

YUR'YEV, Yu.K.; GAL'BERSHTAM, M.A.; PROKOF'YEVA, A.F.

Kinetic study in the series of five-membered heterocyclic compounds of aromatic nature. Part 3. Izv. vys. ucheb. zav.; khim. i khim. tekhn. 8 no.3:421-425 '65. (MIRA 18:10)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, kafedra organicheskoy khimii.

GAL'BERSHTAM, M.A.; KHACHATUROVA, G.T.; NOVITSKIY, K.Yu.;
YUR'YEV, Yu.K.

Reactivity of 5-nitro-2-chloromethylfuran and
5-nitro-2-chloromethylselenophene. Vest. Mosk. un. Ser. 2:
Khim. 20 no.4:83-85 J1-Ag '65. (MIRA 18:10)

1. Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo
universiteta.

GAL'BERSTATAS, S.Kh

GAL'BERSTATAS, S.Kh.

Effect of penicillin on irritability and working capacity of the
nerve-muscle preparation of Rana temporaria. Antibiotiki, 3 no.3:58-60
My-Je '58 (MIRA 11:7)

1. Kafedra gosital'noy khirurgii i kafedra zoologii Vil'nyusskogo
gosudarstvennogo universiteta imeni V. Kapsukasa.

(PENICILLIN, effects,

on nerve-musc. prep. (Rus))

(NERVE MUSCLE PREPARATION, effect of drugs on,
penicillin (Rus))

GAL'BERSHTATAS, S.Ye.

Neural regulation of skeletal muscles. Trudy Len. ob-va est. 72
no.1:130-132 '61. (MIRA 15:3)

(MUSCLES--INNERVATION)

GAL' BERSHTATAS, S. Ye.

Mechanism of the neural regulation of skeletal muscles. Trudy
Len. ob-va est. 74 no. 1:110-113 '63. (MIRA 17:9)

1. GILBERT, J. J. Ing.
2. USSR (600)
4. Earthwork
7. Compacting the soil with tamping block. Sbor. mat. o nov. tekhn. v stroi. 15 No. 3, 1953.

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

GLAZENKO, T.A., dotsent, kand.tekhn.nauk (Leningrad); GAL'BERTON, G.A., kand.
tekhn.nauk (Leningrad)

Speed regulation of a d.c. motor with a semiconductor key in its
armature circuit. Elektrichestvo no.2:49-54 P '61. (MIRA 14:3)
(Electric motors, Direct current)

GAL'BINSHTEYN, Z.N., inzh.; IL'INA, N.F., inzh.; NAUMOVA, M.V., inzh.;
FILINA, T.A., inzh.; KHODOS, M.M., inzh.; GOL'DMAN, Zh.I.;
PATALAKH, V.G.; SNESAREV, M.M.; VUL'FSON, Ye.S., inzh.;
KONSTANTINOVA, L.A., inzh.; SKOBELEVA, A.M., inzh.; TEL'NOVA,
Ye.V., inzh.; KHEYFETS, L.S., inzh.; SELENEVICH, A.S.;
NEDOVESENKO, M.V.; VOLKOVA, A.Ye.; NOVITSKIY, L.M., nauchn.red.;
NEFEDOV, S.F., red.; ROSTOTSKIY, V.K., red.; GORDEYEV, P.A., red.
izd-va; YUDINA, L.A., red.izd-va; VDOVENKO, Z.I., red.izd-va;
GOL'BERG, T.M., tekhn.red.; KOROBKOVA, N.I., tekhn. red.

[Album of new construction equipment recommended for adoption]
Al'bom novoi stroitel'noi tekhniki, rekomenduemoi k vnedreniiu.
Moskva, Gosstroizdat, 1963. No.1. [Industrial construction] Pro-
myshlennoe stroitel'stv. 116 p. No.3. [Construction for transporta-
tion purposes] Transportnoe stroitel'stvo. 91 p. No.4. [Rural
construction] Sel'skoe stroitel'stvo. 71 p. No.5. [Building
materials, products, and elements] Stroitel'nye materialy, izde-
liia i konstruktsii. 41 p. No.8. [Construction and road machinery
and equipment] Stroitel'nye i dorozhnye mashiny i oborudovanie.
104 p. (MIRA 16:8)

(Building materials) (Road machinery)
(Construction equipment)

GAL'BKHAER, L.S.

USSR/Corrosion - Protection From Corrosion

J.

Abs Jour : Referat Zhur - Khimiya, No 9, 1957, 33183

Author : Gal'bkhaer, L.S.

Inst :

Title : Control of the Corrosion of Metal Equipment and Reinforced Concrete Structures at Tobacco Curing Plants.

Orig Pub : Tabak, 1956, No 3, 22-23

Abstract : Description of the experience with the use of perchloro-vinyl coating compositions.

Card 1/1

GAL'BRAYKH, I.Ye., inzh.

Water-to-water heaters for thermal networks. From. energ. 19
no.1:20-24 Ja '64. (MIRA 17:2)

GALWAY, L. Ye.

8/19/59/000/0-7/005/006

AUTHORS: HUNTLIN, E. D.; PEREZ, L. I.; PAUL, A. A.; ...

TITLE: A Method for the Determination of the Tendency for Pore Formation in Rubber Mixtures During Vulcanization

FEBRUARY, Kauchuk i Rezin, 1959, No. 12, pp. 25-28

TEXT: The authors stress the importance of controlling the rubber mixtures during vulcanization to avoid swelling and the formation of pores and to ensure the production of monolithic rubber articles. The presence of gases and steam due to moisture and the strong compression of the pores are very harmful in this connection. Other causes of pore formation are listed. The gasometric method for moisture-determining is described (Ref. 1). The gasometric method for moisture-determining is described (Ref. 2). The authors report on the results of their investigations on the pore formation tendency in different rubber mixtures. The degree of pore formation is determined by the specific gravity method (Ref. 3). However, the specific gravity method during vulcanization, particularly if pore formations occur. The ratio of the specific gravities of the vulcanizates

and the rubber mixture is given in Formula 1. The relation between the ratio and the porosity of the vulcanizate was studied above-mentioned procedure is outlined. The value of K was computed according to the specific gravity method. Fig. 1 shows the instrument used for the determination of the specific gravity. The formula for the determination of the specific gravity is given in Formula 2 and for determination after heating in Formula 3. The values of K obtained are listed in Table 1. The authors used the gasometric method for determining the moisture in the rubber mixtures. Fig. 2 shows the relationship between the value of K and the moisture content of the initial mixture according to the composition during the heating and vulcanization which is explained by the fact that (temperature 170-180°C) part of the moisture content is lost in the rubber mixture volatiles. A special method was applied to increase the moisture content and the dependence of the porosity on the relation of the moisture content in the case of press-solded globules at the "Krasnyy Trugolnik" plant. It was applied in production to the control of rubber

Card 3/4

Mixtures used in the manufacture of these overhoses, which, in turn, were vulcanized at atmospheric pressure and also in the manufacture of tires, were checked and at atmospheric pressure and also in the manufacture of tires. For the results of the K values obtained are listed in Table 4. It can be seen from the table that in order to obtain monolithic overhoses vulcanized at atmospheric pressure, the rubber mixtures must be characterized by a value of K > 0.985. The processing of rubber by the "straining" method causes an increase in the K value by 0.01-0.02. The authors also investigated the conditions. Other tests were carried out for the K determination of rubber mixtures used in the manufacture of boots. The results are given in Table 5. A linear relationship exists between K and the monolithic structure of the boot heels manufactured by modern methods. The authors conclude that the results of the K value are able to determine the quality of the vulcanization of the rubber mixtures. The authors also investigated the dependence of the porosity of the rubber vulcanizates on the value of K, which, in turn, depends on the composition of the rubber mixture. The method recommended was tested in Industry on CKB-60 (SKB-60) and GMS-50 (GMS-50) rubber-based materials and was found

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to be applicable to the control of rubber mixtures. The exact value of the value of K can be made part of the technical regulations, since it is one of the indices characterizing the quality of the rubber mixtures. The numerical value of this figure depends on the composition of the rubber mixtures and vulcanization of the rubber mixtures and is selected according to the specific production conditions. There are 6 tables, 2 figures and 6 references: 5 Soviet and 1 English.

ASSOCIATION: Kuchino-Lesodolovskiy Institut Rezinovyyh i Lateksnyykh Materialov i Spetsialnyy Trugolnik (Scientific-Research Institute of Rubber and Latex Articles and the "Krasnyy Trugolnik" Plant)

GAL'BRAYKH, I. Ye., inzh.

Calculations for immobile supports for underground pipelines.
Stroi. truboprov. 7 no.8:8-11 Ag '62. (MIRA 15:9)

1. Filial Vsesoyuznogo instituta po proyektirovaniyu organizatsiy
energeticheskogo stroitel'stva, Leningrad.
(Pipelines)

VOL'KENSHEYN, V.S.; GAL'BRAYKH, I.Ye.; GEL'MAN, A.A.; MEDVEDEV, N.N.;
NIKIFOROVA, T.F.; RAVDEL', A.A.

Development and application of the method of express-control
of moisture in crude rubber mixtures under production conditions.
Kauch.i rez. 21 no.5:55-57 My '62. (MIRA 15:5)

1. Zavod "Krasnyy treugol'nik" i Leningradskiy tekhnologicheskii
institut imeni Lensoвета.
(Rubber--Moisture)

PROVOROV, V.N.; ZAYTSEVA, V.D.; GAL'BRAYKH, I.Ye.; UR'YAN, R.S.

Photometric method for evaluating textile materials of
colored rubbers. Kauch.i rez. 21 no.9:57-58 S '62.

(MIRA 15:11)

1. Nauchno-issledovatel'skiy institut rezinovykh i
lateksnykh izdeliy i zavod "Krasnyy treugol'nik."

(Rubber--Testing)

(Photometry)

PESCHAMSKAYA, R.Ya.; GOL'DREYER, M.I.; FORER, Ye.R.; SHCHERBAKOVA, L.P.;
GAL'BRAYKH, I.Ye.; NIKIFOROVA, T.F.; FILIPPOVA, A.V.

New softeners for the manufacture of rubber footwear. Kauch. i
rez. 23 no.5:20-24 My '64. (MIRA 17:9)

1. Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh
izdeliy i zavod "Krasnyy treugol'nik".

PESCHANSKAYA R.Ya.; PIDEI'NANT, N.I.; DMOYANI'NSKIY, V.G.; GORSHENOVICH, A.I.;
STEFANOVICH, V.V.; GAL'BERAYKH, I.Ye.; ALEKSEYEVA, N.A.; TIKHONOVA, Zh.I.

Use of paraalkylbenzyl pyridinium chloride as vulcanization
accelerator of rubber compounds. Kauch. i rez. 24 no.10:27-29
'65. (MIRA 18:10)

1. Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh
izdelyi i Zavod "Krasnyy treugol'nik".

L 22246-66 EWP(j)/EWT(m) IJP(c) RM

ACC NR: AP6006493

SOURCE CODE: UR/0138/65/000/010/0027/0029

AUTHOR: Pogchanskaya, R. Ya.; Eydel'nant, N. L.; Smolyanitskiy, V. Z.; Gershenovich, A. I.; Stefanovich, V. V.; Gal'braykh, I. Ye.; Alekseyeva, N. A.; Tikhonova, Zh. I. ³³ ₃₂ ⁸

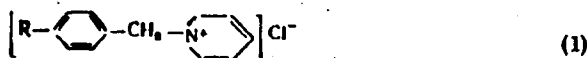
ORG: Scientific-Research Institute of Rubber and Latex Products (Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy); "Red Triangle" Plant (zavod "Krasnyy treugol'nik")

TITLE: The use of p-alkylbenzylpyridinium chloride as a vulcanization catalyst for rubber mixtures ¹⁵

SOURCE: Kauchuk i rezina, no. 10, 1965, 27-29

TOPIC TAGS: vulcanization, catalyst, butadiene styrene rubber, synthetic rubber, rubber chemical

ABSTRACT: A cationactive pyridinium compound, p-alkylbenzylpyridinium chloride (katapin):



where R is an aliphatic radical containing 12-14 carbon atoms, was studied as a vulcanization catalyst. Katapin is a water-soluble dark-brown paste, now being produced on a semi-industrial basis. When large-scale industrial production is organized, katapin production costs will be close to those of captax, the least expensive vulcanization catalyst. Katapin is found to

Cord 1/2

UDC: 678.044.004.14

L 22246-66

ACC NR: AP6006493

have medium-strength activity as a vulcanization catalyst. Katapin makes possible the production of NK-base vulcanizates with higher strength properties than that produced by means of the standard catalysts: captax, altax, and DFG. In butadiene-styrene rubber mixtures, katapin comes close in vulcanization activity to that of DFG. Katapin may be used as an independent agent, as well as in combinations with captax, altax, and thiuram. Orig. art. has: 4 tables.

SUB CODE: 07,11 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 004

Cord 2/2 net

GAL'BRAYKH, I.Ye.

Pipeline joints with measuring throttling devices. Stroi. truboprov.
9 no.4:15-17 Ap '64. (MIRA 17:9)

1. Filial Vsesoyuznogo instituta po proyektirovaniyu organizatsiy
energeticheskogo stroitel'stva, Leningrad.

ACCESSION NR: AT4017415

S/0000/63/000/000/0107/0109

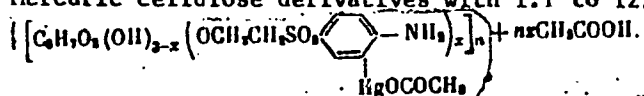
AUTHOR: Akovbyan, E. M.; Gal'braykh, L. S.; Rogovin, Z. A.

TITLE: Synthesis of new derivatives of cellulose and other polysaccharides.
 XLIII. Synthesis of mercury-containing cellulose derivatives

SOURCE: Tsellyuloza i yeye proizvodny*ye, sbornik statey (Cellulose and its derivatives). Moscow, 1963, 107-109

TOPIC TAGS: cellulose, polysaccharide, cellulose derivative, mercury cellulose, alkylcellulose, bactericidal activity

ABSTRACT: Mercuric cellulose derivatives with 1.1 to 12.3% Hg by weight were



prepared by the action of $(\text{CH}_3\text{COO})_2\text{Hg}$ on cellulose previously alkylated with 4- β -hydroxyethylsulfonyl-2-aminoanisole, resulting in:



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ACCESSION NR: AT4017415

and 4- β hydroxyethylsulfonylaniline, resulting in:



The % Hg in the product increases to a certain limit with the duration of the reaction and a rise in temperature up to 80C. The products have marked bactericidal activity. Orig. art. has: 2 tables and 3 chemical equations.

ASSOCIATION: Moskovskiy tekstil'nyy institut (Moscow Textile Institute)

SUBMITTED: 08Oct62

DATE ACQ: 06Jan64

ENCL: 00

SUB CODE: OC, LS

NO REF SOV: 006

OTHER: 002

2/2

Card

A L 11526-66 EWT(m)/EWP(j)/EWA(h)/EWA(l) RM

ACC NR: AP60001877

SOURCE CODE: UR/0190/65/007/012/2174/2175

AUTHORS: ^{44,55} Dimitrov, D. G.; ^{44,55} Gal'braykh, L. S.; ^{44,55} Rogovin, Z. A.

ORG: none

TITLE: New method for synthesis of cellulose derivatives 42
B

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2174-2175

TOPIC TAGS: polymer, radical polymerization, polycondensation, cellulose, cellulose plastic

ABSTRACT: Several desoxyderivatives of cellulose were synthesized by a radical addition reaction. The starting material was 5,6 cellulose suggested by Ye. D. Kaverzneva, V. I. Ivanov, and A. S. Salova (Izv. AN SSSR, Otd. khim. n., 1949, 369). The reaction was carried out in a heterogeneous phase in an atmosphere of dry argon at 30-65C, and with UV irradiation in the presence of benzoyl peroxide, tertiary butyl peroxide, or other peroxides. The compounds synthesized were: 6-C-desoxy-6-trichloromethylcellulose, 5-chloro-6-C-desoxy-6-trichloromethyl cellulose, the dichloride of 5-chloro-6-C-desoxy-cellulosephosphonic acid, and 6-C-desoxytrichlorosilylcellulose. The degree of substitution $\bar{\chi}$ ranged from 15-20. Further work is in progress. Orig. art. has: 1 equation.

SUB CODE: 11,07/SUBM DATE: 21Jun65/ ORIG REF: 001/ OTH REF: 004

UDC: 541.64+661.728.89

(A) L 13523-66 EMT(m)/ETC(F)/ENG(m)/EWP(j)/T RM/DS

ACC NR: AP6001855

SOURCE CODE: UR/0190/65/007/012/2020/2023

26
25
B

AUTHORS: Chaykina, Ye. A.; Gal'braykh, L. S.; Rogovin, Z. A.

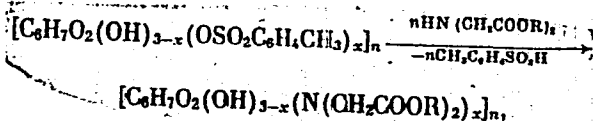
ORG: Moscow Textile Institute (Moskovskiy tekstil'nyy institut)

TITLE: Synthesis of a polymeric complexing agent based on modified cellulose substituted with iminodiacetate groups

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2020-2023

TOPIC TAGS: ion exchange resin, cellulose, intermolecular complex

ABSTRACT: Preparation of a selective ion exchanger by nucleophilic substitution reaction of cellulose tosylate (I) with iminodiacetic acid (II) or its diethyl ester (III) was investigated. Reaction proceeded according to the equation



where R = H, C₂H₅. The effect of the temperature and time of reaction on the composition of the product was studied. Optimum reaction conditions were 16--17 hours at 120C, with liquor ratio of 1:20 and molar ratio of I:II = 1:5. Degree of sub-

Card 1/2

UDC: 661.728.89

L 13523-66

ACC NR: AP6001855

stitution of the product $\gamma = 29--30$ (calculated from N content). Content of carboxyl groups = 12.5--13.5%, exchange capacity of the exchanger (fibrous product) 2.5 mg-equiv/g (measured with 0.1N NaOH). Preliminary study of the properties of the obtained exchange resin shows it to form complexes with Cu^{2+} and Ni^{2+} ions. Orig. art. has: 2 tables and 1 equation.

SUB CODE: 07/

SUBM DATE: 16Oct64/

ORIG REF: 004/

OTH REF: 006

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5.3831
15.8010

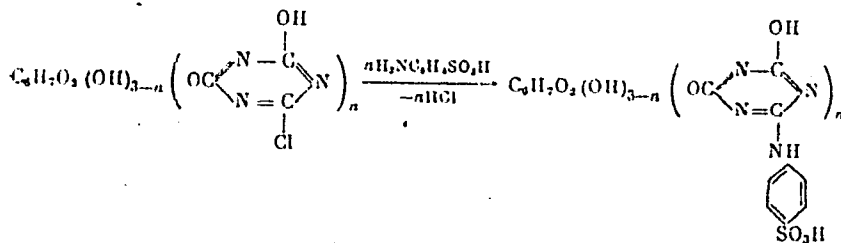
31993
3/150/32/004/003/013/023
B110/3144

AUTHORS: Gal'braykh, L. S., Derevitskaya, V. A., Rogovin, Z. A.,
Cherkalin, M. A.

TITLE: Synthesis of new derivatives of cellulose and other
polysaccharides. XVIII. Synthesis of sulfo derivatives of
cyanuric cellulose

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 3, 1962, 409-413 ^{Mr.}

TEXT: Sulfo cationites were produced from cyanuric cellulose (A): (MIRA 15:3)



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(Cellulose)(Cyanuric chloride)(Ion exchange)

Synthesis of new derivatives...

S/190/62/004/003/013/023
B110/B144

The substitution degree of A calculated from the N content is 10-50 % higher than that calculated from the Cl content. Cl atoms not reacting with cellulose are assumed to be partially saponified by treating alkali cellulose with cyanuric chloride solution. In this process, chemical bonds may form among cellulose macromolecules. The physical structure of cellulose has a great effect upon the substitution degree which becomes 2.5-3.5 times as high by the use of sulfite cellulose instead of cotton fabric. For 60-72 hrs A was treated with aqueous solutions of Na salts of sulfanilic or metanilic acids (3 moles acid per structural unit of A) with the molar ratio 1:20. CH_3COONa addition increased the pH value to 4.0-4.5. ✓

The sulfur content of the sulfo derivative of A was determined gravimetrically, its ion exchangeability by potentiometric titration in the presence of NaCl. Maximum S substitution at $\eta = 33$ corresponded to 1.23 meq/g. 65-80 % of Cl atoms enter into A. The Cl content in the sulfo derivative, however, is $\leq 0.1-0.2$ % which suggests additional hydrolysis. The curves of potentiometric titration of sulfo cationites have two salient points corresponding to two types of acid groups in the macromolecule: at pH = 3.8-4.0, the SO_3H groups are completely neutralized, and at 7.8-8.1, the OH group formed by Cl hydrolysis is neutralized. Derivatives

Card 2/3

Synthesis of new derivatives...

S/190/62/004/003/013/023
B110/B144

of A can also be produced by treating cellulose with aqueous solutions of 2-chloro-4,6-di(4'-sulfophenyl amino)-triazine-1,3,5 and 2,4-dichloro-6-(4'-sulfophenyl amino)-triazine-1,3,5. Owing to its low substitution degree this method is not suited for the synthesis of sulfo cationites. The low degree of cationite swelling owing to chemical bonds among macromolecules, might recommend its application to ion exchange chromatography. There are 1 figure, 2 tables, and 9 references: 1 Soviet and 8 non-Soviet. The most important reference to the English-language publication reads as follows: J. Warren et al. Text. Res. J., 22, 584, 1952. X

ASSOCIATION: Moskovskiy tekstil'nyy institut (Moscow Textile Institute)

SUBMITTED: March 2, 1961

Card 3/3

GAL'BRAYKH, L.S.

PHASE I BOOK EXPLOITATION SOV/AS84

International symposium on macromolecular chemistry. Moscow, 1960.

Mezhdunarodnyy simpozium po makromolekulyarnoy khimii SSSR, Moskva, 14-18 iyunya 1960 g.; doklady i vyvody. Sektsiya III. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18, 1960; Papers and Summaries) Section III. [Moscow, Izd-vo AN SSSR, 1960] 469 p. 55,000 copies printed.

Tech. Ed.: P. S. Kashina.

Sponsoring Agency: The International Union of Pure and Applied Chemistry. Commission on Macromolecular Chemistry.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high molecular compounds.

COVERAGE: This is Section III of a multivolume work containing papers on macromolecular chemistry. The articles in general deal with the kinetics of polymerization reactions, the synthesis of special-purpose polymers, etc. Methods of casting resins, semiconductor materials, etc. Methods of catalyzing polymerization reactions, properties and chemical interactions of high molecular materials, and the effects of various factors on polymerization and the degradation of high molecular compounds. No personalities are mentioned. References given follow the articles.

Ushakov, Kh. U., U. M. Musayev, and R. S. Tillyuz. (USSR). The Radiation Method of Copolymerizing Acrylonitrile with Polystyrene and Perchlorovinyl	170
Rafikov, S. R., G. M. Chelnokova, I. V. Zurnavleva, and P. N. Grigorya (USSR). Oxethylation of Carboxylic and Hetero-Chain Polyamides	184
Santo, I., and E. Gal (Hungary). Grafting Methyl Methacrylate onto Films of Polyvinyl Alcohol Under the Action of X-Rays	207
Lazar, M., R. Rado, and Yu. Pavlinets (Czechoslovakia). Grafting Methyl Methacrylate onto Polypropylene and Polyethylene	214
Rutovskiy, I. A., Z. I. Sval'nyy, and V. M. Bystryy (USSR). The Interaction of Carboxyl-Containing Butadiene-Styrene Rubbers with Polyamides and E-Caprolactam	224
Kolennikov, G. S., and Ts'eng Han-ming (USSR). Synthesis of Free Radicals on Crosslinking in Polyethylene	230
Rudakov, I. I., I. A. Rutovskiy, and B. A. Dzakkin (USSR). On the Transformations of Carboxyl-Containing Butadiene-Styrene Rubbers and Their Mixtures with E-Caprolactam Under the Action of Gamma Radiation	293
Mogovin, Z. A., V. A. Derevitskaya, Sun T'ung, Chang Wei-Kang, and L. S. Gal'braykh (USSR). Synthesis of New Cellulose Derivatives and Other Polysaccharides	302
Yemel'niko, I. M., and V. M. Kiputskiy (USSR). Initiation of the Controlled Synthesis of Modified Celluloses with Oxidation Transforms in Chains of Cellulose Molecules	310
Ivanov, V. I., N. Ya. Lenahina, V. S. Ivanova (USSR). Oxidation Transforms in Chains of Cellulose Molecules	321
Berlin, A. A., Ye. A. Penkaya, and G. I. Yelkova (USSR). Mechanisms of Transforms and Block Copolymerization During the Freezing of Starch Solutions	314
Usmanov, Kh. U., B. I. Akhmedzayev, and U. Azizov (USSR). Modification of the Properties of Cellulose by Grafting	314

314 23

GAL'BRAYKH, L.S.; DRUZHININA, T.V.; KRYLOVA, R.A.

Opening of the complete scientific research laboratory
at the Department of Synthetic Fibers of the Moscow Textile
Institute. Khim.volok. no.3:78-79 '61. (MIRA 14:6)

1. Moskovskiy tekstil'nyy institut.
(Textile fibers, Synthetic—Study and teaching)

GAL'BRAYKH, L.S.; DEREVITSKAYA, V.A.; ROGOVIN, Z.A.

Synthesis of new derivatives of cellulose and other polysaccharides. Part 16: Synthesis of some nitrogen-containing derivatives of cellulose and other polysaccharides. Vysokom.soed. 3 no.10:1561-1565 0 '61. (MIRA 14:9)

1. Moskovskiy tekstil'nyy institut.
(Polysaccharides) (Nitrogen compounds)

L 11045-66 EWT(1)/EWA(j)/EWT(m)/EWP(j)/T/EWA(h) 2 WJ/JK/RM
ACC NR: AR5020058 SOURCE CODE: UR/0031/65/000/012/S130/S130

32
29
B

AUTHOR: Gal'braykh, L.S.; Kryazhev, Yu.G.; Livshits, R.M.

ORG: none

TITLE: Developing new types of graft copolymers 11455

SOURCE: Ref. zh. Khimiya, Abs. 128849

REF SOURCE: Sb. Khimiya i tekhnol. proizvodn. tsellyulozy. Vladimir, Verkhne-Volzsk. kh. izd-vo, 1964, 241-249

TOPIC TAGS: copolymer cellulose, graft copolymer

TRANSLATION: A study of cellulose oxidation by salts of quadrivalent cerium for synthesizing graft polymers has shown that a macroradical is formed at the result of the pyran circle rupture. During the synthesis of methylcellulose/graft polymers the reaction takes place if there is ~1 glycol group to 10 glycol links, and it does not occur at $\gamma \sim 200$. The use of quadrivalent cerium and trivalent manganese permits the grafting in an aqueous medium. The homopolymerization of the grafter monomer may be avoided by using the latter in a vaporized state. A study of graft copolymerization of cellulose esters containing aromatic aminogroups under the effect of a 5-valent vanadium has shown that for each mole of the aminogroup, 2 moles of vanadium acids are expended and that the copolymer contains nitrogroups. Grafting of monomers with reducing powers may be accomplished, e.g., by the introduction into the cellulose of

Card 1/2

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L 14045-66

ACC NR: AR5020058

3

peroxide groups which can be obtained, in particular, by the method of introducing aromatic diazogroups with a subsequent destruction by Fe^{2+} ions. A more practical method is to introduce into the cellulose aldehyde groups (γ to δ) and to oxidize them to peracid by hydrogen peroxide. For synthesizing graft polymers, use may be made of cellulose polymeranalogous conversion reactions or of a cellulose graft component, e.g., graft polymers and polyacrylic hydroxamic acid. The latter is obtained by processing a cellulose graft copolymer with polymethylmetacrylate of either a water or alcohol solution of hydroxylamine. The grafting of certain monomers to cellulose gives new properties to the latter: better resistance to bacteria, better heat resistance, lower combustibility, water resistance, wool-like properties, lesser crumpling, etc. Grafting can also be used for plasticizing cellulose derivatives.

G. Petrzhik.

SUB CODE: 07, III

BVK
Card 2/2

BALABAYEVA, B.D.; VLADIMIROVA, T.V.; SAMOYLOVA, L.S.;
POGOVIN, T.A.

Infrared spectroscopic study of the ion exchange of graft
copolymers of cellulose and polyacrylhydroxamic acid with
 Fe^{+3} and Cu^{+2} ions. Vysokom. soed. 7 no.2:105-110 P 165.
(HIRA 18:3)

1. Moskovskiy tekstil'nyy institut.

VLADIMIROVA, G.A.; GALINSKIY, L.S.; PERKIN, A.S.; ROGOVIN, T.A.

Synthesis of keto group-containing cellulose esters. Vysokom. soed.
7 no.5:786-790 My '65. (MIRA 18:9)

1. Moskovskiy tekstil'nyy institut.

ACC NR: AP7011817

SOURCE CODE: UR'0063'66/011'006'0657'0664

AUTHOR: Virnik, A. D. (Candidate of Technical Sciences); Gal'braykh, L. S. (Candidate of Technical Sciences); Livshits, R. M. (Candidate of Technical Sciences)

ORG: none

TITLE: Chimiical Fibers with special properties

SOURCE: Vsesoyuznoye khimicheskoye obshchestvo, Zhurnal, v. 11, no. 6, 1966, 657-664

TOPIC TAGS: synthetic fiber, fire resistant material, textile

SUB CODE: 11

ABSTRACT: A review on special purpose chemical fibers covers chemical fibers having antibacterial and antimildew properties, flame resistant fibers, fibers and textiles having ion exchange properties, and fibers having complex properties and semiconductor properties. The review covers new methods of preparation, toxic and hygienic requirements, and treatment of fibrous materials to render them special properties. The review contains 131 references, most of which are western sources. JPRS: 40,361

Card 1/1

UDC: 677.46

GALBURĂ, GH.

Galbură, Gh. Variétés-groupe de dimension 3. An. Acad. Repub. Pop. Române. Ser. Mat. Fiz. Chim. 3, no. 18, 428-438+ii (1950). (Romanian. Russian and French summaries)

By considering their normal subgroups, the author obtains an enumeration of the connected 3-dimensional Lie groups. The topology of each group is described.

P. A. Smith (New York, N. Y.)

Smith

Source: Mathematical Reviews,

Vol. 13 No. 6

GALBURA, Gh.

Handwritten mark, possibly initials or a signature.

Galburu, G. Sur le genre d'une courbe algébrique.
Com. Acad. R. P. Roumâne 3, 105-107 (1953). (Ro-
manian. Russian and French summaries)

The Riemann theorem relating the genus, the degree
and the ramification index of an algebraic function is
established with the aid of the index relations of the
theory of pseudo-harmonic functions.

M. Heins (Providence, R.I.)

GALBURE, G.[Galbura, G.]

On the ring of rational equivalence of the algebraic variety.
Rev math pures 4 no.3:351-355 '59. (EEAI 10:9)

1. (Fields, Algebraic) (Geometry, Algebraic)
(Congruences(Geometry)) (Harmonic analysis)

GALBURA, G.

Some properties of the embedding of an algebraic variety in projective space. Rev math pures 6 no.2:283-291 '61.

GALBURE, G. [Galbura, G.]

"Abelian varieties" by Serge Lang. Reviewed by G. Galbura.
Rev math pures 6 no.4:795-861.

G. LUBUKA, G.L.

Secants of a projective algebraic variety. Rev math Roum 9 no.2:
135-139 '64.

GAL'BURT, A.

GAL'BURT, A.

Produce extension-type two-wheel trailers. Avt.transp. 32 no.5:
20 My '54. (MLRA 7:7)
(Autonobiles--Trailers)

GAL'BURT, A.

Device for siphoning gasoline and scavenging fuel lines.

Avt. transp. 34 no.8:29 Ag '56.

(MLRA 9:10)

(Automobiles--Apparatus and supplies)

GAL'BURT, A.; NEMTSEV, G.

Automatic starting devices. Avt. transp. 35 no.8:31-32 Ag '57.
(MIRA 10r9)

1. Glavnyy inzhener avtotransportnoy kontory No.3 (for Gal'burt).
2. Mekhanik garazha Vladimirovskogo raypotrebsoyuza Astrakhanskoy oblasti (for Nemtsev).
(Automobiles--Cold weather operation)

GAL'BURT, A., inzh.

Are such handbooks needed? Avt. transp. 41 no.5:62-63 My '63.
(MIRA 16:10)

(Motor vehicles)

VOROBEY, A.K.; LYUR'YE, G.S.; SHAPIRO, G., red.; GAL'BURT, A.,
spets. red.

[Mechanization and advanced methods for the maintenance and
repair of motor vehicles; practice of the automotive trans-
portation units of the White-Russian S.S.R.] Mekhanizatsiia
i peredovye metody tekhnicheskogo obsluzhivaniia i remonta
avtomobilei; iz opyta raboty avtokhoziaistv Belorusskoi SSR
Minsk, In-t nauchno-tekhn. informatsii i propagandy Gos.komi-
teta Soveta Ministrov BSSR po koordinatsii nauchno-issl. ra-
bot, 1963. 74 p. (MIRA 18:2)

GAL'BURT, A., inzh.

More attention to the manufacture of garage equipment. Avt.transp.
42 no.2:15-17 F '64. (MIRA 17:3)

VOROBAY, A.; GAL'BUK, A., inzh.

Centralizing the maintenance of motor vehicles. Avt. transp. 43
no. 5:22-24 My '65. (MIRA 25:6)

1. Zamestitel' ministra avtomobil'nogo transporta BSSR (for
Vorobey).

1. SAL'MAN, S.I.: GAL'BURT, M. Ya
2. USSR (600)
4. Spinning Machinery
7. Improving the operation of ring spinning frames.
Tekst. prom. 12. no. 11. 1952.

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

GAL'BURT, M.YU.

PIKOVSKIY, Genrikh Iosifovich; SAL'MAN, Semen Il'ich; GINZBURG, Lev Natanovich;
GAL'BURT, Mark Yakovlevich; LIOZNOV, A.G., redaktor; SMOLYAKOVA, M.V.,
tekhnicheskiiy redaktor

[Circular looms for wet weaving of flax] Kol'tsevyye mashiny dlia
mokrogo priadenia l'na. Moskva, Gos. nauchno-tekhn. izd-vo Minister-
stva promyshlennykh tovarov shirokogo potrebleniia SSSR, 1954. 155 p.
(Looms) (Flax) (MIRA 8:4)

GAL'BURT, M.Ya.

PIKOVSKIY, G.I.; GAL'BURT, M.Ya.; SAL'MAN, S.I.

Changing from the wet method of spinning flax to the dry one.
Tekst.prom. 14 no.5:13-15 My '54. (MIRA 7:6)
(Flax)

14(9)

SOV/95-59-6-6/12

AUTHOR: Gal'burt, Ye.I., Engineer (Kiyev)

TITLE: Gas Pipeline Krasnodarskiy Kray - Serpukhov

PERIODICAL: Stroitel'stvo truboprovodov, 1959, Nr 6, pp 18 - 20 (USSR)

ABSTRACT: The main gas pipeline Krasnodarskiy Kray - Serpukhov together with the pipeline Stavropol' - Moskva and Leningrad - Rostov will connect the southern gas producing area with the center. The new pipeline extends over 1000 km crossing over 50 waterways, 22 RR lines and over 100 highways. Over a distance of 700 km the pipeline will be double track, of which 400 km will be made of 1,020 mm pipe and 300 km of 820 mm pipe, the 1,020 mm pipes will have a wall thickness of 12 mm and the 820 mm pipes a wall thickness of 10 mm. In certain parts of the country the wall thickness will be raised to 14 and 12 mm. Pipes 820 x 16 and 720 x 14 will be used in river beds for double and triple tracks. Ravine crossings will be partly above ground and partly underground. The pipeline on a whole will be mostly underground, running parallel to the profile of the country. The article specifies various radii of bends which will be used for the different pipes from 600 to 1,250 m. As protection against corrosion the pipes will be insulated with a bitumen-

Card 1/2

Gas Pipeline Krasnodarskiy Kray - Serpukhov

SOV/95-59-6-6/12

rubber insulation, applicable in 3 grades, - normal, reinforced and extra-reinforced, depending upon the degree of corrosive activity of the soil and the accessibility of the pipeline in case of repair. The entire pipeline will have electric protection. The article cites new methods and devices for laying insulated pipe, also reinforced concrete weights for lowering pipelines into water. The new pipeline will be provided with automatic remote control.
There are: 3 sets of diagrams and 2 tables.

Card 2/2

GAL'BURT, Ye.I., inzh.

One year of work on the Karadag-Tiflis-Eriwan gas line. Stroi.
truboprov. 6 no.3:11-12 Mr '61. (MIRA 14:3)

1. Ukgiprogaz, Kiyev.
(Gas, Natural--Pipelines)

REZNIK, E.R., inzh.; GAL'BURT, Ye.I., inzh.

Laying a gas pipeline in tunnels. Stroi. truboprov. 8 no.3:13-14
Mr '63. (MIRA 16:5)

1. Ukrainskiy gosudarstvennyy institut po proyektirovaniyu
predpriyatiy po dobyche prirodnykh gazov, Kiyev.
(Gas, Natural--Pipelines)

GALBYKH, Iosif (Praga, ChSSR)

Emulsion polymerization of styrene. Khim. v shkole 16 no.5:
79 S-0 '61. (MIRA 14:9)
(Styrene) (Chemistry--Experiments)

GALBYKH, Iosif[Galbyh, Iosif] (Praga, Chekhoslovatskaya Sotsialisti-
cheskaya Respublika)

Demonstrating the reaction of polycondensation. Khim. v shkole
17 no.4:79-80 J1-Ag '62. (MIRA 15:10)

(Polymerization)

GAL'CHENKO, A.A., mayor meditsinskoy sluzhby

Dusk mask. Voen.-med.zhur. no.12:82 '59.
(RESPIRATORS)

(MIRA 14:1)

124-57-1-1154

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 159 (USSR)

AUTHORS: Snitko, I. D., Gal'chenko, A. G.

TITLE: Experimental Investigations of the Working of Riveted Joints of Steel N11 in Thick Bundles Under Static Loads (Eksperimental'nyye issledovaniya raboty zaklepochnykh soyedineniy iz stali N11 v tolstykh paketakh pri staticheskoy nagruzke)

PERIODICAL: Tr. Dnepropetr. in-ta inzh. zh. -d. transp., 1956, Nr 25, pp 318-334

ABSTRACT: Tests were performed to verify the properties of assembly-riveted joints of bridge frames performed according to a novel procedure. Each sample consisted of a bundle of seven sheets of various thicknesses, 410 x 200 mm in size, of an overall thickness of 120 mm, held together by ten 23-mm diam N11-steel rivets. The tests showed that assembly riveting according to the subject procedure ensured, on the average, a 10-15% greater strength than riveting in the shop. Since the actual strength of the joints was 123 to 140% of the specification value, it is concluded that when thick bundles are riveted on the assembly job there is no need to augment the number of rivets by 20% as is required by the 1947 TU (Technical Order, Transl. Ed. Note). S. Ya. Makarov
1. Bridges--Construction--Analysis 2. Riveted joints--Properties
--Test results

Card 1/1

GAL:CHENKO, A.G., kand.tekhn.nauk, dotsent; KONASHENKO, S.I.,
kand.tekhn.nauk, dotsent

Experimental investigation of dynamic flexures of a beam caused
by the motion of a load along the beam. Trudy DIIT no.31:93-100
'61. (MIRA 15:5)

(Beams and girders)

GAL'CHENKO, A.A., mayor meditsinskoy sluzhby

Effect method for treating epidermophytosis of the skin. Voen.-
med.zhur. no.4:86 Ap '60. (MIRA 14:1)
(DERMATOPHYTES)

GAL'chenko, B. V.

7/25 Y 3005 Improvement of Wear Resistance of Cold-Header Dies by Gas Chromizing. G. N. Dubinin and B. V. Gal'chenko. Henry Brucher Translation No. 3033, 3 p. (From: STRAKTIFIKATION, v. 28, no. 8, 1954, p. 17.) Henry Brucher, Alhambra, Calif.

Chromized layers from 0.02 to 0.04 mm thick produce dies with two to six times more service when correctly heat treated. Graph.

of

~~GALCHENKO, D.~~
GALCHENKO, D.M.

Heating in building construction and drying of plaster during winter. p. 22.
(STROITELSTVO. Vol. 1, No. 9/10, 1954)

SO: Monthly List of East European Accession, (EEAL), LC, Vol. 4, No. 9,
Sept. 1955, Uncl.

GAL'CHENKO, D.M., inzhener.

Heating buildings and drying plaster in winter. Stroi.prom. 32
no.9:27-29 S '54. (MLBA 7:11)
(Building--Cold weather conditions)

MONAKHOV, N.I., inzh., glavnyy red.; TURIANSKIY, M.A., inzh., zam.
glavnogo red.; GAL'CHENKO, D.S., inzh., red.; KHAVIN, B.N.,
red.izd-va; VORONIN, K.P., tekhn.red.

[Collection No.11 of consolidated cost indexes of buildings
and structures of meat and dairy industries to be used in
revaluating capital assets] Sbornik no.11 ukрупnennykh pokazatelei
stoimosti zdaniy i sooruzheniy miasnoi i molochnoi
promyshlennosti dlia perechtsenki osnovnykh fondov. Moskva,
Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.materialam,
1959. 39 p. (MIRA 12:10)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam
stroitel'stva.
(Meat industry--Equipment and supplies) (Dairy plants)

S/138/59/000/011/007/011
A051/A029

AUTHORS: Nusinov, M. D.; Pozin, A. A.; Gal'chenko, G. I.

TITLE: The Determination of Some Mechanical Characteristics of Rubber Mixtures, Using the Rotational Elastoviscosimeter ✓

PERIODICAL: Kauchuk i Rezina, 1959, No. 11, pp. 35-39.

TEXT: An instrument and method for determining the mechanical properties of rubber mixtures under conditions of a uniform shear at various temperatures and three conditions of deformation were developed. The mechanical properties of each type of deformation were determined by applying the linear theory of deformation and, in particular, the method of the mechanical moduli (Refs. 1-3). Formula 1 is the equation for the sum deformation, consisting of the elastic instantaneous deformation, the elastic-delayed deformation and the plastic deformation. In addition to the general linear theory, the authors also make use of the model method, according to Refs. 4-9, with the general equation given in Formula 2. Figure 2 shows the relationship of the sum deformation to the time element, in the case of the shear deformation modulus. Formulae 5-7 are the equations of the component

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S/138/59/000/011/007/011
A051/A029

The Determination of Some Mechanical Characteristics of Rubber Mixtures,
Using the Rotational Elastoviscosimeter

types of deformation, listed above, respectively. The authors use these formulae and Figure 2 to determine the mechanical characteristics of the material, which are: G_1 - the shear modulus of the delayed elasticity, in dyne/cm², G_2 - the instantaneous elastic shear modulus, in dyne/cm², η_1 - the viscosity of the delayed elasticity, in dyne·sec/cm², η_2 - the plastic viscosity, in dyne·sec/cm², t - the time of the tension action (deformation), in sec. It is simplest to use the conditions of constant tension for determining the mechanical properties of the rubber. It is also stated that the given Formulae (No. 1-7) are only valid at constant temperatures. Formula 8 is given for calculating the temperature dependence of the plastic viscosity. Formula 9 shows that with an increase in the temperature the plastic viscosity of the material decreases. The experimental methods are outlined in detail and a photographic illustration of the instrument used is given in Figure 3 with a diagrammatic sketch of its component parts. Each part is described in detail and the functioning principle of the instrument is explained. The tests are conducted at constant temperature, determined by an ultrathermostat. The computed results

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S/138/59/000/011/007/011
A051/A029The Determination of Some Mechanical Characteristics of Rubber Mixtures,
Using the Rotational Elastoviscosimeter

along the two branches were found to coincide completely. The following high-filled rubber mixtures were tested (in weight parts): CKB-60 (SKB-60) 125 lamp carbon black, 25 vaseline oil; CKC-30A (SKS-30A) 180 jet carbon black, 90 polydienes; CKH (SKI) 117 jet carbon black, 40.0 vaseline oil. Sulfur was excluded to eliminate the effect of the scorching in the mixtures. As a result of the experimental procedure it was shown that there is a relationship between the elastic-viscous characteristics for the three rubber mixtures and the value of the shear tension within a range of $0.0785 \cdot 10^6 - 0.238 \cdot 10^6$ dyne/cm² at a temperature of 70°C. This indicates that in the test range of deformation and shear tensions the tested rubber mixtures are linear elastic-viscous materials, the behavior of which can be simulated by using a four-element mechanical model. It was also found that for the SKB-60-based rubber mixture the plastic viscosity coefficient η_2 and the shear modulus of the delayed-elastic shear G_1 decrease with an increase in the temperature. There are 2 diagrams, 1 oscillogram, 5 graphs, 1 table, 9 formulas and 15 references: 12 Soviet, 2 English, 1 French.

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S/138/59/000/011/007/011

A051/A029

The Determination of Some Mechanical Characteristics of Rubber Mixtures,
Using the Rotational Elastoviscosimeter

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy i lateksnykh
izdeliy (Scientific Research Institute of the Rubber and
Latex Products Industry)



Card 4/4

Dec. 51

GAL'CHENKO.G. I.

USSR/Chemistry - Thermal Properties of
Ammonium Chloride, Bichromates

"Determination of True Specific Heat of Powdered Substances at High Temperatures,"
M. M. Popov, G. L. Gal'chenko, Thermal Lab, Moscow State U

"Zhur Obshch Khim" Vol XXI, NO 12, pp 2220-2235

Proved it feasible to use "method of direct heating with continuous input of measured heat" for measurement of true sp heat of nonmetallic powd substances at temps 100-700° in adiabatic calorimeter. Detd true molar sp heats and heats of polymorphons transformations of NaCl, BaCl₂, NH₄Cl, Na₂CO₃, Na₂SO₄, Na₂Cr₂O₇, and K₂Cr₂O₇.

PA 194T69

AUTHORS: Popov, M. M., (Deceased), SOV/78-3-B-4/48
Gal'chenko, G. L., Senin, M. D.

TITLE: The True Specific Heat of UO_2 , U_3O_8 and UO_3 at High
Temperatures (Istinnyye teployemkosti UO_2 , U_3O_8 i UO_3 pri
vysokikh temperaturakh)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1978, Vol. 3, Nr 8,
pp. 1734-1737 (USSR)

ABSTRACT: The determination of the true specific heat of finely pow-
dered samples of UO_2 , U_3O_8 and UO_3 was accomplished by the
method of direct heating and by continuous addition of an
exactly calculated quantity of heat by means of metallic and
quartz calorimeters. The specific heat of U_3O_8 was determined
in the platinum calorimeter. The rate of temperature of the
true molar heat is expressed by the following equations:
 UO_2 at 160-603° $C_p = 15,29 + 1,716 \cdot 10^{-2} T - 1,41 \cdot 10^{-5} T^2$,
 U_3O_8 at 100-320° $C_p = 53,51 + 8,99 \cdot 10^{-2} T - 1,279 \cdot 10^{-4} T^2$,

Card 1/2

The True Specific Heat of UO_2 , U_3O_8 and UC_3
at High Temperatures.

SCV/78-3-8-4/48

$$U_3O_8 \text{ at } 400-600^\circ \text{ } C_p = 64,25 + 1,582 \cdot 10^{-2} T,$$
$$UC_3 \text{ at } 119-400^\circ \text{ } C_p = 20,12 + 1,15 \cdot 10^{-2} T - 4,36 \cdot 10^{-6} T^2.$$

There are 4 tables and 4 references, 1 of which is Soviet.

SUBMITTED: February 15, 1958

Card 2/2

5(4)

AUTHORS: Popov, M. M. (Deceased), Gal'chenko, G. L., Senin, M. D. SOV/78-4-6-5/44

TITLE: The Specific ^{Heat} and the Heat of Fusion of UCl_4 and UJ_4 , and the Transformation Heat of UJ_4
(Teployemkosti i teploty plavleniya UCl_4 i UJ_4 , teplota prevrashcheniya UJ_4)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 6, pp 1241-1245 (USSR)

ABSTRACT: The specific heat, the heat of fusion of UCl_4 and UJ_4 , and the transformation heat of UJ_4 were determined. The investigation results are given in tables 1 and 2. The initial material for UCl_4 and UJ_4 was produced by chlorination or iodizing of uranium⁴ salts of uranium metals. The results concerning the apparent specific heat of UJ_4 are given in table 3 and figure 2. The specific heat of UJ_4 changes anomalously in a temperature interval of from 453-528°, the polymorphous transformation takes place in a temperature interval of from 453-505°.

Card 1/2

The Specific Heat and the Heat of Fusion of UCl_4 and UJ_4 , and the Transformation Heat of UJ_4 ^{SOV/78-4-6-5/44}

The transformation heat for UJ_4 amounts to 3526 ± 58 cal/mol. The melting heats of UCl_4 and UJ_4 amount to 11938 ± 22 - and 5637 ± 100 cal/mol. There are 2 figures, 5 tables, and 7 references, 5 of which are Soviet.

SUBMITTED: March 25, 1958

Card 2/2

SOY/76-33-8-35/39

28(5)

AUTHORS:

Vostroknutov, N. G., Kornilov, A. N., Gal'chenko, G. L.,
Skuratov, S. M. and Timofeyev, B. I.

TITLE:

Arrangement for Measuring the Work of Alternating Current in
Calorimetry

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 8, pp 1883-1886
(USSR)

ABSTRACT:

For determining the heats of reaction taking place at higher rates with high temperatures, a calorimeter bomb with an electric furnace is usually used. Since, however, the resistance of the furnace greatly increases within a short time, the determination of the work of the current becomes very difficult if the amperage and voltage change in wide ranges. Reference 1 recommends in such cases to use a precision wattmeter, but fails to give any data regarding the pattern or the method of measurement to be used. Now an arrangement for measuring the work of the electric current in the furnace of a calorimeter bomb under the above circumstances is described. The wiring diagram (Fig 1) consists, in the main, of an active-current meter (I) and a reactance-current meter (II). For (I), a single-phase alternating current meter of the W Ei 55 (Siemens) type for 5 a and 120 v is used. In recent

Card 1/2

SOV/76-33-8-35/39

Arrangement for Measuring the Work of Alternating Current in Calorimetry

times, however, this instrument was replaced by a current meter of the V-3 type designed by N. G. Vostroknutov, VNIIEK (Moscow) in order to raise the measurement accuracy. A current meter specially made for the requirements of (II) (Ref 2) was built at the otdeleniye elektricheskikh izmereniy VNIIEK (Moskva) (Department of Electrical Measurements of the VNIIEK (Moscow)). The measurement principle, the current meter calibration (Table), and the use of the arrangement in calorimetry are described, and the corresponding calculation equations are given. There are 1 figure, 1 table, and 3 references, 2 of which are Soviet.

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

SUBMITTED: January 27, 1959

Card 2/2

SOV/20-127-5-23/58

5(2,4)
AUTHORS:

Gal'chenko, G. L., Kornilov, A. N., Timofeyev, B. I.,
Skuratov, S. M.

TITLE:

The Standard Enthalpy of Boron Oxide Formation

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 5,
pp 1016 - 1018 (USSR)

ABSTRACT:

The enthalpy of B_2O_3 mentioned in the title is a fundamental quantity in the thermochemistry of the boron compounds. Its determination is connected with considerable experimental difficulties. Due to this fact the values mentioned in publications (Refs 1-13) do not agree (-270-368 kcal/mol). No reliable value may be chosen from it since in part of the papers (Refs 1-9) the errors caused by the side processes cannot be detected whereas in the other part of these papers data lack permitting the utilization of the obtained results. In the present paper a report is made on an experimental determination of the mentioned quantity by 3 independent methods which (within the limit of measuring errors) led to one and the same result. 1) Combustion of boron in oxygen, 2) Direct determination.

Card 1/2

The Standard Enthalpy of Boron Oxide Formation

SOV/20-127-5-23/58

tion of the heat of formation of boron nitride and the computation of the $\Delta H_{\text{form}}^{\circ}$ of B_2O_3 by using a reliably determined value of the combustion heat of boron nitride (Ref 18). 3) Direct determination of the heat of formation of BCl_3 and the computation of $\Delta H_{\text{form}}^{\circ}$ of B_2O_3 by using reliably determined heat values for the BCl_3 hydrolysis (Ref 19), and the B_2O_3 dissolution (Ref 20) as well as the H_2O formation and of the HCl solution corresponding to the concentration (Ref 14). The above mentioned agreement of the results obtained according to the methods 1-3 proves that considerable systematical errors have been avoided in each of the determinations. There are 22 references.

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

PRESENTED: April 7, 1959, by V. N. Kondrat'yev, Academician

SUBMITTED: April 4, 1959

Card 2/2

Gal'chenko, G. L.

81912
S/078/60/005/07/10/014
B004/B056

21,3000

AUTHORS:

Gal'chenko, G. L., Gagarinskiy, Yu. V.,
Popov, M. M. (Deceased)

TITLE:

The Specific Heat of UF_4 in the Interval of 100-400°

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 7,
p. 1631

TEXT: The authors determined the specific heat of dehydrated $UF_4 \cdot 2.5H_2O$ in a vacuum according to a method described in Refs. 1 and 2 by means of direct heating. In the temperature interval of from 100 to 400°C three series of experiments were carried out: a) 100-270°C, b) 100-370°C, and c) 370-400°C. The results are shown in a figure. In series a) reproducible values for the specific heat were found, which are considerably higher than the values of series b). In heating beyond 270°C a thermal effect was observed, which manifests itself by a decrease in specific heat. In heating to more than 370°C no thermal effect occurs, but the entire curve is lower than that of series a). The authors explain this

Card 1/2

The Specific Heat of UF_4 in the Interval of
100-400°

81942
S/078/60/005/07/10/014
B004/B056

phenomenon by the fact that in the dehydration of $UF_4 \cdot 2.5H_2O$, first an unstable form of UF_4 is formed, which has a higher specific heat than the stable form which is formed in heating to temperatures of between 270 to 370°C. In this the authors also point to the transformation of UF_4 after heating to 350°C to monoclinic structure, which is reported in Ref. 4. There are 1 figure and 4 references: 3 Soviet and 1 Japanese. X

SUBMITTED: August 25, 1959

Card 2/2

85620

S/078/60/005/012/001/016

B017/B064

11. 2221

AUTHORS: Gal'chenko, G. L., Timofeyev, B. I., and Skuratov, S. M.TITLE: Determination of the Formation Enthalpy of Boron Tetra-
chloridePERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 12,
pp. 2645-2650

TEXT: The present paper describes the calorimetric determination of the reaction heat of boron with chlorine. The chlorination of boron was carried out in a bomb calorimeter heated by a small electric furnace. The method of determining the formation heat of boron tetrachloride is described in detail. The following values were determined for the formation enthalpy of liquid and gaseous BCl_3 :

$$\Delta H_{\text{formation}}^{\circ} \text{BCl}_3 \text{ liquid} = -102.9 \pm 0.6 \text{ kcal/mole}$$

$$\Delta H_{\text{formation}}^{\circ} \text{BCl}_3 \text{ gas} = -97 \pm 0.7 \text{ kcal/mole}$$

Card 1/2

85620

Determination of the Formation Enthalpy of
Boron Tetrachloride

S/078/60/005/012/001/016
B017/B064

The experimental data were compared with published ones. The formation enthalpy of vitreous boron oxide from crystalline boron and gaseous oxygen was calculated to be

$$\Delta H_{\text{formation B}_2\text{O}_3 \text{ glass}}^{\circ} = -301.8 \pm 1.4 \text{ kcal/mole.}$$

The thermochemical equations to calculate the formation enthalpy are given. On the basis of the values found for $\Delta H_{\text{formation BCl}_3 \text{ liquid}}^{\circ}$ and the thermochemical equations, the formation enthalpy of vitreous boron oxide from crystalline boron and gaseous oxygen was calculated:

$$\Delta H_{\text{formation B}_2\text{O}_3 \text{ glass}}^{\circ} = -301.8 \pm 1.4 \text{ kcal/mole.}$$

There are 1 figure, 2 tables, and 8 references: 1 Soviet, 4 US, 1 British, 1 French, and 1 Swiss.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov). Termo-
khimicheskaya laboratoriya im. V. F. Luginina (Thermo-
chemical Laboratory imeni V. F. Luginin)

SUBMITTED: August 21, 1959

Card 2/2

85621

S/078/60/005/012/002/016
B017/B064

11.1300

AUTHORS: Gal'chenko, G. L., Kornilov, A. N., Skuratov, S. M.TITLE: Determination of the Formation Enthalpy¹ of Boron Nitride²⁷PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 12,
pp. 2651-2654

TEXT: The formation heat of boron nitride was determined in a calorimetric bomb heated by a small electric furnace. Amorphous high-purity boron (O: 0.23%, H: 0.12%, N: 0.005%, and Ca, Mg, and Cu totaling ~0.01%) was used as initial material. For the experiments, nitrogen was freed from oxygen, and dried. A table lists the results of determining the reaction heat between boron and nitrogen. The formation enthalpy of hexagonal boron nitride from crystalline boron and gaseous nitrogen was calculated, and the following values were determined:

$$\Delta H_{\text{formation BN crystalline}}^{\circ} = -60.7 \pm 0.3_4 \text{ kcal/mole.}$$

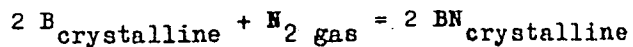
The formation enthalpy of boron oxide was determined by the following thermochemical equations:

Card 1/2

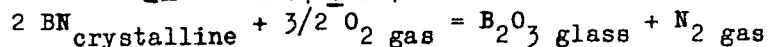
85621

Determination of the Formation Enthalpy
of Boron Nitride

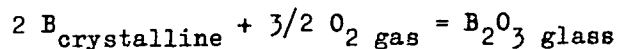
S/078/60/005/012/002/016
B017/B064



$$\Delta H = -121.4 \pm 0.7 \text{ kcal}$$



$$\Delta H = -180.4 \pm 1.2 \text{ kcal (according to Ref. 5)}$$



$$\Delta H^{\circ}_{\text{formation B}_2\text{O}_3 \text{ glass}} = -301.8 \pm 1.4 \text{ kcal/mole.}$$

This value is in agreement with published values (Refs. 6, 12, and 13).
There are 1 figure, 1 table, and 13 references: 4 Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov). Termo-
khimicheskaya laboratoriya im. V. F. Luginina (Thermo-
chemical Laboratory imeni V. F. Luginin)

SUBMITTED: August 21, 1959

Card 2/2

GAL'CHENKO, G.L.; KORNILOV, A.N.; SKURATOV, S.M.

Heat of combustion of boron. Zhur. neorg. khim. 5 no.10:2141-2147
O '60. (MIRA 13:10)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonsova i
Termokhimicheskaya laboratoriya im. V.F.Luginina.
(Boron) (Heat of combustion)

GAL'CHENKO, G.L.; VARUSHCHENKO, R.M.; BUBNOV, Yu.N.; MIKHAYLOV, B.M.

Heat of formation of n-butyl ester of di-n-butylboric acid.
Zhur. ob. khim. 32 no.1:284-287 Ja '62. (MIRA 15:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova i
Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Butaneboronic acid) (Heat of formation)

34825

S/020/62/142/005/016/022
B110/B10111.2232
11.1240AUTHORS: Gal'chenko, G. L., Timofeyev, B. I., and Skuratov, S. M.

TITLE: Determination of formation heat of decaborane

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 5, 1962, 1077-1080

TEXT: For an accurate determination of the formation heat $\Delta H_{\text{form}}^{\circ}$ of decaborane, $B_{10}H_{14}$, the latter was subjected to quantitative thermal decomposition in boron and hydrogen at 700 - 800°C. Decaborane (≈0.8 g) distilled in vacuo to constant melting point was heated in a calorimeter with tungsten wire. The degree of decomposition was determined from the quantitative measurement of H_2 (0.2 % accuracy): (a) by pressure determination in a Hg manometer; (b) gravimetrically after oxidation by copper oxide at 600°C and adsorption to magnesium perchlorate and P_2O_5 . The initial temperature was $12.14 \pm 0.03^{\circ}C$, the final temperature 24.0 - 24.4°C. Solid pyrolysis products were: (1) fine amorphous powder; (2) slaggy pieces with 5 - 10 % crystalline phase; and (3) coarse crystalline powder

Card (1/3)

Determination of formation heat of ...

S/020/62/142/005/016/022
B110/B101

with quartzlike structure. BCl_3 formed almost quantitatively during chlorination at 350 - 400°C. The crystalline powder consisted of non-volatile boron hydride, the amorphous substance, of boron.

$Q_{\text{react}} = W \cdot \Delta \theta_{\text{exp}} - Q_{\text{el}}$ is valid; where W = heat value of the calorimeter,

$\Delta \theta_{\text{exp}}$ = temperature increase during the experiment; Q_{el} = heat liberated by the current. Since $Q_{\text{react}} : V_{\text{H}_2}$ (referred to $\theta = 0^\circ\text{C}$ and $P = 760\text{mm Hg}$)

is practically constant, $Q_{\text{react}} : V_{\text{H}_2}$ may be referred to $\text{B}_{10}\text{H}_{14}(\text{cryst}) =$

$10 \text{B}_{(\text{amorph})} + 7 \text{H}_2(\text{gas})$. The heat of decomposition

$\Delta U_{\text{B}} = -(Q_{\text{react}}/V_{\text{H}_2}) \cdot 22433.7$. Experimental result: $\Delta U_{\text{B}} = 13.89 \pm 1.0$.

On transition from ΔU to ΔH at $\theta = 25^\circ\text{C}$ and $P = 1 \text{ atm}$, only

$\Delta n RT = 4.13 \text{ kcal/mole}$ was of importance. $\Delta H = 18.0 \pm 1.0 \text{ kcal/mole}$ for

$\text{B}_{10}\text{H}_{14}(\text{cryst}) = 10 \text{B}_{(\text{amorph})} + 7 \text{H}_2(\text{gas})$ at 25°C and 1 atm . Considering

$\Delta H = -0.4 \text{ kcal/mole}$ for $\text{B}_{(\text{amorph})} = \text{B}_{(\text{cryst})}$, the result was:

Card 2/3

Determination of formation heat of ...

S/020/62/142/005/016/022
B110/B101

$\Delta H_{\text{form}}^{\circ} \text{B}_{10}\text{H}_{14}(\text{cryst}) = -14.0 \pm 1.0 \text{ kcal/mole}$ which agrees with the value found by W. H. Johnson et al. There are 1 figure, 1 table, and 7 references: 2 Soviet and 5 non-Soviet. The four references to English-language publications read as follows: F. D. Rossini et al., Selected Values of Chemical Thermodynamic Properties, Natl. Bur. Stand., Circ. 500 (1952). W. H. Evans et al., Thermochemistry and Thermodynamic Functions of some Boron Compounds Symposium on Thermal Properties, N. Y. 1959. B. Siegel, J. L. Mack, J. Phys. Chem., 62, no. 3, 373 (1958). W. H. Johnson et al., J. Res. Natl. Bur. Stand., 64A, no. 6, 521 (1960).

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

PRESENTED: September 18, 1961, by Vikt. I. Spitsyn, Academician

SUBMITTED: September 16, 1961

Card 3/3

GAL'CHENKO, G.L.; VARUSHCHENKO, R.M.; BUBNOV, Yu.N.; MIKHAYLOV, B.M.

Determination of the heat of formation of di-n.-butyl ester of
n.-butylboric acid. Zhur.ob.khim. 32 no.8:2405-2408 Ag '62.
(MIRA 15:9)

(Butaneboronic acid) (Heat of formation)

GAL'CHENKO, G.L.; VARUSHCHENKO, R.M.

Heat of combustion of trialkylborons. Part 1: Determination
of the heats of combustion of tripropylboron, triisopropylboron,
and triisoamylboron. Zhur. fiz. khim. 37 no.11:2513-2519 N'63.
(MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

ACCESSION NR: AP4041752

S/0076/64/038/006/1474/1480

AUTHOR: Varushchenko, R. M.; Gal'chenko, G. L.

TITLE: Heats of combustion of trialkylborons. II. Derivation of equation for calculation of the heats of combustion of trialkylborons

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 6, 1964, 1474-1480

TOPIC TAGS: trialkylboron, heat of combustion, heat of hydroboration, thermodynamics, calorimetry

ABSTRACT: In recent years the heats of formation of a large number of trialkylborons have been experimentally determined. The determinations were conducted by the heat of combustion method and by measuring the heat of the reaction of hydroboration of olefins with formation of the corresponding trialkylborons. The purpose of this work was to verify the agreement of these experimental results and to generalize them for calculation of the heats of combustion or formation for those trialkylborons which were not investigated experimentally. The authors derive a general form equation for calculation of the heat of combustion of trialkylborons according to the method of V. M. Tatevskiy [Khimicheskoye stroeniye uglevodorodov

Card 1/2

ACCESSION NR: AP4041752

1 zakonosernosti v ikh fiziko-khimicheskikh svoystvakh (Chemical Structure of Hydrocarbons and Their Characteristic Physico-Chemical Properties), Moscow State University Press, 1953]. The obtained equation was used for verifying the agreement between the available data on the heats of combustion of trialkylborons. It was found that there exists a systematic discrepancy of several kcal/mole between the data obtained by the heats of combustion method and those calculated from the determination of the heats of hydroboration of olefins. The authors express their gratitude to S. S. Yarov for a number of valuable suggestions in the preparation of this manuscript. Orig. art. has: 5 tables.

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

SUBMITTED: 15May63

ENCL: 00

SUB CODE: GG, TD

NO REF SOV: 005

OTHER: 009

Card 2/2

MEDVEDEV, V.A.; YUNGMAN, V.S.; VOROB'YEV, A.F.; GURVICH, L.V.;
BERGMAN, G.A.; REZNITSKIY, L.A.; KOLESOV, V.P.;
GAL'CHENKO, G.L.; KHODEYEV, Yu.S.; KHACHKURUZOV, G.A.;
SOKOLOV, V.B.; GOROKHOV, L.N.; MONAYENKOVA, A.S.;
KOMAROVA, A.F.; VEYTS, I.V.; YURKOV, G.N.; MALENKOV, G.G.;
SMIRNOVA, N.L.; GLUSHKO, V.P., akademik, otv. red.;
MIKHAYLOV, V.V., red.; KARAPET'YANTS, M.Kh., red.

[Thermal constants of substances; reference book in ten
numbers] Termicheskie konstanty veshchestva; spravochnik
v desiati vypuskakh. Moskva, No.1. 1965. 144 p.
(MIRA 18:7)

1. Moscow. Vsesoyuznyy institut nauchnoy i tekhnicheskoy
informatsii.

GAL'CHENKO, G.L.; AMMAR, M.M.; SK'IRATOV, S.M.; BUBNOV, Yu.N.; MIKHAYLOV, B.M.

Heats of formation of n-tributyl borate and di-n-butylboronic acid
anhydride. Vest. Mosk. un. Ser. 2: Khim. 20 no.2:3-8 Mr-Ap '65.
(MIRA 18:7)

1. Laboratoriya termokhimii Moskovskogo gosudarstvennogo universiteta
i Institut organicheskoy khimii AN SSSR.

STATEMENT BY: DR. V. M. BELYUKH, D.Sc., DR. V. I. KRYUKOV, D.Sc.

Members of the Department of Chemistry, Institute of
Chemical Physics, Academy of Sciences of the USSR, Moscow.
No. 3012-04 Moscow, U.S.S.R. (MIRA 1978)

In: Proceedings of the International Conference on
Organic Chemistry of the USSR (Moscow, 1978).

GAL'CHENKO, G.L.; GEDAKYAN, D.A.; TIMOFFEYEV, B.I.; SKURATOV, S.M.

Standard heats of formation of $ZrCl_4$ and $HfCl_4$. Dokl. AN SSSR
161 no.5:1081-1084 Ap '65. (MIRA 18:5)

1. Submitted October 10, 1964.

SMOLENSKIY, Ye.A.; SEYFER, A.L.; GAL'CHENKO, G.L.

Approximate method of calculating the physicochemical properties of compounds of the $A(R_1 \dots R_k)$ type. Zhur. fiz. khim. 39 no.9:2142-2144 S '65. (MIRA 18:10)

GAL'CHENKO, G.L.; ZAUGOL'NIKOVA, N.S.; SKURATOV, S.M.; VASIL'YEV, L.S.;
BEZMENOV, A.Ya.; MIKHAYLOV, B.M.

Heats of formation of methoxyboracyclopentane and methyl ether
of di-n-butylboronic acid. Dokl. AN SSSR 166 no.1:103-105 Ja
'66. (MIRA 19:1)

1. Moskovskiy gosudarstvennyy universitet i Institut organicheskoy
khimii im. N.D.Zelinskogo AN SSSR. Submitted April 5, 1965.

L 01264-67 EWT(m)/T WW/JW/JWD/WE/RM

ACC NR: AP6003492

SOURCE CODE: UR/0020/66/166/001/0103/0105

AUTHOR: Gal'chenko, G. L.; Zaugol'nikova, N. S.; Skuratov, S. M.; Vasil'yev, L. S.;
Beznenov, A. Ya.; Mikhaylov, B. M. 62
8

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet); Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences, SSSR (Institut organicheskoy khimii Akademii nauk SSSR)

TITLE: Heat of formation of methoxyboracyclopentane and methyl di-n-butylboric acidⁿ

SOURCE: AN SSSR. Doklady, v. 166, no. 1, 1966, 103-105

TOPIC TAGS: heat of formation, boron compound, boric acid, *heat of polymerization*

ABSTRACT: The heat of combustion, ΔH_c , of these compounds was determined calorimetrically, using a precise water calorimeter, and heats of formation were calculated subsequently. Accuracy of determination was $\pm 0.02\%$. The combustion products, CO_2 and H_2BO_3 , were determined gravimetrically or by base titration in the presence of mannite, respectively. Among the compounds investigated, the $(n-C_4H_9)_2BOCH_3$ burned more completely than the others. The determined ΔH_c at 298.15°K were -2911.7 ± 0.6 kcal/mole for liquid $\square B-OCH_3$ and -1590.9 ± 0.8 kcal/mole for liquid $(n-C_4H_9)_2BOCH_3$. The ΔH_p of polymerized $\square BOCH_3$ was also determined and was -9296.2 ± 1.0 cal/g. Thus, the calculated heat of polymerization was ~ -1 kcal/mole. The polymer was prepared by keeping the monomer in sealed ampules for 3 to 8 months at room temperature. It was a clear

Card 1/2

UDC: 541.1.11