ROZANSKI W.

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669.046.562:669.14.

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Różański W. The Influence of Ultrasonic Waves on the Cementation of Steel

„Wplyw ultradźwięku na nawęglanie stali". Archiwum Hutnictwa (PAN). No. 2, Warszawa, 1958, pp. 125—146, 25 figs., 4 tabs.

The main point of this work was to investigate the influence of ultrasonic waves on the cementation of steel. The experiments were carried out on specimens of low-carbon steel containing 0.12% C. All specimens were cemented in a carburizing medium of 70% charcoal, 20% $BaCO_3$, and 10% Na_2CO_3. The temperatures employed were 850, 900, 1000°C. and for each temperature the carburizing process amounted to 30, 50 and 120 minutes. As controls for specimens cemented with ultrasonic waves, others were submitted to normal cementation. The ultrasonic waves came into action at the moment when the specimen attained the desired cementation temperature, and lasted till the cooling temperature, after carburizing, dropped to 600°C. During the investigations, an ultrasonic generator working on the magnetostriction principle was applied. The frequency of the ultrasonic waves was about 28 kHz, and the acoustic power of the generator was of the order of 35 watts. The main foundation for the method of investigations was to develop standing ultrasonic waves in the specimens cemented. This gave rise to production of nodes in certain places of the specimen, where the tension throughout the time of the ultrasonic action has the value of zero. On the other hand, withdrawing from the nodes the

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Rozanski W.

increase in the value of the tension caused maximum to be reached
at half way between the neighbouring nodes. In this way, the values 3
of tensions in the specimens cemented diversify according to the
situation of the given point. As a result of the investigations made it
appears that the influence of ultrasonic waves on the carburizing pro- 2
cess of steel depends on the values of tensions evoked in the specimens
cemented. At small intensities of the ultrasonic waves, there occurs an
increase in the carbon diffusion, which in effect gives rise to the thick-
ness of the cemented layer. After certain values of the intensity of
the ultrasonic waves are exceeded, a phenomenon of graphitization
occurs during cementation. The highest degree of graphitization is
observed in places of greatest tension where the specimens were
several times ruptured. All ruptures of specimens occurred in precisely
determined places. This is of course in accordance with the state of
tensions produced by the ultrasonic standing waves. The secretion of
graphite developed by ultrasonic waves is caused by the acceleration of
carbon diffusion as well as by inducing tensions giving rise to graphiti-
2/2 zation.

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ROZANSKI, W.

Piecework or a day's work with a premium, p. 136

WIADOMSKI NAFTOWE. (Stowarzyszenie Naukowo-Techniczne Inzynierow i Technikow Przemyslu Naftowego i Zwiazku Zawodowego Gornikow Naftowcow) Krosno, Poland, Vol. 5, no. 6, June 1959

Monthly list of East European Accessions (EEAI) LC, Vol. 9/no 2, Feb. 1960

Uncl.

ROZANSKI, Waclaw; RYS, Jerzy

Cause of premature wear of locked coil ropes. Metal i odlew no. 9:19-30 '63.

1. Katedra Metalografii i Obrobki Cieplnej, Akademia Gorniczo-Hutnicza, Krakow.

ROZANSKI, Witold

The need for professional training in the Boring Machinery Repair Shop in Krosno. Wiad naft 6 no.1:18-20 '60. (EEAI 9:6)
(Poland-- Boring machinery)

18(0)

P/039/60/000/03/002/017
D010/D025

AUTHOR: Różański, Wacław, Docent, Doctor of Engineering

TITLE: The Most Important Scientific and Didactic Achievements of the Mining and Metallurgical Academy and Directions of Investigations in Iron Metallurgy

PERIODICAL: Hutnik 1960, Nr 3, p 92 - 95

ABSTRACT: In the introductory part of this article the author deals with the early history of the Academy which was formed in 1919 and originally composed of two departments and five chairs. Its most active organizers were the following professors: Engineer Rodziewicz- and Bielewicz, Engineer Korwin-Krukowski, Doctor of Engineering, I. Feszczenko-Czopiwski, Doctor of Engineering W. Łoskiewicz, Doctor of Engineering R. Dawidowski, Engineer A. Ludkiewicz and Engineer J. Buzek. During WW II the Germans closed the Academy. It was reopened in 1945 with chairs and institutes covering new fields and subjects of metallurgy

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D010/D025

he Most Important Scientific and Didactic Achievements of the Mining and Metallurgical Academy and Directions of Investigations in Iron Metallurgy

mindful of the necessity to replenish decimated staffs of engineers in the industry. To-day the Metallurgical Department of the Academy consists of 13 Chairs and 140 scientific workers. The Chair of Pig iron metallurgy, headed by Professor Master of Engineering St. Holewiński is divided into two sub-sections, its scientific activities are concentrated on: 1) Raw-materials for blast furnaces, 2) Intensification of iron production, 3) Investigation on blast-furnace profiles and structure, 4) By-products utilization. As the result of these investigations 29 scientific publications were issued; the most interesting were investigations on zonal sintering process with simultaneous arsenic removal, processing of slag for cement, and slag wool production. This work was carried out mostly by Docent, Doctor of Engineering E. Mazanek, and Masters of Engineering J. Janowski and R.

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The Most Important Scientific and Didactic Achievements of the Mining and Metallurgical Academy and Directions of Investigations in Iron Metallurgy

Benesch. The Chair of Steel Metallurgy headed by Professor, Master of Engineering F. Olszak, is divided into 4 departments: 1) General Metallurgy, 2) Steel Metallurgy, 3) Electro-Metallurgy and 4) Iron-Alloys Metallurgy. Eighteen manuals and 43 scientific papers, written mostly by Professor F. Olszak and Master of Engineering J. Kozielski were published. The most important investigations conducted by this chair dealt with non-metallic steel components, diffusional deoxydation, improvement of pig-iron before processing in open hearth furnaces, slagging of alloy-components in induction furnaces, manganese and iron recovery from open hearth furnace slag and investigations on converter processes. The Chair of Metal Pressure Forming headed by Professor Doctor of Engineering W. Les-

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The Most Important Scientific and Didactic Achievements of the Mining and Metallurgical Academy and Directions of Investigations in Iron Metallurgy

kiewicz, dealing with steel processing, is divided into three departments: Rolling, Forging and Drawing. Over 30 articles dealing with the Chair's investigations were published; those on rolling were written by Professor W. Leskiewicz, on pressing and drawing by Docents, Masters of Engineering M. Schneider and K. Janas, while those on roller profiles by Docent, Doctor of Engineering J. Bazan. The Chair of Metallography and Heat-Treatment headed by Professor Doctor of Engineering Z. Jasiewicz (after the death in 1956 of the late Professor W. Łoskiewicz) is divided into three departments: Metallography, Heat Treatment, and X-Ray Radiology. The more important achievements of this Chair are investigations on ultra-sonic influence on diffusion processes, recrystallization of austenite,

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The Most Important Scientific and Didactic Achievements of the Mining and Metallurgical Academy and Directions of Investigations in Iron Metallurgy

relation between heat-expansion coefficient of metals crystallizing in cubic system and their melting temperature, step phenomena during torsion tests, quantitative analysis of austenite and martensite in steels, crystallography of martensitic changes, growing and orientation of mono-crystal, supersonic damping in relation to grain size in metals, sintering of powders, non-destructive methods of metal examination and electrolytic polishing. These investigations were carried out or supervised by Professor Master of Engineering T. Malkiewicz, Docent J. Chojnacki, Docent Doctor of Engineering W. Różański, Doctor of Engineering St. Gorczyca and Assistant Professor Master of Engineering J. Lesiecki. Application of statistical methods for evaluation of investigation results are carried out by Professor Doctor of Engineering Z. Jasiewicz and Master of Engineering J. Ryś. The Chair submitted 240 scientific papers for publication. Pro-

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Card 5/8

P/039/60/000/03/002/017
D010/D025

The Most Important Scientific and Didactic Achievements of the Mining and Metallurgical Academy and Directions of Investigations in Iron Metallurgy

fessor Doctor of Engineering W. Łoskiewicz was the first in Poland to lecture on Light Metals Science and Metallurgy. The Chair of Heat Economy was inaugurated in 1925 and since Professor R. Dawidowski's death it is headed by assistant Professor Doctor of Engineering R. Andrzejewski. The most important subjects being dealt with by the Chair are combustion of fuels and intensification of firing processes, in the industry theory of gas flow in metallurgical furnaces, combution of solid fuels on grates, theory of controlling generator gas composition, problems of metal recuperators and regenerators. Professor Andrzejewski carried out some investigations on high- and low pressure gas burners and Doctor of Engineering K. Mikuła on dust extraction from flue-gases and me-

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Card 6/8

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D010/D025

The Most Important Scientific and Didactic Achievements of the Mining and Metallurgical Academy and Directions of investigations in Iron Metallurgy

tallurgical fumes. In response to the rapid development of the heavy industry, the following new chairs were formed: The Chair of Metallurgical Furnace Construction was formed in 1947. The Chair of Coke-Technology was organized in 1957; it is headed by Docent, Master of Engineering Fr.Byrtus. In spite of its short existence the Chair did some research on preparation of coal charge for coke-processing, on usefulness of coke in blast-furnaces, on pulverization and concentration of coal to be used for coke processing. Six scientific papers were already published. In 1956 the Chair of Economics and Production in Metallurgical Plants, under Professor Master of Engineering A. Zalewski was formed. The chair of Statistics and Accounts headed by Professor Doctor of Engineering Z. Jasiewicz was organized in 1958. It is divided into two sections, one is direc-

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D010/D025

The Most Important Scientific and Didactic Achievements of the Mining and Metallurgical Academy and Directions of Investigations in Iron Metallurgy

ted by Professor Jasiewicz himself and the second by Master Z. Dymek. The author states that in this short review only the most important items were mentioned. In general, the character of investigations although rather theoretical, was carried out with the intention of possible future practical application. Some of them were already responsible for savings running into several million złoty. Up to 1939 the Metallurgical Section of AGH granted 224 Mechanical Engineering degrees and 4 Doctor of Engineering degrees. Since 1945 1,300 Mechanical Engineers- and 25 Doctor of Engineering degrees were awarded.

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ASSOCIATION: Akademia Górniczo-Hutnicza (Mining and Metallurgical Academy Cracow(Kraków)

Card 8/8

ROZANSKI, W.

The influence of ultrasonic waves on the cementation of steel. p. 125

ARCHIWUM HUTNICTWA (Polska Akademia Nauk, Komitet Hutnictwa) Warszawa, Poland.
Vol. 3, no. 2, 1958

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, September 1959.
Uncl.

ROZANSKI, WACLAW,

Distr: 4E1b

√ Effect of ultrasonic waves on cementation of steel. Wacław Różański (Akad. Górniczo-Hutnicza, Kraków, Poland). *Arch. Hutnictwa* 3, 125-43(1958)(English summary).—Samples of low-C steel, 1.6, 2.3, and 2.8 mm. in diam., were cemented with a mixt. of charcoal 70, $BaCO_3$ 20, and Na_2CO_3 10%, at 850, 900, and 1000°, for 30, 60, or 120 min., being exposed to action of 28,000 cycles/sec. ultrasonic waves from a 35-w. generator. Standing waves were produced in the specimens. At low intensities, C diffusion was accelerated; with increasing intensity graphitization occured, and, in some cases, specimens were broken.

J. Stecki

ROZANSKI, W.

Koniecpol

P. 10 (TURYSTA) Poland, No. 8, Apr. 1957.

SO: Monthly Index of Eat European Acessions (AEEI) Vol. 6, No. 11, November 1957.

Distr: 4E2c

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Surface cleaning of steel with electricity and air. Władysław Różański. *Wiadomości Hutnicze* 13, 204-7(1957).—Experiences obtained in this field by the Polish "Ferrum" steel foundry, are presented. The method involves fusing of the metal surface in an elec. arc, and subsequent removal of it by a stream of air under a pressure of 4–6 atm. C.d. was 3–5 amp./sq. mm. of electrode cross section. C electrodes, coated or not with electrolytic Cu, were used. Length of the elec. arc should be const. and may vary only from 2 to 5 mm. C.d. range (in amp.), rate of electrode burning in cm./min., and rate of cleaning in depth in mm./min. were: 110–120, 14.0 and 0.45 for electrode of 6-mm. radius; 190–210, 12.0 and 0.70 for 8-mm. radius electrode; 400–430, 5.0 and 0.72 for electrode having 12-mm. radius; 180–230, 7.3 and 0.64 for 12 × 3 mm. (in surface) electrode; 290–390, 7.0 and 0.60 for 25.3-mm. electrode and 380–630, 4.0 and 0.50 for 40.4 mm. electrode. The method was used for removing cracks on rolled and cast products, etc. It is suitable for most kinds of steel. Efficiency and costs of the method described were compared with those of other methods. The method seems to be useful for cleaning ingots and other steel products of almost all kinds, particularly hard steels. It is at least 3 or 4–6 times as efficient as chiseling or polishing. It is cheaper by 30%. Z. Kurtyka

SB
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GOLUBEV, V.A.; ROZANTSEV, E.G.

Stobbe' condensation ith a free iminoxyl radical. Izv. AN SSSR. Ser. khim. no.4:716-718 '65. (MIRA 18:5)

1. Institut khimicheskoy fiziki AN SSSR.

GUR'YANOVA, V.V.; KOVARSKAYA, B.M.; KRINITSKAYA, L.A.; NEYMAN, M.B.;
ROZANTSEV, E.G.

Possibility of initiating the chain reaction of polymer oxidation by iminoxyl radicals. Vysokom. soed. 7 no.9:1515-1519 S '65.
(MIRA 18:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut plasticheskikh mass.

KONOVALOVA, N.P.; BOGDANOV, G.N.; MILLER, V.B.; NEYMAN, M.B.;
ROZANTSEV, E.G.; EMANUEL', N.M.

Antitumorigenic activity of stable free radicals. Dokl. AN SSSR 157 no.3:707-709 Jl '64. (MIRA 17:7)

1. Institut khimicheskoy fiziki AN SSSR. 2. Chlen-korrespondent AN SSSR (for Emanuel').

L 21776-65 EPF(c)/EWT(m)/EWP(j) Pc-4/Pr-4 RPL RM/WW/JFW

S/0062/64/000/008/1553/1553

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B

ACCESSION NR: AP4044712

AUTHOR: Rozantsev, E. G.; Krinitskaya, L. A.

TITLE: The free iminoxyl radical in the Meerwein-Ponndorff reaction

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1964, 1553

TOPIC TAGS: Meerwein Ponndorff reaction, free iminoxyl radical, carbonyl reduction, paramagnetic alcohol, diamagnetic compound

ABSTRACT: The carbonyl derivatives of free iminoxyl radicals were reduced, without participation of the free valence, to the corresponding paramagnetic alcohol by the Meerwein-Ponndorff reaction. (Previous work by E. G. Rozantsev and A. V. Shapiro (Izv. AN SSSR. Ser. khim. 1964, 1138) had shown the free iminoxyl radical readily adds hydrogen at the free valence to form the corresponding diamagnetic products). Free 2, 2, 5, 5-tetramethyl-3-oxopyrrolidin-1-oxyl was reduced with aluminum isopropylate to the free 2, 2, 5, 5-tetramethyl-3-hydroxypyrrolidine-1-oxyl, melting 125.5-126C (from hexane), in 80% yield. The

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ACCESSION NR: AP4044712

latter could not be obtained by catalytic oxidation of 2, 2, 5, 5-tetramethyl-3-hydroxypyrrolidine. Orig. art. has: 1 equation

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences, SSSR)

SUBMITTED: 21May64 ENCL: 00

SUB CODE: GC NO REF SOV: 001 OTHER: 000

Card 2/2

ROZANTSEV, E. G.: ~~Master~~ Cand Chem Sci (diss) -- "The catalytic synthesis of 2, 5-dimethyl-3-alkyl (and aryl) thiophanes from 2, 5-dimethyl-3-alkyl (and aryl) furanidines". Moscow, 1958. 11 pp (Moscow Order of Lenin and Order of Labor Red Banner State U im M. V. Lomonosov, Chem Faculty), 120 copies (KL, No 4, 1959, 122)

SOV/55-58-1-24/33

AUTHORS: Yur'yev,Yu.K., Rozantsev,E.G.,and Godovikova,S.N.

TITLE: Catalytic Changes of Heterocyclic Combinations. LIV. Change of 2,3,5 - Trialkyl - Furnadynes Into 2,3,5 - Trialkylthiophanes (Kataliticheskiye prevrashcheniya geterotsiklicheskikh soyedineniy. LIV. Prevrashcheniye 2,3,5 - trialkilfuranidinov v 2,3,5 - trialkiltiofany)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya fiziko-matematicheskikh i yestestvennykh nauk, 1958, Nr 1, pp 183-186 (USSR)

ABSTRACT: The method of the analytic change of oxygen-containing heterocyclic combinations in cycles with other heteroatoms was used successfully for the synthesis of 2,3,5 - trimethyl, 2,5 - dimethyl - 3 - ethyl - and 2,5 - dimethyl - 3 - propylthiophane out of corresponding trialkylfurnidynes. The obtained 2,3,5 - trialkylthiophanes are colorless fluids not solvable in water, boiling at the normal pressure, and having a characteristic odor. There are 12 references, 8 of which are Soviet, 3 American, and 1 French.

ASSOCIATION: Kafedra organicheskoy khimii (Chair of Organic Chemistry)

C~~ard 1/~~2

YUR'YEV, Yu.K.; ROZANTSEV, E.G.; GODIKOVA, S.N.

Synthesis of 2,5-dimethyl-3-alkylfuranidines. Zhur. ob. khim. 28 no. 8:2168-2171 Ag '58. (MIRA 11:10)

1. Moskovskiy gosudarstvennyy universitet.
(Furan)

SOV/63-3-6-32/43

AUTHORS: Yur'yev, Yu.K., Rozantsev, E.G., Gribov, B.G.

TITLE: Synthesis of 2,3,5-Trialkylthiophanes by Catalytic Transformation of 2,3,5-Trialkylfuranidines (Sintez 2,3,5-trialkiltiofanov kataliticheskim prevrashcheniyem 2,3,5-trialkilfuranidinov)

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1958, Vol III, Nr 6, pp 830-831 (USSR)

ABSTRACT: The use of the sulfur-organic compounds from petroleum is an important task for Soviet scientists. The different stages of a synthesis of 2,3,5-trialkylthiophanes from 2,3,5-trialkylfuranidines are shown. Other compounds of this group are presented in a table.
There are 7 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova (Moscow State University Imeni M.V. Lomonosov)

SUBMITTED: April 30, 1958

Card 1/1

5 (3,4)

AUTHORS: Yur'yev, Yu. K., Rozantsev, E. G., SOV/55-58-6-27/31
Yegorov, Yu. P.

TITLE: The Infrared Spectra of Thiophane and Its Homologues (Infrakrasnyye spektry tiofana i yego gomologov)

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 6, pp 215 - 222 (USSR)

ABSTRACT: As the exact determination of sulphur containing petroleum fractions is of a great practical and technological interest V. M. Tatevskiy and one of the authors (Ref 1) tried to analyze the Raman-spectrum of thiophane and of eight of its homologues with the result that they observed in all compounds investigated a characteristic frequency of 690 cm^{-1} which was ascribed to the fully symmetrical oscillation of the thiophane ring. On the other hand, the spectra of the sulphides with open carbon chains show - in the range between 600 and 700 cm^{-1} - also intensive lines which are ascribed to the valency oscillations of the C-S-bond. (Refs 2-5). Hence, as the Raman spectrum is but roughly indicative, and as it is difficult to decipher it in view of its extensive background, the above authors tried to use the infrared spectrum for identifying the five-member

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cyclic sulphides. Besides, publications are lacking of data on the infrared spectrum of the thiophane homologues. The task, therefore, consisted in finding out the characteristics of the individual bands of the various connecting groups of the homologues worth an analysis. The infrared spectra were taken of the representatives of the 2-Alkyl-thiophane range (alkyl-C_2H_5, C_3H_7, C_4H_9) (Fig 1), of the 3-alkyl-thiophanes (Alkyl-C_2H_5, C_3H_7, C_4H_9, C_5H_{11}, i-C_5H_{11}, C_6H_{13}; Fig 2), the spectrum of the 2.5 dimethyl-thiophane, the representatives of the range of the 2.5 dimethyl-3-alkyl-thiophane (Alkyl-CH_3, C_2H_5, C_3H_7, C_4H_9, i-C_4H_9, C_5H_{11} and i-C_5H_{11} Fig 3). The fist two ranges, but also the last, show in their spectra a repetition of various frequencies which can be employed for characterizing the individual compounds. The valency oscillations of C-S are somewhat lower in the 2-alkyl-thiophanes than in the 3-alkyl-thiophanes (715-730 and 730-750 cm^{-1}). With all monoalkylthiophanes the frequency of the annular skeleton was at 1260 cm^{-1}, whilst with the trialkyl-thiophanes this frequency amounted to 1250 cm^{-1}. The bands, absent in the infrared spectrum of the thiophane itself and the bands, all but intensive, in the infrared spectrum of the monoalkyl--thiophanes in the range about 1370 cm^{-1}, were considerably stronger with the trialkylthiophanes. Furthermore, the intensity of the bands in the ranges 2930-2940 and 2960 cm^{-1} considerably increased with the increase of the methylene groups and the methyl-groups. Investigations in connection with the infrared spectrum proved that they may be employed advantageously for an analysis of the sulphur-containing petroleum fractions for determining the thiophane and its homologues contained therein. The spectrograms were taken by means of the spectrometer IKS-11. The constant values of the monoalkyl--thiophanes and the 2.5 dimethyl-3-alkyl-thiophanes are compiled in tables 1 and 2. The synthesis of the last mentioned compounds is described briefly. There are 3 figures, 2 tables, and 22 references, 13 of which are Soviet.

ASSOCIATION: Kafedra organicheskoy khimii (Chair for Organic Chemistry)

SUBMITTED: September 19, 1958

Card 3/3

SOV/79-28-8-36/66

AUTHORS: Yur'yev, Yu. K., Rozantsev, E. G., Godovikova, S. N.

TITLE: Synthesis of the 2,5-Dimethyl-3-Alkylfuranidines (Sintez 2,5-dimetil-3-alkilfuranidinov)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 8, pp. 2168 - 2171 (USSR)

ABSTRACT: The present paper describes the synthesis of the trialkylfuranidines, which have the alkylradicals in the 2,3 and 5-positions. Reports in literature on the 2,5-dimethyl-3-ethylfuranidine only are available (Ref 2). The synthesis is carried out by distillation of the 4-ethylhexene-1-ol-5 with phosphoric acid. The authors synthesized the 2,3,5-trialkylfuranidines from 2,5-dimethyl-furanidone-3 according to the following scheme:

2,5-dimethylfuranidone-3 $\xrightarrow{\text{AlkMgX}}$ 2 2,5-dimethyl-3-alkyl-3-hydroxyfuranidine $\xrightarrow[J_2]{H_2O}$ 2,5-dimethyl-3-alkyldihydrofuran $\xrightarrow[\text{Ni}]{H_2}$

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Synthesis of the 2,5-Dimethyl-3-Alkylfuranidines SOV/79-28-8-36/66

2,5-dimethyl-3-alkylfuranidine. According to this method 2,3,5-trimethyl-3-hydrofuranidine; 2,5-dimethyl-3-ethyl-3-hydroxyfuranidine and the 2,5-dimethyl-3-propyl-3-hydroxyfuranidine which has not been described, heretofore, were synthesized. The dehydration of the 2,5-dimethyl-3-alkyl-3-hydroxyfuranidine produces a mixture of the dihydrofuran isomers with an admixture of diene hydrocarbons. For the dehydration of the tertiary alcohols of the furanidine series iodine and p-toluene sulfonic acid are the best means. The catalytic hydration of the 2,5-dimethyl-3-alkyldihydrofurans yields 2,5-dimethyl-3-alkylfuranidine. The described synthesis of the 2,3,5-trialkylfuranidines represents a general method of synthesis of the furanidine homologs of this structure. There are 1 table and 7 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: July 1, 1957

Card 2/3

Synthesis of the 2,5-Dimethyl-3-Alkylfuranides SOV/79-28-8-36/66

Card 3/3

YUR'YEV, Yu.K.; ROZANTSEV, E.G.

Dehydration of 2,3,5-trimethyl-3-hydroxyfuranidine. Vest.Mosk.un. Ser.mat.,mekh.,astron.,fiz.,khim. no.6:171-179 '59. (MIRA 13:10)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.
(Furan)

ROZANTSEV, E.G.; KRINITSKAYA, L.A.

Free iminoxyl radical in the Meerwein-Pondorff reaction. Izv. AN SSSR. Ser. khim. no.8:1553 Ag '64. (MIRA 17:9)

1. Institut khimicheskoy fiziki AN SSSR.

NEYMAN, M.B.; MAYRANOVSKIY, S.G.; KOVARSKAYA, B.M.; ROZANTSEV, E.G.;
GINTSBERG, E.G.

Polarographic study of some N-oxide free radicals. Izv.
AN SSSR. Ser. khim. no.8:1518-1521 Ag '64. (MIRA 17:9)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR
i Institut khimicheskoy fiziki AN SSSR.

ROZANTSEV, E.G.; SHAPIRO, A.B.

New stable free radical of the indole class 2,2,4,4-tetramethyl-1,2,3,4-tetrahydro-γ-carboline-3-oxyl. Izv. AN SSSR. Ser. khim. no.6:1123-1125 Je '64. (MIRA 17:11)

1. Institut khimicheskoy fiziki AN SSSR.

YUR'YEV, Yu.K.; ROZANTSEV, E.G.

Synthesis of 2, 5-dimethyl-3-alkyl- and 2, 5-dimethyl-3-arylthiophanes. Khim.sera i azotorg.soed.sod.v neft.i nefteprod. 3:19-24 '60. (MIRA 14:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova. (Thiophene)

5.3600

77860
SOV/79-30-2-11/78

AUTHORS: Yur'yev, Yu. K., Rozantsev, E. G.

TITLE: Catalytic Conversions of Heterocyclic Compounds. LV. Synthesis of 2,5-Dimethyl-3-Alkyl- and 2,5-Dimethyl-3-Arylthiophanes

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2, pp 406-410 (USSR)

ABSTRACT: The authors converted 2,5-dimethyl-3-alkylfuranidines into corresponding 2,5-dimethyl-3-alkylthiophanes (aluminum oxide or thorium dioxide were used as catalysts for the reaction which was conducted at 330°; the space velocity of hydrogen sulfide was 0.3 hr^{-1}). Constants and yields of the obtained (new) products are listed in Table A. (1) Name of the compound; (2) bp (pressure in mm); (3) found; (4) calculated; (5) Yield (in %); (6) Results of analysis for sulfur (in %); (7) 2,5-Dimethyl-3-butylthiophane; (8) 2,5-Dimethyl-3-isobutylthiophane; (9) 2,5-Dimethyl-3-amylthiophane; (10) 2,5-Dimethyl-3-

Card 1/5

Catalytic Conversions of Heterocyclic Compounds. 77860
LV. Synthesis of 2,5-Dimethyl-3-Alkyl-and SOV/79-30-2-11/78
2,5-Dimethyl-3-Arylthiophanes

-isoamylthiophane; (11) 2,5-Dimethyl-3-cyclohexylthiophane; (12) 2,5-Dimethyl-3-phenylthiophane; (13) 2,5-Dimethyl-benzylthiophane.

Table A. Constants and yields of 2,5-dimethyl-3-alkyl-(or aryl)-thiophanes.

1	2	n_D^{20}	d_4^{20}	MR_D		5	6	
				3	4		3	4
7	210–211° (748)	1.4757	0.8930	54.40	54.18	26	18.34, 18.37	18.61
8	208–209 (752)	1.4740	0.8922	54.27	54.18	36	18.33, 18.31	18.61
9	237–238 (765)	1.4734	0.8868	58.99	58.80	22	16.96, 16.97	17.20
10	233–234 (752)	1.4736	0.8862	59.07	58.80	19	16.91, 16.93	17.20
11	117–118 (10)	1.5510	1.0102	62.05	61.71	35	15.80, 15.79	16.16
12	95–96 (3)	1.5650	1.0260	61.05	60.20	11,20*	16.29, 16.34	16.67
13	111–112 (3)	1.5300	0.9783	65.15	64.86	21,41*	15.22, 15.29	15.54

Card 2/5 * The catalyst is thorium oxide on alumina (25% of ThO_2).

Catalytic Conversions of Heterocyclic
Compounds. LV. Synthesis of 2,5-Di-
methyl-3-Alkyl- and 2,5-Dimethyl-3-
-Arylthiophanes

77860
SOV/79-30-2-11/78

It was noted that the speed for the catalytic reaction of 2,5-dimethyl-3-butylfuranidine is only half that for the 2,5-dimethyl-3-propylfuranidine. This is explained by steric hindrance caused by the longer butyl radical in the β -position to the furanidine cycle and in trans-position to the α -radical (see Fig. 5). Due to the side reactions (dehydration and elimination of H_2S from the intermediate 1,4-mercaptooxy-compound), the yields of 2,5-dimethyl-3-arylthiophanes are very low. For these compounds (see note to Table A) thorium oxide was found to give better yields than alumina. There are 7 figures; 1 table; and 14 references, 12 Soviet, 1 Japanese, 1 U.S. The U.S. reference is: D. Rank, N. Sheppard, G. Szasz, J. Chem. Phys., 17, 831 (1950).

Card 3/5

Catalytic Conversions of Heterocyclic Compounds. LV. Synthesis of 2,5-Dimethyl-3-Alkyl- and 2,5-Dimethyl-3-Arylthiophanes

77860
SOV/79-30-2-11/78

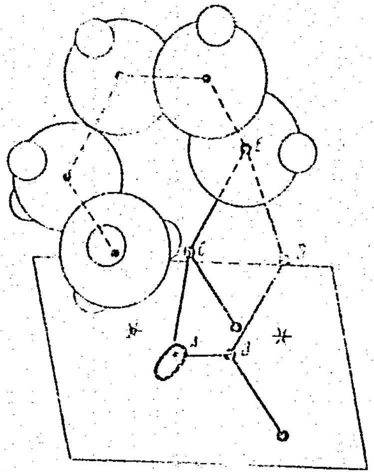


Fig. 5. Adsorption of the 2,5-dimethyl-3-butylfuranidine molecule on the surface of the catalyst and appearance of steric effect at the atom C of furanidine cycle.

Card 4/5

Catalytic Conversions of Heterocyclic Compounds. LV. Synthesis of 2,5-Dimethyl-3-Alkyl- and 2,5-Dimethyl-3--Arylthiophanes

77860
SOV/79-30-2-11/78

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy universitet)

SUBMITTED: February 26, 1959

Card 5/5

S/064/61/000/003/003/009
B101/B203

AUTHORS: Rozantsev, E. G., Klimenko, M. Ya., Myshkin, A. Ye.

TITLE: Production of isoamylenes from the pentane amylene fraction

PERIODICAL: Khimicheskaya promyshlennost', no. 3, 1961, 24-26

TEXT: Isoamylenes contained in the pentane amylene fraction (PAF) of thermal petroleum cracking are a promising raw material for the synthesis of isoprene. The present paper deals with the production of these compounds from the PAF. The investigation was made with PAF of the following composition (% by weight): butane and butylenes 0.30, isopentane 11.68, pentane 33.82, pentene-1 12.95, trans-pentene-2 10.34, cis-pentene-2 5.75, 2-methyl butene-1 8.06, 2-methyl butene-2, 10.58, 3-methyl butene-1 0.61, isoprene 2.04, trans-piperylene 1.61, cis-piperylene 1.97, others 0.29. The low content of 3-methyl butene-1 is explained by its low boiling point (losses in decanting and storing of the fraction). A production of isoamylene by rectification is not possible since the components of the fraction form azeotropic mixtures with slightly different boiling points. Hydration of isoamylenes to isoamyl alcohols by means of 65% H_2SO_4 gave low yields

Card 1/7

S/064/61/000/003/003/009
B101/B203

Production of isoamylenes ...

only (about 20%). On the basis of the fact that HCl adds to the double bond on the tertiary C atom, the hydrochlorination of 2-methyl butene-2 and 2-methyl butene-1 was performed. The resulting tert-amyl chloride (boiling point 84°C) can be easily separated by distillation from the hydrocarbons not hydrochlorinated. One part by weight of PAF was shaken with three parts by weight of HCl (specific gravity 1.17-1.19) for 3-4 hr. Then, the hydrocarbon layer was decanted, washed with ice water, dried with $CaCl_2$, and fractionated. Among the fractions (35-42°C, 42-84°C, 84-90°C, residue with boiling point above 90°C), the 84-90°C fraction consisted of almost pure t-amyl chloride. Additional t-amyl chloride was obtained from the 42-84°C fraction by a second distillation so that the total yield was about 85%. The chromatographic analysis of PAF treated with HCl showed the complete absence of 2-methyl butene-2 and 2-methyl butene-1. Among the three methods of isoamylene production from the chloride: 1) splitting-off of HCl by strong alkalies, 2) catalytic dehydrochlorination, 3) hydrolysis in the presence of weak alkalies and subsequent dehydration of t-amyl alcohol, the latter was chosen. Hydrolysis was conducted at 20-25°C in the presence of 5% solutions of soda, sodium bicarbonate, ammonium bicarbonate, or calcium hydroxide.

Card 2/7

S/064/61/000/003/003/009
B101/B203

Production of isoamylenes ...

The resulting tert-amyl alcohol was extracted by means of the PAF residue, and then fractionated. The 84-90°C fraction consisted of t-amyl chloride contaminated by t-amyl alcohol, the 90-105°C fraction of t-amyl alcohol contaminated by the chloride. Rectifying once more yielded pure tert-amyl alcohol. Isoamylenes formed as a by-product. Table 1 gives the results. The dehydration of t-amyl alcohol was conducted as follows: 1) 100 parts by weight of t-amyl alcohol were mixed with 10 parts by weight of КУ-2 (KU-2) cation exchanger, and heated on a water bath. Dehydration started at 70-75°C, and attained its maximum velocity at 80-85°C. The products were collected in a vessel cooled with dry ice; 2) t-amyl alcohol was let through an electrically heated quartz vessel filled with Al_2O_3 at a rate of 0.5 ml per 1 ml of catalyst and per 1 hour. Table 2 gives the results. As the PAF may also contain a higher amount of 3-methyl butene-1 (up to 8%), its isomerization to 2-methyl butene-2 was studied. It was performed in a continuously working quartz apparatus filled with 10% $Al_2(SO_4)_3$ + 90% Al_2O_3. Pure 3-methyl butene-1 was used for this purpose, which was obtained by treating the isoamyl alcohol dehydrated over aluminum oxide

S/064/61/000/003/003/009
B101/B203

Production of isoamylenes ...

with 60-65% sulfuric acid. Optimum temperature of isomerization was 270°C. The degree of isomerization was controlled on the basis of the refractive index. Table 3 gives the results. The advantages of the described procedure are: 1) high selectivity, 2) the resulting amyl chloride is free from organic sulfur compounds, 3) low pressure and low temperatures, 4) after removal of the isoamylenes from the PAF, the n-amylenes can be worked into methyl propyl ketone. Isomerization of 3-methyl butene-1 to 2-methyl butene-2 widens the raw-material basis for isoprene production. If the isomerization is not performed, the synthesis of methyl propyl ketone also yields methyl isopropyl ketone which is another valuable solvent. The low content of diene hydrocarbons in the PAF could be utilized by extractive distillation by means of dimethyl Sulfolane (Ref. 6: Patent USA 2,623,844; 1952). There are 3 tables and 6 non-Soviet-bloc references.

Card 4/7

Production of isoamylenes ...

S/064/61/000/003/003/009
B101/B203

Таблица 2

Дегидратация третичного амилового спирта

1 Катализатор	2 Температура °C	3 Выход 2-метилбутена-2 %	n_D^{20} 4 катализата
Al_2O_3	200	97,3	1,3855
»	150	71	1,3869
»	100	41	1,3992
5 КУ-2	80	81	1,3855

Table 2

Legend to Table 2: 1) catalyst, 2) temperature, 3) yield of 2-methyl butene-2, 4) of the catalyzate, 5) KU-2

Card 6/7

Production of isoamylenes ...

S/064/61/000/003/003/009
B101/B203

Таблица 3

Изомеризация 3-метилбутена-1 в 2-метилбутен-2

1 Температура, °C	n_D^{20} 2 полученных изоамиленов	3 Степень изомеризации, %
210	1,3770	46
245	1,3823	69
270	1,3838	76
300	1,3840	77

Table 3

Legend to Table 3: 1) temperature, 2) of the resulting isoamylenes, 3) degree of isomerization

Card 7/7

ROZANTSEV, E.G.; BERGER, I.I.

Removal of sulfur compounds from hydrocarbon gases. Khim.prom. no.5:339-340 My '61. (MIRA 14:6)

(Hydrocarbons)
(Sulfur compounds)

ROZANTSEV, E.G.; VYSTAVKINA, L.B.

Sulfoaliphatic cation exchangers based on polyvinyl alcohol.
Zhur.prikl.khim. 35 no.4:919-921 Ap '62. (MIRA 15:4)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov.
(Ion exchange) (Vinyl alcohol polymers)

ROZANTSEV, E. G.; PAPKO, R. A.

2,2,7,7-Tetramethyl-5-homopiperazinone-nitric oxide, a new stable free radical. Izv. AN SSSR Otd. khim. nauk no.12:2254 D '62. (MIRA 16:1)

1. Institut khimicheskoy fiziki AN SSSR.

(Piperazinone) (Radicals(Chemistry))

ROZANTSEV, E. G.; MAMEDOVA, Yu. G.; NEYMAN, M. B.

Preservation of the free valency in the reduction of the 2,2,6,6-tetramethyl-γ-piperidone-nitric oxide radical according to Kizhner's reaction. Izv. AN SSSR Otd. khim. nauk no.12:2250-2251 D '62. (MIRA 16:1)

1. Institut khimicheskoy fiziki AN SSSR.

[illegible]Piperidone) (Radicals(Chemistry))

ROZANTSEV, E.G.

Chemistry and taste. Priroda 51 no.5:47-51 My '62. (MIRA 15:5)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.
(Taste)

ROZANTSEV, E.G.

ROZANTS[illegible], E.G.; PAPKO, R.A.

Beckmann rearrangement of a free radical. Izv. AN SSSR. Otd.khim. nauk no.4:764-765 Ap. '63. (MIRA 16:3)

1. Institut khimicheskoy fiziki AN SSSR.
(Radicals (Chemistry)) (Beckmann rearrangement)

YEFREMOVA, G.I.; ROZANTSEV, E.G.

Mutagenic activity of free radicals of the piperidine series. (MIRA 18:10)
Genetika no.2:63-66 Ag '65.

1. Institute of Chemical Physics, Academy of Sciences of the U.S.S.R., Moscow.

L 13877-66 EWT(m)/EWP(j)/EWP(b)/T/EWP(t) IJP(c) WW/JW/JWD/RM/JD/WE

ACC NR: AP6003494 SOURCE CODE: UR/0020/66/166/001/0129/0131

AUTHOR: Rozantsev, E. G.; Burmistrova, R. S.

ORG: Institute of Chemical Physics, Academy of Sciences SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR)

43

B

44,55

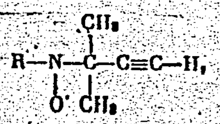
TITLE: Free nitroxide radicals of the acetylene series

SOURCE: AN SSSR. Doklady, v. 166, no. 1, 1966, 129-131

TOPIC TAGS: free radical, nitroxide

ABSTRACT: Free nitroxide radicals of the type

21



$$R-\underset{\dot{O}}{\underset{|}{N}}-\overset{CH_3}{\overset{|}{\underset{CH_3}{\underset{|}{C}}}}-C\equiv C-H,$$

where R is: I, iso-C_3H_7; II, tert-C_4H_9; or III, tert-C_5H_{11}, have been synthesized (for the first time, according to the authors) by direct catalytic oxidation of the respective secondary amines. The oxidation did not affect the acetylene bond, and formed the free radicals in solution. Nitroxides II and III were isolated in the form of golden

Card 1/2 UDC: 541.515

Card 2/2

L 15335-66 EWT(m)/EWP(j)/T/ETC(m)-6 WW/RM

ACC NR: AP6000983 (A) SOURCE CODE: UR/0286/65/000/022/0059/0059

41
B

AUTHORS: Kovarskaya, B. M.; Gurbyanova, V. V.; Rozantsev, E. G.; Neyman, M. B.

ORG: none

15,44,55 16

TITLE: A method for obtaining stabilized polyformaldehyde. Class 39, No. 176406

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 59

TOPIC TAGS: polymer, polymerization, polyformaldehyde plastic, nitrogen compound

ABSTRACT: This Author Certificate presents a method for obtaining stabilized polyformaldehyde by introducing into the finished polymer a stabilizing system 15 consisting of a polyamide and nitrogen-containing compound. To increase the thermostability 15 of the polymer, 2,2,6,6-tetramethyl-4-oxypiperidinoxyl, phenylcarbonate-2,2,6,6-tetramethyl-4-ethyl-4-oxypiperidinoxyl is used as the nitrogen-containing compound.

SUB CODE: 11/ 07/ SUBM DATE: 17May63

GC

Card 1/1 UDC: 678.644'141.048.2

2

NEYMAN, M.B.; KRINITSKAYA, L.A.; ROZANTSEV, E.G.

Inhibition of the thermal oxidative degradation of polycaproamide in the presence of stable iminoxyl radicals of the series of hydrogenated pyrrole. Izv. AN SSSR. Ser. khim. no.11:2055-2057 '65. (MIRA 18:11)

1. Institut khimicheskoy fiziki AN SSSR.

ROZANTSEV, E.G.; KALASHNIKOVA, L.A.; NEYMAN, M.B.

Effect of stable free radicals on the thermal oxidative degradation of polypropylene. Zhur.prikl.khim. 38 no.3:702-705 Mr '65. (MIRA 18:11)

1. Institut khimicheskoy fiziki AN SSSR. Submitted March 4, 1963.

ROZANTSEV, E.G.; BURMISTROVA, R.S.

Free acetylenic iminoxyls. Dokl. AN SSSR 166 no.1:129-131 Ja '66. (MIRA 19:1)

1. Institut khimicheskoy fiziki AN SSSR. Submitted April 12, 1965.

L 41216-66 EWT(m)/EWP(j) RM/WW/JW/JWD

ACC NR: AP6015090 (A) SOURCE CODE: UR/0020/66/168/001/0104/0105

58
57
B

AUTHOR: Lebedev, Yu. A.; Rozantsev, E. G.; Kalashnikova, L. A.; Lebedev, V. P. Neyman, M. B.; Apin, A. Ya.

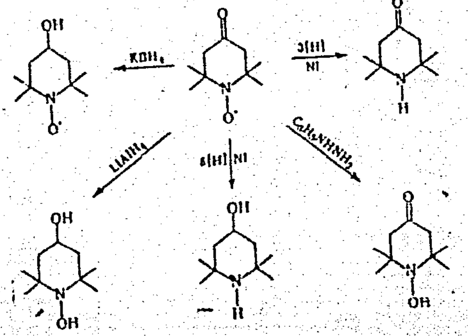
ORG: Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fizikii AN SSSR)

TITLE: Thermochemical study of some free radicals and their hydrides

SOURCE: AN SSSR. Doklady, v. 168, no. 1, 1966, 104-105

TOPIC TAGS: free radical, hydride, thermochemistry

ABSTRACT: All the investigated compounds were prepared by the following scheme:



The compounds were purified in Ar atmosphere (recrystallization, chromatography, sublimation in vacuo) and then submitted to a calorimetric investigation. The thermochemical properties of the compounds are given in Table 1. The paper was presented by Academician V. N. Kondrat'yev on 6 Aug 65. Orig. art. has 1 formula and 2 tables.

UDC: 541.11+547.823

Card 1/2

L 41316-66 EWT(m)/EWP(j) JW/RM

ACC NR: AP6024018 (N) SOURCE CODE: UR/0062/66/000/006/0979/0983

46
B

AUTHOR: Rozantsev, E. G.; Gur'yanova, Ye. N.

ORG: Institute of Chemical Physics, Academy of Sciences, SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR); Physicochemical Institute im. L. Ya. Karpov (Fiziko-khimicheskiy institut)

TITLE: Some characteristics of the structure of free iminoxyl radicals of the piperidine series

SOURCE: AN SSSR. Izv. Ser khim, no. 6, 1966, 979-983

TOPIC TAGS: free radical, piperidine, heterocyclic base compound, HYDRIDE

ABSTRACT: In order to determine the spin and charge densities in free iminoxyl radicals, the authors studied the polar properties of these radicals and compared them with the properties of the corresponding hydrides. The dipole moments (DM) of the compounds studied (2,2,6,6-tetramethyl-1-hydroxypiperidine, 2,2,6,6-tetramethylpiperidine-1-hydroxyl, 2,2,6,6-tetramethyl-4-oxopiperidine-1-hydroxyl, 2,2,6,6-tetramethyl-4-hydroxypiperidine-1-hydroxyl, nitrogen diphenyl oxide, and diphenylhydroxylamine) were measured at 25° in benzene and n-octane. The effect of the presence of an unpaired electron in the =NO· group on the dipole moment was determined. The distribution of the spin density of the unpaired electron was found to be 27% on the nitrogen atom and 73% on the oxygen atom. The most probable conformations of the hetrocyclic rings of the

Card 1/2 UDC: 541.51+539.143+547.7

L 41316-66

ACC NR: AP6024018

free radical studied were established on the basis of the DM data. Orig. art. has: 1 figure.

SUB CODE: 07/ SUBM DATE: 01Feb64/ ORIG REF: 005/ OTH REF: 005

Card 2/2

L 37213-66 EWT(m)/EWP(j) RM

ACC NR: AP6014407 SOURCE CODE: UR/0062/66/000/004/0675/0679

40

B

AUTHOR: Rozantsev, E. G.; Krinitskaya, L. A.; Neyman, M. B.

ORG: Institute of Chemical Physics, Academy of Sciences SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR)

TITLE: Free iminoxyl radical in the hydrogenated pyrrole series

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1966, 675-679

TOPIC TAGS: free radical, chemical reaction, heterocyclic base compound, secondary amine, chemical valence

ABSTRACT: Free iminoxyl radicals of hydrogenated pyrrole were synthesized and the possibility of running reactions with them without affecting the free valency was studied. The free iminoxyl radicals of the amides of 2,2,5,5-tetramethylpyrroline and 2,2,5,5-tetramethylpyrrolidine carboxylic acids were prepared by catalytic oxidation. These radicals are very stable to oxygen, can be used to inhibit radical processes, and can be readily reduced to the corresponding heterocyclic analoga of hydroxylamine or amines. A new method proposed for protecting the

UDC: 542.91+547.7+541.51

Card 1/2

L 37213-66

ACC NR: AP6014407

C

secondary amino groups in amino acids comprises oxidizing the amino groups to iminoxyl radicals, esterifying with diazomethane and reducing the ester radical to the amino ester. Orig. art. has: 1 table, 1 figure and 4 equations.

SUB CODE: 07/ SUBM DATE: 17Jan64/ ORIG REF: 014 OTH REF: 004

Card 2/2 mLP

L 46325-66 EWT(m)/EWP(j) T IJP(c) RM

ACC NR: AP6018126 SOURCE CODE: UR/0191/66/000/006/0037/0039

14
B

AUTHOR: Yasina, L. L.; Shapiro, A. B.; Rozantsev, E. G.

ORG: none

TITLE: Inhibition of polymer oxidation with certain free radicals

SOURCE: Plasticheskiye massy, no. 6, 1966, 37-39

TOPIC TAGS: oxidation, oxidation inhibition, amine, organic imine compound, free radical, EPR spectrometry, paramagnetic ion

ABSTRACT: The antioxidation properties of carboline and quinoline derivatives were studied by determining the induction period for oxygen absorption by isotactic polypropylene and polyformaldehyde. 2,2,4,4-tetramethyl and 2,2,4,4,9-pentamethyl-1-1,2,3,4-tetrahydro-γ-carbolines (I and II) and their oxyl radicals 2,2,4,4-tetramethyl- and 2,2,4,4,9-pentamethyl 1,2,3,4-tetrahydro-γ-carboline-3-oxyl (III and IV); 2-spirocyclohexyl and 5,6-benzo-2-spirocyclohexyl-4-methyl-3,4,3',2'-tetrahydrofurano-1,2,3,4-tetrahydroquinolines (V and VI) and their corresponding -1-oxyl radicals (VII and VIII) were investigated. Radical IV was a stronger inhibitor than amines I or II or radical III; the

UDC: 678.048.2

Card 1/2

L 46325-66

ACC NR: AP6018126

0

paramagnetic radicals VII and VIII were stronger than amines V and VI. IV and VII inhibited thermal oxidation of polyformaldehyde more than the other mentioned compounds but less than the standard 2,2,6,6-tetramethyl-4-ethyl-4-hydroxypiperidine-1-oxyl. Orig. art. has: 5 figures, 1 table and 2 equations.

SUB CODE: 07/ SUBM DATE: none/ ORIG REF: 009/ OTH REF: 001

Card 2/2 fv

L 01859-67 EWT(m)/EWP(j)/T/EWP(t)/ETI IJP(c) JD/WW/JW/RM

ACC NR: AP6031289 SOURCE CODE: UR/0074/66/035/009/1549/1573

50
B

AUTHOR: Rozantsev, E. G.

ORG: Institute of Chemical Physics, AN SSSR, Moscow (Institut khimicheskoy fiziki AN SSSR)

15

TITLE: Paramagnetic derivatives of nitric oxide

21

SOURCE: Uspekhi khimii, v. 35, no. 9, 1966, 1549-1573

TOPIC TAGS: nitric oxide, paramagnetic derivative, free radical

ABSTRACT: Studies on paramagnetic derivatives of nitric oxide have been reviewed under the headings: 1. Introduction; 2. Paramagnetic nitrogen oxides; 3. The Tremy salt; 4. $R-\underset{\overset{\|}{O}}{\dot{N}}-R$—radicals; 5. $R-\underset{\overset{|}{O^{\bullet}}}{N}-R$—radicals; and 6. Individual polyradicals. The review was undertaken because monographs on free radicals contain almost no data on paramagnetic derivatives of nitric oxide. In this review, main attention is devoted to studies on the structure, reactivity, and synthesis of radicals of this class. There are 61 Soviet and 208 Western references. The Soviet references include 32 original studies by the author. Orig. art. has: 10 figures. [BO]

SUB CODE: 07,20/ SUBM DATE: none/ ORIG REF: 059/ OTH REF: 210/

Card 1/1 LC UDC: 546.668:546.174

L 01077-67 EWT(m)/EWP(j)/EWP(t)/ETI IJP(c) [illegible]

ACC NR: AP6035963 SOURCE CODE: UR/0062/66/000/004/0770/0770

ROZANTSEV, E. G., Institute of Chemical Physics, AN SSSR
(Institut khimicheskoy fiziki AN SSSR)

33

"Selective Reduction of the Carbonyl Group of a Free Radical Without Participation of the Unpaired Electron"

B

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 4, 1966, p 770

Abstract: The free radical 2,2,6,6-tetramethyl-4-oxopiperidine-1-oxyl cannot be converted into 2,2,6,6,-tetramethyl-4-oxypiperidine-1-oxyl by direct catalytic reduction of the carbon group since the free valence of the iminoxyl group is also hydrogenated in this case. Analogous results are obtained when the radical is reduced with lithium aluminum hydride. However, when potassium boron hydride, is the reducing agent, the free radical reaction takes place smoothly both in air and in argon. A yield of 88.3% is obtainable from the procedure described. [JPRS: 37,177]

TOPIC TAGS: free radical, chemical reduction, lithium aluminum hydride

SUB CODE: 07 / SUBM DATE: none

Card 1/1

UDC: 547.256.2 - 541.51

0922 0485

[illegible]

ACC NR: [illegible] SOURCE CODE: UR/0192/66/007/002/0187/0191

AUTHOR: Shapiro, A. B.; Buchachenko, A. L.; Medzhidov, A. A.; Rozantsev, E. G.

ORG: Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fiziki AN SSSR)

TITLE: Organomercury free radicals

SOURCE: Zhurnal strukturnoy khimii, v. 7, no. 2, 1966, 187-191

TOPIC TAGS: organomercury compound, free radical, EPR spectrum

ABSTRACT: The first representatives of organomercury stable radicals were obtained in solution and their electron paramagnetic spectra were investigated. Hyperfine structure was analyzed for nuclei of magnetic isotopes of mercury. The value of MacConnell's constant for isotropic hyperfine interaction with the isotopes Hg^{199} and Hg^{201} was determined. Mercury derivatives of N-ter-butylaniline, 2,2,4-trimethyl-1,2,3,4-tetrahydroquinoline, and 2,2-dimethylindoline were described. The authors thank F. M. Yegidis for furnishing the N-ter-butylaniline. Orig. art. has: 5 figures and 1 table. [JPRS: 38,970]

SUB CODE: 07 / SUBM DATE: 25Jun65 / ORIG REF: 003 / OTH REF: 004

UDC: 538.113

Card 1/1 0785 2083

ACC NR: AT6031630 (N) SOURCE CODE: UR/3175/66/000/029/0035/0041

AUTHOR: Rozantsev, E. G.; Stepanov, A. P.

ORG: [Stepanov] Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fiziki AN SSSR); [Rozantsev] UPT im. S. M. Kirov

TITLE: New active materials for nuclear magnetometers

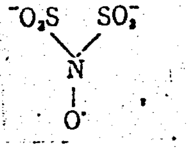
SOURCE: USSR. Gosudarstvennyy geologicheskiy komitet. Osoboye konstruktorskoye byuro. Geofizicheskaya apparatura, no. 29, 1966, 35-41

TOPIC TAGS: nuclear magnetic resonance, nuclear spin, nuclear structure, electron polarization, magnetic effect, magnetic field measurement, earth magnetism, proton polarization, paramagnetic material, EPR spectrum

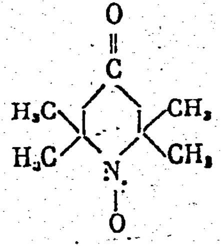
ABSTRACT: New active materials for use in nuclear precession magnetometers have been developed by the Institute of Chemical Physics, AN SSSR. These nitric acid radicals have a number of advantages over the conventional aqueous solution of nitrosodiumsulfonate $K_2(NO(SO_3)_2)$. The operation of nuclear precession magnetometers is cyclic. First the active material is polarized and then the frequency of the signal, generated by the transducer (containing the active material) in the presence of a magnetic field and proportional to its strength, is measured. The combination of the two processes improves the response speed of the magnetometer, and increases the signal-to-noise ratio.

Card 1/3

These improvements became possible with the discovery of the nitrosodiumsulfonate as an active material. The dissociation of this salt in water generates paramagnetic ions which exhibit a superfine, well resolved structure of the electron paramagnetic resonance spectrum. Saturation of any line in this spectrum leads to a considerable increase of the nuclear magnetization of the solvent. This phenomenon is called "dynamic polarization". The great disadvantage of $K_2(NO(SO_3)_2)$ is its instability. In distilled water, the paramagnetic ion-radical dissociates in seconds. This is an autocatalytic process, the rate of which increases with concentration. Two new compounds were synthesized: 2,2,6,6-tetramethyl-1-oxypiperidine-1-oxyl (II) and 2,2,6,6-tetramethyl-4-oxypiperidine-1-oxyl (III) which are easily dissolvable in many polar and non-polar proton-containing solvents. Both compounds have an electron paramagnetic resonance spectrum with well resolved structure, similar to material (I). The new materials are very stable. Their solutions did not change over a six month period, even with heating up to 90°C. Since both salts can be dissolved in a variety of organic solvents, one with a high proton concentration and long period of proton relaxation can be chosen for best performance under any climatic conditions. One disadvant-

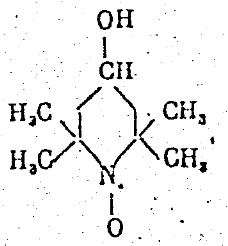


(I)



(II)

ACC NR: AT6031630


(III)

age of these materials is the large width of the electron transitions that necessitates a high powered high frequency saturating generator. There is, however, at least in principle, the possibility of synthesizing materials with narrower lines in the superfine structure of their electron paramagnetic resonance spectra. Orig. art. has: 3 figures, 2 tables.

SUB CODE: 18/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 003

Card 3/3

ACC NR: AP7013135 SOURCE CODE: UR/0062/66/000 009/1650/1652

AUTHOR: Shapiro, A. B.; Rozantsev, E. G.

ORG: Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fiziki AN SSSR)

TITLE: First organothallium free radical

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 9, 1966, 1650-1652

TOPIC TAGS: free radical, thallium compound, exchange reaction

SUB CODE: 07

ABSTRACT: In the reaction of the free radical 8-acetyloxymercuri-2,2,4,6-tetramethyl-1,2,3,4-tetrahydroquinolinooxy with thallium triisobutyrate, an exchange of mercury with thallium was detected, yielding a new organothallium free radical. This was the first time that an organothallium free radical had been produced in solution. The hyperfine structure of the electron paramagnetic spectrum of the new radical was investigated on thallium isotopes Tl^{203} and Tl^{205} Orig. art. has: 2 figures and 1 formula. [JPRS: 40,422]

Card 1/1 UDC: 542.91+547.1'3+541.515+5 38.113+546.6

0933 0831

L 31886-66 EWT(m)/EWP(j) WW/JW/RM

ACC NR: AP6012536 SOURCE CODE: UR/0062/66/000/003/0571/0572

AUTHOR: Rozantsev, E. G.; Gintsberg, E. G.

32
B

ORG: Institute of Chemical Physics, Academy of Sciences SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR)

TITLE: Electronic structure of free iminoxyl radicals

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 3, 1966, 571-572

TOPIC TAGS: free radical, physical chemistry, electrochemical analysis

ABSTRACT: An attempt is made to obtain more information on the electron configuration of free iminoxyl radicals by the potentiometric titration method. The similarity of potentiometric titration curves and magnitudes of basicity constants of the compared compounds shows that secondary amines, hydroxylamines and free imine acids have pronounced unseparated electron pairs. It is significant that in terms of basicity, free radicals occupy an intermediate position between corresponding amines and hydroxylamines. The pKa are determined for free iminoxyl radicals: 2,2,6,6-tetramethyl-4-oxopiperidine-1-oxyl and 2,2,6,6-tetramethyl-4-hydroxypiperidine-1-oxyl. Orig. art. has: 1 table and 1 figure.

Card 1/2 UDC: 541 + 541.51

L 31886-66

ACC NR: AP6012536

O

SUB CODE: 07/ SUBM DATE: 23Jul65/ ORIG REF: 001/ OTH REF: 004

Card 2/2 LS

S/055/59/000/06/21/027
B004/B002

AUTHORS: Yur'yev, Yu. K., Rozantsev, E. G.

TITLE: Dehydration of 2,3,5-Trimethyl-3-oxyfuranidine

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, No. 6, pp. 171-179

TEXT: During the dehydration of 2,3,5-trimethyl-3-oxyfuranidine by means of p-toluene-sulfonic acid, the three isomers shown in the scheme on p 171 may develop, which differ from one another by the position of their double bonds. It was the purpose of this paper to isolate these isomers from the reaction product. The starting substance was produced from 2,5-dimethyl-furanidone-3 according to reference 3. By fractionating the product obtained from the reaction with p-toluene-sulfonic acid, the authors obtained three main fractions (Table 1, Fig. 1). From the first main fraction, 2,3,5-trimethyl-Δ^3-dihydrofurane was isolated. Its structure was shown by treatment with ozone (development of ketonic acid) and by proving the methylketone group by means of KIO_3, furthermore by its Raman and infrared spectra (Table 2, Fig. 2), but mainly by means of the infrared spectrum within the range 2740 - 3100 cm^{-1} (Fig. 3). If

Card 1/3

clearly shows the absorption bands at 3065 cm^{-1} of the CH groups of Δ^{3}-dihydro-furane. The ultraviolet spectrum (Fig. 4), however, has no absorption maxima, but it shows the absorption which corresponds to substituted ethylene. 2,3,5-trimethyl-Δ^{2}-dihydro-furane was isolated from the third main fraction. Its structure was determined by the oxidation with ozone into 2-pentenone-4 and the oxidation of the latter into crotonic acid by means of KBrO. Table 2 and figures 2,3,4 also give the corresponding spectra of these compounds. The Raman spectrum shows that the intense line of the double bond is 1581 cm^{-1} as is the case with the similarly built cyclic vinylether. At 3095 cm^{-1} the infrared spectrum shows the absorption bands of Δ^{2}-dihydro-furane. The ultraviolet spectrum shows the conjugation of the double bond of the cycle with the free electron pair of oxygen. The third isomer, namely 2,5-dimethyl-3-methylene-furanidine was assumed in the second main fraction. After treatment with 2,4-dinitro-phenyl-hydrazine for the purpose of separating 2,3,5-trimethyl-Δ^{2}-dihydro-furane, the substance was again fractionated, and (Table 3) 2,3,5-trimethyl-Δ^{2}-dihydro-furane was again obtained. Thus, the dimethyl-methylene compound is unstable and is rearranged into the two trimethyl compounds. There are 4 figures, 3 tables, and 17 references, 5 of which are Soviet.

Card 2/3

Dehydration of 2,3,5-Trimethyl-3-oxyfuranidine

S/055/59/000/06/21/027
B004/B002

ASSOCIATION: Kafedra organicheskoy khimii (Chair of Organic Chemistry)

SUBMITTED: March 7, 1959

Card 3/3

ROZANTSEV, E.G.; NEYMAN, M.B.

Reply to certain remarks of O.L.Lebedev and G.A.Razuvaeva in connection with the priority of the discovery of nonradical reactions of free radicals. Zhur. org. khim. 1 no.7:1337-1338 Jl '65. (MIRA 18:11)

GOLUBEV, V.A.; ROZANTSEV, E.G.; NEYMAN, M.B.

Some free iminoxyl reactions involving an unpaired electron.
Izv. AN SSSR. Ser. khim. no.11:1927-1936 '65.
(MIRA 18:11)

1. Institut khimicheskoy fiziki AN SSSR.

EWT(m)/EWP(j)/T/ETC(m) RPL WW/RM

L 11111-66

ACC NR: AP6002100 SOURCE CODE: UR/0062/65/000/011/2055/2057

46

B

44 55 44 55 44 55

AUTHOR: Neyman, M. B.; Krinitskaya, L. A.; Rozantsev, E. G.

44 55

ORG: Institute of Chemical Physics, Academy of Sciences SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR)

7,44,55

TITLE: Inhibition of the thermal oxidative degradation of polycaproamide by stable imineoxyl radicals from hydrogenated pyrrols

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 11, 1965, 2055-2057

TOPIC TAGS: polymer, polycaproamide, antioxidant, inhibitor, polymer stability

ABSTRACT: Previous work had shown that some imineoxyl radicals are antioxidants 15 and can inhibit the thermal oxidative degradation of polymers. In this work the following stable imineoxyl radicals, previously synthesized by the authors, were tested for their ability to retard the thermal oxidative degradation of polycaproamide:

UDC: 541.6+541.51

Card 1/2

L 11111-66

ACC NR: AP6002100

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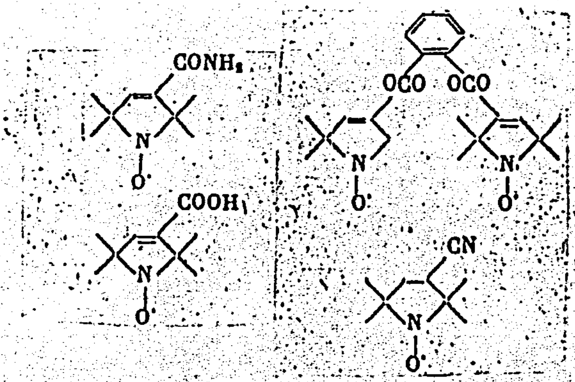


They were found to inhibit the destruction of polycaproamide, exhibiting a well-pronounced induction period at 160C. The inhibiting properties of the above radicals drop sharply when the temperature of the process is raised to 200C. Orig. art. has: 1 table, 2 figures. [VS]

SUB CODE: 07 SUBM DATE: 18Mar65/ ORIG REF: 008/ OTH REF: 002
ATD PRESS: 4176

Card 2/2

L 10199-66 EWT(m)/EWP(j)/EWA(c) RPL RM

ACC NR: AP5028458 SOURCE CODE: UR/0286/65/000/020/0021/0021

AUTHORS: Rozantsev, E. G.; 44,55 Golubev, V. A.; 44,55 Neyman, M. B. 44,55

35

B

ORG: none

TITLE: Method for obtaining individual polyradicals. Class 12, No. 175504 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 21

TOPIC TAGS: polyradical, polymer triethylamine, polymerization

ABSTRACT: This Author Certificate presents a method for obtaining individual polyradicals. 55 To obtain polyradicals stable towards oxygen, the stable radical 44 2,2,6,6.-tetramethyl-4-oxypiperidine-1-oxyl is reacted with hexamethylenediisocyanate in benzene solution at a temperature of ∿ 100C or with phosphorus trichloride in benzene solution in presence of triethylamine at OC, or with the tetrachloroanhydride of pyromellitic acid in piperidine solution at OC.

SUB CODE: 07/ SUBM DATE: 24Oct64/

9C

Card 1/1

UDC: 547.77.8.024

L 1139-66 EWT(m)/EPF(c)/EWP(j)/T/EWP(t)/EWP(b)/EWA(c) IJP(c)/RPL JD/RM

ACCESSION NR: AP5022593 UR/0190/65/007/009/1515/1519
678.01:54

44,55 44,55 44,55 44,55

AUTHORS: Gur'yanova, V. V.; Kovarskaya, B. M.; Krinitskaya, L. A.; Neyman, M. B.; Rozantsev, E. G. 44,55

7,44,55 7 57

TITLE: On the possibility of initiating the chain oxidation of polymers by nitrogen oxide radicals 7 54

21 21 B

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1515-1519

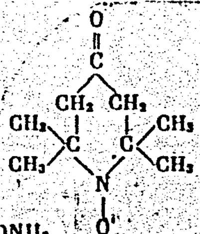
TOPIC TAGS: free radical, EPR, polymerization, hydrazobenzene, free radical polymerization

ABSTRACT: The kinetics, activation energies and preexponential factors for six reactions between six different iminoxyl radicals and hydrazobenzene 7 have been determined. The investigation was undertaken to extend currently available information on the abstraction of nitrogen-bound hydrogen atoms by nitrogen oxide radicals discussed by M. B. Neyman, Yu. G. Mamedova, P. Blenke, and A. L. Buchachenko (Dokl. AN SSSR, 144, 392, 1962). The radicals studied were:

Card 1/4

L 1139-66

ACCESSION NR: AP5022593



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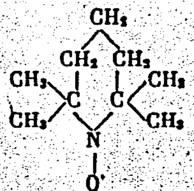

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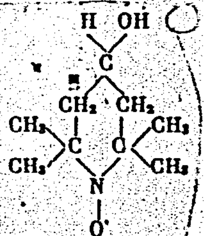
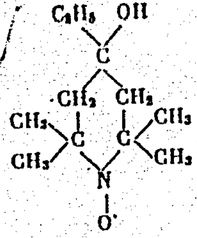
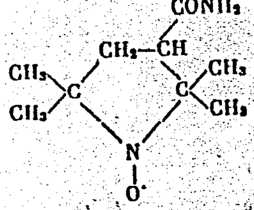


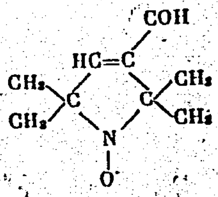
III



IV



V



VI

Card 2/4

L 1139-66
ACCESSION NR: AP5022593

3

The rate of reaction was followed by observing the changes in the EPR and UV spectra. The experimental results for hydrazobenzene are shown graphically in Fig. 1 on the Enclosure. Reaction rate constants and preexponential factors for the six different radicals are given in tabular form. A reaction mechanism is proposed. It is concluded that nitrogen oxide radicals are capable of abstracting nitrogen-bound hydrogen, giving rise to an active radical that is capable of initiating oxidation. Orig. art. has: 1 table, 3 graphs, and 3 equations.

ASSOCIATION: Institut plasticheskikh mass (Plastics Institute) 44,55

SUBMITTED: 24Sep64 ENCL: 01 SUB CODE: OC, GC

NO REF SOV: 011 OTHER: 002

Card 3/4

BUCHACHENKO, A.L.; GOLUBEV, V.A.; MEDZHIDOV, A.A.; ROZANTSEV, E.G.

Electron paramagnetic resonance spectra of biradicals having a weak exchange reaction. Teoret. i eksper. khim. 1 no.2:249-253 Mr-Ap '65. (MIRA 18:7)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.

VASSERMAN, A.M.; BUCHACHENKO, A.L.; ROZANTSEV, Ye.G.; NEYMAN, M.B.

Dipole moments of molecules and radicals, Di-tert-butyl nitroxide. Zhur. struk. khim. 6 no.3:467-468 My-Je '65.

(MIRA 18:8)

1. Institut khimicheskoy fiziki AN SSSR.

BUCHACHENKO, A.L.; GOLUBEV, V.A.; NEYMAN, M.B.; ROZANTSEV, E.G.

Electron paramagnetic resonance spectra of individual polyradicals.
Dokl. AN SSSR 163 no.6:1416-1418 Ag '65.
(MIRA 18:8)

1. Institut khimicheskoy fiziki AN SSSR. Submitted January 21, 1965.

L 59350-65

ACCESSION NR: AP5019335 UR/0020/64/157/003/0707/0709

AUTHOR: Konovalova, N. P.; Bogdanov, G. N.; Miller, V. B.; Neyman, M. V.; Rozantsev, E. G. 14 B

TITLE: Antitumor activity of stable free radicals

SOURCE: AN SSSR. Doklady, v. 157, no. 3, 1964, 707-709

TOPIC TAGS: biochemistry, neoplasm

ABSTRACT: The antitumor activity of free radicals was studied in the light of literature data indicating that a vital role in the mechanism of the antitumor action of inhibitors of radical processes is played by the action of comparatively stable free radicals formed from the inhibitors. Stable free radicals of a number of 4-substituted 2,2,6,6-tetramethylpiperidine oxides were investigated by a kinetic method of determining antitumor effectiveness. The kinetics of the changes in the weight of the spleen, number of leukocytes and hemocytoplasts per cubic millimeter of blood and percent content of hemocytoplasts in the bone marrow were studied in mice of the C57BL line with grafted leukemia from the La strain. Antileukemic activity was discovered in three free radicals; the

Card 1/2

L 59350-65

ACCESSION NR: AP5019335

antileukemic activity of one of the preparations was found to be due to the presence in its molecule of both an unpaired electron and of a urethan group.

Orig. art. has: 4 graphs, 1 table.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences SSSR)

SUBMITTED: 19Mar63 ENCL: 00 SUB CODE: LS, GC

NR REF SOV: 005 OTHER: 003 JPRS

Card 2/2

NEYMAN, M.B.; ROZANTSEV, E.G.; GOLUBEV, V.A.

First stable triradicals. Izv. AN SSSR. Ser. khim. no.3:548-550
'65.
(MIRA 18:5)
1. Institut khimicheskoy fiziki AN SSSR.

ROZANTSEV, E.G.; GOLUBEV, V.A.; NEYMAN, M.B.; KOKHANOV, Yu.V.

New stable iminoxyl biradicals. Izv. AN SSSR. Ser. khim. no.3:
572-573 '65. (MIRA 18:5)

1. Institut khimicheskoy fiziki AN SSSR.

ROZANTSEV, E.G.; GOLUBEV, V.A.

Free tetraradicals. Izv. AN Ser. khim. no.4:718-720 '65. (MIRA 18:5)

1. Institut khimicheskoy fiziki AN SSSR.

KALASHNIKOVA, L.A.; ROZANTSEV, E.G.; CHAYKIN, A.M.

Pressure of saturated vapors of some stable free radicals. Izv. AN SSSR. Ser. khim. no.5:800-805 '65. (MIRA 18:5)

1. Institut khimicheskoy fiziki AN SSSR.

ROZANTSEV, E.G.; SHAPIRO, A.B.; KO[illegible]OVA, [illegible]

Paramagnetic derivatives in the 1,2,3,4-tetrahydro-γ-carboline series. Izv. AN SSSR. Ser. khim. no.6:[illegible]-1122 '65. (MIRA 18:6)

1. Institut khimicheskoy fiziki AN SSSR.

L 59597-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RPL RM
ACCESSION NR: AP5017964 UR/0062/65/000/006/1102/1104
547.831+547.024

28
25
B

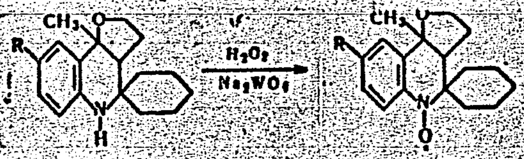
AUTHOR: Shapiro, A. B.; Rozantsev, E. G.; Povarov, L. S.; Grigos, V. I.

TITLE: Paramagnetic derivatives in the hydrogenated quinoline series

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 6, 1965, 1102-1104

TOPIC TAGS: quinoline derivative, free radical, electron spin resonance, ESR spectrum

ABSTRACT: The following stable radical from the hydrogenated quinoline series was obtained for the first time: 6-methoxy-4-methyl-2-spirocyclohexyl-3,4; 3',2'-tetrahydrofuran-1,2,3,4-tetrahydroquinolin-1-oxyl (IV). It was synthesized by catalytic oxidation of the corresponding amine (II):



(I) R = H
(II) R = OCH₃

(III) R = H
(IV) R = OCH₃

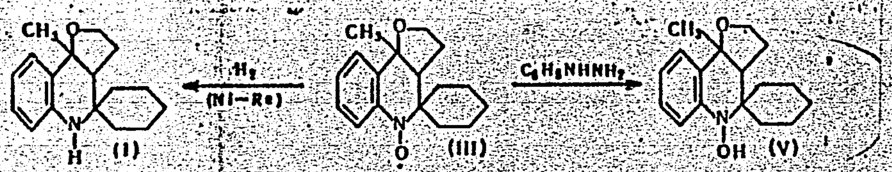
Card 1/3

L 59597-65

ACCESSION NR: AP5017964

3

The hyperfine structure of the ESR spectrum of this radical consists of 6 lines. Such a decrease in the number of lines upon replacement of hydrogen in the para-position by a methoxy group agrees with modern concepts of the interaction of an unpaired electron with protons of the benzene ring. Radical (III) was reduced to the initial amine and to the corresponding hydroxylamine (V):



The synthetic procedure employed is described. "In conclusion, the authors express their appreciation to A. A. Medzhidov for participating in the evaluation of the spectroscopic part of this work." Orig. art. has: 2 figures and 2 formulas.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences, SSSR); Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

Card 2/3

L 59597-65
ACCESSION NR: AP5017964

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SUBMITTED: 30Sep64 ENCL: 00 SUB CODE: OC, NP

NO REF SOV: 006 OTHER: 000

Card 3/3