NEYKO, Ye.M.

Effect of slight blood loss on body reactivity in experimental peritonitis. Vrach. delo no.12:21-22 D '61. (MIRA 15:1)

1. Kafedra patologicheskoy fiziologii Stanislavskogo meditsinskogo instituta. Nauchnyy rukovoditel' - prof. M.M.Smyk.
(HEMORRHAGE) (PERITONITIS)

NEYKO, Ye.M.

Distribution in various organs and tissues of radioactive phosphorus administered intravenously in infectious peritonitis. Biul. eksp. biol. i med. 52 no.7:38-40 Jl '61. (MIRA 15:3)

1. Iz kafedry patologicheskoy fiziologii (zaveduyushchiy - prof. N.V. Kolpikov) Stanislavskogo meditsinskogo instituta (direktor - dotsent G.A. Babenko). Predstavlena deystvitel'nym chlenom AMN SSSR. A.V. Lebedinskim.

(PHOSPHORUS--ISOTOPES)
(PERITONITIS)

FISHCHENKO, L.Ya.; NEYKO, Ye.M.

Effect of toad venom on the healing of experimental wounds. Biul. eksp. biol. i med. 52 no.12:93-95 D '61. (MIRA 14:12)

1. Iz kafedry (zav. - dotsent L.Ya. Fishchenko) patologicheskoy fiziologii Stanislavskogo meditsinskogo instituta (dir. - dotsent G.A.Babenko). Predstavlena deystvitel'nym chlenom AMN SSSR A.V. Lebedinskim.

(WOUNDS) (VENOM) (TOADS)

FISHCHENKO, L.Ya.; NEYKO, Ye.M.

Treatment of blood transfusion shock occuring against a background of neuroplegic action. Biul.eksp.biol.i med. 54 no.11: 42-46 N '62. (MIRA 15:12)

1. Iz kafedry patologicheskoy fiziologii Stanislavskogo meditsinskogo instituta. Predstavlena deystvitel'nym chlenom AMN SSSR A.V.Lebedinskim.
(SHOCK) (BLOOD—TRANSFUSION) (AUTONOMIC DRUGS)

NEYKO, Ye.M.; SOPIL'NIK, A.Ya.

Changes in liver function in peritonitis during disorders of its arterialization. Pat. fiziol. i eksp. terap. 9 no.3: 61-63 My-Je '65. (MIRA 18:9)

1. Kafedra patologicheskoy fiziologii (zav.- doktor med. nauk S.M. Mints) i kafedra normal'noy anatomii (zav.- prof. Ye.P. Mel'man) Ivano-Frankovskogo meditsinskogo instituta.

MEYKO, Ye.M. [Meiko, IE.M.]

State of bile formation and secretion in experimental peritonitis.
Fiziol. zhur. [Ukr.] 11 no.6:828-829 N-D '65. (MIRA 19:1)

1. Kafedra patologicheskoy fiziologii Ivano-Frankovskogo meditsinskogo instituta. Submitted March 1 , 1964.

NEYKOV, N. T.

Easily Removable Dead Feeding Heads in the Cast Iron Casting Trade. The Bulgarian Heavy Industry, 6:35:June 55

Neykov, O.D.

STESHENKO,A.I.; ZHURAVLEV,S.P.; TARAN,P.N.; KUDRYASHOV,K.V.; ZHUKOV,M.N.; BELYY,P.L.; KADYRVAYEV,R.A.; PASTUSHKIN,P.M.; SHOSTAK,A.G.; OSTROUKHOV,A.I.; POLONSKIY,M.I.; OSTROUKHOV,I.I.; LUGOVSKIY,S.I.; SEMENKO,P.I.; KHOROSHEV,O.V.; IBRAYEV,Sh.I.; NEYKOV,O.D.

"Dust control in the mines of Krivoy Rog Basin." V.V.Nedin. Reviewed by A.I.Steshenko and others. Gor.zhur. no.9:61-62 S '55. (MLRA 8:8)

(Krivoy Rog--Mine dusts) (Nedin,V.V.)

NEYKOV, O.D.

MEDIN, V.V., professor, doktor tekhnicheskikh nauk; NEYKOV, O.D., gornyy inzhener; [illegible] V., kandidat tekhnicheskikh nauk; BABOV, D.M., kandidat meditsinskikh nauk.

Mine dust removal with self-cleaning oil filters. Gor.zhur. no.6:66-69 Je '57. (MIRA 10:8)

1. Krivorozhskiy gornorudnyy institut i Krivorozhskiy institut gigiyeny truda.

(Mine dusts) (Filters and filtration)

AUTHOR: Neykov, O.D., Mining Engineer 127-58-4-11/21

TITLE: Underground Crushers in Domestic and Foreign Mines (Podzemnyye drobilki na otechestvennykh i zarubezhnykh rudnikakh)

PERIODICAL: Gornyy Zhurnal, 1958, Nr 4, pp 41-46 (USSR)

ABSTRACT: The author compares the organization of work with underground crushers at home and abroad and describes the superiority of foreign methods. The most important condition for satisfactory work of these crushers is the installation of large underground bunkers for unprocessed and crushed ores. The larger the capacity of the bunkers the more productive the work of the crusher. In most Soviet mines where these crushers are installed, they work only a few hours and are idle for the rest of the time. Sanitary conditions of work abroad are also better because of special dust absorbing installations. There are 5 figures and 10 non-Soviet references.

ASSOCIATION: Krivorozhskiy gornorudnyy institut (The Krivoy Rog Ore Mining Institute)

Card 1/1 1. Mines - Equipment 2. Ore crushers - USSR

Neykov O.D.

127-58-4-15/31

AUTHORS: Nedin, V.V., Doctor of Technical Sciences, Neykov, O.D., Mining Engineer, Sheleketin, A.V., Candidate of Technical Sciences

TITLE: The Elimination of Dust from the Jaw Crusher (Obespylivaniye shchekovoy drobilki)

PERIODICAL: Gornyy Zhurnal, 1958, Nr 4, pp 55-58 (USSR)

ABSTRACT: The authors describe a suction apparatus for the elimination of dust from the jaw crusher, constructed by the Laboratory for the Prevention of Silicosis of the Institute of Mining Works of the AS USSR and the Krivoy Rog Institute of Work Hygiene. There is 1 figure, 8 references, 5 of which are Soviet and 3 English.

ASSOCIATION: Laboratoriya po bor'be s silikozom Instituta gornogo dela AN SSSR (Laboratory for the Prevention of Silicosis at the Mining Institute of the AS UkrSSR) Krivorozhskiy institut gigieny truda (The Krivoy Rog Institute of Work Hygiene)

Card 1/1 1. Ore crushers - Safety measures 2. Ore crushers - Hazards 3. Silicosis - Preventive measures

NEYKOV, O.D., Cand Tech Sci -- (diss) "Study and selection of
[illegible]
effective ~~means~~ of removal dust from subterranean bunkers."
Dnepropetrovsk, 1959. 15 pp (Min of Higher Education UkSSR.
Denpropetrovsk Order of Labor Red Banner Mining Inst im Artem).
150 copies (KL, 38-59, 117)

NEDIN, V.V., prof., doktor tekhn.nauk; NEYKOV, O.D., gornyy inzhener

Dust control in underground bunkers. Bor'ba s sil. 3:97-10
'59. (MIRA 12:

(KRIVOY ROG BASIN--IRON MINES AND MINING)
(DUST--PREVENTION)

NEYKOV, O.D.

Study of vacuuming underground bunkers. Sbor.trud.Inst.gor.dela
AN URSR no.8:122-131 '61. (MIRA 15:2)
(Mine dusts--Removal)

NEYKOV, O.D., kand.tekhn.nauk; BOSHNYAKOV, Ye.N.

Dust collectors for cleaning the air of the suction system in the housings of crushers. Bor'ba s sil. 230-239 '62.
(MIRA 16:5)

1. Krivorozhskiy filial Instituta gornogo dela AN UkrSSR.
(Crushing machinery) (Dust collectors)

NEYKOV, O.D.

Calculation of air changes in the aspirator housings of crushing plants. Sbor.nauch.trud.Kriv.fil.IGD AN URSR no.1: 88-98 '62. (MIRA 16:4)

(Dust)

NEDIN, V.V.; NEYKOV, O.D.; DANCHENKO, F.I.

Study of new filter cloths. Sbor.nauch.trud.Kriv.fil.IGD AN URSR no.1:104-123 '62. (MIRA 16:4)
(Dust collectors)

NEYKOV, O.D.; MATVIYENKO, A.K.

Selection of the design of a cloth filter for mines. Sbor.nauch.
trud.Kriv.fil.IGD AN URSR no.1:128-136 '62. (MIRA 16:4)
(Dust collectors)

NEDIN, V.V.; NEYKOV, O.D.; BOSHNYAKOV, Ye.N.; AFANAS'YEV, I.I.

Study of a dust collector for fine cleaning of air sucked out of aspirator housings. Sbor.nauch.trud.Kriv.fil.IGD AN URSR no.1:141-145 '62. (MIRA 16:4)
(Dust collectors)

NEYKOV, O.D.; BOSHNYAKOV, Ye.N.

Studying aspiration on a laboratory unit for materials-handling places. Sbor.nauch.trud.Kriv.fil.IGD AN URSR no.1:145-155 '62. (MIRA 16:4)

(Conveying machinery) (Dust)

NEYKOV, O.D.; BARANOVA, Yu.I.

Study in measuring the disperion od dust by sampling the air with a filter made of FPP-15 cloth. Sbor.nauch.trud.Kriv.fil. IGD AN URSR no.1:181-185 '62. (MIRA 16:4)
(Dust)

NEDIN, V.V.; NEYKOV, O.D.; DANCHENKO, F.I.

Removing dust from the air by means of bag filters in mines of the Krivoy Rog Basin. Gor.zhur. no.5:64-67 My '62. (MIRA 16:1)

1. Krovorozhskiy filial Instituta gornogo dela AN UkrSSR.
(Krivoy Rog Basin--Mine dust--Removal)
(Filters and filtration)

NEDIN, V.V., doktor tekhn.nauk; NEYKOV, O.D., kand.tekhn.nauk; BOSHNYAKOV, Ye.N.

Controlling dust in the housings of crushers with a cascade arrangement of equipment. Bor'ba s sil. 5:218-229 '62. (MIRA 16:5)

1. Krivorozhskiy filial Instituta gornogo dela AN UkrSSR.
(Crushing machinery) (Dust—Prevention)

NEDIN, V.V., doktor tekhn.nauk; NEYKOV, O.D., kand.tekhn.nauk; DANCHENKO,
F.I., inzh.

Removing dust from the air around underground receiving bunkers.
Gor. zhur. no.9:68-71 S '62. (MIRA 15:9)

1. Krovorozhskiy filial Instituta gornogo dela AN UkrSSR.
(Mine dusts--Removal)

KEYKOV, G.D., kand. tekhn. nauk; B[illegible], Ye.[illegible], inzh.; [illegible], I.I.;
LOTOTSKIY, [illegible]

Development and introduction of new aspiration systems at crushing plants in the Krivoy Rog Basin. Bor'ba s sil. 6: 14?-150 '64 (MIRA [illegible])

1. Krivorozhskiy filial Instituta gigiyeny truda [illegible]

NEDIN, V.V., doktor tekhn. nauk; NEYKOV, O.D., kand. tekhn. nauk;
BOSHENYAKOV, Ye.N., inzh.; SYCH, I.A.

Comparative testing of dust collectors under industrial conditions. Bor'ba s sil. 6:151-157 '64 (MIRA 18:2)

1. Krivorozhskiy filial Instituta gornogo dela im. M.M.Fedorova.

NEDIN, Valentin Vasil'yevich; NEYKOV, Olog Domianovich; KULIKOV,V.V.,
retsenzent; STEBAKOV, B.A., otv. red.

[Dust control in mines] Bor'ba s pyl'iu na rudnikakh.
Moskva, Nedra, 1965. 198 p. (MIRA 18:8)

BULGARIA / Chemical Technology. Chemical Products. H
Cellulose and its Derivatives. Paper.

Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 69373.

Author : Neykov P., Machev S.
Inst : Not given.
Title : Production of Cellulose from a Mixed Pulp by the Sulfate Method.

Orig Pub: Tezhka promishlenost, 1956, 5, No 1, 31-39.

Abstract: It has been established that by employing mixtures of fir and beech tree pulps, the obtained cellulose has a high permanganate number (130-140). In the production of cellulose of low permanganate number (100-110), the destruction of fibers takes place. A mixture composed of 80-85% pulp derived from fir and of 20-15% beech pulp yields cellulose that has mechanical characteristics similar to

Card 1/2

YEL'TSOV, A.I.; NEYLAND, E.A.; KOLESNIKOVA, Ye.N.

Treatment of children with diabetes mellitus at the Yessentuki "Lunost'" sanatorium. Vop. okh. mat. i det. 6 no.8:26-28 Ag '61. (MIRA 15:1)

1. Iz Yessentukskogo detskogo sanatoriya "Yunost'" (glavnyy vrach A.I.Yel'tsov) Severo-Kavkazskogo zonal'nogo upravleniya spetsializirovannykh sanatoriyev Ministerstva zdravookhraneniya RSFSR (nach. G.I.Kazachok).

(YESSENTUKI—DIABETES)

L

NEYLAND, G. K., Cand Tech ~~Ixxt~~ Sci -- (diss) "~~A~~ On the comparative advantage~~ous,~~s ness of the use ~~application~~ of circular-saw machines, equipped with conical saws and band-saw machine tools in the (manufacture of packaging materials) ~~tare industry~~." Riga, 1957. 20 pp with graphs. (Latvian Agr Acad), 200 copies. (KL, 9-58, ~~12~~ 118)

NEYLAND, G.K.

The effectiveness of using frames with circular thin-edged and band saws. Les.prom. 35 no.4:25-27 Ap '57. (MIRA 10:5)

1. Sel'skokhozyaystvennaya akademiya Latviyskoy SSR.
(Saws)

EPRO, V.R., inzh.; NEYLAND, G.K., inzh.

From practices in the use of the KVM-2 vibration potato digger. Trakt. i sel'khozmash. 33 no.1:40 Ja '63. (MIRA 16:3)

1. Nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva Latviyskoy SSR.

(Latvia--Potato digger (Machine))

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

13C

C/

[illegible] in steel with a carbo- [illegible] 6, 1130—1146).—The C [illegible] is determined [illegible] and permeability of the steel.

I. F. H.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

NEYLAND, K. K., NOSOV, G. I., BEZDENEZHNYKH, A. A., LEBEDEV, Ya. I. and KSENEFONTOV, V. F.

"Utilization of Alloy Scrap at Magnitogorsk Combine," Stal', No.6, pp. 10-18, 1946

Evaluation B-60428

NEYLAND, K. K., NOSOV, G. I., VERGAZOV, N. G., KSENEFONTOV, V. Ye. and LEBEDEV, Ya. I.

"Melting Chromium-Molybdenum-Nickel Steel in a 350-Ton Basic Open-Hearth Furnace," Stal', No.6, pp. 459-466, 1946

Evaluation B-61757

NEYLAND, K. K.

NEYLAND, K. K. -- "Dynamics of Oxidation Processes and Slag Conditions in Processing Alloy Wastes from Basic Open-hearth Furnace." Latvian State U, 1948 (Dissertation for the Degree of Candidate of Chemical Sciences)

SO: Izvestiya Ak. Nauk Latviyskoy SSR, No. 9, Sept., 1955

NEILANDS, K.K.

✓ **Manganese in process of melting steel.** K. Neilands. 16
Latvijas PSR Zinātņu Akad. Vēstis 1955, No. 5 (Whole No.
94), 96–108(in Russian).—O content of molten steel in the
Martens process increased as the C content decreased, but
was not dependent on Mn content. Ferromanganese addn.
did not influence O content of the melt in the furnace, but
the O content of the rolled product was 50% lower. The
distribution coeff. of S between slag and metal increased
very significantly with the basicity of the slag, and, to a
small extent, with the Mn percent Mn content did not in-
fluence the puncturing characteristics of rolled sheets;
here the important factor was P and S contents, which
should be below 0.035 and 0.045%, resp. No correlation
was found between Mn content, within 0.1–0.7% Mn, and
the quality of the rolled sheet. Andrew Dravnieks

NEYLAND, L.E. [Neilands, L.]; VANAG, G.Ya. [Vanags, G.] akademik

2-Phenyl-4-azabenz(f)-1,3-indandione, a new representative of the heterocyclic analogs of 1,3-indandione. Dokl. AN SSSR 146 no.3: 615-617 S '62. (MIRA 15:10)

1. Rizhskiy politekhnicheskiy institut. 2. AN Latviyskoy SSR (for Vanag).

(Indandione)

NEYLAND, L.E. [Neilands, L.]; NEYLAND, O. Ya. [Neilands, O.]; VANAG, G.Ya.
[Vanags, G.], akademik

New method of production of tetronic acid. Dokl. AN SSSR 159
no.5:1099-1101 D '64 (MIRA 18:1)

1. Rizhskiy politekhnicheskiy institut. 2. AN Latviyskoy SSR
(for Vanag).

USSR/Chemistry - Synthesis methods

Card 1/1 Pub. 151 - 31/37

Authors : Gudrinietse, E.; Neyland, O.; and Varag, G.

Title : Nitrodimedone and some of its derivatives

Periodical : Zhur. ob. khim. 24/10, 1863-1866, Oct 1954

Abstract : A new method for the derivation of nitrodimedone through nitration of dimedone with fumic nitric acid is presented. Certain nitrodimedone salts with inorganic and organic bases, well soluble in water and alcohol, are described. The derivation of chloro- and bromo-derivatives of nitrodimedone is explained. The preparation of monosemicarbazone and monophenylhydrazone of nitrodimedone is described. Eight references: 7-USSR and 1-USA (1907-1953).

Institution : The Latvian State University

Submitted : May 7, 1954

NEYLAND, O.

GUDRINIETSE, E.; NEYLAND, O.; VANAG, G.

Iodonium derivatives of β-diketones. Part 1: The reaction of dimedon with iodozobenzene. Zhur.ob.khim. 27 no.10:2737-2740 O '57. (MIRA 11:4)

1. Latviyskiy gosudarstvennyy universitet.
(Cyclohexnedione) (Benzene)

AUTHORS: Zvorykina, V. K., Neyland, O. Ya. [illegible]

TITLE: Concerning Several **Conversion** Products of the Diastereoisomers of γ-Ethyl-β-N-Carbethoxyaminocaprylic Acid (O nekotorykh produktakh prevrashcheniya diastereoizomernykh γ-etil-β-N-karbetoksiaminokaprilovykh kislot)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 9, pp 1o99 - 11o3 (USSR)

ABSTRACT: In the previous papers the authors reported the preparation of two diastereoisomers of γ-ethyl-β-aminocaprylic acid, which were referred to as A_1 and A_2 in these papers. Also prepared were several derivatives and transformation products (Refs 1-3). In testing these compounds biologically it was found that several of them (especially isomer A_2) had bacteriostatic properties The authors were therefore interested in carrying out further, similar investigations to test the chemical and biological properties of these compounds. To do this, however, it was necessary that the molecular configurations be maintained and that substitution take place at the

Card 1/2

Concerning Several **Conversion** Products of the SOV/62-58-2-3/2[illegible]
Diastereoisomers of γ-Ethyl-β-N-Carbethoxyaminocaprylic Acid

functional groups. Therefore the authors prepared diastereoisomers (A_1 and A_2) of γ-ethyl-β-(ω-phenylureido)-caprylic acid, γ-ethyl-β-semicarbazidocaprylic acid, and 1-phenyl-4-(1-ethylpentyl)-2,6-dioxohexahydropyrimidine. For the synthesis of these compounds the reactions discovered by Rodionov and Zvorykina (Ref 4) were used. In addition to these reactions (in order to compare the yields) the isomers of these compounds were prepared by the method of Longfield and Stieglitz (Longfel'd and Shtiglits) (Ref 8), by reacting phenyl isocyanate with γ-ethyl-β-aminocaprylic acid (Ref 3), and by the hydrolysis of 1-phenyl-4-(1-ethylpentyl)-2,6-dioxohexahydropyrimidine (Ref 4), respectively. There are 8 references, 7 of which are Soviet.

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

SUBMITTED: February 2, 1957

Card 2/2

79-28-5-14/69

AUTHORS: Neyland, O. Ya., Vanag, G. Ya., Gudriniyetse, E. Yu.

TITLE: Iodonium Derivatives of β-Diketones (Yodoniyevyye proizvodnyye β-diketonov) II. Thermal Decomposition of the Phenyldimedonyl-iodonium (II. Termicheskoye razlozheniye fenildimedonilyodona)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 5, pp. 1201 - 1205 (USSR)

ABSTRACT: Earlier (Reference 1), the authors had shown that the dimedonium (5,5-dimethylcyclohexandion-1,3) reacts very easily with iodosobenzene with the formation of an iodonium compound --phenyldimedonyliodonium (formula II). The recrystallized and dried product is very stable at usual temperature, contrary to the non-purified one. But also the purified product (II) decomposes on boiling in aqueous solutions. From the decomposition products iodized benzene and the phenyether of iodo-dimedon (III) could be separated, the composition of which is proved by cleavage with acids in phenol and conversion into the phenyl ether of dimedone (IV). This ether is easily cleft

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79-28-5-14/69

Iodonium Derivatives of β-Diketones. II. Thermal Decomposition of the Phenyldimedonyliodonium

into phenol and dimedone by acids. The decomposition of phenyldimedonyliodonium is illustrated by scheme 1. Depending on the place of the break of the C-J binding, the phenylether of iododimedone iodized benzene are obtained. The investigation on the decomposition of phenyl dimedonyliodonium shows clearly that this compound has the structure of iodonium salts. The phenyl ethers of dimedone have hitherto not been described Thus in the thermal decomposition of phenyl dimedonyliodonium a new compound forms, namely, the phenyl ether of iododimedone, besides, still-iodized benzene and an oily product of unknown structure. In the reduction of phenyl ether of the iododimedone a new product, the phenyl ether of dimedone was obtained In the case of direct phenylation of dimedone with diphenyl iodonium bromide new products resulted: the phenyl ether of dimedone, the phenyl dimedone, the diphenyl dimedone and the phenyl ether of phenyl dimedone. There are 8 references, 2 of which are Soviet.

Card 2/3

79-28-5-14/69

Iodonium Derivatives of β-Diketones. II. Thermal Decomposition of the Phenyldimedonyliodonium

ASSOCIATION: Latviyskiy gosudarstvennyy universitet (Latvian State University)

SUBMITTED: April 15, 1957

Card 3/3

5(4)

AUTHORS: Neyland, O. Ya., Vanags, G. J. (Riga) SOV/74-28-4-4/6

TITLE: Spectroscopic Investigation Methods of the Tautomerism of β-Dicarbonyl Compounds (Spektroskopicheskiye metody issledovaniya tautomerii β-dikarbonil'nykh soyedineniy)

PERIODICAL: Uspekhi khimii, 1959, Vol 28, Nr 4, pp 436-464 (USSR)

ABSTRACT: In this survey the authors attempted to generalize the existing material on spectroscopic investigations of keto-enols. At the same time several theoretical questions occurring in connection with spectroscopic data are discussed. In order to systematize the existing material above all various states and forms of equilibrium of β-dicarbonyl compounds had to be investigated. The diversity of the possible forms indicates complicated phenomena of the tautomerism of keto-enols thus justifying the application of spectroscopic investigation methods. Moreover, spectral properties of the individual forms are characterized. The dicarbonyl form (I) of the aliphatic and alicyclic β-dicarbonyl compounds has no chromomorphous system but only 2 isolated carbonyl groups. For this reason it is

Card 1/6

characterized in the usual ultra violet zone by an only small absorption at 270 - 290 mμ. The absorption zone of the carbonyl groups is rather broad for various types of carbonyl compounds. But in the case of an individual type and even an individual compound the position of the maximum changes according to the polarity of the solvent. In the transition of a polar (e. g. methanol) to an apolar (e. g. hexane) solvent a bathochromic shift is observed (a shift of the absorption maximum in the direction of long waves) (Ref 10). Unsaturated or aromatic β-dicarbonyl compounds show a very complicated picture. In these cases there is a characteristic chromomorphous system, carbonyl group - double bond (aromatic cycle), which absorbs intensively in the respective zone. In computations the absorption of the dicarbonyl form $\varepsilon_k \neq 0$ has to be considered which renders the determination of the quantity of the enol form very difficult. Valence oscillations of the non-conjugated carbonyl group are characterized by the frequencies 1700 - 1750 cm^{-1} (Refs 14, 15) and can be clearly distinguished in infrared as well as in Raman spectra. In the case of aliphatic β-dicarbonyl compounds with an ester arrangement (acetoacetic ester, etc) 2 characteristic frequencies of the dicarbonyl form are observed: that of the ketone group and that of carbonyl ester in the range of 1710 - 1715 cm^{-1} and 1739 - 1745 cm^{-1}, respectively. This bipartition of the characteristic frequencies goes back to the mechanic interaction of the oscillations of two independent carbonyl groups (Ref 19). Among the structural factors especially the substitution by halogen atoms at the α-carbon atom influences the degree of the characteristic frequencies. The simplest prototype of the enol form are the α, β-unsaturated ketones or α, β-unsaturated carboxylic acids (III). Such a chromomorphous system is characterized by an intensive absorption in the wide ultra-violet range according to the nature of the substituents R_1, R_2, R_3, and R_4 which influence the position of the absorption maximum. The enol form is mainly characterized by the valence oscillations of the carbonyl group, the double bond and the hydroxyl group. In contrast to the dicarbonyl form of aliphatic and alicyclic compounds we have in this case a conjugated carbonyl group as well as a conjugated double bond. In the case of a free enol form the recognition of the individual bands becomes more difficult because an intramolecular hydrogen bond may be formed at the expense of the hydroxyl or carbonyl group. The hydrogen bond may change the frequency of the carbonyl group which then may coincide with the frequency of the double bond. The two characteristic frequencies appear most distinctly in Raman spectra. Some authors found a relation between the nature of the metal in the complex and the frequency shift. The fluctuations of the hydroxyl group of the β-dicarbonyl compounds appear in the wide range of 2500 - 3500 cm^{-1} because of the presence of various hydrogen bonds according to structure, solvent, concentration, and admixtures (Ref 14). The classical method by Meyer (Ref 43) which was supplemented by Dieckmann (Ref 44) and accelerated by Schwarzenbach (Ref 18) is still valid for the determination of the enol

Spectroscopic Investigation Methods of the Tautomerism SOV/74-28-4-4/6
of β-Dicarbonyl Compounds

content. The enol content can also be determined by using several spectral properties of the keto-enols. The investigation by infrared-spectroscopy seems to be very promising. Usually, the dissociation constants of keto-enols are determined in the same way as those of other acids, i. e. electrometrically. In the case of keto-enols there are still other possibilities, i. e. the application of ultra-violet absorption spectra. Numerous investigations showed that Meyer's law is not valid for a large group of β-diketones. In these cases the method of infrared and, in part, ultra-violet-spectroscopy can be successfully used. However, the tautomerism of trans-fixed β-dicarbonyl compounds is still very unclear and requires further investigation. The behavior of some alkylidene acetylacetones which was discovered by means of spectroscopy is also interesting. Table 1 - characteristic frequencies of non-conjugated dicarbonyl form; Table 2 - characteristic frequencies of conjugated dicarbonyl form; Table 3 - ultra-violet absorption of undissociated enol form which may exist in cis-form; Table 4 - ultra-violet

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Spectroscopic Investigation Methods of the Tautomerism SOV/74-28-4-4/6
of β-Dicarbonyl Compounds

absorption of trans-fixed β-dicarbonyl compounds and their derivatives; Table 5 - ultra-violet absorption of the enolate anion and enolate cation; Table 6 - characteristic frequencies of the enol form in the range of double bonds; Table 7 - characteristic frequencies of the hydroxyl group of β-dicarbonyl compounds; Table 8 - characteristic frequencies of intramolecular metallic derivatives of β-dicarbonyl compounds. There are 8 tables and 88 references, 24 of which are Soviet.

Card 6/6

5(3) SOV/79-29-6-26/72

AUTHORS: Gudriniyetse, E., Vanag, G., Strakov, A., Neyland, O.

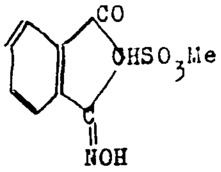
TITLE: Sulfonation of β-Diketones (Sul'firovaniye β-diketonov). VI. Derivatives of Indandione—1,3-sulfonic-2-acid (VI. Proizvodnyye indandion-1,3-sul'fo-2-kisloty)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 6, pp 1893 - 1897 (USSR)

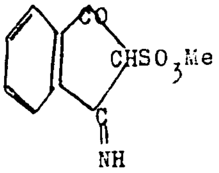
ABSTRACT: There are no data available in publications regarding the derivatives of the keto group of the sulfonic acids of the ketones and aldehydes (Ref 1). Although the dioxime of the indandione-1,3-sulfonic-2-acid obtained from its dipotassium salt and hydroxylamine hydrochloride in the presence of K_2CO_3 was described (Ref 2), the authors were not able to attain the same results, neither with the disodium nor with the dipotassium salt of this acid. On addition of alcohol the initial product, and not the dioxime described, precipitated.

Card 1/3

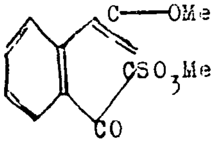
Sulfonation of β-Diketones. VI. Derivatives of Indandione- SOV/79-29-6-26/72
1,3-sulfonic-2-acid



(I)



(II)



(III)

The experiments under review indicated that the oxime (I) is readily formed on boiling of the sodium salt of the indandione-1,3-sulfonic-2-acid in glacial acetic with hydroxylamine-hydrochloride, even without anhydrous sodium acetate. It is hardly soluble in water and is transformed by bromination to give the 2,2-dibromo-indandione-1,3. The oxygen of the keto group of the sodium salt of the acid mentioned is substituted by the imino group with compound (II) being formed in the $Me=NH_4$. When treating compound (II) with the alcoholic solution of sodium hydroxide or sodium ethylate compound (IV) (Me=Na) was formed, the bipolar structure of which was confirmed by the ultraviolet absorption spectra. A number of derivatives of the indandione-1,3-sulfonic-2-acid was thus synthesized (the oxime, semicarba-

Card 2/3

Sulfonation of β-Diketones. VI. Derivatives of Indandione-1,3-sulfonic-2-acid

SOV/79-29-6-26/72

zone, imine and phenyl-imine in the form of the sodium, ammonium or aniline salts). Bromination of the sodium salt of the oxime of the above-mentioned acid and of the ammonium salt of the imine of the same acid (V) yielded 2,2-dibromo-indandione-1,3. Phosphorus pentachloride forms with the sodium salt of the acid the 2-chloro-indandione-1,3-sulfonic-2-acid-chloride. Its bromination results in 2-chloro-2-bromo-indandione-1,3. When boiling the sulfo-chloride with alcohols SO_2 develops, which is transformed into 2,2-dichloro-indandione-1,3. There are 1 figure and 11 references, 6 of which are Soviet.

ASSOCIATION: Latviyskiy gosudarstvennyy universitet (Latvian State University)

SUBMITTED: May 19, 1958

Card 3/3

NEYLAND, O. Ya. Cand Chem Sci -- "Iodonium derivatives of beta-diketones." Riga, 1960 (Riga Polytechnic Inst. Chem Faculty) (KL, 1-61, 182)

5.3600

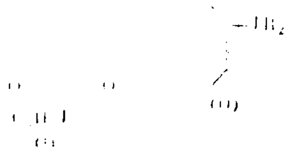
778[illegible]
SOV/79-30-2-[illegible]/78

AUTHORS: Neyland, O. Ya., [illegible], I. Ya.

TITLE: Iodonium Derivatives of β-Diketones. III. Acylation and Alkyl[illegible] of Pheny[illegible]dimedonyliodone

PERIODICAL: Zhurnal [illegible] khimii, 19[illegible], Vol [illegible], Nr [illegible], pp [illegible]10-[illegible] ([illegible])

ABSTRACT: Previously it was shown (ZhOKh, 27, [illegible], 1957) that 5,5-dimethylcyclohexane-1,3-dione (dimedone) reacts with iodobenzene forming compound I. The same compound is formed in the reaction of dimedone with II, [illegible]OO [illegible] OO.



Card 1/4 In the above reaction, acetic or benzoic acid is

[illegible] Derivatives of β [illegible] 1961
III. A[illegible] A[illegible] SOV/[illegible]
[illegible]

[illegible] is obtained in a pure state. The [illegible] below:

[illegible] /[illegible]

[illegible] SOV/7[illegible]

[illegible] presented [illegible]

Nr	Starting materials	Obtained products	Yield in %	mp in °C
1	Dimedone + phenyliodoso acetate + HF	I	88	[illegible]
[illegible]	Dimedone + phenyliodoso benzoate	I	8[illegible]	1[illegible]* ([illegible])
[illegible]	I + acetyl chloride	chlorodimedone	[illegible]	[illegible]
[illegible]	I + benzoyl chloride	VI, R = [illegible] H [illegible] O, X = Cl	90	[illegible] ([illegible])
[illegible]	I + HCl + triethyl [illegible]	VI, R = C H [illegible], X = [illegible]	[illegible]	[illegible]

* The melting point depression can be explained by a small admixture of benzoic acid.

[illegible] /[illegible]

(Table cont'd) 77881 SOV/[illegible]

The Obtained Products and Their Properties

Starting materials	Obtained products	Yield in %	[illegible]
I + dimethyl sulfate + ammonium borofluoride	phenyl-(O-methyl-dimedonyl) iodonium borofluoride	7[illegible]	[illegible]
I + dimethyl sulfate + ammonium borofluoride	phenyl-(O-methyl-dimedonyl)-iodonium borofluoride	41	[illegible]
I + methanol + dimethyl sulfate	VIII, A CH_3SO_4H	7[illegible]	[illegible]
Diphenyliodonium bromide + AgOH + CH_3COOH	Diphenyliodonium acetate	44	14[illegible]

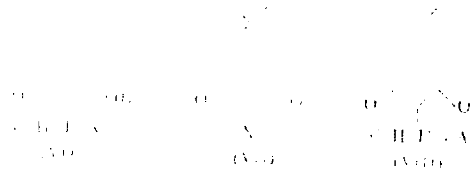
The Obtained Products and Their Properties

Nr	Starting materials	Obtained products	Yield in %	mp in °C
10	O-ethyldimedone + CH$_3$COOK + CH$_3$COOH + complex of I$_2$ with dioxane	O-ethyl iododimedone	6.5	150-151

Card [illegible]

Iodonium Derivatives of -Diketones. III. Acylation and Alkylation of Phenyldimedonyliodone

77831
SOV/79-3[illegible]-2-3[illegible]/[illegible]



There are [illegible] tables; and 11 references, 4 Soviet, 4 German, 1 Swiss, 2 U.K., [illegible] U.S. The [illegible] U.K. [illegible] U.S. references are: A. R. Fox, K. H. Pausacker, J. Chem. Soc., [illegible] (19[illegible]7); K. H. Pausacker, ibid., [illegible]7 (19[illegible]); H. Meerwein, E. Battenberg, H. Gold, E. Pfeil, G. Willfang, J. Pr. Chem., 1[illegible]4, 83 (1[illegible]4[illegible])

ASSOCIATION: Riga Polytechnical Institute (Rizhskiy politekhnicheskiy institut)

SUBMITTED: February [illegible], 19[illegible]

Card 6/[illegible]

AUTHORS: Neyland, O. Ya., Vanag, G. Ya., Academician of the AS Latviyskaya SSR

S/020/60/131/04/036/073
B011/B017

TITLE: Iodonium Derivatives of 5-Phenylcyclohexanedione-1,3 and Their Transformations

1

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 4, pp 847-849 (USSR)

TEXT: In an earlier paper (Ref 1) the authors produced a new compound from 5-phenylcyclohexanedione-1,3: enolatebetainephenyl-(5-phenylcyclohexanedione-1,3-yl-2)-iodonium (I), which in the following is referred to as phenyl iodonium. The authors dealt with the study of its properties, the structural characteristics, and its alkylation and cleavage products. It is a white substance soluble in chloroform and benzene under intensive yellow coloring. Phenyl iodonium is not highly resistant, and is cleft by various reagents, especially by sun rays. Cleavage may proceed in two directions with the rupture of the iodine-carbon bonds. Thus, phenyl iodonium decomposes smoothly, in the presence of HCl, into iodobenzene and 2-chloro-5-phenylcyclohexanedione-1,3 (II). In pyridine solution and under the action of temperature, the following cleavage products are formed: iodobenzene and phenyl ether of 2-iodo-5-phenylcyclohexanedione-1,3 (III). In the presence of silver nitrate and pyridine, cleavage takes place only in the iodine-phenyl bond; in this connection, the silver salt of 2-iodo-5-phenylcyclohexanedione-1,3 (IV) is formed. By strong acylating and alkylating agents (benzoyl

Card 1/3

chloride, triethyl-oxonium-boron fluoride), phenyl iodonium is not cleft but forms acyl- and alkyl derivatives. As a consequence, the rupture of the iodine-carbon bond is oriented as is the case in analogous dimedone derivatives (Ref 2). Under given conditions, phenyl iodonium exists without any doubt in the form of the enolate anion. It follows therefrom that the electron density on the carbon atom of the active methylene group is increased as compared with the non-ionized form. The enolate anion system is characterized by a high mobility of the electron charge. The absorption spectra of phenyl iodonium (I) and of pyridinium-enolate-betaine (VII) show strong displacements of the characteristic maxima of the enolate-anion system of the enolate betaines as compared with a normal system. This may only be explained by a change in the electron structure and a doubling of the bonds. It may be assumed that the electron density on the carbon atom of the active methylene group increases under the influence of a positively charged substituent. Hence, also the character of the carbon-carbon and carbon-oxygen bonds in the system is changed (see Scheme). Up to now, no satisfactory method has existed to determine the correct structure of the enolate anions. The balance of the charge in both oxygen atoms may be expressed, as is usually done, by dotted lines for non-integral bonds (e.g. IV). In symmetric systems, the equivalence of the two carbonyl groups must be observed. The authors, however, proved by their examples that the electron

Iodonium Derivatives of 5-Phenylcyclohexanedione-1,3 and Their Transformations

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B011/B017

density in the oxygen- and the carbon atom may vary. In this case, charge portions localized in individual atoms can be difficultly estimated. For this reason, difficulties arise in the preparation of enolate betaines. The hitherto used method (VIII) is not sufficiently precise. Method (IX) (see Scheme) would be the most correct one. The difficulty of estimating the charge portions δ and δ', as well as the fact that $2\delta + \delta' = 1$ must also be taken into account. There are 5 Soviet references.

ASSOCIATION: Rizhskiy politekhnicheskiy institut (Riga Polytechnic Institute)

SUBMITTED: October 15, 1959

Card 3/3

5.3610

69999

AUTHORS: Neyland, O., Stradyn', Ya., Vanag, G., Academician AS LatvSSR

S/020/60/131/05/028/069
B011/B117

TITLE: On the Structure of Some Cyclic 2-Nitro-diketones-1,3

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 5, pp 1084-1087 (USSR)

TEXT: In continuation of their work on the tautomerism of the cyclic 2-nitro-diketones (Refs 1, 2), the authors studied 2-nitro-dimedone (I, $R_1 = R_2 = CH_3$, see scheme), 2-nitro-5-phenyl cyclohexanedione-1,3 (2-nitrophenedione; I, $R_1 = H$, $R_2 = C_6H_5$), their anions, and some related compounds. The structures of the compounds mentioned as well as the difference between the three nitration products of phenedione (melting point 120-121°, 131-132°, and 119-120°, respectively) could be clarified. The infra-red spectra of the solid substances were taken in suspension in paraffin oil and in chloroform solutions. The ultra-violet spectra of 10^{-4} M solutions in H_2O, CH_3OH, or $CHCl_3$ were taken. Polarograms of 10^{-4} M aqueous solutions of the corresponding substances in buffer solutions were taken by Britton-Robinson on a background consisting of 0.1 N KCl. Table 1 shows the compilation of the results. From these, it follows that the 2-nitro-dimedone and the 2-nitrophenedione in chloroform show an analogous

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structure, i.e. that of a nitro-enol in which a stable intramolecular hydrogen bond has been established for the hydroxyl group. The analogous structure of the molecules of 2-nitro-dimedone and 2-nitrophenedione in chloroform is proved by the similarity of their ultraviolet spectra. The infrared spectrum of solid 2-nitro-dimedone differs considerably from its spectrum in chloroform. Hence, it follows that 2-nitro-dimedone in the solid state exists also in the form of a nitro-enol. In this case, however, not the intramolecular, but the intermolecular interaction of the groups prevails. On the other hand, the infrared spectra of solid 2-nitrophenedione give evidence of the facts that: 1) both modifications with melting points of 131-132° and 120-121° have an analogous structure, and 2) that the structure resembles in this case the state found in a CHCl$_3$ solution. This means that this structure forms a nitro-enol with an intramolecular hydrogen bond, though an intermolecular interaction can take place in this case also. The third modification of the 2-nitrophenedione (melting point 119-120°) has a quite different structure. The authors came to the conclusion that this modification corresponds to the 6-nitro-3-phenyl hexanoic-5-acid (IV). This acid forms when 2-nitrophenedione is boiled in aqueous solutions whereby its ring is easily split. From the infra-red spectra of the solid ammonium salts of the 2-nitro-dimedone and the 2-nitrophenedione, the authors

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On the Structure of Some Cyclic 2-Nitro-diketones-1,3 S/020/60/131/05/028/069
B011/B117

conclude that a mesomeric anion (II) with the charge distributed between two carbonyl groups and the nitro group must exist. It seems that the electron density is unevenly distributed in the mesomeric 2-nitro-enolate anions. 2-Nitro-dimedone and 2-nitrophenedione on the one and 2-nitro-indandione-1,3 on the other hand have an entirely different structure. The two first-mentioned ones are in the solid state nitro-enols, while the latter exists as a nitro-diketone or as an ionized nitro-acid. This and other structural differences can be explained, if it is borne in mind that the 2-nitro-dimedone and the 2-nitrophenedione have a stable six-membered ring, while there is a higher-stressed five-membered ring in the 2-nitro-indandione-1,3. In the latter, endocyclic double bonds are less advantageous than the exocyclic ones (Ref 2). Therefore, the tendency of the 2-nitro-indandione-1,3 is to form a type of a keto-nitro-acid, while, in the case of the six-membered nitro-β-diketones, the formation of a nitro-enol is possible. A. Grinvalde and M. Tiltin' are mentioned. There are 1 table and 14 references, 6 of which are Soviet. 4

ASSOCIATION: Institut organicheskogo sinteza Akademii nauk LatvSSR (Institute of Organic Synthesis of the Academy of Sciences, Latviyskaya SSR), Rizhskiy politekhnicheskiy institut (Riga Polytechnic Institute)

SUBMITTED: November 23, 1959

Card 3/3

5.3600

80090
S/020/60/131/06/34/071
B011/B005

AUTHORS: Neyland, O. Ya., Vanag, G. Ya., Academician AS LatvSSR

TITLE: The Mechanism of Interaction of Phenyl-iodoso 7 Compounds With Some β-Diketones 7

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 131, No. 6, pp. 1351 - 1354

TEXT: The authors state that the reactions of phenyl-iodoso acetate can be divided into 2 subtypes: 1) On reaction with alcohols, α-glycols, and amines, its oxidizing properties become apparent. Ketones, azo- and other compounds are formed. 2) In the presence of strong acids, reactions occur with aromatic hydrocarbons, and iodonium salts are formed. In reality, both types of reaction are based on a common scheme: a) the mobile proton is separated, and the corresponding derivative of bivalent iodine is formed; b) the intermediate product decomposes, or is stabilized. This depends on the character of the new bond of iodine (with C,N,O) and the present anion. The reactions mentioned in the title and investigated by the authors are in full agreement with this mechanism. It is known (Ref. 10) that dimedone with iodosobenzene and phenyl-iodoso fluoride forms an internal iodonium salt of the enolate-betaine type (III, $R_1 = R_2 = CH_3$). When

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The Mechanism of Interaction of Phenyl-iodoso Compounds With Some β-Diketones

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B011/B005

the authors transferred this reaction to other β-diketones and β-keto esters, it appeared that no iodonium compounds can be isolated. This applies to acetyl acetone, dibenzoyl methane, indanedione-1,3, 2-phenylindanedione-1,3, acetoacetic ester, and malonic-acid ester. Iodobenzene was formed in all cases. IV and V (2-acetoxy derivatives) were formed as 2nd products in the case of dibenzoyl methane and phenylindanedione. The reaction of phenyl-iodoso acetate in the presence of pyridine yielded enolate betaines of pyridinium-β-dicarbonyl compounds (VI) in the case of acetoacetic ester, acetyl acetone, and dibenzoyl methane. The reaction of phenyl-iodoso acetate with β-dicarbonyl compounds gives a new proof of the double reactivity of the latter. This again shows the great difference between the properties of β-diketones of the cyclohexanedione-1,3 series and other groups investigated. The pyridinium-enolate betaines (VI) are yellow crystalline substances. Their melting point cannot be accurately determined. Some of them lower their melting point by absorbing air moisture (Table 1). The structure of these substances was investigated by ultraviolet and infrared absorption spectra. Some of them have a cis-form, others a trans-form. The infrared spectra of the enolate betaines investigated in the range of double bonds show a complicated picture which can be hardly interpreted at first. It can be said, however, that the localization of the charge in the enolate-

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80090

The Mechanism of Interaction of Phenyl-iodoso Compounds With Some β-Diketones

S/020/60/131/06/34/071
B011/B005

anion systems greatly depends on structural factors. There are 1 table and 18 references, 4 of which are Soviet.

ASSOCIATION: Rizhskiy politekhnicheskiy institut (Riga Polytechnic Institute)

SUBMITTED: November 30, 1959

Card 3/3

5.3100
5.3610

80056

S/020/60/132/01/30/064
B011/B126

AUTHORS: Aren, A. K., Neyland, O. Ya., Vanag, G. Ya., Academician of the AS LatvSSR

TITLE: The Structure of 2-Para-Nitrophenylindandione-1,3

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 1, pp. 115-118

TEXT: The authors have shown that 2-para-nitrophenylindandione-1,3 (NPI) is a very mobile system, which exists in polar solvents and apparently also in the solid state as an anion with a balanced electron structure. This system is also capable of mutual conversions. In solvents of weak polarity NPI exists in colorless diketo form. The NPI anion possesses two kinds of reactivity: a) with diazomethane it forms a methyl ester of the enol form; b) with bromine and chlorine, 2-bromine and 2-chlorine derivatives are produced. NPI differs from the colorless 2-phenyl indandione-1,3, since it is dark red in color. The 2-chlorine and 2-bromine derivatives of NPI are colorless, while the 2-amino derivatives are yellow or orange. The authors wanted to clarify the cause of this coloring of NPI. Phenylindandiones crystallize from polar solvents as red substances. On the determination of the melting points, the red forms become colorless. There are,

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The Structure of 2-Para-Nitrophenylindandione-1,3 S/020/60/132/01/30/064
B011/B126

however, signs that the red form of NPI is stable, and is not influenced either by the action of temperature or by the type of solvent. In order to clarify the possibility that NPI may exist in valence structures (III) and (IV), the authors analyzed NPI and some of its derivatives in the ultraviolet and infrared. Further, the methyl ester of its enol form $C_{16}H_{11}O_4N$ was analyzed. Fig. 1 shows that the ultraviolet absorption spectra of NPI and its Na salt have identical curves. It is obvious that the electron structure of NPI in the solution is the same as that of its anion. Therefore, NPI is dissociated in a solution of absolute methanol. The ultraviolet spectrum of NPI gives an absorption curve in dichloroethane which is characteristic of the diketo form (Fig. 2). The data of the infrared spectrum of a saturated NPI solution in dichloroethane agree with those of the ultraviolet spectra. 0.0001 M NPI solutions in dichloroethane are completely colorless. After standing for a long time in chloroform or dichloroethane a suspension of red NPI gradually changes to the colorless crystalline form, which is without doubt a diketo form. During the separation from the solution the colorless form changes back to the red form. Thus, contradictory assertions are disproved (Ref. 7). NPI differs from the other derivatives of 2-phenylindandione-1,3 which are replaced in the para-position by electrophilic substituents, simply because the red form is more stable here. The ultraviolet

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The Structure of 2-Para-Nitrophenylindandione-1,3

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B011/B126

spectrum of the methyl ester of the enol form of NPI in absolute methanol differs considerably from that of NPI proper. Thus, the enol ester structure of the former is confirmed. The infrared spectrum of red NPI suspended in paraffin oil, recrystallized from glacial acetic acid, disproves the theory of its existence in diketo form (I), since no absorption of the CO groups occurs. When the sample is dissolved in water and then recrystallizes, besides other oscillations, frequencies of average intensity of the CO groups occur at 1700 and 1735 cm^{-1}. The authors believe that it undergoes a partial conversion to the diketo form under the action of the solvent. The data of the infrared spectroscopic analysis do not prove that the red form of solid NPI is an enol (II). The authors also refute the previously assumed structure of diketo nitric acid (IV), on the basis of their results. The infrared spectrum in the region of double bonds is so complicated that one cannot really speak of characteristic frequencies of single groups (Ref. 8). The authors illustrate the structure (VII) that they assume, in a scheme. They thank A. Grinval'de and M. Tiltin'sh for taking the ultraviolet spectra. There are 2 figures and 10 references, 6 of which are Soviet.

ASSOCIATION: Rizhskiy politekhnicheskiy institut (Riga Polytechnic Institute)

SUBMITTED: January 30, 1960
Card 3/3

NEYLAND, O.Ya.; VANAG, G.Ya.

Iodonium derivatives of β-diketones. Part 4: Reaction of 5-phenyl-1,3-cyclohexanedione with pheynliodose acetate. Zhur. ob. khim. 31 no.1:146-156 Ja '61. (MIRA 14:1)

1. Rizhskiy politekhnicheskiy institut.
(Cyclohexanedione) (Benzene)

STRAKOV, A.Ya.; NEYLAND, O.Ya. [Neilands, O.]; GUDRINIYETSE, E.Yu.
[Gudriniece, E.]; VANAG, G.Ya. [Vanags, G.], akademik

Sulfonation of 2-veratryl- and 2-piperonyl-1,3-indandiones. Dokl. AN SSSR 141 no.2:374-377 N '61. (MIRA 14:11)

1. Rizhskiy politekhnicheskiy institut. 2. AN Latviyskoy SSR (for Vanag).

(Indandione) (Sulfonation)

NEYLAND, O. [Neilands, O.]; VANAG, G. [Vanags, G.] akademik

New method for the production of iodonium compounds. Dokl. AN SSSR 141 no.4:872-874 D '61. (MIRA 14:11)

1. Rizhskiy politekhnicheskiy institut. 2. AN Latviyskoy SSR (for Vanag).

(Iodonium compounds)

NEYLAND, O.; VAVERE, M.

Synthesis of the system 1,3,5,7-tetraketo-a-hydrindacene.
Zhur.ob.khim. 33 no.3:1044-1045 Mr '63. (MIRA 16:3)

1. Rizhskiy politekhnichesiy institut.
(Hydrindacene) (Carbonyl group)

NEYLAND, O. [Neilands, O.]; LAYZANE, Z. [Laizane, Z.]

Nitration of some derivatives of cyclic β-diketones by a nitrating mixture. Zhur. ob. khim. 34 no.8:2804-2805 Ag '64. (MIRA 17:9)

1. Rizhskiy politekhnicheskiy institut.

LINABERG, Ya. [Linabergs, J.]; NEYLAND, O. [Neilands, O.]; VEYS, A. [Veiss, A.];
VANAG, G. [Vanags, G.]

Acidity and enolization of 2-aryl-1,3-indandione. Dokl. AN SSSR 154 no.6: 1385-1388 F '64. (MIRA 17:2)

1. Rizhskiy politekhnicheskiy institut. 2. Akademik AN LatvSSR (for Vanag).

NEYLAND, L.E. [Neilands, L.]; NEYLAND, O. Ya. [Neilands, O.]; VANAG, G.Ya. [Vanags, G.], akademik

New method of production of tetronic acid. Dokl. AN SSSR 159 no.5:1099-1101 D '64. (MIRA 18:1)

1. Rizhskiy politekhnicheskiy institut. 2. AN Latviyskoy SSR (for Vanag).

L 56050-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM
ACCESSION NR: AP5018359 UR/0020/64/159/002/0373/0376

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18
B

AUTHOR: Neyland, O.

TITLE: Phenyliodonated triphenylphosphoranes

SOURCE: AN SSSR. Doklady, v. 159, no. 2, 1964, 373-376

TOPIC TAGS: iodinated organic compound, organic phosphorus compound

ABSTRACT: The reaction of phenyliodosoacetata /$C_6H_5I(OOCCH_3)_2$/ with carbethoxymethylenetriphenylphosphorane and benzoylmethylenetriphenylphosphorane were studied. The reaction produces acetates of phenyliodonated phosphorances, which were isolated in the form of sparingly soluble bromides of phenyliodonicarbethoxymethylenetriphenylphosphorane and phenyliodoniobenzoylmethylenetriphenylphosphorane, respectively, which are colorless, relatively unstable ... gave the corres- Phenyliodonation in the presence of fluoboric acid ... and well crystallized. These

experiments indicated the

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L 56050-65

ACCESSION NR: AP5018359

in triphenylphosphorances, since they react with phenyliodosoacetate without the presence of acids. The phenyliodonated phosphoranes are readily cleaved by acids, such as HCl and HBr, forming iodobenzene and the corresponding

Orig. art. has: 2 formulas, 1 table.

ASSOCIATION: Rizhskiy politekhnicheskiy institut (Riga Polytechnic Institute)

SUBMITTED: 03Jul64 ENCL: 00 SUB CODE: OC, GC

NR REF SOV: 004 OTHER: 012 JPRS

Card 2/2

[illegible] RADYN', Ya. [illegible]; [illegible]
VAN[illegible], G. [illegible], G.], akademik [illegible]

Electron [illegible] breaking [illegible] bis-2-phenyl-1,3-indandiones. Dokl. AN [illegible] Ja '66. (MIRA 19:1)

1. Institut organicheskogo sinteza AN LatvSSR. [illegible] SSR (for Vanag). Submitted May [illegible], 196[illegible].

NEYLAND, V. M., Cand Tech Sci -- (diss) "Application of method of geometric characteristics for the analysis and synthesis of jointed mechanisms possessing therein a five-link mechanism." /Riga/, 1960. 25 pp; with charts; (State Committee of Higher and Secondary Specialist Education under the Council of Ministers Latvian SSR, Riga Polytechnic Inst); 200 copies; price not given; (KL, 22-60, 138)

NEYLAND, V.Ya. (Moskva); TAGANOV, G.I. (Moskva)

Forward stagnation point heat transfer for hypersonic flow. Inzh. zhur. 1 no.3:151-153 '61. (MIRA 15:2)

(Aerodynamics, Hypersonic)

NEYLAND, V.Ya. (Moskva)

Solving the equations of a laminary boundary layer near the stagnation point in case of the injection of a heat radiating gas. Inzh.zhur. 1 no.2:31-36 '61. (MIRA 14:12)
(Boundary layer) (Thermodynamics)

NEYLAND, V.Ya. (Moskva); TAGANOV, G.I. (Moskva)

Characteristics of the flow in a stall zone. Inzh.zhur. 2 no.3:36-42 '62. (MIRA 15:8)
(Stalling (Aerodynamics))

NEYLAND, V. Ya. (Moskva)

Effect of radiation heat transfer on the entrainment of substances in the critical point of a blunt body. Inzh. zhur. 2 no.4:227-231 '62. (MIRA 16:1)

(Heat--Radiation and absorption)
(Mass transfer)

L 10628-63 EPA(b)/EWT(1)/BDS--AEDC/AFFTC/ASD--Pd-4--WW
ACCESSION NR: AP3000709 S/0258/63/003/002/0207/0214

58

AUTHOR: Neyland, V. Ya. (Moscow); Taganov, G. I. (Moscow)

TITLE: On the configuration of forward separated flow regions in supersonic gas flow past bodies

SOURCE: Inzhenernyy zhurnal, v. 3, no. 2, 1963, 207-214

TOPIC TAGS: supersonic symmetrical flow, separated symmetrical flow, flow detection angle, separated flow parameter, laminar boundary layer

ABSTRACT: A detailed study of the configurations of forward separated flow regions in supersonic flow past symmetrical bodies is presented. The angle of flow separation is determined, and its dependence on Mach member is established for the case when the ratio of viscous boundary layer thickness on the boundary of a conical separated region near the reattachment point to the radius of body curvatures at the meridional cross section tends to zero. Calculations of the angle of separation in the case of flow past a cone and sphere with spikes at zero angle of attack, as well as in the case of flow past a cylinder with a flat plate, were carried out on a computer. The dependence of the angle of separation

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ACCESSION NR: AP3000709

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on the ratio of spike length to sphere diameter is established for a wide range of Mach numbers. The dependence of the angle of separation on the cone angle is also established. It is stated that the relationships obtained make it possible to determine the configuration of the separated flow region and the angle of flow separation for a given Mach number and separation point location for symmetrical bodies of arbitrary shape in supersonic flow at zero angle of attack. The results of calculations are given in graphs. Orig. art. has: 6 figures and 3 formulas.

ASSOCIATION: none

SUBMITTED: 12Dec62

DATE ACQ: 21Jun63

ENCL: 00

SUB CODE: AI

NO REF SOV: 001

OTHER: 006

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Card 2/2

L 15584-63 EPR/EPA(b)/EWT(1)/BDS AFFTC/ASD Ps-4/Pd-4 WW

ACCESSION NR: AP3000721 S/0258/63/003/002/0362/0366

AUTHORS: El'kin, Yu. G.; Neyland, V. Ya.; Sokolov, L. A. (Moscow) 63

TITLE: Base pressure on a wedge in supersonic flow

SOURCE: Inzhenerny*y zhurnal, v. 3, no. 2, 1963, 362-366

TOPIC TAGS: base pressure, laminar mixing, flow separation, wedge flow

ABSTRACT: The authors have used the model of laminar mixing of a supersonic jet with quiescent air to derive an expression for the base pressure on a wedge in supersonic flow. Use has also been made of the heat transfer results in separated flow. The assumptions are made that thermodynamic equilibrium exists throughout the flow and that the boundary layer thickness at the start of mixing (or flow separation) is zero. The governing flow equations are integrated numerically after using the Dorodnitsy*n transformations. It is shown that for very large mach numbers the pressure ratio between the wedge base and the wedge surface remains almost constant for small wedge angles (less than 10°) but tends towards

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ACCESSION NR: AP3000721

infinity for larger wedge angles. For a blunt-edged plate (zero wedge angle) in hypersonic flow the insensitivity of the base pressure to changes in the mach number is correlated with the mach independence principle. Orig. art. has: 14 equations and 4 figures.

ASSOCIATION: none

SUBMITTED: 23Aug62 DATE ACQ: 21Jun63 ENCL: 00

SUB CODE: AI NO REF SOV: 002 OTHER: 005

Card 2/2

L 18236-63 EPR/EPA(b)/EWT(1)/BDS/ES(v) AEDC/AFFTC/ASD/AFMDC Ps-4/
Pd-4/Pe-4 WW

ACCESSION NR: AP3006339 S/0258/63/003/003/0419/0423 76

AUTHOR: Neyland, V. Ya. (Moscow); Taganov, G. I. (Moscow)

TITLE: Forward separated flow region in nonsymmetrical supersonic flow over a spiked cone

SOURCE: Inzhenerny*y zhurnal, v. 3, no. 3, 1963, 419-423

TOPIC TAGS: separated flow, hypersonic flow, hypersonic flow over cone, spiked cone, mass flow rate, laminar mixing

ABSTRACT: A generalization of the method used by S. M. Bogdonoff and T. E. Vas (Hypersonic Separated Flows. Seventh Anglo-American Aeronaut. Conf., N. Y., 1959) to solve the problem of hypersonic separated flow over a spiked cone at an angle of attack other than zero is described. The flow configuration is given in Fig. 1 of the Enclosure. Coordinates of lines of intersection of a "fluid cone" (BOB') with the body and flow parameters in the laminar mixing region are determined, and an expression for mass flow rate to the stagnation region is established, and a numerical calculation of the angle of the "fluid cone" is made for various angles of attack α (0—10°) at Mach numbers 5—100. The results (given in graphs) with respect to the maximum value of the angle of attack compatible

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ACCESSION NR: AP3006339

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with the flow model considered are discussed. Orig. art. has: 3 figures and 15 formulas.

ASSOCIATION: none

SUBMITTED:	13Feb63	DATE ACQ:	27Sep63	ENCL:	01
SUB CODE:	AI	NO REF SOV:	001	OTHER:	002

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L 15765-63 EPA(b)/EWT(1)/BDS AFFTC/ASD Pd-4

ACCESSION NR: AP3006340 S/0258/63/003/003/0424/0426

57

AUTHOR: Neyland, V. Ya. (Moscow)

[redacted]

TITLE: Hypersonic inviscid gas flow over a plate at an angle of attack

SOURCE: Inzhenerny*y zhurnal, v. 3, no. 3, 1963, 424-426

TOPIC TAGS: hypersonic flow, viscous flow, inviscid flow, flow over plate, angle of attack, Mach number, Prandtl number, separated flow

ABSTRACT: A method is outlined for calculating the parameters of an inviscid gas flow (see Fig. 1 of Enclosure). The correlations of the flow theory of an inviscid gas makes it possible to determine the one-parameter class of solutions at given values of angle of attack and M of the incident flow. Numerical results are obtained for laminar flow in the mixing region with no heat transfer under the assumptions that the product of the density and the dynamic coefficient of viscosity is constant across the mixing region and that the Prandtl number is equal to 1. The dependence of the ratio of the pressure on the upper surface of a plate to the static pressure of the incident flow from the angle of attack at various Mach numbers (2—100) is given in Fig. 2. It is

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ACCESSION NR: AP3006340

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concluded that the considered flow model can be applied to cases other than that of inviscid gas flow over a plate. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 13Feb63 DATE ACQ: 27Sep63 ENCL: 02

SUB CODE: AI NO REF SOV: 001 OTHER: 001

Card 2/2

ACCESSION NR: AP4[illegible]951 S/0258/64/004/001/0029/0035

AUTHOR: Neyland, V. Ya. (Moscow)

TITLE: The effect of heat transfer and turbulence in the mixing region on separation zone characteristic

SOURCE: Inzhenernyy*y zhurnal, v. 4, no. 1, 1964, 29-35

TOPIC TAGS: separation zone, heat transfer, flow separation, base pressure, enthalpy, turbulent flow, axisymmetric mixing zone, Mach number

ABSTRACT: The effect of heat transfer and the dependence of flow separation angle β and base pressure on the enthalpy of the stagnant region g_2 was investigated analytically. The flow geometry is given in Fig. 1 on the Enclosure where separation is induced by a point or a leading edge. Solutions are given both for laminar and turbulent flow conditions. In the former, similarity solutions were obtained using the Dorodnitzy*n transformation; for turbulent flow, the Prandtl turbulence theory was applied to an axisymmetric mixing zone with $r \approx r(x)$. For Pr = 1, values of the parameter

$$\bar{u} = \frac{f_2'}{\sqrt{(1-g_2) f_2' + g_2}},$$

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ACCESSION NR: AP4026951

were determined numerically for $g_2 = 0$, 1, and Mach numbers between 0 and 10. These values were compared to those obtained by H. H. Korst (A Theory of Base Pressure in Transonic and Supersonic Flow. J. Appl. Mech. v. 23, No. 4, 1956). Also, curves were obtained relating the reattachment angle δ to β for similar g and M values and the nondimensional base pressure to the Mach number for each β. The results show that heat transfer, by reducing the value of g_2 inside the separation region, increases δ substantially. The opposite is true for the base pressure, where lowering g_2 from 1 to zero lowers the base pressure for all Mach numbers. Orig. art. has: 13 equations, 5 figures, and 1 table.

ASSOCIATION: none

SUBMITTED: 13Feb63 ENCL: 01

SUB CODE: ME, TD NO REF SOV: 005 OTHER: 003

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L 13523-65 EWT(1)/EWP(m)/FCS(k)/EWA(1) Pd-4 ASD(d)/AFETR/SSD/ASD(f)-2/
AEDC(a)/AFTC(a)/AS(dp)-3

ACCESSION NR: AP4037096 S/0258/64/004/002/0247/0250

AUTHORS: Neyland, V. Ya. (Moscow); Sokolov, L. A. (Moscow)

B

TITLE: Base pressure behind wedges at angle of attack in supersonic gas flow

SOURCE: Inzhenernyy zhurnal, v. 4, no. 2, 1964, 247-250

TOPIC TAGS: base pressure, wedge flow, supersonic flow, Dorodnitsyn variable, stagnation zone, angle of attack, mixing region

ABSTRACT: The base pressure on wedges at angles of attack α in an inviscid supersonic stream has been determined from similarity considerations. The assumption is made (see Fig. 1 on the Enclosure) that $P_{4B} = P_{2H} = P_d$, Pr = 1 and