

ZOVITSKIY, A.V.

Immediate results of 62 pulmonary resections. Probl.tub. no.6:  
104-106 '61. (MIRA 14:9)

1. Iz tuberkuleznogo sanatoriya "Primoriye" (glavnyy vrach N.T.  
Sokolova, nauchnyy rukovoditel' - prof. A.G. Gil'man).  
(TUBERCULOSIS) (LUNGS—SURGERY)

NOVITSKIY, A.V. (Yalta, ul. Kiyevskaya, d.20, kv.34)

Successive bilateral partial resection in pulmonary tuberculosis. *Grud.khir.* 4 no.6:77-79 N-D'62. (MIRA 16:10)

1. Iz khirurgicheskoy kliniki (sav. - prof. A.F.Sil'man) Instituta meditsinskoy klimatologii i klimatoterapii imeni I.M. Sechenova (dir. B.V.Bogutskiy).  
(TUBERCULOSIS) (LUNGS—SURGERY)

NOVITSKIY, A.V., starshiy inzh.

Mechanization of major pipeline repairs. Neftianik 6 no.12:14  
D '61. (MIRA 14:12)

1. Karskiy nefteprovodnyy uchastok.  
(Petroleum--Pipelines)

NOVITSKIY, A.V.

Bilateral partial resection of the lungs in tuberculosis patients.  
Probl. tub. 41 no.11:27-33 '63. (MIRA 17:9)

1. Iz khirurgicheskoy kliniki (zav. - prof. A.G.Gil'man) Instituta  
meditsinskoy klimatologii i klimatoterapii imeni Sechenova (dir.  
B.V.Bogutskiy, zamestitel' direktora po nauchnoy chasti - prof.  
S.R.Tatevosov), Yalta.

ALASYUK, G. Ya., inzh.; KUCHERYAVENKO, Ye. Ye., inzh.; MINTS, V.B., inzh.;  
NOVITSKIY, A. Ye., inzh.

Reinforced panels for hydraulic structures. Trudy Inst. Organizirovaniya  
no.1:94-131 '59. (MIRA 14:3)  
(Hydraulic structures) (Concrete panels)

NOVITSKIY, B.F., kand.tekhn.nauk

Temperature calculations for thermal fish processing apparatus.  
Trudy VNIRO 39:99-105 '59. (MIRA 14:6)  
(Fishery products—Preservation)

NOVITSKIY, B.F., kand.tekhn.nauk

Mathematical study of the morphometric indices of Baltic herring.  
Trudy VNIRO 39:141-147 '59. (MIRA 14:6)  
(Baltic Sea—Herring) (Fishes—Anatomy)

FRIDMAN, V.M., kandidat khimicheskikh nauk; MOVITSKIY, B.G. inzhener.

Ultrasonic method for measuring the degree of leather  
tanning. Leg. prom. 17 no.1:23-24 Ja '57. (MIRA 10:2)

(Tanning)  
(Ultrasonic waves--Industrial applications)



AUTHOR: Novitskiy, B.G. and Fridman, V.M. 46-1-19/20

TITLE: An ultra-sonic instrument for measuring certain physico-mechanical properties of leather, rubber, plastic and high-molecular weight materials. (Ultrazvukovoy pribor dla izmereniya nekotorykh fiziko-mekhanicheskikh svoystv kozhi, plasticheskikh i vysokomolekularnykh materialov.)

PERIODICAL: "Akusticheskiy Zhurnal" (Journal of Acoustics), 1957, Vol. III, No. 1, pp. 92 - 94, (U.S.S.R.)

ABSTRACT: A schematic diagram, photographs of the clamp and of the instrument itself, cross-sectional drawing of the I-cut Seignette salt disc grip are given. Constructional details are described and discussed. So are the principles and methods of measurements for various materials.  
2 photographs, 2 figures.

ASSOCIATION: Supersonic Laboratory of the Ministry of Light Industry. (Ultrazvukovaya Laboratoriya Ministerstva Legkoy Promyshlennosti, Moskva).

SUBMITTED: April, 5, 1956.

AVAILABLE:  
Card 1/1

FRIEDMAN, V. M. and ~~NOVITSKIY, D. G.~~

"Exciting of acoustic vibrations of ~~large~~ intensity by a hydrodynamic transducer"

report submitted for the 4th Intl. Congress of Acoustics,  
Copenhagen, Denmark, 21-28 Aug 1962.

KOTLYARSKIY, L.B.; NOVITSKIY, B.G.; FRIDMAN, V.M.

Cavitation phenomena due to the action of an acoustic hydrodynamic emitter. Akust. zhur. 9 no.4:434-440 '63. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya, Moskva.

NOVITSKIY, B.P., kapitan 1-go ranga v otstavke

Around Europe. Mor. sbor. 48 no.12:21-26 D '64.

(MIRA 18:2)

VINOGRADOV, A.D.; BOVITSKIY, B.Z.; POZDMYSHOV, A.V., redaktor; ANDRIANOV,  
B.I., tekhnicheskiy redaktor

[Soviet gliding] Sovetskii planerizm. Moskva, Izd-vo Dosaaf, 1955.  
140 p. (MLBA 8:10)  
(Gliding(Aeronautics))

NOVITSKIY, D., brigadir gruzchikov, delegat XIII s"yezda professional'nykh  
soyuzov

We are the bosses. Sov. profsoiuzy 19 no.19:14-15 0 '63.  
(MIRA 16:11)

1. Odesskiy port.

NOVITSKIY, D. A.

"Biological Method of Early Diagnosis of Pregnancy;" Akusher. i Ginekol., No. 6,  
1949. Chair Obstetrics & Gynecology, Khar'kov Med. Inst., -c1949-.

**NOVITSKIY, D.A.**

Acceleration of labor by Ivanov's method. Akush.gin., Moskva No.4:  
57-58 July-Aug 51. (CIME 21:1)

1. Candidate Medical Sciences. 2. Of the Department of Obstetrics and  
Gynecology (Head--Prof.D.Ye.Shvundak), Khar'kov Medical Institute.



VARTAPETOV, B.A.; SHEYNERMAN, M.D.; NOVITSKIY, D.A.

Effect of season and temperature on frog test in early pregnancy.  
Akush. gin., Moskva no.4:73-75 July-Aug 1952. (GML 23:2)

1. Candidate Medical Sciences for Vartapetov and Sheynerman; Docent for Novitskiy. 2. Of the Ukrainian Institute of Experimental Endocrinology (Head -- Prof. Z. M. Dinershteyn) and of the Department of Obstetrics and Gynecology (Head -- Prof. D. Ye. Shmundak) of Khar'kov Medical Institute.

1. NOVITSKIY, Docent, D. A.
2. USSR (600)
4. Puerperium
7. Control of hypotensive uterine hemorrhage in puerperium by constriction of the uterine vessels through the vaginal vault. Akush.i gin. no. 6, 1952.

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

NOVITSKIY, D.A., dots:

Iodine reaction for early diagnosis of pregnancy [with summary in English]. Akush. i gin. 34 no.5:35-37 8-0 '58 (MIRA 11:10)

1. Iz kafedry akusherstva i ginekologii No.2 (nav. - prof. V.F. Matveyeva) Dnar'kovskogo meditsinskogo instituta.  
(PREGNANCY TESTS,  
iodine reaction for early diag. (Rus))

NOVITSKIY, D.A. [Novyts'kyi, D.A.], dotsent

Reaction of urine with iodine for determining the early stages of pregnancy. Ped., akush. i gin. 23 no.5:58-60 '61. (MIRA 14:12)

1. Kafedry akusherstva i ginekologii pediatricheskogo i sanitarno-gigiyenicheskogo fakul'tetov (zaveduyushchiy - prof. V.F.Matveyeva [Matvieieva, V.F.]) Khar'kovskogo meditsinskogo instituta (rektor - dotsent B.A.Zadorozhnyy [Zadorozhnyi, B.A.]).  
(PREGNANCY—SIGNS AND DIAGNOSIS)

SEVERNYY, Vadim Vladimirovich, kand. khim. nauk; NOVITSKIY, Eduard Grigor'yevich, inzh.; STAROSEL'SKAYA, M.Ya., nauchn. red.

[Synthesis of organosilicon oligomers and polymers and their stabilization; survey of foreign patents] Sintez kremniorganicheskikh oligomerov i polimerov i ikh stabilizatsiia; obzor inostrannykh patentov. Moskva, TsNIIPI, 1964. 34 p. (MIRA 18:5)

L 34100-65 EWT(m)/EPF(c)/KPA(w)-2/EMP(j)/T Pc-4/Pab-10/Pt-4 EWH/WW/DJ/EM  
ACCESSION NR: AP5007434 S/0286/65/000/004/0062/0062

AUTHOR: Borisov, M. F.; Novitskiy, E. G.; Melyakhova, E. I.

TITLE: Preparative method for organosilicon polymers. Class 39, No. 168444

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 62

TOPIC TAGS: silicone, organosilicon polymer, polysiloxane gel

ABSTRACT: An Author Certificate has been issued for a preparative method for organo-silicon polymers based on a polymethylphenylsiloxane fluid. In order to produce a gel-type polymer whose properties would be preserved at elevated temperatures, the fluid is mixed with 1,2-diethoxymethacrylatetetramethyldisiloxane [sic]. The mixture is thickened with aluminum naphthenate and heated at 150C for 4-6 hr. [SM]

SUBMITTED: 00ADP03

NO REF SOV: 000

OTHER: 000

AFD PRESS: 3210

Card 1/1

NOVITSKIY, E.C.; SINGINA, N.D.

Preparation of **polymerisable** organosilicon oligomers, diethoxymethacrylate polyd.alkyl-(alkylaryl)-siloxanes. Plast. massy no.8:21-22 '65. (MIRA 18:9)

S/191/62/000/011/002/019  
B101/B186

AUTHORS: Novitskiy, E. G., Korolev, G. V.

TITLE: Use of nitrogen oxide as inhibitor of  $\omega$ -polymerization in the gaseous phase

PERIODICAL: Plasticheskiye massy, no. 11, 1962, 6-7

TEXT: The spontaneous  $\omega$ -polymerization of methacrylic acid and other unsaturated monomers occurring at high temperatures can be suppressed in the liquid phase by inhibitors such as tannin, hydroquinone, etc. (1-2% admixture). However, a spongy  $\omega$ -polymer also forms in the gaseous phase in consequence of high concentration on the walls of the reaction vessel, changes into the liquid phase, and thereupon initiates a spontaneous polymerization, despite of the presence of the inhibitors mentioned. It is shown here that the spontaneous polymerization also occurs when argon is bubbled through methacrylic acid at 155-158°C, but is suppressed for at least one hour when 5% NO is added to the argon. Likewise the spontaneous polymerization of the reaction mixture of polydiethylene glycol phthalate and methacrylic acid heated to 200°C was suppressed

Card 1/2



S/191/62/000/011/002/019  
B101/B186

Use of nitrogen oxide as ...

for 6 hrs when 2% NO had been added to the Ar. This allows of polyester acrylates being synthesized in the melt almost completely in the first stage of esterification, and of obtaining oligomers which can be rapidly cured by common radical initiators. There is 1 table.



Card 2/2

YAKOBSON, A.M.; NOVITSKIY, F.N.

Theoretical evaluation of the possibilities of the beta-  
introscopy method. Zav. lab. 29 no.10:1194-1198 '63.

(MIRA 16:12)

1. Institut metallurgii imeni A.A. Baykova.

NOVITSKIY, G.A. (Khmel'nik, Vinnitskoy oblasti)

Khmel'nik mineral water. Vrach.delo no.11:1219 N '56. (MLBA 10:3)  
(KHEMEL'NIK--MINERAL WATERS)

NOVITSKIY, G.A.

Effectiveness of Khmel'nik mineral baths in treating diseases of  
the musculoskeletal system and the peripheral nervous system.  
Vop.kur.fizioter. i lech.fiz.kul't. 22 no.4:66-67 J1-Ag '57.  
(MIRA 10:11)

1. In Khmel'nikskoy vodolechebnitsy Vinnitskoy oblasti (glavnyy  
vrach G.A.Novitskiy)

(KHMEL'NIK--MINERAL WATERS)

(JOINTS--DISEASES) (NERVOUS SYSTEM--DISEASES)

NOVITSKIY, G.A.

Effectiveness of treating hypertension with Khmel'nik mineral  
baths. Vrach.delo no.4:429 Ap'58 (MIRA 11:6)

1. Khmel'nikskaya vodolechebnitsa, Vinnitskoy oblasti.  
(HYPERTENSION)  
(KHMEL'NIK--MINERAL WATERS)

NOVIETSKIY, G.O. [Novyts'kyi, H.O.]

Health resort in the city of Khmel'nik. Nauka i zhyttia 8  
no.5:22-23 My '58. (MIRA 13:4)

1. Glavnyy vrach vodolechebnitsy, g.Khmel'nik, Vinnitskoy oblasti.  
(KHMEL'NIK)  
(HEALTH RESORTS, WATERING PLACES, ETC.)

KARYSHEVA, K.A., prof.; NOVITSKIY, G.A.

Effectiveness of the treatment of some dermatoses with baths using  
water from the Khmel'nik mineral spring. Vrach.delo no.10:1031-  
1033 0 '59. (MIRA 13:2)

1. Kurort Khmel'nik, Vinnitskoy oblasti.  
(SKIN--DISEASES) (KHMEL'NIK--MINERAL WATERS)

NOVITSKIY, G.A. (Khmel'nik)

Khmelnik, the balneological and mud resort of the Ukraine. Vrach.  
dolo no.4:427-429 Ap '60. (NIRA 13:6)  
(KHMELNIK--HEALTH RESORTS, WATERING PLACES, ETC.)



NOVITSKIY, Grigoriy Aleksandrovich; GOLUB, T.D., red.; CHUCHUPAK, V.D.,  
tekhn. red.

[The health resort of Khmel'nik and its medicinal properties]  
Kurort Khmel'nik i ego lechebnye svoistva. Kiev, Gosmedizdat  
USSR, 1962. 111 p. (MIRA 16:3)  
(KHEML'NIK--HEALTH RESORTS, WATERING PLACES, ETC.)

NOVITSKIY, G.A. (Khmel'nik, Vinnitskoy oblasti)

Clinical observations on the action of carbonic acid-radon baths  
in treating diseases of the peripheral nervous system at Khmel'nik  
health resort. Vrach.delo no.8:146-148 Ag '62. (MIRA 15:11)

(NERVES, PERIPHERAL--DISEASES)  
(KHMEL'NIK (VINNITSA PROVINCE)--BATHS, MEDICATED)

NOVITSKIY, G.I.

NOVITSKIY, G.I., insh.; SHIKALOV, I.G., insh.

Let's prolong the life of railroad ties. Put' i put. khos. no.10:  
17-18 0 '57. (MLRA 10:11)

(Railroads--Ties)

NOVITSKIY, Georgiy Ivanovich; STOGOV, Vyacheslav Vladimirovich; BARAKS,  
A.M., kand.tekhn.nauk, red.; BOBROVA, Ye.M., tekhn.red.

[Wood impregnation plants] Derevopropitochnye zavody. Moskva.  
Gos.transp.shel-dor.izd-vo, 1959. 314 p. (MIRA 12:8)  
(Wood--Preservation) (Railroads--Ties)

E 42058-66 INT(m)/T DS

ACC NR: AR6013856 (A,N) SOURCE CODE: UR/0276/65/000/011/G017/G017

AUTHORS: Volokhonskiy, L. A.; Novitskiy, G. S.; Polin, I. V.

46  
B

TITLE: Heat produced by an electrode used in an electric vacuum arc furnace with a lining

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 116140

REF SOURCE: Tr. Vses. n.-i. in-ta elektroterm. oborud. vyp. 1, 1965, 77-88

TOPIC TAGS: vacuum arc furnace, electrode, heat, heat balance, *ELECTRODE PROPERTY*

ABSTRACT: Formulas for calculating temperature fields of a working electrode have been derived in the course of this work and were verified experimentally. It was shown that the distribution of temperatures along the cross section of an electrode may be considered uniform through the entire period of melting. During the lining melting, the axial temperature field changes only insignificantly. The established heat regime is reached over a long period of time. It would be proper to heat the electrode to increase the speed of its melting. The formulas derived may be used to calculate the heat balance during melting in the lining. 11 illustrations. Bibliography of 4 titles. [Translation of abstract]

SUB CODE: 13

Card 1/1 sf

UDC: 621.365.2:66.047.2.036.61



1. SHIFMAN, M. I.; NOVITSKIY, G. V.
2. USSR (600)
4. Mixing Machinery
7. Type of concrete and cement mortar mixing arrangements for construction work in the coal industry. Ugol' 28, No. 3, 1953.

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

NOVITSKIY, G. V.

6635

Novitskiy, G. V.

SHIFMAN, M. I. i NOVITSKIY, G. V. OPTY ORGANIZATSII STROITEL'STVA  
TSENTRAL'NYKH UGLEBOGATITEL'NYKH FABRIK M., 1954 48 S SILL; 6L  
Chert 22SM (M-VO UGUL'NOY PROMSTI SSSR TEKHN UPR. TSENTR. IN-T  
TEKHN INFORMATSII) 1,000EKZ, BESPR. 955-2323)P  
622.333:622.7169 plus 69:658/5

SO: KNIZHANYA LETOPIS' NO. 6, 1955



NOVITSKIY, G.V., inzh.

Plan for organizing a standard "block system" of mine  
surface building. Shakht.stroi. no.9:22--27 S '57. (MIRA 10:10)

Inst. VNIIONPROMZHIKSTROY.

(Mining engineering)  
(Mine buildings)

NOVITSKIY, I. F., and NOVIKOV, O. P.

"Concerning the use of new Techniques in Scientific Research and Scientific Production by Laboratories of the Institute." Proceedings of Inst. Epidem. and Microbiol im. Gamaleya 1954-56

Personnel Identified as Participants in Sessions of the Scientific Council Held by the Institute During 1954. Inst. Epidem and Microbiol im. Gamaleya AMS USSR

SO: Sum 1186, 11 Jan 57.

NOVINSKIY, I. I., ed.

Philosophical problems of contemporary biology; a collection of articles Moskva, Izd-vo  
Akad. nauk SSSR, 1951. 397 p.

NOVITSKIY, I. S. Dr. Med. Sci.

Dissertation: "The Pathological Anatomy and Pathogenesis of Brusellosis in Man."  
First Moscow Order of Lenin Medical Inst. 10 Feb 47.

SO: Vechernyaya Moskva, Feb, 1947 (Project #17836)

USSR / Human and Animal Morphology, Normal and Patho- S-7  
logic -- Pathologic Anatomy

Abs Jour; Ref Zhur-Biol., No 31, 1958, 59952

Author : Novitskiy, I. S.

Inst : Omsk Medical Institute

Title : On the Pathologic Anatomy and Pathogenesis of Opisthorchis in Man (General Data, Morphology of the Nervous System)

Orig Pub: Tr. Omskogo med. in-ta, 1957, No 22, 25-34

Abstract: The typical morphological changes caused by the invasion of *Opisthorchis felineus* consist in chronic angiocholitis; structural changes are also observed in the liver and pancreas in the form of swollen parenchymatous elements, destruction of

Card 1/2

USSR/Human and Animal Morphology (Normal and  
Pathological. Circulatory System.

8-3

Abs Jour: Ref Zhur-Biol., No 16, 1958, 74326

Author : ~~Novitskiy, I. S.~~

Inst : Onsk Medical Institute.

Title : Pathomorphology of the Heart in Brucellosis  
in Man.

Orig Pub: Tr. Onskogo med. in-ta, 1957, No 22, 159-  
183

Abstract: Among 92 cases of brucellosis (B) which under-  
went autopsy, endocarditis was discovered in  
18 of the diseased. The presence of specific  
brucellosis endocarditis was determined. Chan-  
ges of the endocardium are compared with cli-  
nical manifestations of the disease. Involve-

Card : 1/2

NOVITSKIY, I.S., prof.

Omsk Medical Institute on the 40th anniversary of the Great October  
Socialist Revolution. Trudy OMI no.25:3-21 '59. (MIRA 14:10)

1. Direktor Omskogo meditsinskogo instituta imeni Kalinina.  
(OMSK—MEDICAL COLLEGES)

NOVITSKIY, I.S., prof. (Omsk)

Omsk Medical Institute, its role in training specialists and  
developing science. Trudy Perm. gos. med. inst. 43:24-30 '63.  
(MIRA 17:6)



NOVITSKIY, I.S., prof.

Cholesteatomas of the brain according to materials of  
prosections performed in Omsk. Trudy OMI no.54:5-20 '64.  
(MIRA 18:9)

1. Iz kafedry patologicheskoy anatomii Omskogo meditsinskogo  
instituta.

NOVITSKIY, I.S., mekhanik-maladchik

Rail lifter. Put' i put. khoz. 9 no.9:23 '65. (MIRA 18:9)

1. Stantsiya Kotlas, Severnoy dorogi.

NOVITSKIY, I.V.

Improving the oil sump of tractor air filters. Avt.trakt.prom. no.6:17 Je  
'53. (MLRA 6:6)

1. Khar'kovskiy traktorosborechnyy zavod.

(Tractors--Motors)

NOVITSKIY, I. V.

K. A. Katsevich, V. A. Adol'f, I. V. Novitskiy, et al., Traktor KhTZ-7 (The KhTZ-7 Tractor), Selkhozgiz, 23 sheets.

The booklet describes the construction and regulation of the garden-and-truck farm tractor KhTZ-7, gives instructions for the operation and maintenance of the tractor, treats the construction of a shed system for agricultural machines working with the KhTZ-7 tractor, and gives the technical data of the tractor, rules for washing and parking it, a table of the principal assembly tolerances, and other information.

SO: U-6472, 18 Nov 1954

**NOVITSKIY, I.V.**

**Starting an experimental gasoline diesel engine. Avt. trakt.  
prom. no.5:6-8 My '55. (MIRA 8:8)**

**1. Khar'kovskiy traktoroborochnyy zavod.  
(Tractors--Engines)**

NOVITSKIY, I.V.

Investigation of the slotted oil filter for the KMTZ-7 tractor.  
Avt. 1 trakt. prom. no.9:19-24 S '56. (MIRA 9:11)

1. Khar'kovskiy traktoroborochnyy zavod.  
(Tractors--Engines--Oil filters)

NOVITSKIY, I.V., inzh.

Investigating slit oil filters of truck-tractors. Trakt. i sel'-  
khozmasb. no.4:12-16 Ap '58. (MIRA 11:5)

1. Khar'kovskiy traktorosborechnyy zavod.  
(Tractors—Engines—Oil filters)

ADOL'F, Viktor Aleksandrovich, inzh.; LEBEDINSKIY, G.V., inzh.; MOK-  
SIN, M.A., inzh.; NOVITSKIY, I.V., inzh.; PESTRYAKOV, A.I., red.;  
GURVICH, N.N., tekhn. red.

[DSSh-14 self-propelled chassis] Samokhodnoe shassi DSSh-14.  
Pod red. G.V. Lebedinskogo. Moskva. Gos. izd-vo sel'khoz. lit-  
ry, 1959. 181 p.

(MIRA 14:5)

I. Khar'kovskiy traktoroborochnyy zavod (for Adol'f, Lebedin-  
skiy, Maksin, Novitskiy)

(Tractors)



NOVITSKIY, I.V. [Novyts'kyi, I.V.]

D-16 diesel engine. Mekh.sil'.hosp. 11 no.2:30-31 F '60.  
(MIRA 13:6)

1. Khar'kovskiy traktoroborochnyy zavod.  
(Diesel engines)

NOVITSKIY, I.V., inzh.; LINETSKIY, I.Ye., inzh.

Two-cylinder D-16 diesel engine with air cooling. Trakt. i sel'-  
khozmasb. 30 no.9:12-15 S '60. (MIRA 13:9)

1. Zhar'kovskiy traktoroborochnyy zavod.  
(Diesel engines -- Cooling)

ADOL'F, V.A., inzh.; LEBEDINSKIY, G.V., inzh.; NOVITSKIY, I.V., inzh.;  
PODRIGALO, A.I., inzh.; FESTRYAKOV, A.I., red.; BALLOD, A.I.,  
tekhn. red.; DEYEVA, V.M., tekhn. red.

[The T-16 self-propelled chassis] Samokhodnoe shassi T-16.  
Moskva, Sel'khozizdat, 1962. 254 p. (MIRA 15:11)

1. Khar'kovskiy traktorosborechnyy zavod (for Adol'f,  
Lebedinskiy, Novitskiy, Podrigalo).  
(Tractors)

ACC NR: AP6031385

SOURCE CODE: UR/0079/66/036/009/1649/1655

AUTHOR: Novitskiy, K. I.; Razumova, N. A.; Petrov, A. A.

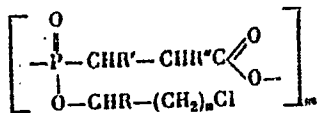
ORG: Leningrad Technological Institute imeni Lensovet (Leningradskiy tekhnologicheskoy institut)

TITLE: Phosphorus-containing heterocycles. Part 8: Condensations of glycolphosphorous acid chlorides with  $\alpha, \beta$ -unsaturated acids

SOURCE: Zhurnal obshchey khimii, v. 36, no. 9, 1966, 1649-1655

TOPIC TAGS: chloride, condensation reaction, organic phosphorus compound, phosphorous acid

ABSTRACT: The condensation of chlorides of ethylene glycol-, propylene glycol- and 1,3-butylene glycolphosphorous acids with acrylic, methacrylic and crotonic acids was studied in order to apply this reaction to the preparation of chlorides of various dichlorophosphonocarboxylic acids. It was found that the chlorides of glycolphosphorous acids reacting with  $\alpha, \beta$ -unsaturated acids yield primarily oligomers of the structure

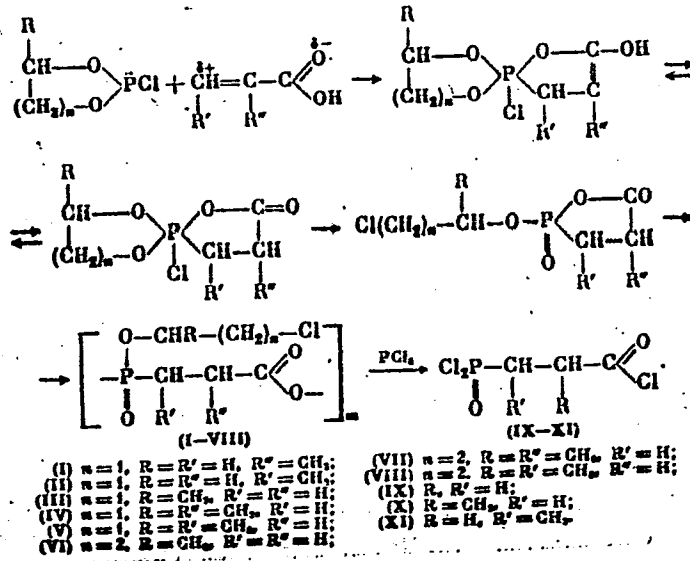


Card 1/3

UDC: 547.26\*118

ACC NR: AF6031385

in the form of a viscous mass light-yellow to light-brown in color. The overall process of oligomer formation is represented as follows:



Card 2/3

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*ca*

Isomerization of polymethylene hydrocarbons under the influence of aluminum chloride. M. N. Turan-Pitak and K. Yu. Novitskiy. J. Gen. Chem. (U.S.S.R.) 19, 237-23 (1948) (English summary); cf. C.A. 43, 1214 (1949). Cyclohexane (b. 91-2°, n<sub>D</sub><sup>20</sup> 1.480) d<sub>4</sub><sup>20</sup> 0.8170 was converted to the hydrate, b. 91-2°, n<sub>D</sub><sup>20</sup> 1.4170 of 0.0009. This latter was heated with solid KOH and pent. liquid at 100-210° to yield cyclohexane, b. 145-51°, n<sub>D</sub><sup>20</sup> 1.4177, d<sub>4</sub><sup>20</sup> 0.8177. Mixed with 1/2 molar amt. of AlCl<sub>3</sub> with a total conc. of 10% it isomerized to a hydrocarbon, b. 116-2°, n<sub>D</sub><sup>20</sup> 1.4244, d<sub>4</sub><sup>20</sup> 0.7989, which is either 1,3- or 1,4-dimethylcyclohexane. G. M. Kovalov

*Lab. Organic Chem in N.D. Zelinskiy, Moscow State Univ.*

CLASSIFICATION	METALLOGRAPHICAL LITERATURE CLASSIFICATION	CROSS INDEXING	SERIALS	COLLECTIONS	CROSS INDEXING

NOVITSKIY, K. YU.

USSR/Chemistry - Ethylene Chemistry - Hydrogen Sulfide

Nov 48

"Interaction of Ethylene Oxide With Hydrogen Sulfide in the Presence of Aluminum Oxide," Yu. K. Yur'yev, K. Yu. Novitskiy, Lab of Org Chem imeni N. D. Zelinskiy, Moscow State U imeni M. V. Lomonosov, 3 pp

"Dok Ak Nauk SSSR" Vol LXIII, No 3

Study of interaction of ethylene oxide with hydrogen sulfide in presence of aluminum oxide at 200° showed that basic reaction products, five- and six-member heterocyclic compounds with two heteroatoms, were acetaldehyde thylacetal, dioxane thioxane and acetaldehyde. During contact of ethylene oxide with aluminum oxide, both dioxane and acetaldehyde were obtained at 200°. Latter was disproportionate. Submitted by Acad A. N. Nesmeyanov 15 Sep 48.

PA 55/49T20

26

**B**

Interaction of Ethylene Oxide and Hydrogen Sulfide  
in the Presence of Aluminum Oxide. (In Russian.) Yu.  
K. Yur'ev and K. Yu. Novitskii. *Doklady Akademii  
Nauk SSSR* (Reports of the Academy of Sciences of  
the USSR), new ser., v. 63, Nov. 21, 1948, p. 285-288.  
11 references.

ASAC. S.S.S.R. METALLURGICAL LITERATURE CLASSIFICATION

GROUPS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

RESEARCH INSTITUTION



NOVITSKIY, K. YU.

Aug 49

USSR/Chemistry - Dehydration  
Glycols

"Cocatalytic Dehydration of Thiodiethylene Glycol and 1,4-Thioxane With Hydrogen Sulfide,"  
Yu. K. Yur'yev, K. Yu. Novitskiy, Lab of Org Chem imeni N. D. Zelinskiy, Moscow State  
U imeni M. V. Lomonosov, 3 1/2 pp

"Dok Ak Nauk SSSR" Vol LXVII, No 5

Records the yields of dithiane from the reactions of thiodiethylene glycol with hydrogen sulfide in the presence of aluminum oxide during a temperature interval of 200-400°C for periods of 55-80 minutes for 11 experiments. On the basis of these, the melting point of dithiane is computed at 108-110°C. Submitted 1 Jun 49.

FA 66/49T22

CA

Simultaneous dehydration of ethylene glycol with hydrogen sulfide. Yu. K. Var'ev, K. Yu. Nazitkii, and E. V. Kukhar'skaya. *Doklady Akad. Nauk S.S.S.R.* 66, 541-4 (1949).—Reaction of  $(\text{CH}_2\text{OH})_2$  with  $\text{H}_2\text{S}$  over  $\text{Al}_2\text{O}_3$  at  $400^\circ$  yields mainly thiophene, with liberation of  $\text{C}_2\text{H}_4$ ; over an aluminosilicate catalyst  $\text{O}(\text{CH}_2\text{CH}_2\text{OH})_2$  is dehydrated and dioxane is formed smoothly. The reaction probably proceed via formation of ethylene oxide. Passage of 293.5 g. glycol (at 10 g./hr.) in a  $\text{H}_2\text{S}$  stream over  $\text{Al}_2\text{O}_3$  at  $225^\circ$  gave 23 g. water-insol. oil, which gave 2.4 g. *p*-xathiane, *m.*  $145-6^\circ$ ,  $n_D^{20}$  1.4927,  $d_4^{20}$  1.1160, and 0.6 g. *p*-dithiane, *m.*  $109^\circ$ ; the aq. layer gave 11 g.  $\text{AcH}$ , 6.1 g. of its acetal with glycol, *bp*  $82.5-8.5^\circ$ ,  $n_D^{20}$  1.3960,  $d_4^{20}$  0.9882, 13 g. *p*-dioxane, *bp*  $100-1^\circ$ ,  $n_D^{20}$  1.4230,  $d_4^{20}$  1.0306, as well as 105 g. unreacted glycol. Similar reaction at  $400^\circ$  gave, from 240 g. glycol, 4.2 g. thiophene and a mixt. of unresolved S derivatives; considerable amts. of  $\text{C}_2\text{H}_4$  were evolved.  $\text{O}(\text{CH}_2\text{CH}_2\text{OH})_2$  (20 g.) heated to  $200^\circ$  over 4 g. aluminosilicate catalyst gave 89.5% dioxane.  $(\text{CH}_2\text{OH})_2$  was not dehydrated even at  $200^\circ$ .

G. M. Kosolapoff

CA

13

Dehydration of thiodiethyleneglycol and disproportionation of *p*-oxathiane. Yu. K. Yur'ev and N. Yu. Novitskii. *Doklady Akad. Nauk S.S.S.R.* 66, 717-19 (1949); cf. preceding abstr.— $S(CH_2CH_2OH)_2$  (10 g., bp 136-7°,  $n_D^{20}$  1.5211,  $d_4^{20}$  1.1815) passed over  $Al_2O_3$  in a N atm. at 225° in 90 min. gave 4.1 g. (83%) *p*-dithiane, m. 109.5°, 0.9 g. *p*-oxathiane, bp 146.8°,  $n_D^{20}$  1.5410,  $d_4^{20}$  1.1166, and a trace of an aldehyde, probably AcH. Heating 31 g.  $S(CH_2CH_2OH)_2$  and 8 g. aluminum-oxide catalyst to 170-80°, and then at 230-41° when distn. of oxathiane was complete, gave 17 g. *p*-oxathiane, bp 147.8°,  $n_D^{20}$  1.5400,  $d_4^{20}$  1.1180, and 3.1 g. *p*-dithiane. Passing 12.5 g. oxathiane over  $Al_2O_3$  at 230° in 90 min. in a N atm. gave 5.4 g. unreacted material, 0.0 g. *p*-dithiane, and some AcH; at 250°, 3.9 g. unreacted material is obtained, as well as 0.8 g. dithiane and some AcH; H<sub>2</sub>S was detectable. G. M. Kosolapoff

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CA

Reaction of ethylene oxide and ethylene glycol with an  
 oxides at elevated temperatures in the presence of aluminum  
 oxide. Yu. K. Yur'ev, K. Yu. Novitskiy, and E. I.  
 Mingulina (M. V. Lomonosov State Univ., Moscow;  
 Doklady Akad. Nauk S.S.S.R. 76, 87 (1962)).—While  
 ethylene oxide (I) and  $NH_3$  in the presence of  $Al_2O_3$  at 400°  
 are reported to yield pyridine and no homologs (Malinov-  
 skii and Moryganov, C.A. 42, 12616) and  $AcH$  and  $NH_3$   
 over  $Al_2O_3$  at 425° yield alkylated pyridines, an investiga-  
 tion of the reaction of I with  $NH_3$  over  $Al_2O_3$  at 400° gave  
 indications that only pyridine homologs form, and no  
 pyridine can be detected among the products; the reaction  
 probably proceeds by isomerization of I into  $AcH$ . Passage  
 of I at 10 g./hr. in  $NH_3$  at 400° over  $Al_2O_3$  gave 3.5 g. cataly-  
 zate from 390 g. I; fractionation gave 2.6 g.  $AcH$ ,  $NH_3$ ,  
 m. 97°, and mixed 2- and 4-methylpyridines (identified  
 after extensive fractionation and further crys-  
 tallization and methylation). Although a fraction b. 113–12°  
 was obtained, it was not pyridine, but a crude mixt. of the  
 methylpyridines (Malinovskii, *et al.*, *loc. cit.*). Passage of  
 $(CH_2OH)_2$  (8 drops/min.) in  $NH_3$  over  $Al_2O_3$  at 400° gave,  
 from 275 g. glycol, 276 g. catalyze that yielded 1 g.  
 $AcH$ ,  $NH_3$ , and mixed 2- and 4-methylpyridines, identified  
 as above; no pyridine was detected. G. M. Ko-olapud

1951

NOVITSKIY, E. Yu.

"Catalytic Conversion of Oxides of Ethylene and Diols." Sub 8 Jun 51,  
Moscow Order of Lenin State U imeni M. V. Lomonosov.

Dissertations presented for science and engineering degrees in Moscow  
during 1951. *Card Chem Sci.*

SO: Sum. No. 480, 9 May 55

C.A.

Preparation of monoethanolamines from ethylene  
 oxide and amines. Yu. S. Vor'ev, K. Yu. Novitskiy,  
 and L. G. Liberev (Moscow State Univ.). Invest. Akad.  
 Nauk S.S.S.R., *Dokl. Khim.*, **1931**, 317-21. (Receiv-  
 ed ethylene oxide (I) (48 g.) into 100 g.  $\text{PhNH}_2$  and 35 ml.  
 $\text{H}_2\text{O}$  at  $14-16^\circ$  in 3-4 hrs. (at the end of the reaction the  
 temp. rises spontaneously to  $70^\circ$ ) in spite of the cooling  
 bath and distn. yields 78.5%  $\text{PhNHCH}_2\text{CH}_2\text{OH}$ , b.p.  $170^\circ$ ,  
 $n_D^{20}$  1.5760,  $d_4^{20}$  1.0945; picrate, m.  $124^\circ$  (from EtOH).  
 When equimolar amts. are used, the yield drops to 32%.  
 Stirring does not appear to affect the yield. Similarly, *p*-  
 toluidine at  $50-70^\circ$  in the presence of 20% (by wt.) of  $\text{H}_2\text{O}$   
 gives 80% *p*- $\text{MeC}_6\text{H}_4\text{NHCH}_2\text{CH}_2\text{OH}$ , b.p.  $155^\circ$ , m.  $42^\circ$   
 (picrate, m.  $99^\circ$ ); *o*-isomer (80% yield), b.p.  $149^\circ$ ,  $n_D^{20}$   
 1.5700,  $d_4^{20}$  1.0794 (picrate, m.  $130^\circ$ ); *l*-Cyst. $\text{NH}_2$  (71.5g.),  
 10 ml. EtOH, and 10 ml.  $\text{H}_2\text{O}$  treated with 11 g. I after  
 initial heating on a steam bath gave 79.5% *l*-Cyst. $\text{NH}-$   
 $\text{CH}_2\text{CH}_2\text{OH}$ , b.p.  $182^\circ$ , m.  $50^\circ$  (picrate, m.  $161^\circ$ ); *o*-Aniline  
 under the above conditions gave 81% *o*- $\text{Me}_2\text{C}_6\text{H}_3\text{NHCH}_2-$   
 $\text{CH}_2\text{OH}$ , b.p.  $182.3^\circ$ ,  $n_D^{20}$  1.5737,  $d_4^{20}$  1.1504 (picrate m.  
 $139^\circ$ ); *p*-isomer (79%), b.p.  $187^\circ$ , m.  $41^\circ$ . G. M. K.

Lab Organic Chem in N.D. Zelinskiy

NOVITSKII, K. YU.

Chem Abs

V.48 25 Jan 54

Organic Chem

Oxidation and synthesis of compounds of the thiophene series. Yli. K. YUF'ev and K. Yu. Novitskii (Moscow State Univ.). *Zhur. Obshchei Khim.* 22, 2187-9 (1952).  
 Ethylene oxide (I) (200 g.) passed over  $Al_2O_3$  at  $250^\circ$  in  $H_2S$  atm. gave 150 g. catalyrate which yielded 5.0 g. AcH; 3.4 g. dioxane, 2.5 g. 1,4-thioxane, and 2.9 g. 1,4-dithiane, bp  $65-115^\circ$ . Similarly 170 g. I at  $300^\circ$  gave 113 g. catalyrate which yielded 5.3 g. AcH and 2.4 g., 1.4%, thiophene (after distn. from Na) in addn. to 2.4 g. thioxane and 1.8 g. dithiane; 210 g. I at  $350^\circ$  gave 4.1 g. thiophene (2%); at  $400^\circ$  the yield of thiophene was 5.1%; and at  $450^\circ$  it was 5.2%. Propylene oxide (II) passed over  $Al_2O_3$  at  $400^\circ$  in  $H_2S$  atm., gave (from 212 g. II) a range of products which yielded 15.6 g. crude 2,4-dimethylthiophene (III), bp  $139.5-140^\circ$ , which, purified through chloromercuri deriv. (m.  $138^\circ$ , bp  $139.5^\circ$ ,  $n_D^{20}$  1.5150,  $d_4^{20}$  0.8899. At  $225^\circ$  the same amount of II gave a very low yield of III (1.6 g.). The formation of the dimethylthiophene can be explained by isomerization of II into EtCHO followed by reaction with  $H_2S$ .  
 G. M. Kosolapoff

③

Chem

NOVITSKIY, K. Yu.

Chemical Abst.  
Vol. 48 No. 9  
May 10, 1954  
Organic Chemistry

② chem  
α-Oxide and synthesis of compounds of the thiophene  
series. Yu. K. Yanov and K. Yu. Novitskiy. J. Gen  
Chem. U.S.S.R. 22, 2243-6 (1952) (Engl. translation).  
See C.A. 48, 6144. H. J. H.



NOVITSKIY, K. Yu.

6

Interaction of ethylene oxide with aromatic and heterocyclic amines. Yu. K. Yur'ev, K. Yu. Novitskiy, L. G. Liberov, and R. D. Yatsenko. *Vestnik Akad. Nauk SSSR. Univ.* 1953, No. 6, 129-32; *Referat. Zhur., Khim.* 1953, No. 8488. --When ethylene oxide (I) reacts at a high temp. with  $2-C_6H_5NH_2$  (II), it yields  $2-C_6H_4NHCH_2CH_2OH$  (III); with  $PhNH_2$  (IV) I yields  $HOCH_2CH_2NH_2Ph$  (V); with  $o-C_6H_4NH_2$  (VI), I yields  $o-C_6H_4NHCH_2CH_2OH$  (VII); with  $\alpha$ -aminopyridine (VIII), I yields 1,2-dihydro-1-(2-hydroxyethyl)-2-iminopyridine (IX); with 2-amino-4-methylthiazole (X), I yields 3-(2-hydroxyethyl)-4-methyl-2-imino-4-thiazoline (XI). When 11 g. I is passed into 71.5 g. II, 100 g. dioxane, 10 ml. alc., and 5 ml. water for 1 hr. at 30-40°, distn. yields 23.1 g. III, b, 197-8°, m. 52° (from abs. alc.); picrate, m. 162° (from alc.). The following are similarly obtained: 132 g. V, b, 154°, n<sub>D</sub><sup>20</sup> 1.5820, d<sub>4</sub> 1.0506, from 121 g. IV in 20 ml. water and 44 g. I upon heating up to 40-50°; 29.5 g. VII, b, 134.5-35°, n<sub>D</sub><sup>20</sup> 1.5880, d<sub>4</sub> 1.2320, from 81.9 g. VI in 10 ml. alc., 1 ml. water, and 70 g. I at 75-80°; 14 g. IX, b, 173-4°, m. 112° (from abs. g. I at 75-80°); 23.5 g. VIII in 5 ml. water and 5.5 g. I with heating to 80°; 6.5 g. XI, b, 146-8° (in a N stream), n<sub>D</sub><sup>20</sup> 1.5715 (picrate, m. 155.3-58°) from 48 g. X in 15 ml. alc. and 1 ml. water and 28 g. I at 50-60°. By hydrolysis of 10 g. IX, 8 g. 1-(2-hydroxyethyl)-2(1H)-pyridinone were obtained, b, 177-8°, m. 100°. Marjorie Ketner

CH

③

FD-773

NOVITSKIY, K. Yu.  
USSR/Chemistry

Card 1/2 : Pub 129 10/24

Author : Akishin, P. A.; Rambidi, N. G.; Novitskiy, K. Yu.; Yur'yev, Yu. K.

Title : Raman spectra of heterocyclic compounds. I

Periodical : Vest. Mosk. un., Ser. fizikom. i yest. nauk, Vol 9, No 2, 77-80,  
Mar 1954

Abstract : Measured the Raman spectra of cyclic sulfur compounds to obtain experimental proof for the constancy of the line intensity of the C-S bond vibration. In the spectra of sulfur-saturated compounds (thiophane, 1,4-thioxane and alpha-methyltrimethylene sulfide) the sum of the line intensities of the C-S bond was found to be constant within the limits of experimental error. In the spectra of the unsaturated sulfur compound (delta - dihydrothiopyrane) two facts are apparent: a) the sum of the line intensities for the C-S bond is much less than that of the saturated compounds; b) the intensity of the

FD-773

Card 2/2

C=C bond in the compound is greater than that of the isolated C= bond.  
One table. Fifteen references (one foreign).

Institution : Chair of Physical Chemistry and Chair of Organic Chemistry

Submitted : July 10, 1953

15(2)

SOV/72-59-5-6/23

AUTHOR:

Novitskiy, L. A.

TITLE:

Improvement of the Transparency of the Glass S-23 in the Closely Situated Infrared Spectrum Range (Uluchsheniye svetopropuskaniya stekla S-23 v blizhney infrakrasnoy oblasti spektra)

PERIODICAL:

Steklo i keramika, 1959, Nr 5, pp 16 - 18 (USSR)

ABSTRACT:

Table 1 shows the chemical composition of the glass types S-23, which in practice differ but little from one another. The transparency of these glass types in the infrared range, however, differs greatly, as may be seen from figure 1. The glass type Nr 4 proved to be the best and consisted especially of pure chemicals, as was found out by an examination (Table 2). Special glass meltings were carried out to obtain the glass S-23 with a maximum transparency. Table 3 shows the comparative values of the chemical quality of the glass types Nr 4 and Nr 5. Figure 2 shows the melting conditions of these two glass types. The coefficient of light absorption was 1.3% for the glass Nr 4 and 0.65% for Nr 5. L. T. Platonova, D. F. Ronis, and S. Ye. Trilisskiy participated in the experiments. As a result, the coefficient of light absorption of the glass S-23 could be reduced by about its half. There are 2 figures and 3 tables.

Card 1/1

5(3)

## AUTHORS :

Yur'yev, Yu. K., Novitskiy, K. Yu.,  
Demina, M. H.

SOV/79-29-7-42/83

## TITLE:

On the Structure of the Products of the Reaction of 2-Amino-4-methylthiazole With  $\alpha$ -Oxides (O stroyenii produkta vzaimodeystviya 2-amino-4-metil'tiazola s  $\alpha$ -okisyami)

## PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2299-2302  
(USSR)

## ABSTRACT:

In connection with a previous paper by Yur'yev and coworkers (Ref 1) the authors synthesized the hitherto unknown 2-( $\beta$ -oxyalkyl)-aminothiazoles by two different methods, in order to ascertain simultaneously the structure of the oxyalkyl derivatives of 2-amino-4-methylthiazole obtained by reaction of the latter with  $\alpha$ -oxides. Apparently thiazole derivatives with alkylated "ring-nitrogen"-atoms are not formed in the reaction of 2-chloro-4-methylthiazole with alkanolamines in the manner described here (Ref 3). By reaction of 2-chloro-4-methylthiazole with ethanolamine and 2-propanolamine 2-( $\beta$ -oxyethyl) amino-4-methylthiazole and 2-( $\beta$ -oxypropyl) amino-4-methylthiazole

Card 1/2

On the Structure of the Products of the Reaction  
of 2-Amino-4-methylthiazole with  $\alpha$ -Oxides

SOV/79-29-7-42/85

respectively were obtained. A comparison of the constants of these compounds and their derivatives with the constants of the compounds synthesized by the authors by reaction of 2-amino-4-methylthiazole with the corresponding  $\alpha$ -oxides (Ref 1) proved to be identical. This was also confirmed by the identity of the infrared absorption spectra of the 2-( $\beta$ -oxyethyl) amino-thiazoles obtained by different methods and the ultraviolet absorption spectra of their hydrochlorides (reaction scheme) Thus  $\alpha$ -oxides react differently with 2-amino-4-methylthiazole than with 2-aminopyridine and yield 2-( $\beta$ -oxyalkyl) amino-thiazoles, thereby retaining the thiazole structure. There are 1 figure, 1 table, and 9 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: June 13, 1958

Card 2/2

5(3)

**AUTHORS:**

Yur'yev, Yu. K., Novitskiy, K. Yu.  
Bolesov, I. G.

SOV/79-29-9-30/76

**TITLE:**

Investigation in the Series of Furan.  
I. Synthesis of the N-( $\beta$ -Oxyalkyl)-furfuryl Amine

**PERIODICAL:**

Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 2951-2954  
(USSR)

**ABSTRACT:**

The present paper deals with the synthesis of the mono-N-( $\beta$ -oxyalkyl)-furfuryl amines from 2-furfuryl amine and the simplest  $\alpha$ -oxides (oxides of ethylene and propylene) according to a method already earlier developed by the authors (Refs 6,7) and taking account of the papers quoted in references 1-5, among them the paper of A. A. Ponomarev et al. (Ref 5). According to the previous method, ethylene oxide was allowed to flow into the amine. The corresponding N-( $\beta$ -oxyalkyl)-furfuryl amines resulted in an 86% yield. The yields were 83,5-92,5% at higher molar percentages of the  $\alpha$ -oxides in the reaction with furfuryl amine. The properties of di-N-( $\beta$ -oxyethyl)-furfuryl amine as synthesized by the authors were completely different from those of the preparation described by German authors (Ref 5): it is a colorless oil; its

Card 1/2

Investigation in the Series of Furan.

SOV/79-29-9-30/76

I. Synthesis of the N-( $\beta$ -Oxyalkyl)-furfuryl Amine

picrate melts at 127-128°; its refractive index is higher. Its infrared absorption spectrum confirms its structure: instead of the lacking frequencies which are characteristic of the N-H bond there is a broad band characterizing the group O-H. No crystalline hydrochloride was obtained in the passage of hydrogen chloride through the chloroform solution of the preparation. In the reaction with thionyl chloride the hydrochloride of di-N-( $\beta$ -ethyl chloride)-furfuryl amine resulted which yielded N-(2-furfuryl)-thiomorpholine under the action of sodium sulphide (2 Schemes). The given data which confirm the structure of di-N-( $\beta$ -oxyethyl)-furfuryl amine show that G. Drefahl and K. König (Ref 5) mistook this compound for another one. With  $\alpha$ -oxides di-(2-furfuryl amine forms N-( $\beta$ -oxyalkyl)-difurfuryl amines in high yields (Scheme 3). There are 9 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: July 14, 1958

Card 2/2



5(3)

SOV/20-126-4-32/62

AUTHORS: Yur'yev, Yu. K., Novitskiy, K. Yu., Zhingareva, V. N.

TITLE: Investigations Into the Furan Series (Issledovaniye ryadu furana). The Synthesis of Symmetric 2,5-bis-(dialkylamino-methyl)-furan (Sintez simmetrichnykh 2,5-bis-(dialkilamino-metil)-furanov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 4, pp 806-808 (USSR)

ABSTRACT: The furans mentioned in the subtitle are hardly described in publications. 2,5-bis-(dimethyl-aminomethyl) furan was obtained with a very small yield (Ref 1). Diamines of such structure, as well as their dihaloid alkylates are of interest as potential, ganglion-blocking, and curare-like compounds, with regard to their physiological activity. The authors used 2,5-bis-chloromethyl furan for synthesizing symmetric diamines of the mentioned structure. Its reciprocal action with secondary amines showed satisfactory results in the production of the corresponding diamines (see scheme). The reaction develops easily with the reciprocal action of etheric solutions of bis-chloromethyl furan with secondary amine in the presence of caustic alkali. From among the secondary amines dimethyl-

Card 1/2

SOV/20-126-4-32/62

**Investigations Into the Furan Series. The Synthesis of Symmetric 2,5-bis-(dialkylaminomethyl)-furan**

amine and diethylamine, piperidine, and morpholine were added to the reaction. Thus 2,5-bis-(dimethyl-aminomethyl)-2,5-bis-(diethylaminomethyl), 2,5-bis-(piperidine-methyl), and 2,5-bis-(N-morpholine-methyl)-furan were produced. The constants corresponded to those produced by means of another method (Ref 1). The reciprocal action here described of 2,5-bis-chloromethylfuran with secondary amines, up to now has been the only comfortable way producing the corresponding symmetric amines of the furan series. There are 3 references, 1 of which is Soviet.

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

**PRESENTED:** March 5, 1959, by A. N. Nesmeyanov, Academician

**SUBMITTED:** February 28, 1959

Card 2/2

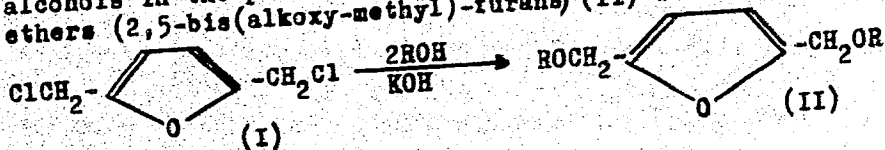
S/079/60/030/007/027/039/XX  
B001/B066

AUTHORS: Novitskiy, K. Yu., Volkov, V. P., Kostetakiy, P. V.,  
and Yur'yev, Yu. K.

TITLE: Investigation in the Furan Series. VII. 2,5-Bis(chloro-  
methyl)-furan in the Synthesis of 2,5-Bis(alkoxy-methyl)-  
and 2,5-Bis(alkyl-mercapto-methyl)-furan

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 7, pp. 2203-2207

TEXT: Following Ref. 1 the authors synthesized 2,5-bis(alkoxy-methyl)-  
and 2,5-bis(alkyl-mercapto-methyl)-furan by treating 2,5-bis(chloro-methyl)-  
furan with alcohols and mercaptans. The substitution of alkoxy groups for  
two chlorine atoms in compound (I) takes readily place under the action of  
alcohols in the presence of alkali lye; the yield of the corresponding  
ethers (2,5-bis(alkoxy-methyl)-furans) (II) was between 60 and 70%. ✓



Card 1/2

84873

S/079/60/030/010/009/030  
B001/B07511.1260  
AUTHORS:Novitskiy, K. Yu., Yur'yev, Yu. K., and Zhingareva, V. N.

TITLE:

Investigation of the Furan Series. IX. Synthesis of 2,5-Bis-(amino-methyl) Furans

PERIODICAL:

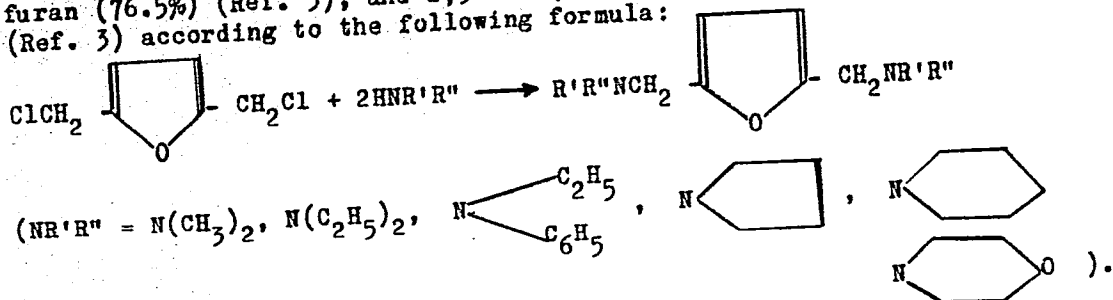
Zhurnal obshchey khimii, 1960, Vol. 30, No. 10,  
pp. 3218-3220

TEXT: F. Gill and H. Ing (Ref. 1) have recently described the synthesis of the symmetric diamines of the furan series. They aminomethylated dimethylfurfuryl-amine with hydrochloric dimethyl amine and, thus, obtained 2,5-bis-(dimethyl-amino-methyl) furan (70%). Proceeding from the methyl ester of pyromucic acid, A. L. Mndzhoyan and his collaborators (Ref. 2) synthesized 2,5-bis-(dipropyl-amino-amethyl) furan. The present paper shows that the reaction of 2,5-bis-(chloro-methyl) furan with secondary aliphatic, aliphatic-aromatic, and heterocyclic amines leads to the corresponding N-substituted 2,5-bis-(amino-methyl) furans in sufficiently good yields. Thus, the following compounds resulted from the action of dimethyl and diethyl amines, N-ethyl aniline, pyrrolidine, piperidine, and morpholine upon 2,5-bis-(chloro-methyl) furan (I): 2,5-bis-(dimethyl-  
Card 1/3

84873

Investigation of the Furan Series. IX. Synthesis of 2,5-Bis-(amino-methyl) Furans S/079/60/030/010/009/030 B001/B075

amino-methyl) furan (75.5%) (Ref. 3); 2,5-bis-(diethyl-amino-methyl) furan (40%) (61%) (Ref. 3); 2,5-bis-(N-ethyl-N-phenyl-amino-methyl) furan (40%); 2,5-bis-(N-pyrrolidino-methyl) furan (62%); 2,5-bis-(N-piperidino-methyl) furan (76.5%) (Ref. 3); and 2,5-bis-(N-morpholino-methyl) furan (62%) (Ref. 3) according to the following formula:



In order to synthesize a doubly primary diamine of the furan series, 2,5-bis-(chloro-methyl) furan was reacted with phthalimide potassium. The resulting diphtalide was reacted with hydrazine hydrate (Ref. 4) to give 2,5-bis-(amino-methyl) furan in a 40% yield. There are 4 references: 2 Soviet and 2 British.

Card 2/3

84873

Investigation of the Furan Series. IX. Synthesis S/079/60/030/010/009/030  
of 2,5-Bis-(amino-methyl) Furans B001/B075

ASSOCIATION: Moskovskiy gosudarstvennyy universitet  
(Moscow State University)

SUBMITTED: November 1959

X

Card 3/3

88451

S/079/61/031/001/013/025  
B001/B066

15.8111

2209

AUTHORS: Novitskiy, K. Yu., Volkov, V. P., Shayderova, L. P., and  
Yur'yev, Yu. K.

TITLE: Studies in the Furan Series. XI. 2,5-Bis-(chloro-methyl)-  
furan in the Synthesis of Symmetric 2,5-Dialkyl Furans

PERIODICAL: Zhurnal obshchey khimii, 1961, Vol. 31, No. 1, pp. 136 - 139

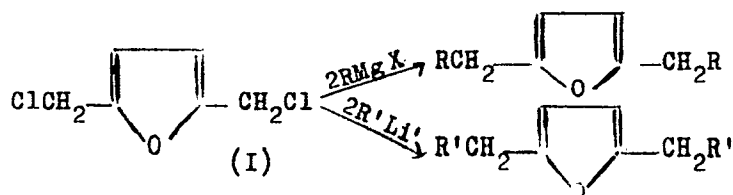
TEXT: The authors synthesized the symmetric 2,5-dialkyl furans by the reaction of 2,5-bis-(chloro-methyl)-furan with organomagnesium compounds, in yields of 33 - 56 %. They found the yield to be highly dependent on the length of the carbon chain and on the nature of the halogen of the alkyl magnesium halide. The maximum yields of dialkyl furans were obtained with alkyl magnesium chlorides (46 % with propyl magnesium chloride, and 38 % with butyl magnesium chloride); when using alkyl magnesium bromides, the yield drops to 37 % with propyl magnesium bromide, and to 29 % with butyl magnesium bromide; when using methyl magnesium iodide, the yield is only 5 %.

Card 1/3

68481

Studies in the Furan Series. XI. 2,5-Bis-(chloro-methyl)-furan in the Synthesis of Symmetric 2,5-Dialkyl Furans

S/079/61/031/001/013/025  
B001/B066



$R = \text{CH}_3, \text{C}_2\text{H}_5, n\text{-C}_3\text{H}_7, n\text{-C}_4\text{H}_9, \text{iso-C}_4\text{H}_9$ ;  $R' = \text{C}_2\text{H}_5, n\text{-C}_3\text{H}_7, n\text{-C}_4\text{H}_9$ .

Attempts with Grignard reagents from n-octyl bromide, bromo benzene, benzyl chloride, cyclopentyl- and cyclohexyl chloride were unsuccessful. 5 % diphenyl and symmetric diphenyl ethane (18 %) were separated with phenyl magnesium bromide and benzyl magnesium chloride respectively. In the reaction of methyl magnesium halides with furfuryl chloride (Ref. 7) a polycondensation mainly occurs, which yields the polymers presented in Scheme 2. The yields of the corresponding dialkyl furans in the reaction of 2,5-bis-(chloro-methyl)-furan with lithium alkyls were 19 - 25 %. There are 9 references: 4 Soviet, 1 French, 1 Canadian, 1 British, and 3 US.

Card 2/3



88481

Studies in the Furan Series. XI. 2,5-Bis-  
(chloro-methyl)-furan in the Synthesis of  
Symmetric 2,5-Dialkyl Furans

S/079/61/031/001/013/025  
B001/B066

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State  
University)

SUBMITTED: February 22, 1960

Card 3/3

NOVITSKIY, K.Yu.; VOLKOV, V.P.; YUR'YEV, Yu.K.

Furan series. Part 12: Furan-2,5-dialdehyde and its reactions  
with malonic acid derivatives. Zhur. ob. khim. 31 no. 2:538-  
541 F '61. (MIRA 14:2)

1. Moskovskiy gosudarstvennyy universitet.  
(Furandicarboxaldehyde)

NOVITSKIY, K.Yu.; YUR'YEV, Yu.K.; OLEYNIK, A.F.; AFANAS'YEVA, Yu.A.

Furan series. Part 16: N-( $\beta$ -oxyethyl) furfurylamines in the synthesis of piperazines and ethylenediamines containing a furan ring. Zhur.ob.khim. 31 no.5:1445-1448 My '61. (MIRA 14:5)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.  
(Furfurylamine) (Piperazine) (Ethylenediamine)

NOVITSKIY, K.Yu.; VOLKOV, V.P.; SHAYDEROVA, L.P.; YUR'YEV, Yu.K.

Furan series. Part 18: 2, 5-Bis(N-alkylazomethine)- and  
2, 5-bis(N-arylazomethine)-furans. Zhur.ob.khim. 31 no.10:  
3277-3281 0 '61. (MIRA 14:10)

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

NOVITSKIY, K.Yu.; VOLKOV, V.P.; YUR'YEV, Yu.K.

Furan series. Part 20: Reactions of condensation, oxidation,  
and reduction of furan-2,5-dialdehyde. Zhur.ob.khim. 32 no.2:  
399-402 F '62. (MIRA 15:2)

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

NOVITSKIY, K.Yu.; YUR'YEV, Yu.K.; ZHINGAREVA, V.N.

Furan series. Part 22: Reaction of 2,5-bis(Chloromethyl) furan with amines. Zhur.ob.khim. 32 no.6:1824-1828 Je '62. (MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
(Furan) (Amines)

NOVITSKIY, K.Yu.; YUR'YEV, Yu.K.; ZHINGAREVA, V.N.

Furan series. Part 23: Reaction of 2,5-bis(chloromethyl)  
furan with metal cyanides. Zhur.ob.khim. 32 no.10:3303-3308  
0 '62. (MIRA 15:11)

1. Moskovskiy gosudarstvennyy universitet imeni  
M.V. Lomonosova.

(Furan)  
(Alkali metal cyanides)

NOVITSKIY, K. Yu.; YUR'YEV, Yu. K.; OLEYNIK, A. F.

Furan series. Part 24: N-( $\beta$ -mercaptoethyl)furfurylamines  
and furfurylthiazolidines. Zhur. ob. khim. 33 no.1:68-71  
'63. (MIRA 16:1)

1. Moskovskiy gosudarstvennyy universitet imeni M. V.  
Lomonosova.

(Furfurylamine) (Thiazolidine)



NOVITSKIY, K.Yu.; OLEYNIK, A.F.; YUR'YEV, Yu.K.

2-Vinylfuran oxide. Zhur.ob.khim. 33 no.3:1043-1044 Nr '63.  
(MIRA 16:3)

1. Moskovskiy gosudarstvennyy universitet.  
(Furan)

NOVITSKIY, K.Yu.; VOJKOV, V.P.; IL'INA, Yu.M.; YUR'YEV, Yu.K.

Furan series. Part 25: Oxidative cleavage of 2,5-disubstituted furans.  
Zhur.ob.khim. 33 no.4:1145-1149 Ap '63. (MIRA 16:4)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.  
(Furan) (Oxidation)

NOVITSKIY, K.Yu.; YUR'YEV, Yu.K.; ZHINGAREVA, V.N.; YUNUSOV, M.S.

Furan series. Part 28: Synthesis of 2,5-bis( $\beta$ -dialkylaminoethyl) furans. Zhur,ob.khim. 33 no.7:2164-2167 J1 '63. (MIRA 16:8)

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

NOVITSKIY, K.Yu.; YUR'YEV, Yu.K.; ZHINGAREVA, V.N.; YEGOROVA, Ye.F.

Synthesis of symmetrical 3,4-bis (dialkylaminomethyl)-furans.  
Dokl.AN SSSR 148 no.4:856-859 F '63. (MIRA 16:4)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
Predstavleno akademikom A.N.Nesmeyanovym.  
(Furan)