, S.A.; FAYNZIL'BERG, A.A.; NOVIKOV, S.S.

Molecular absorption spectra of nitro alkanes. Izv. AN SSSR. Otd. khim. nauk no.2:330-337 F '61. (MIRA 14:2)

1. Institut organicheskoy khimii im.N.D.Zelinskogo AN SSSR.
(Paraffins--Spectra)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; SHVEKHGEYMER, G.A.; PYATAKOV, N.F.

Interaction of β-nitro alcohols and ethoxyacetylene. Izv. AN SSSR. Otd. khim. nauk no.2:375-376 F '61. (MIRA 14:2)

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

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; BRUSNIKINA, V.M.; RUDENKO, V.A.

Synthesis of some derivatives of 1-benzyl-1, 2, 3-triazole. Izv.AN SSSR Otd.khim.nauk no.3:474-477 Mr '61. (MIRA 14:4)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Triazole)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

KHMEL'NITSKIY, L.I.; NOVIKOV, S.S.; LEBEDEV, OV.

Interaction between N_2O_4 and organic compounds. Report No.6: Arylnitronitrosomethanes and mechanism of the reaction between N_2O_4 and aromatic compounds containing an acinitro or isonitroso group in the side chain. Izv.AN SSSR Otd.khim.nauk no.3:477-482 Mr '61. (MIRA 14:4)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Methane) (Nitrogen oxide)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

DUDINSKAYA, A.A.; SHVEKHGEYMER, G.A.; NOVIKOV, S.S.

Condensation of piperylene with nitro olefins. Izv.AN SSSR.Otd. khim.nauk no.3:522-523 Mr '61. (MIRA 14:4)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Piperylene) (Olefins)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

BEL'CHEV, F.V.; SHUYKIN, N.I.; NOVIKOV, S.S.

Catalytic amination of alcohols. Izv.AN SSSR Otd.khim.nauk no.4: 649-652 Ap '61. (MIRA 14:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Amination) (Alcohols)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; FAYNZIL'BERG, A.A.; GULEVSKAYA, V.I.; SEVOST'YANOVA, V.V.

Synthesis and quantitative determination of α-halo nitro compounds. Izv.AN SSSR Otd.khim.nauk no.4:672-677 Ap '61. (MIRA 14:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Nitro compounds)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

KHMEL'NITSKIY, L.I.; LEBEDEV, O.V.; SLOVETSKIY, V.I.; NOVIKOV, S.S.

Reactions of N_2O_4 with organic compounds. Report No. 7: Syn-anti isomerism of aryl nitrolic acids. Izv.AN SSSR Otd.khim.nauk no.4: 678-683 Ap '61. (MIRA 14:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Nitrogen oxide) (Nitrolic acid)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

SLOVETSKIY, V.I.; FAYNZIL'BERG, A.A.; GULEVSKAYA, V.I.; NOVIKOV, S.S.

Molecular absorption spectra of α-halo nitro alkanes. Izv.AN SSSR Otd.khim.nauk no.4:683-690 Ap '61. (MIRA 14:4)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
(Paraffins--Spectra)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; SHVEKHGEYMER G.A.; DUDINSKAYA, A.A.

Condensation of cyclopentadiene with mono- and disubstituted nitro olefins. Izv.AN SSSR Otd.khim.nauk no.4:690-695 Ap '61. (MIRA 14:4)

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

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; BURMISTROVA, M.S.; GORELIK, V.P.; CHKHIKVADZE, Yu.G.

Condensation of nitro alkanes with acetaldehyde. Izv.AN SSSR Otd. khim.nauk no.4:695-698 Ap '61. (MIRA 14:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Paraffins) (Acetaldehyde)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

PEREDREYEVA, M.A.; DENISENKO, Ya.I.; NOVIKOV, S.S.

Vapor-phase nitration of hydrocarbons of the cyclopentane series. Part 4: Nitration of butylcyclopentane. Izv.vys.ucheb.zav.; khim. i khim.tekh. 4 no.6:977-980 '61. (MIRA 15:3)

1. Artilleriyskaya inzhenernaya akademiya imeni F.E.Dzerzhinskogo, kafedra khimii.
(Cyclopentane) (Nitration)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; SHVEKHGEYMER, G.A.; PYATAKOV, N.F.

Addition of nitrile chloride to acrylic and methacrylic acids and their derivatives. Izv.AN SSSR.Otd.khim.nauk no.5:914-915 My '61. (MIRA 14:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Nitriles) (Acrylic acid) (Methacrylic acid)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

TARTAKOVSKIY, V.A.; NOVIKOV, S.S.; GODOVIKOVA, T.I.

Synthesis of organomercury nitro compounds. Report 4: Addition of trinitromethane mercury salt to unsaturated hydrocarbons. Izv.AN SSSR. Otd.khim.nauk no.6:1042-1049 Je '61. (MIRA 14:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Nitroform) (Olefins)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

BELIKOV, V.M.; MAYRANOVSKIY, S.G.; KORCHEMNAYA, TS.B.; NOVIKOV, S.S.

Tautomerism of nitro compounds. Report 3: Effect of temperature and ionic strength of solutions on the rates of phenylnitomethane tautomeric transitions. Izv.AN SSSR,Otd.khim.nauk no.6:1108-1111 Je '61. (MIRA 14:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Methane) (Tautomerism)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; RUDENKO, V.A.; BRUSNIKINA, V.M.

Aminotriazoles in the Mannich reaction. Izv.AN SSSR, Otd.khim.nauk no.6:1148-1149 Je '61. (MIRA 14:6)

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

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

SLOVETSKIY, V.I.; SHEVELEV, S.A.; FAYNZIL'BERG, A.A.; NOVIKOV, S.S.

Dissociation constants of gem-dinitroalkanes. Zhur. VKhO 6 no.6: 707-708 '61. (MIRA 14:12)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Paraffins) (Dissociation)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

SLOVETSKIY, V.I.; SHEVELEV, S.A.; FAYNZIL'BERG, A.A.; NOVIKOV, S.S.

Dissociation constant of trinitromethane. Zhur.VKHO 6 no.5:599-600 '61. (MIRA 14:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR.

(Nitroform)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; BABIYEVSKIY, K.K.; SHLYAPOCHNIKOV, V.A.

Synthesis and spectra of deuteronitroform. Dokl. AN SSSR 141 no.4:875-876 D '61. (MIRA 14:11)

1. Institut organicheskoy khimii AN SSSR. Predstavleno akademikom A.V. Topchiyevym.
(Nitroform--Spectra) (Deuterium compounds)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S. S.; KORSAKOVA, I. S.; BULATOVA, N. N.

Addition of nitroalkanes to chloromethylvinyl ketone. Izv. vys. ucheb. zav.; khim. i khim. tekh. 5 no.5:753-755 '62. (MIRA 16:1)

1. Moskovskiy inzhenerno-fizicheskiy institut.

(Paraffins) (Ketone)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; TARTAKOVSKIY, V.A.; GODOVIKOVA, T.I ; GRIBOV, B.G.

Synthesis of organomercuric nitro compounds. Report No.5: Addition of mercuric salt of trinitromethane to unsaturated alcohols. Izv. AN SSSR Otd.khim.nauk no.2:272-276 F '62. (MIRA 15:2)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Mercury organic compounds)
(Nitroform)
(Olefins)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; TARTAKOVSKIY V.A.; GODOVIKOVA, T.I.; GRIBOV, B.G.

Synthesis of organomercuric nitro compounds. Report No.6: Mechanism of the direct addition mercury salt of trinitromethane to the double bond. Izv. AN SSSR Otd.khim. nauk no.2:276-281 F '62. (MIRA 15:2)

1. Institut organicheskoy khimii im. N.E.Zelinskogo AN SSSR.
(Mercury salts)
(Unsaturated compounds)
(Nitroform)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

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B117/B138

AUTHORS: Slovetskiy, V. I., Shevelev, S. A., Faynsil'berg, A. A., and Novikov, S. S.

TITLE: Destructive effect of light on aliphatic nitro-compounds

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 2, 1962, 359 - 360

TEXT: In a study of the spectra of nitro-compounds it was found that nitroalkanes and their salts are destroyed by light. A sample placed in a standard cuvette was illuminated by the lighting unit of an ИСП-51 (ISP-51) apparatus The wavelength of the mercury line examined was separated with standard light filters. To secure a standard amount of light energy during the experiments, the less intense lines were irradiated longer: 405 mμ - 10 hr; 436 mμ - 2 hr; 546 mμ - 3 hr. Conclusion: The closer the wavelength of light incident upon the substance is to the absorption maximum of this substance, the more intense is its decomposition Daylight has a particularly destructive effect upon nitroalkanes The effect of electric

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

KHMEL'NITSKIY, L.I.; NOVIKOVA, T.S.; NOVIKOV, S.S.

Oxidation of aromatic amines by trifluoroperacetic acid.
Izv.AN SSSR.Otd.khim.nauk no.3:516-517 Mr '62. (MIRA 15:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Amines) (Peroxyacetic acid)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

OKHLOBYSTINA, L.V.; FAYNZIL'BERG, A.A.; NOVIKOV, S.S.

Improved methods for producing α,ω-dinitroalkanes. Izv.AN SSSR.Otd.khim.nauk no.3:517-518 Mr '62. (MIRA 15:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Paraffins) (Nitro compounds)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; SLOVETSKIY, V.I.; BELIKOV, V.M.; ZAVILOVICH, I.M.; YEPISHINA, L.V.

Spectrophotometric study of dissociation constants of 1,1-dinitropentane, 1,1-dinitrohexane, and 1,1-dinitrodecane. Izv.AN SSSR.Otd.khim.nauk no.3:520-523 Mr '62. (MIRA 15:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Nitro compounds) (Ionization) (Spectrophotometry)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

MAYRANOVSKIY, S.G.; BELIKOV, V.M.; KORCHEMNAYA, TS.B.; NOVIKOV, S.S.

Mechanism of reduction of nitro compounds on the dropping mercury electrode. Izv.AN SSSR.Otd.khim.nauk no.3:523-525 Mr '62. (MIRA 15:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Nitro compounds) (Reduction, Electrolytic)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; SLOVETSKIY, V.I.; SHEVELEV, S.A.; FAYNZIL'BERG, A.A.

Spectrophotometric determination of the dissociation constants of aliphatic nitro compounds. Izv.AN SSSR Otd.khim.nauk no.4: 598-605 Ap '62. (MIRA 15:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Nitro compounds) (Dissociation)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

BELIKOV, V.M.; MAYRANOVSKIY, S.G.; KORCHEMNAYA, TS.B.; NOVIKOV, S.S.

Tautomerism of nitro compounds Report No.4: Mechanims of tautomeric transformations of nitro compounds. Izv.AN SSSR Otd.khim.nauk no.4:605-614 Ap '62. (MIRA 15:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo.
(Nitro compounds) (Tautomerism)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

IVANOVA (Korsakova), I.S.; LONEOVA, Yu.V.; NOVIKOV, S.S.

Addition of ethylenedinitrodiamine to nitroalkenes. Izv. A[illegible] SSSR. Otd.khim.nauk no.5, 920-921 My '62. (MIRA 15:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Ethylenediamine) (Olefins)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

IV[illegible]NOVA (Korsakova), I.S.; BULATOVA, N.N.; NOVIKOV, S.S.

Addition of nitroacetic acid esters to α,β-uns[illegible] ketones.
Izv. AN SSSR. Otd.khim.nauk no.5 921-9[illegible] [illegible]. (MIRA [illegible]:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo [illegible] SSSR.
(Acetic acid) (Ketones)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

SLOVETSKIY, V.I.; FAYNZIL'BERG, A.A.; NOVIKOV, S.S.

Quantitative correlation between the induction constants of radical-substituents and physicochemical properties of nitro compounds. Izv.AN SSSR.Otd.khim.nauk no.6:989-995 '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Nitro compounds) (Radicals (Chemistry))

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; BELIKOV, V.M.; YEPISHINA, L.V.

Action of chlorinating agents on nitrodiols. Izv.AN SSSR.Otd.-khim.nauk no.6:1111-1116 '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Ethanediol) (Chlorination)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

SLOVETSKIY, V.I.; SHEVELEV, S.A.; YERASHKO, V.I.; FAYNZIL'BERG, A.A.; NOVIKOV, S.S.

Structure of salts of 1,1-dinitroalkanes and trinitromethane. Izv.AN SSSR.Otd.khim.nauk no.6:1126 '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Paraffins--Spectra)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

SLOVETSKIY, V.I.; TARTAKOVSKIY, V.A.; NOVIKOV, S.S.

Synthesis of organomercury nitro compounds. Report No.7. Problem of tautomerism of the trinitromethane mercury salt. Izv.AN SSSR.Otd.khim.nauk no.8:1400-1405 Ag '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR. (Nitroform) (Mercury organic compounds) (Tautomerism)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

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S/062/62/000/008/015/016
B117/B180

AUTHORS: Novikov, S. S., and Sevost'yanova, V. V.

TITLE: Synthesis of alkyl silanes with a nitro-group in the γ-position

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 8, 1962, 1485-1486

TEXT: The addition between substituted silanes (trichloro-, methyl dichloro-, ethyl dichloro-, diethyl chloro- and triethylsilane) and unsaturated nitro-compounds (nitro-ethyls and 3-nitropropene-1) was investigated. with the aim of finding a better synthesis for organo-silicon nitro-compounds. Chloro platinic acid in i-propyl alcohol was used as a catalyst. Autoclave experiments at atmospheric and high pressures showed that pressure changes have hardly any effection yield or composition of the products. The nitro ethyls reacted extremely vigorously with Cl_3SiH or CH_3SiHCl_2, H and HCl being liberated with methyl dichlorosilane, however 1-chloro-2-nitro ethane and unidentified polymers

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were isolated, and not the product expected. Heating 3-nitro prop-1-ene with Cl_3SiH, CH_3SiHCl_2 and $C_2H_5SiHCl_2$ (to 75°C) produced, the corresponding adducts in satisfactory yield. The γ-nitro-propyl dichloro-silanes synthesized are colorless, viscous compounds, hydrolyzing rapidly in air. The reaction products of 3-nitro propene-1- decompose with liberation of gas. No reaction occurs between $(C_2H_5)_3SiH$ and 3-nitro propene-1. The activity of the substituted silanes diminished with the number of chlorine atoms: $Cl_3SiH > CH_3SiHCl_2 > (C_2H_5)_2SiHCl$.

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: February 22, 1962

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

IVANOVA, I.S.; KONNOVA, Yu.V.; NOVIKOV, S.S.

Syntehses of methyl ester of α-nitrocrotonic acid. Izv.AN SSSR.Otd.khim. nauk no.9:1677-1679 S '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Chrotonic acid)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

SHLYAPOCHNIKOV, V.A.; SHEVELEV, S.A.; YERASHKO, V.I.; FAYNZIL'BERG, A.A.; NOVIKOV, S.S.

Intensity of stretching N-O vibrations in nitro-alkanes and halogenated nitro alkanes. Izv.AN SSSR.Otd.khim.nauk no.9:1684-1686 S '62. (MIRA 15:10)

1. Institut oganicheskoy khimii ii. N.D.Zelinskogo AN SSSR.
(Paraffins—Spectra)

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IVANOVA, I.S.; KONNOVA, Yu.V.; BULATOVA, N.N.; NOVIKOV, S.S.

Addition of 3,3,5,5-tetranitropiperidine to α,β-unsaturated compounds. Izv.AN SSSR.Otd.khim.nauk no.9:1686-1688 S '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Piperidine) (Unsaturated compounds)

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NOVIKOV, S.S.; BABIYEVSKIY, K.K.; SHEVELEV, S.A.; IVANOVA, I.S.; FAYNZIL'BERG, A.A.

Synthesis of 1,1,1,3,-tetranitro-2-alkylpropanes and their cleavage by the action of bases. Izv. AN SSSR.Otd.khim.nauk no.10:1853-1855 O '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Propane) (Bases (Chemistry))

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IVANOVA, I.S.; BULATOVA, N.N.; NOVIKOV, S.S.

Addition of tetranitroalkanes to α,β-unsaturated ketones. Izv. AN SSSR. Otd.khim.nauk no.10:1856-1858 O '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Paraffins) (Ketones)

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IVANOVA, I.S.; BULATOVA, N.N.; NOVIKOV, S.S.

Ethylenedinitrodiamine in the reaction of addition to α,β-unsaturated ketones. Izv. AN SSSR.Otd.khim.nauk no.10:1858-1859 O '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Ethylenediamine) (Keytones)

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42650

S/062/62/000/011/015/021
B117/B101

AUTHORS: Ivanova, I. S., Kornova, Ye. V., and Novikov, S. S.

TITLE: Addition of gem-dinitroalkanes to unsaturated nitro-compounds

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 11, 1962, 2000-2004

TEXT: The nucleophilic addition of 1,1-dinitropropane, 1,1-dinitrobutane to 2,2,2-trinitroethyl acrylate was examined in order to ascertain the reactivity of the double bond in acryl esters of nitro-alcohols. The reaction at room temperature in methanol and in the presence of catalytic amounts of sodium methylate resulted in the following compounds: (1) The 2,2,2-trinitroethyl ester of 1,1-dinitrocaproic acid was obtained from 1,1-dinitropropane and 2,2,2-trinitroethyl acrylate; m.p. 55-56°C, yield 51.1%; (2) the 2,2,2-trinitroethyl ester of 1,1-dinitroenanthic acid was obtained from 1,1-dinitrobutane and 2,2,2-trinitroethyl acrylate; m.p. 69-70°C, yield 17.6%. For comparison, the same gem-dinitroalkanes were added to 1-nitroalk-1-enes, whereby the following compounds were obtained for the first time: (1) 1,1,1-trinitro-2-methyl pentane,

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Addition of gem-dinitroalkanes... S/062/62/000/011/015/021
B117/B101

b.p. 109-110.5°C (1 mm Hg), n_D^{20} 1.4727, from 1,1-dinitropropane and 1-nitropropene-1 in a yield of [illegible], [illegible] 1,1,3-trinitro-2-ethyl pentane, b.p. 130-130.5°C (2 mm Hg), n_D^{20} 1.4764, from 1,1-dinitropropane and 1-nitrobutene-1 in a yield of [illegible], [illegible] 1,1,3-trinitro-2-n-propyl pentane, b.p. 1[illegible]-1[illegible]3°C (1 mm Hg), n_D^{20} 1.47[illegible], from 1,1-dinitropropane and 1-nitropentene-1 in a yield of [illegible]. The yields of the products obtained indicate that the double bonds in nitroalkenes are more reactive than the double bond in the esters of unsaturated acids and nitro-alcohols.

ASSOCIATION: Institut [illegible] Akademii nauk SSSR (Institute of Organic Chemistry imeni N.D.Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: June 1[illegible], 1962

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

BELIKOV, V.M.; MAYRANOVSKIY, S.G.; KORCHEMNAYA, TS.B.; NOVIKOV, S.S.

Kinetic polarographic currents of the recombination of anions of nitro compounds. Izv. AN SSSR. Otd.khim.nauk no.11:2103 N '62. (MIRA 15:12)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR i Institut elementoorganicheskikh soyedineniya AN SSSR.
(Nitro compounds) (Polarography)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

IVANOVA, I. S.; BOGDANOVA, G. F.; ALEKSEYEVA, T. A.; NOVIKOV, S. S.

Synthesis of dinitrodiazodicarboxylic acids. Izv. AN SSSR Otd. khim. nauk no.12:2236-2238 D '62. (MIRA 16:1)

1. Institut organicheskoy khimii im. N. D. Zelinskogo AN SSSR.

(Acids, Organic) (Diazo compounds)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; SEVOST'YANOVA, V.V.; FAYNZIL'BERG, A.A.

Characteristic chemical properties of organic compounds containing positive halogen. Usp.khim. 31 no.12:1417-1436 D '62. (MIRA 16:2)

1. Institut organicheskoy khimii AN SSSR imeni N.D.Zelinskogo.
(Organic compounds) (Halogens)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; SLOVETSKIY, V.I.; TARTAKOVSKIY, V.A.; SHEVELEV, S.A.; FAYNZIL'BERG, A.A.

On the existence of aci-forms of 1,1-dinitroalkanes and trinitromethane. Dokl. AN SSSR. 146 no.1:104-106 S '62. (MIRA 15:9)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR. Predstavleno akademikom M.I. Kabachnikom.
(Paraffins) (Nitro compounds)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

S/062/63/000/001/007/025
B101/B186

AUTHORS: Slovetskiy, V. I., Shevelev, S. A., Yerashko, V. I., Faynzil'berg, A. A., and Novikov, S. S.

TITLE: Spectrometric structural analysis of the salts of 1,1-dinitro alkanes and trinitro methane

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 1, 1963, 57-63

TEXT: A comparative study was made of the IR spectra of the lithium, potassium sodium and ammonium salts of 1,1-dinitro methane, 1,1-dinitro ethane, 1,1-dinitro propane, 1,1-dinitrobutane, 1,1-dinitro pentane, 1,1-dinitro hexane, 1,1-dinitrodecane, and trinitro methane, in order to elucidate their structures. Results: All 1,1-dinitro alkanes have bands at 1450, 1210, and ~1120 cm^{-1}, but no bands characterizing the stretching vibrations of N-O in the noncharged NO_2 groups exist in the spectra of any of the compounds. The spectra of the salts show neither the two bands in the region of 800-900 cm^{-1} that are found in free gem-dinitro alkanes, whereof at least one is caused by the stretching vibra-

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tions of the C-N bond, nor bands characteristic of the C=N bond. The nature of the cation has no effect on the spectrum except that in ammonium salts additionally NH_4^+-ion bands appear as well as a weak 1580 cm^{-1} band produced by hydrolysis. Conclusion: All nitro groups are equivalent and participate similarly in the formation of the anion. Hence, the formulas of the salts are $[RC(NO_2)_2]^- M^+$ and $[C(NO_2)_3]^- M^+$. No carbanions are present. There are 2 figures and 5 tables. The most important english-language references are: N. Jonathan, J. Molecul. Spectra, 7, 105 (1961); L. W. Kissinger, H. E. Ungnade, J. Organ. Chem., 25, 1471 (1960).

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences USSR)

SUBMITTED: March 26, 1962

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NOVIKOV, S.S., kand. ekon. nauk

Modernization of the equipment and its economic effectiveness in the textile industry. Uch. zap. Chuv. gos. ped. inst. no.10[illegible] '63. (MIRA 18:1)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137430013-8

NOVIKOV, S.S.; SEVOST'YANOVA, V.V.; YEPISHINA, L.V.

Synthesis of nitroalkyl siloxanes. Izv. AN SSSR Ser.khim. no.10: 1860-1861 O '63. (MIRA 17:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

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