"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

LISIN, B.V., podpolkovnik; KARDASH, V.M., inzh.-podpolkovnik; PEREDEL'SKIY, N.P., inzh.-podpolkovnik; KOTLYAROV, D.M., podpolkovnik; BUDNIKOV, F.A., podpolkovnik; OKUNEV, Yu.K., podpolkovnik, red.; SOLOMONIK, R.L., tekhn.red.

[Increasing the length of time between overhauls for motor vehicles] Puti i sposoby povysheniia mezhremontnykh probegov mashin. Moskva, Voen.izd-vo M-va obor.SSSR, 1960. 70 p.

(MIRA 13:6)

1. Russia (1923- U.S.S.R.) Avtotraktornoye upravleniye. 2. Prepodavateli Voyennogo avtomobil'nogo uchilishcha (for Lisin, Kardash, Peredel'skiy, Kotlyarov, Budnikov).

(Motor vehicles--Maintenance and repair)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KALVODA, R; BUDNIKOV, G.

Czechoslovakia

Polarographic Insitute, Czechoslovak Academy of Science, -- Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 4, 1963, pp 838-846

"Ocillopolarographic Behavior of Certain Carbonyl Combinations."

2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KOSTROMIN, A.I.; BUDNIKOV, G.K.

Use of ions of phthalic acid in studying complex compounds of lead. Uch. zap. Kaz. un. 117 no.9:207-208 '57. (MIRA 13:1)

1.Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina. Kafedra analiticheskoy khimii.
(Lead compounds) (Phthalic acid)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

5(3),5(4) SOV/20-127-4-25/60

AUTHORS: Kitayev, Yu. P., Budnikov, G. K., Arbuzov, A. Ye., Academician

TITLE: Polarographic Investigation of the Tautomerism of Some Semi- and Thiosemicarbazones in Solutions

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 4, pp 818-821 (USSR)

ABSTRACT: As the problem of the structure and tautomerism of semi- and thiosemicarbazones has not yet been fully solved, the authors started with this article a systematic investigation of the structure and behavior of the representatives of this type of compounds. At first, the polarographic method was used. The semi- and thiosemicarbazones of acetone, methyl-ethyl ketone, acetaldehyde, propionaldehyde, cyclopentane, benzaldehyde, and acetophenone as well as the thiosemicarbazone of para- and isopropylbenzaldehyde were investigated by means of an LP-55 polarograph (Heyrovskiy system) with photographic recording of polarograms. The polarograms were recorded for buffer solutions of the above compounds with the pH-values 5.7, 7.3, 9.3 at 20° and a molar concentration of the semi- and thiosemicarbazones 5.10^{-4}-5.10^{-3}. A family of curves was obtained for every

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solution with a certain pH-value. The polarograms show the high similarity in the behavior and, consequently, in the structures of the individual compounds. Certain rules for the polarograms of the aliphatic aldehydes and ketones as well as of the alicyclic ketones of semi- and thiosemicarbazones were found in the change of polarograms (Fig 1); the waves with an $E_{1/2} \sim -1.4$ to -1.55 v first become smaller with the time; gr again, and finally disappear completely. The aliphatic and alicyclic oxo-compounds had - as they occur in two tautomeric forms - two waves at $E_{1/2} \sim -1.5$ v and $E_{1/2} \sim -1.1$ v. Comparative polarograms of the aqueous alcohol solutions of S-methylthiosemicarbazone were recorded which also show the two waves corresponding to the two tautomeric forms ($E_{1/2} \sim -0.8$ and ~ -1.15 v). An analysis of the polarograms led to the following results: All compounds investigated had ensemi- and enthiosemicarbazone structure in aqueous and aqueous-alcoholic solutions. There is no transition of the double bond from the azomethin group into the carbonyl group.

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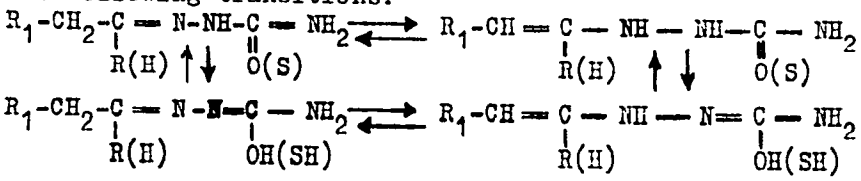
The polarograms of the benzalsemi- and acetophenonethiosemicarbazones again showed only one wave ($E_{1/2} \sim -1.15$)(Fig 3).

In the general case, the polarograms pointed to 4 possible tautomers of the semi- and thiosemicarbazones. They permit the following transitions:



There are 3 figures and 6 references, 4 of which are Soviet.

ASSOCIATION: Khimicheskiy institut im. A. Ye. Arbuzova Kazanskogo filiala Akademii nauk SSSR (Chemical Institute of the Kazan' Branch of the Academy of Sciences, USSR)

SUBMITTED: May 21, 1959

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

5(4) SOV/20-127-5-30/58

AUTHORS: Kitayev, Yu. P., Budnikov, G. K., Arbuzov, A. Ye., Academician

TITLE: The Polarographic Investigation of the Stereoisomeric Transformation of Some Semi- and Thiosemicarbazones in Solutions

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 5, pp 1041-1043 (USSR)

ABSTRACT: The authors point out that the stereoisomerism of semi- and thiosemicarbazones has not yet been sufficiently well investigated, and that there are many discrepancies in published data (Refs 2-4). Investigations were carried out of the semi- and thiosemicarbazones of methyl ketone, diethyl ketone, cyclopentanone, cyclohexanone, benzaldehyde, acetophenone, and thiosemicarbazone of p-isopropylbenzaldehyde in a 20% solution of methanol in water with pH = 5.7 under irradiation with ultraviolet light. The measurements were carried out by means of the photorecording polarograph LR-55. In the case of alicyclic aldehydes and ketones the stereoisomeric transformation of the corresponding semi- and thiosemicarbazones occurs easily. Under irradiation by ultraviolet light the polarogram shows a new wave with positive $E_{1/2}$. An exception is formed by the thiosemi-

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carbazone of cyclopentanone, which decays by irradiation. The production of the second wave, the height of which increases with the duration of the irradiation, is explained by the production of a labile form. In the case of cyclic derivatives isomerism is based on the cis- and trans-form with respect to the ring. In aromatic derivatives stereoisomerism may be explained by the group $\begin{matrix} R_1 \diagdown \\ R(H) \diagup \end{matrix} C{=}N{=}$.

Table 1 gives the measured potentials of the semiwaves of the stereoisomers and the transformation energies. Even though the polarographical data alone do not suffice for the purpose of explaining the structure of stereoisomers, they may, in conjunction with chemical and physical methods, nevertheless make a valuable contribution. The labile forms found will as a rule be the cis- (or syn-) forms, though there are exceptions. Therefore a further investigation of the structure of these stereoisomers is necessary. There are 2 figures, 1 table and 9 references, 7 of which are Soviet.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

SOV/20-127-5-30/58

The Polarographic Investigation of the Stereoisomeric Transformation of Some Semi- and Thiosemicarbazones in Solutions

ASSOCIATION: Khimicheskiy institut im. A. Ye. Arbuzova Kazanskogo filiala Akademii nauk SSSR (Chemical Institute imeni A. Ye. Arbuzov of the Kazan' Branch of the Academy of Sciences, USSR)

SUBMITTED: May 22, 1959

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; BUDNIKOV, G.K.; ARBUZOV, A.Ye.

Study of tautomerism and geometric isomerism of nitrogen- containing derivatives of carbonyl compounds. Report No.3: Polarographic study of some semi- and thiosemicarbazones in water-alcohol solutions. Izv. AN SSSR.Otd.khim.nauk no.5:824-831 My '61. (MIRA 14:5)

1. Khimicheskiy institut im. A.Ye.Arbuzova Kazanskogo filiala Akademii nauk SSSR.
(Semicarbzaones) (Polarography)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

TOROPOVA, V.F.; KITAYEV, Yu.P.; BUDNIKOV, G.K.

Complex compounds of mercury and silver with acetone thiosemicarbazone. Zhur. neorg. khim. 6 no.3:647-652 Mr '61. (MIRA 14:3)

1. Kazanskiy gosudarstvennyy universitet imeni V. I. Ul'yanova-Lenina Kazanskiy filial AN SSSR.

(Mercury compounds)
(Silver compounds)
(Acetone)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; BUDNIKOV, G.K.; ARBUZOV, A.Ye.

Tautomerism and geometrical isomerism of nitrogen-containing carbonyl compounds. Report No.4: Polarographic study of transformations of some semi- and thiosemicarbazones in water - alcohol solutions. Izv. AN SSSR. Otd.khim.nauk no.7: 1222-1227 Jl '61. (MIRA 14:7)

1. Khimicheskiy institut im. A.Ye. Arbuzova Kazanskogo filiala Akademii nauk SSSR.

(Semicarbazones)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; BUDNIKOV, G.K.; ARBUZOV, A.Ye.

Study of tautomerism and geometrical isomerism of nitrogen-containing derivatives of carbonyl compounds. Report No.5: Polarographic study of semi- and thiosemicarbazones of aromatic aldehydes. Izv.AN SSSR.Otd.khim.nauk no.10:1772-1780 O '61. (MIRA 14:10)

1. Khimicheskiy institut im. A.Ye.Arbuzova Kazanskogo filiala AN SSSR.
(Semicarbazones) (Polarography)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; BUDNIKOV, G.K.; TROYEPOL'SKAYA, T.V.; ARBUZOV, A. Ye., akademik

Quantitative evaluation of the effect of substituents on the polarographic reduction of certain azomethine compounds. Dokl. AN SSSR 137 no.4:862-865 Ap '61. (MIRA 14:3)

1. Khimicheskiy institut im.A. Ye. Arbuzova Kazanskogo filiala AN SSSR.
(Schiff bases) (Hammett equation)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; BUDNIKOV, G.K.; SKREBKOVA, I.M.

Tautomerism and geometrical isomerism of nitrogen-containing derivatives of carbonyl compounds. Report No.6: Polarographic study of semicarbazones and thiosemicarbazones of some aliphatic and alicyclic ketones. Izv. AN SSSR Otd.khim.nauk no.2:244-252 F '62. (MIRA 15:2)

1. Khimicheskiy institut im. A.Ye.Arbuzova AN SSSR, Kazan'.
(Semicarbazones)
(Polarography)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; BUDNIKOV, G.K.; CHERNOVA, A.V.

Tautomerism and geometric isomerism of nitrogen-containing derivatives of carbonyl compounds. Report No.7: Ultraviolet spectra of some semi- and thiosemicarbazones. Izv.AN SSSR.Otd. khim.nauk no.7:1208-1213 Jl '62. (MIRA 15:7)

1. Khimicheskiy institut im. A.Ye.Arbuzova AN SSSR.
(Semicarbazones—Spectra)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; BUDNIKOV, G.K.

Color reaction of thiosemicarbazones with sodium nitroprusside.
Zav.lab. 28 no.7:806-807 '62. (MIRA 15:6)

1. Khimicheskiy institut Kazanskogo filiala AN SSSR.
(Semicarbazones) (Sodium nitroprusside)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; BUDNIKOV, G.K.

Use of polarography in organic chemistry. Usp.khim. 31 no.6: 670-709 Je '62. (MIRA 15:5)

1. Khimicheskiy institut imeni A.Ye. Arbuzova Kazanskogo filiala AN SSSR.
(Polarography) (Chemistry, Organic)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, G.K.; KITAYEV, Yu.P.

Oscillographic polarography of some semicarbazones and thiosemicarbazones. Zhur.ob.khim. 32 no.2:358-364 F '62. (MIRA 15:2)

1. Khimicheskiy institut imeni A.Ye. Arbuzova Kazanskogo filiala AN SSSR.

(Semicarbazones)
(Polarography)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

SHAGIDULLIN, R.R.; SATTAROVA, F.K.; BUDNIKOV, G.K.; KITAYEV, Yu.P.

Characteristic analytical features in infrared absorption spectra and in the structure of semi- and thiosemicarbazones, as well as of their mathylation products. Izv. AN SSSR, Ser. fiz. 26 no.10:1301-1303 O '62. (MIRA 15:10)

1. Khimicheskiy institut im. A.Ye.Arbuzova AN SSSR.
(Semicarbazones—Spectra)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAEV, I.P.; BUDNIKOV, G.K.

Utilization of polarography in organic chemistry. Analele chimie 18 no.1:120-166 Ja-Mr '63.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; BUDNIKOV, G.K.

Polarographic reduction of semicarbazones and thiosemicarbazones. Zhur. ob. khim. 33 no.5:1396-1403 My '63. (MIRA 16:6)

1. Khimicheskiy institut imeni A.Ye. Arbuzova AN SSSR.
(Semicarbazones) (Polarography)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; BUDNIKOV, G.K.

Polarographic study of some benzohydrazides. Dokl. AN SSSR 154 no.6:1379-1381 F '64. (MIRA 17:2)

1. Khimicheskiy institut im. A.Ye.Arbuzova AN SSSR. Predstavleno akademikom A.Ye.Arbuzovym.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

L 19607-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AP5003150 S/0020/64/158/002/0423/0426

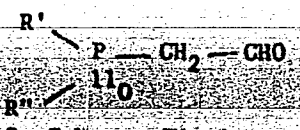
AUTHOR: Razumov, A. I.; Savicheva, G. A.; Budnikov, G. K.

TITLE: Polarographic behavior and structure of certain phosphorylated aldehydes in aqueous solutions

SOURCE: AN SSSR. Doklady, v. 158, no. 2, 1964, 423-426

TOPIC TAGS: aldehyde, polarography, phosphorus, aqueous solution

Abstract: The polargraphic reduction of phosphorylated aldehydes with the general formula



where R' = C_2H_5, C_2H_5O, C_6H_5, p-CH_3-C_6H_4, p-C_2H_5-C_6H_4, p-iso-C_3H_7-C_6H_4, p-Cl-C_6H_4; R'' = C_2H_5, C_2H_5O, was systematically studied for the first time. Their polarographic activity was due to the aldehyde group rather than the phosphoryl group. Two portions could be distinguished on the polarographic waves of aqueous solutions of the compounds studied: the portion of the curve of the base of the wave possessed the character of an

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adsorption prewave; in the middle pH region, as the concentration of the substance in solution was increased to $7 \cdot 10^{-3}$ mole/liter, the height of the reduction wave increased in proportion to the concentration, the height of the prewar decreasing. The temperature coefficient was 4-5% per degree. The value of the electroreduction current was determined by the equilibrium concentration of the free aldehyde form, the position of the equilibrium of the aldehyde form with the hydrated form in turn depending on the pH of the solution. The principle of linear free energy was used for a quantitative evaluation of the influence of substituents at the phosphorus atom on the reactivity of the aldehyde group; it was found that satisfactory correlation of the values of $E_{1/2}$ and the sum of the sigma constants of the substituents is observed only if the values of the Hammett constants are used, while if the constants of the substituents according to Taft and Kabachnik are used, no such pattern is manifested. Orig. art. has 2 formulas, 4 graphs, and 1 table.

ASSOCIATION: Kazanskiy khimiko-tekhnologicheskiy institut im. S. M. Kirova (Kazan Chemical Engineering Institute); Khimicheskiy institut im. A. Ye. Arbuzova Akademii nauk SSSR (Chemical Institute, Academy of Sciences, SSSR)

SUBMITTED: 15Apr64 ENCL: 00 SUB CODE: OC, OP

NO REF SOV: 007 OTHER: 004 JPRS

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

SHAGIDULLIN, R.R.; SATTAROVA, F.K.; RAYEVSKIY, O.A.; BUDNIKOV, G.K.; KITAYEV, Yu.P.

Infrared absorption spectra of semi and thiosemicarbazones of the aldehyde and ketone series. Izv. AN SSSR, Ser. khim. no.6:960-965 Je '64. (MIRA 17:11)

1. Khimicheskiy institut im. A.Ye. Arbuzova AN SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; BUDNIKOV, G.K.

Tautomerism and geometrical isomerism of nitrogen-containing derivatives of carbonyl compounds. Report No.12: Polaroghraphic study of semi and thiosemicarbazones of aliphatic aldehydes. Izv. AN SSSR. Ser. khim. no.6:978-984 Je '64.

(MIRA 17:11)

1. Khimicheskiy institut im. A.Ye. Arbuzova AN SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, G.K.

Oscillographic polarography in organic chemistry. Usp. khim. 33 no.11:1371-1406 N '64. (MIRA 17:12)

1. Khimicheskiy institut A.Ye. Arbuzova AN SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

RAZUMOV, A.I.; SAVICHEVA, G.A.; BUDNIKOV, G.K.

Polarographic behavior and structure of some phosphorylated aldehydes in aqueous solutions. Dokl. AN SSSR 158 no.2:423-426 S '64. (MIRA 17:10)

1. Kazanskiy khimiko-tekhnologicheskiy institut im. S.M.Kirova i Khimicheskiy institut im. A.Ye.Arbuzova AN SSSR. Predstavleno akademikom A.Ye.Arbuzovym.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, G.K.; KAL'VODA, R. [Kalvoda, R.]

Electrochemical behavior of secondary butyl alcohol at the surface of a mercury cathode. Zhur. ob. khim. 35 no.7:1131-1133 Jl '65. (MIRA 18:8)

1. Khimicheskiy institut imeni A.Ye. Arbuzova AN SSSR i Polyarograficheskiy institut Chekhoslovatskoy Akademii nauk, Praga.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

[illegible], [illegible], [illegible], [illegible]; [illegible], [illegible]

Reactivity of [illegible] carbonyl [illegible] in [illegible] compounds. Part 1: Polarographic [illegible] of phosphorylated [illegible] in aqueous solutions. Zhur. ob. khim. 35 no.8:1454-1460 Ag '65. (MIRA 18:[illegible])

[illegible] Kazanskiy khimik-[illegible] [illegible] Kirova i Khimicheskiy [illegible] [illegible] [illegible] SSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

VYASELEV, M.R.; BUDNIKOV, G.K.; KITAYEV, Yu.P.

Possibility of determining microquantities of organic compounds during their adsorption by using an oscillographic method with stepped polarization voltage. Dokl. AN SSSR 162 no.2:331-334 My '65. (MIRA 18:5)

1. Kazanskiy aviatsionnyy institut. Submitted October 8, 1964.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

Budnikov, G. K.

CZECHOSLOVAKIA

KITAEV, IU. P.; BUDNIKOV, G. K.

A. E. Arbuzov Institute of Chemistry (Khimicheskii institut im. A. E. Arbuzova), Academy of Sciences of the USSR (AN SSSR [Akademiia Nauk SSSR]), Kazan' (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 12, Dec 1965, pp 4178-4183

"Polarographic reduction of some diaziridines."

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

KITAYEV, Yu.P.; [illegible], G.K.; [illegible], T.V.

Maxima on the polarographic curves of some nitrogen-containing derivatives of carbonyl compounds. Izv. AN SSSR. Ser.khim. no.1:180-183 '66. (MIRA 19:1)

1. Khimicheskiy institut im. A.Ye.Arbuzova AN SSSR. Submitted April 27, 1965.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

L 29278-66 -EWP(j)/EWT(1)/EWT(m) RM/RO SOURCE CODE: UR/0079/65/035/008/1454/1460

32
B

ACC NR: AP6019320

AUTHOR: Razumov, A. I.; Savicheva, G. A.; Budnikov, G. K.

ORG: Kazan' Chemico-Technological Institute im. S. M. Kirov (Kazanskiy khimiko-tekhnologicheskiy institut); Chemical Institute im. A. Ye. Arbuzov, AN SSSR (Khimicheskiy institut AN SSSR)

TITLE: Reactivity of organophosphorus compounds containing carbonyl groups. I. Polarographic study of phosphorylated aldehydes in aqueous solutions

SOURCE: Zhurnal obshchey khimii, v. 35, no. 8, 1965, 1454-1460

TOPIC TAGS: organic phosphorus compound, polarographic analysis, aldehyde, aqueous solution

ABSTRACT: The polarographic behavior of compounds $RR'P(O)CH_2CHO$ (R = Et, EtO, Ph, p-MeC_6H_4, p-EtC_6H_4, p-iso-PrC_6H_4, p-ClC_6H_4; R' = Et, EtO) and $RR'P(O)CH_2CH_2CHO$ (R = Et, EtO, Ph, p-MeC_6H_4, pClC_6H_4; r' = EtO) in aqueous solutions was studied. The half-wave potentials - $E_{\frac{1}{2}}$ for both types of aldehyde increased in an approximately linear relation with increasing values of $-\Sigma\sigma_n$ for the substituents, when these values were calculated according to Hammett. No such relation was found when values of σ calculated according to Taft or Kabachnik were used. The behavior

UDC: 543.253:547.448.1

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of the aldehydes with respect to polarographic reduction indicated that the aldehydes in solution were in equilibrium with a protonized hydrated form and with an enol form, the equilibrium between the various forms depending on the pH of the solution. Orig. art. has: 6 figures, 1 formula, and 1 table. [JPRS]

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CHIRKOV, N.A.; BUDNIKOV, I.D.; MEDVEDEV, A.P.; RISPEL', E.N.

Production of 5KhNV steel with the use of silicothermic and complex tungsten-containing briquets. Stal' 25 no.3:228-230 Mr '65. (MIRA 18:4)

1. Chelyabinskiy nauchno-issledovatel'skiy institut metallurgii i Chelyabinskiy stankostroitel'nyy zavod.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, I.V.

BUDNIKOV, I.V., professor.

Increasing the carding capacity of a carding frame. Tekst.prom. 14 no.12:11-13 D'54. (MLRA 8:2)
(Carding machines)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

ZOTIKOV, V.Ye., prof., doktor.tekhn.nauk; BUDNIKOV, I.V.; TRYKOV, P.P.; GINZBURG, L.N., retsenzent; KARPOV, L.I., retsenzent; ORLOVA, Z.M., retsenzent; TALEPOROVSKAYA, V.V., retsenzent; FINKEL'SHTEYN, I.I., retsenzent; KOPELEVICH, Ye.I., red.; SHAPENKOVA, T.A., tekhn.red.

[Fundamentals of the spinning of fabrics] Osnovy priadeniia voloknistykh materialov. Pod red. V.E.Zotikova. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po legkoi promyshl., 1959. 506 p. (MIRA 12:11)

1. Kafedra pryadeniya khlopka Ivanovskogo tekhnologicheskogo instituta (IvTI) (for Karpov, Orlova, Taleporovskaya, Finkel'shteyn).
(Spinning)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, I.V.

Concerning A.I.Nikolaev's article. Standartizatsiia 24 no.2: 38-39 F '60. (MIRA 13:5)
(Wool--Grading)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

ZOTIKOV, Vladimir Yevgen'yevich, doktor tekhn. nauk, prof.; BUDNIKOV, Ivan Vasil'yevich; TYKOV, Petr Pavlovich; GORDEYEV, Vasiliy Aleksandrovich; DALIDOVICH, Aleksandr Semenovich; CHUGREYEVA, V.N., red.; BATYREVA, G.G., tekhn. red.

[Equipment and technology for the processing of fibrous materials] Mekhanicheskaia tekhnologiia voloknistykh materialov. Moskva, Gislegprom, 1963. 638 p. (MIRA 16:9)
(Textile industry) (Textile machinery)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, K.V.

BUDNIKOV, K.V.; MOSKALENKO, I.F.

[Training manual for the sailor] Uchebnoe posobie dlia matrosa morskogo flota. Izd.2., ispr. Moskva, Morskoi transport, 1951. 267 p. (MLRA 7:6)
(Merchant seamen--Handbooks, manuals, etc.)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, Konstantin Vasil'yevich; MOSKALENKO, Ivan Fedorovich; MINCHIN, Mark Aronovich; POLIN, Leonid Yevgen'yevich; BUKHANOVSKIY, I.L., redaktor; IVANOV, K.A., redaktor; TIKHONOVA, Ye.A., tekhnicheskiy redaktor

[Merchant seaman's manual] Uchebnoe posobie dlia matrosa morskogo flota. Izd.4-oe, ispr. i dop. Moskva, Izd-vo "Morskoi transport," 1955. 278 p. (MLRA 9:1)
(Merchant seamen--Handbooks, manuals, etc.)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

Welding + Flame-Cutting

Welded Tangential Cutters. A. V. Sokolov and N. E. Rodnikov. (*Avtog. Delo*, 1949, No. 7, 24-26). [In Russian]. The effect of pressure during the flash-welding of high-speed and other steels to form cutter blanks, and the effect of their subsequent heat-treatment on the properties of the joint are described.—S. K.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, M.S., kand.tekhn.nauk, dots.

Modular planning in the construction industry. Stroi.prom. 27 no.11:19-22 N '49. (MIRA 13:2)
(Assembly-line methods)
(Building--Tables, calculations, etc.)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, M. S.

Practice of the assembly-line construction according to new methods Kyiv, Vyd-vo Akademii arkhitektury Ukr. RSR, 1951. 172 p. (54-33027)

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

Budnikov, M.S.

BUDNIKOV, M.S., kandidat tekhnicheskikh nauk; NEDAVNIY, P.I., inzhener.

Continuous specialized work team method of housing construction. Gor.khoz. Mosk. 25 no.7:15-19 Jl '51. (MLRA 6:11)

1. Budnikov, M.S., chlen-korrespondent Akademii arkhitektury SSSR.
(Building) (Dwellings)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, M.S., doktor tekhnicheskikh nauk professor, redaktor; TUROVSKIY, B., redaktor; GARSHANOV, A., tekhnicheskiy redaktor.

[Specifications for mass-produced apartment] Tekhnologicheskee proektirovanie pri vozvedenii seriinykh zhilykh domov. Pod red. M.S.Budnikova. Kiev, Izd-vo Akademii arkhitektury USSR, 1955. 153 p.(MIRA 9:5)

1.Akademiya arkhitektury USSR. Nauchno-issledovatel'skiy institut stroitel'noy tekhniki.
(Apartment houses)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, M.S.

BUDNIKOV, M.S., doktor tekhnicheskikh nauk, professor, redaktor; ROKHLIN, I.A., redaktor; ZELENKOVA, Ye., tekhnicheskiy redaktor

[Innovations in construction methods; panel-built apartment houses. A collection of articles] Novoe v stroitel'noi tekhnike; panel'nye zhilye doma. Sbornik statei pod red. M.S. Budnikova, Kiev 1955. 156 p. (MLRA 8:8)

1. Chlen-korrespondent Akademii arkhitektury Ukrainskoy SSR (for Budnikov) 2. Akademiya arkhitektury URSR, Kiev. Otdeleniye stroitel'nykh nauk.
(Apartment houses) (Buildings, Prefabricated)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, M.S., prof.; KLINDUKH, A.M., kand.tekhn.nauk; NEDAVNIY, P.I., kand. tekhn.nauk; KASPIN, L.A., kand.tekhn.nauk

Standardization in planning the technology and organization of mass housing construction. Nov.v stroi.tekh. no.10:5-39 '57. (MIRA 10:12)

(Building)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

SMIRNOV, Nikolay Aleksandrovich; BUDNIKOV, M.S., prof., doktor tekhn. nauk, retsenzent; KOZLOVSKIY, V.M., inzh., nauchnyy red.; KAPLAN, M.Ya., red.izd-va; PUL'KINA, Ye.A., tekhn.red.

[Technology of building] Tekhnologiia stroitel'nogo proizvodstva. Leningrad, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1959. 376 p. (MIRA 13:3)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Budnikov).
(Construction industry)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, Mikhail Sergeyevich, doktor tekhn. nauk, prof.; CHECHIK, Aron Abramovich, kand. tekhn. nauk, dots.; OBOZNYY, Aleksey Pavlovich, kand. tekhn. nauk, dots.; PETRENKO, Grigoriy Mikhaylovich, dots.; AL'PEROVICH, Semen Zinov'yevich, kand. tekhn. nauk, dots.; KHAZAN, Moisey Yakovlevich, kand. tekhn. nauk, dots.; REZNICHENKO, I.Ye., red.; NARINSKAYA, A.L., tekhn. red.

[Building techniques] Tekhnologiia stroitel'nykh protsessov. Kiev, Gos. izd-vo lit-ry po stroit. i arkhit. USSR, 1961. 487 p. (MIRA 14:12)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Budnikov).

(Building)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, Mikhail Sergeyevich, doktor tekhn. nauk, prof.; NEDAVNIY, Pavel Il'ich, kand. tekhn. nauk; RYBAL'SKIY, Viktor Isayevich, kand. tekhn. nauk; REZNICHENKO, I.Ye., red.; IPATEVA, S.A., tekhn. red.

[Principles of aaembly-line methods in construction] Osnovy potochnogo stroitel'stva. Pod red. M.S.Budnikova. Kiev, Gos. izd-vo lit-ry po stroit. i arkhit. USSR, 1961. 413 p. (MIRA 15:3)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Budnikov).

(Construction industry)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, Mikhail Sergeyevich, doktor tekhn. nauk, prof.;
OBOZNYY, Aleksey Pavlovich, kand. tekhn. nauk, dots.;
VISHNEVYY, V., red.

[Technology and organization of the erection of buildings and structures] Tekhnologiia i organizatsiia vozvedeniia zdanii i sooruzhenii. Kiev, Budivel'nyk, 1964. 303 p. (MIRA 17:6)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

SLIPCHENKO, P.S., glav. red.; KUCHERENKO, K.R., red.; FILONENKO, K.I., red.; LESNAYA, A.A., red.; ABYZOV, A.G., red.; BUDNIKOV, M.S., red.; VETROV, Yu.A., red.; GLADKIY, V.I., red.; GOLOSOV, V.A., red.; IZMAYLOV, V.G., red.; KANYUKA, N.S., red.; KAIPOV, E.A., red.; KLINDUKH, A.M., red.; KUSHNAREV, N.Ye., red.; LUYK, A.I., kand. tekhn. nauk, red.; NEMENKO, L.A., red.; RYBAL'SKIY, V.I., red.; SITNIK, I.P., red.; FEDOSENKO, N.M., red.; FILAKHTOV, A.L., kand. tekhn. nauk, red.; KHILOBOCHENKO, K.S., red.; VORONKOVA, L.V., red.; KIYANICHENKO, N.S., red.

[Construction industry: technology and mechanization of the construction industry; the economics and organization of construction] Stroitel'noe proizvodstvo: tekhnologiia i mekhanizatsiia stroitel'nogo proizvodstva; ekonomika i organizatsiia stroitel'stva. Kiev, Budivel'nyk, 1965. 180 p. (MIRA 18:4)

1. Nauchno-issledovatel'skiy institut stroitel'nogo proizvodstva. 2. Nauchno-issledovatel'skiy institut stroitel'nogo proizvodstva (for Luyk, Filakhtov).

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BLINNIKOV, I.; BUDNIKOV, N.

Conference on prospecting methods. Geol. nefti i gaza 5 no. 5:61-64 My '61. (MIRA 14:4)

(Prospecting)

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VASIL'YEV, V.G.; MERZLENKO, Yu.F.; MATSKEVICH, M.M.; ZHIVAGO, N.V.; LI CHZHAO-ZHEN' [Li Chao-Jên]; GOLYAKOV, V.A.; SHABATIN, I.V.; BORISENKO, Ye.M.; MIROSHNIKOV, M.V.; USPENSKAYA, N.Yu.; KHEL'KVIST, V.G.; GRATSIANOVA, O.P.; BUDNIKOV, N.B.; BELOV, K.A.; MAKSIMOV, S.P.

Discussion. Trudy VNIGNI no.32:282-336 '60. (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza (for Vasil'yev, Zhivago, Khel'kvist). 2. Neftepromyslovoye upravleniye Stavropol'neft' (for Merzlenko). 3. Groznenskiy nauchnoissledovatel'skiy neftyanoy institut (for Matskevich). 4. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. I.M. Gubkina (for Li Chzhao-zhen', Uspenskaya). 5. Stavropol'skiy filial Groznenskogo nauchnoissledovatel'skogo neftyanogo instituta (for Golyakov, Shabatin, Borisenko, Miroshnikov). 6. Ministerstvo geologii i okhrany nedr SSSR (for Gratsianova, Budnikov). 7. Glavnyy geolog neftyanogo i gazovogo upravleniya Stavropol'skogo sovnarkhoza (for Belov).

(Caucasus, Northern—Petroleum geology)
(Caucasus, Northern—Gas, Natural—Geology)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, N.I., inzh.

Optimum control of electric drives of mine hoisting machines. Izv.vys.ucheb.zav.; gor.zhur. 8 no.11: 130-134 '65.

(MIRA 19:1)

1. Krivorozhskiy gornorudnyy institut. Rekomendovana kafedroy osnov elektrotekhniki i elektricheskikh mashin. Submitted July 8, 1965.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BURN[illegible]

[illegible] and gas prospecting in the U.S.S.R.; basic results for 1964 and problems for [illegible]. Geol. nefti i gaza 9 no.4:1-10 Ap '65. (MIRA 18:8)

1. Gosudarstvennyy geologicheskiy komitet SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

LUGOV, S.F.; BUDNIKOV, N.P.; TYZHNOV, A.V.

Some results of the scientific technological conference on methods of prospecting for mineral deposits. Sov. geol. 4 no.4:149-157 Ap '61. (MIRA 14:5)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Prospecting--Congresses)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, N.P.; BUYALOV, N.I.; VASIL'YEV, V.G.; KORNEV, B.V.

Present status of methods for rating oil and gas test wells in the U.S.S.R. and means for improving them. Geol. nefti i gaza 5 no.7:1-7 Jl '61. (MIRA 14:9)

1. Ministerstvo geologii i okhrany nedr SSSR, Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut i Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza.

(Petroleum geology) (Gas, Natural—Geology)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

LARIN, M.N., prof., doktor tekhn.nauk; KRASIL'NIKOV, I.M.; TSYGANOVA, M.P.; AKIMOV, A.V., kand.tekhn.nauk; BUDNIKOV, N.Ye., inzh.; PETROSYAN, L.K., kand.tekhn.nauk; DIBNER, L.G., inzh.; SILAYEVA, I.D., inzh.; MAGAZINER, Z.G., kand.tekhn.nauk; UVAROVA, A.F., tekhn.red.

[Cutting tools designed for high production and their efficient operation] Vysokoproizvoditel'nye konstruktsii reztsov i ikh ratsional'naia ekspluatatsiia. Pod red. M.N.Larina. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 239 p. (MIRA 12:6)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut. 2. Sotrudniki Vsesoyuznogo nauchno-issledovatel'skogo instrumental'nogo instituta (for all except Uvarova).

(Metal-cutting tools)

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BUDNIKOV, N V

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PHASE I BOOK EXPLOITATION SOV/5581

Moscow. Dom nauchno-tekhnicheskoy propagandy.

Vysokoproizvoditel'nyy rezhushchiy instrument [sbornik] (Highly Productive Cutting Tools; Collection of Articles) Moscow, Mashgiz, 1961. 354 p. Errata slip inserted. 10,000 copies printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR. Moskovskiy dom nauchno-tekhnicheskoy propagandy imeni F. E. Dzerzhinskogo.

Ed. (Title page): N. S. Degtyarenko, Candidate of Technical Sciences; Ed. of Publishing House: I. I. Lesnichenko; Tech. Ed.: Z. I. Chernova; Managing Ed. for Literature on Cold Treatment of Metals and Machine-Tool Making: V. V. Rzhavinskiy, Engineer.

PURPOSE : This collection of articles is intended for technical personnel of machine, instrument, and tool plants.

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Highly Productive Cutting Tools (Cont.) SOV/5581

COVERAGE: The collection contains information on the following: new brands of high-speed steels and hard alloys; designs of built-up tools and tools for the machining of holes; tools for machining heat-resisting and light-metal alloys and plastics; tools for unit-head machines and automatic production lines; and methods for the sharpening and maintenance of carbide-tipped tools. No personalities are mentioned. There are 56 references, mostly Soviet. References accompany some of the articles.

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I. NEW BRANDS OF HIGH-SPEED STEELS AND HEAD ALLOYS

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

Ryvkin, G. M. Tools for Automatic Production 222

V. TECHNIQUE OF MAKING AND BRAZING CARBIDE TOOLS

Ivensen, V. A. Production of Small-Size Shaped Carbide Tools From Plasticized Blanks 265

Anan'ina, G. S. [Engineer]. Making Small-Size Carbide Milling Cutters 273

Budnikov, N. Ye. Rational Methods in Brazing Carbide-Tipped Tools 281

VI. TOOL-SHARPENING METHODS

Degtyarenko, N. S. [Candidate of Technical Sciences]. Sharpening of Cutting Tools [Made] of High-Speed Steel 303

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29913
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D041/D113

12400

AUTHOR: Budnikov, N.Ye., Engineer

TITLE: New heat-resistant tool brazing solders and their fluxes

SOURCE: Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu. Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut. Moscow, Mashgiz, 1961, Novaya tekhnologiya izgotovleniya instrumenta, p. 75

TEXT: The author discusses the results of experimental investigations conducted to find new heat-resistant brazing alloys and the corresponding fluxes. Copper and brass have been widely applied for brazing tools with hard-alloy plates in cases where the tools were not subjected to heavy loads and high temperatures (300-500°C). Above 300-500°C, brass and copper are inadequate for this purpose. In order to raise the mechanical and technological properties, small quantities of nickel, manganese, aluminum, silicon, etc were added to copper and brass. Investigations of binary alloys conducted f

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D041/D113

New heat-resistant tool ...

flux compositions were developed at VNII, the first-mentioned being the most active: (1) borax (69-73.2%), boric acid (21-21.8%), calcium fluoride (5-10%); (2) borax (62.5-73.2%), boric acid (19.6-21.8%), sodium fluoride (5-15%); and (3) borax (61.4%), boric acid (18.6%), and potassium fluoride (20%). [Abstracter's note: in the conclusions, the first brazing alloy is said to contain 0.5-0.6% Al while in the text the Al content is given as 0.5-1.0%; the second brazing alloy is said to contain 62-64% Cu, while in the text the Cu content is given as 62-68%].

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PODGURSKIY, G.V.; PODOSENOVA, N.A.; ROSLAVLEV, V.G.; MIRINA, L.G.; BUDNIKOV, N.Ye.; GARASHCHENKO, A.P.; LUNEVA, Z.S.; PETROSYAN, L.K.; GAMOVA, L.S.; DEGTYARENKO, N.S., kand. tekhn. nauk, red.; LESNICHENKO, I.I., red. izd-va; CHERNOVA, Z.I., tekhn. red.

[Technological processes in manufacturing metal-cutting tools] Tekhnologiia izgotovleniia reztsov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 79 p. (MIRA 14:10)
(Metal-cutting tools)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

LARIN, M.N., doktor tekhn.nauk, prof.; TSYGANOVA, M.P., inzh.; TAMBOVTSEV, S.S., kand. tekhn. nauk; MITYAKOV, A.V., inzh.; PETROSYAN, L.K., kand. tekhn. nauk; CHERNOUSENKO, A.P., inzh.; BUDNIKOV, N.Ye., inzh.; MARTYNOV, A.D., kand. tekhn. nauk; IVANOVA, N.A., red. izd-va; GORDEYEVA, L.P., tekhn. red.

[High-production designs of form cutters and their efficient use] Vysokoproizvoditel'nye konstruktsii fasonnykh frez i ikh ratsional'naia ekspluatatsiia. Pod red. M.N.Larina. Moskva, Mashgiz, 1961. 174 p. (MIRA 14:12)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut. 2. Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut, Moscow (for all except Ivanova, Gordeyeva)

(Metal-cutting tools)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

S/123/62/000/002/006/012
A004/A101

AUTHOR: Budnikov, N. Ye.

TITLE: New heat-resistant tool solders and fluxes

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 2, 1962, 31, abstract 2B133 (V sb. "Novaya tekhnol. izgotovleniya instrumenta", no. 2, Moscow, Mashgiz, 1961, 70-75)

TEXT: The author presents the results of investigations concerning the selection of compositions of heat-resistant tool solders and fluxes. Copper and brass used as solder for the soldering of tools fitted with sintered carbide bits ensure a durable joint only in that case, if the tool is heated in the working process up to 300 - 500°C. If the tools are heated up to 450°C, the soldering strength is reduced by a factor of 4. The author recommends two new solder compositions for the soldering of tools with sintered carbide bits (% by weight): 1) 0.5 - 6 Al, 3 - 4 Ni, 1.5 - 2 Mn, 0.1 - 0.2 Si, the rest being copper. The solder fusion temperature is 1,020 - 1,030°C, the tensile strength limit is 24 - 26 kg/mm^2. 2) 62 - 64 Cu, 3 - 4 Ni, 1.5 - 2 Mn, up to 0.1 Si, the rest being zinc. The solder fusion temperature is 830 - 900°C, the tensile strength

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limit amounts to 26 - 30 kg/mm^2. If, instead of silicon, 0.1 - 0.15% Ti is added to the first compound, it can be used for soldering the high-titanium T30K4 sintered carbide. The use of borax and boracic acid as flux for soldering tools with sintered carbide bits does not ensure complete dissolving of high-temperature oxides in sintered carbides. To ensure the active properties of borax and boracic acid, the author recommends to add to their eutectic composition 5 - 10% calcium fluoride or 5 - 15% sodium fluoride or up to 20% potassium phosphide. The use of the mentioned solder compositions and fluxes increases the strength of soldered joints of tools by 20 - 30% both at normal temperatures and at 450 - 500°C. There is 1 figure.

I. Zorokhovich

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, N.Ye., inzh.

New heat-resistant solder and fluxes for soldering cutting tools. Nov.tekh.izg.instr. no.2:70-75 '61. (MIRA 15:8)
(Solder and soldering)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, N.Ye.

Use of briquetted solder for soldering hard-alloy cutting tools. Stan. i instru. 36 no.1:39-40 Ja '65. (MIRA 18:4)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, O. K. Jan 1948

USSR/Metals
Precipitants
Solutions

"Theory of the Precipitation of Metals from Solutions by Metallic Precipitants"
I. N. Plaskin, Corr Mem, Acad Sci USSR; N. A. Suvorovskaya, O. K. Budnikov,
Moscow Inst Nonferrous Metals and Gold imeni M. I. Kalinin, 8 pp

"Izv Akad Nauk SSSR, Otdel Tekh Nauk" No 1

Speed of precipitation of one metal by another can be determined not only be duration of the relation, but on basis of state and dimensions of the surface of the precipitate, temperature, and composition of the solution. Studies conducted on basis of related displacement of metals regarding qualitiative study of the process and study of kinetics and mechanics of the reaction. Published, 6 May 1947

PA 43/43T74

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

PA/48/49T32

BUDNIKOV, O. P.

USSR/Engineering Mar 49
Building Materials
Cement

"Problem of Increasing the Water Resistance of 'Gazha' Materials," P. P. Budnikov, O. P. Mchedlov-Petrosyan, 5 pp

"Zhur Priklad Khim" Vol XXII, No 3

Raw "gazha" when mixed with clay or similar bonding agent has high resistance to water. Heat treatment of this substance produces a substance almost impervious to water. It has been used successfully in manufacture of a

48/49T32

USSR/Engineering (Contd) Mar 49

"gazha" cement composed of clay, gypsum and small quantities of "gazha". A 50% mixture of gypsum and "gazha" was stored for 8 years in its combined form and when used still had excellent water resistant and mechanical qualities. Submitted 5 Apr 48.

48/49T32

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EARLIER PUBLICATIONS FOR THIS AUTHOR ARE AVAILABLE IN THE INACTIVE FILE -- WE WILL PULL THEM UPON REQUEST.

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L 12059-66 EWP(e)/EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) JD/JG/AT/WH
ACC NR: AP6001301 SOURCE CODE: UR/0363/65/001/008/1349/1353

AUTHOR: Budnikov, P. P.; Matveyev, M. A.; Yanovskiy, V. K.; Kharitonov, F. Ya.

ORG: Moscow Chemical Engineering Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

TITLE: Sintering and accumulative recrystallization of spectroscopically pure magnesium oxide containing hafnium dioxide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 8, 1965, 1349-1353

TOPIC TAGS: magnesium oxide, crystallization, hafnium oxide, sintering

ABSTRACT: Accumulative recrystallization was studied in its purest form, i.e., during sintering of high-purity oxide, when no liquid phase or inclusions of other phases are present, and the quantity of impurities and defects due to deviations from stoichiometry caused by interaction with the ambient gaseous medium does not exceed the concentration of inherent thermal defects of the oxide lattice. These conditions are fulfilled in the case of spectroscopically pure MgO and its mixtures with small and precisely known quantities of

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certain cations, for example, hafnium (0.25% HfO_2 was added). It is shown that the addition of hafnium considerably affects the course of both the sintering and the accumulative recrystallization. The latter and the compaction of the ceramic were found to be closely related. In order to obtain a very fine-grained but dense ceramic, the conditions of preparation and sintering of the samples should be such as to promote a decrease in the surface energy and in the gram-atomic volume of the single crystal of the original material. Orig. art. has: 5 figures and 11 formulas.

SUB CODE:11, 20 / SUBM DATE: 07Apr65 / ORIG REF: 006 / OTH REF: 004

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BUDNIKOV, P.P., akademik, red.; CHEREPANOV, A.M., kand.tekhn.nauk, red.; MANUYLOVA, G.M., red.; RYBKINA, V.P., tekhn.red.

[Ceramics and glass; translations] Keramika i steklo; sbornik perevodov. Moskva, Izd-vo inostr.lit-ry, 1960. 310 p. (MIRA 13:12)

1. AN USSR (for Budnikov).
(Glass) (Ceramics)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, Petr Petrovich, akademik, zasluzhennyy deyatel' nauki i tekhniki, trizhdy laureat Stalinskoy premii; KUKOLEV, G.V., prof., doktor tekhn.nauk, otv.red.; BEREZHNOY, A.S., red.; AVGUSTINIK, A.I., prof., red.; BUTT, Yu.M., prof., red.; MCHEDLOV-PETROSYAN, O.P., prof., red.; GINSTLING, A.M., prof., red.; SMELYANSKIY, I.S., prof., red.; ZNACHKO-YAVORSKIY, I.L., kand.tekhn.nauk, red.; ZHIKHAREVICH, S.A., kand.tekhn.nauk, red.; KRECH, E.I., kand.tekhn.nauk, red.; MATVEYEV, M.A., kand.tekhn.nauk, red.; ROYAK, S.M., kand. tekhn.nauk, red.; NEMCHENKO, Ye.M., red.izd-va; MARCHUK, G.T., red.izd-va; KADASHEVICH, O.A., tekhn.red.

[Selected works] Izbrannye trudy. Kiev, Izd-vo Akad.nauk USSR, 1960. 571 p. (MIRA 13:7)

1. AN USSR; chlen-korrespondent AN SSSR (for Budnikov). 2. Chlen-korrespondent AN USSR (for Berezhnoy).
(Silicates) (Ceramic materials) (Refractory materials)
(Binding materials)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, P.P., akademik; BELINSKAYA, G.V., kand.tekhn.nauk

Effect of iron oxides on certain properties of steatitic materials. (MIRA 13:1)
Trudy GIEKI no.4:47-56 '60.

1. Akademiya nauk USSR (for Budnikov).
(Ceramics) (Iron oxides)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, P.P., akademik; RODINA, N.P., kand.tekhn.nauk

Steatite on the basis of Shabrovskiy deposit talc. Trudy GIEKI no.4:56-64 '60. (MIRA 15:1)

1. Akademiya nauk USSR (for Budnikov).
(Shabrovskiy region--Talc)

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B015/B060

15.2100 also 2209

AUTHOR: Budnikov, P. P., Corresponding Member of the Academy of Sciences USSR

TITLE: Scientific Problems in the Chemistry and the Technology of Silicates

PERIODICAL: Silikattechnik, 1960, No. 10, pp. 450-453

TEXT: The author discusses the problems related to the chemistry and the technology of silicates and thoroughly describes new types of cements and hydrothermally hardening building materials. The progress achieved in the new technique, and particularly in the metallurgy of zirconium, titanium, beryllium, tantalum, niobium, as well as their alloys and also semiconductors and special ceramic products, has led to the production of new construction materials from highly refractory pure oxides of metals, carbides, nitrides, borides, sulfides of transition metals, silicides, cermets, etc. The modern technique has raised many problems in connection with the synthesis of minerals that must be

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Scientific Problems in the Chemistry and the Technology of Silicates

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stable at exceedingly high temperatures and in gas flows of supersonic velocities. The modern quantum theory of chemical bonds in the crystal lattice assumes that the thermal and mechanical stability of a number of synthetic materials be dependent to a large extent on the presence of a single, binary, or ternary system of covalent bonds. These covalent bonds are very important, e.g., in the synthetic refractories obtained from pure oxides for reactor construction. According to V. V. Tarasov, phenomena of covalent overlapping of wave functions, which are responsible for the effect of polymerization in inorganic high polymers, are of great importance for the development of semiconductor properties of the substance. This notion is a corollary to the hypotheses set up by Academician A. F. Ioffe, the Canadian researcher Peerson, and the Swiss physicist Mooser. Basically new methods based on the quantum thermodynamics of the crystal lattice of these substances have been developed for the investigation of inorganic polymers. Great importance is attached to theoretical and practical problems relative to the combination of ceramic and powder-metallurgical refractories with metals under various actions of the external medium. Special importance is further attached

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Scientific Problems in the Chemistry and the Technology of Silicates

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to the investigation of multicomponent ferrites, and also to a final clarification of the theory of sintering, with special regard of the mechanism of the diffusion of the substances during the sintering process. Research in the field of the physical chemistry of clays must be intensified. The widely known theory of clinker formation has a number of major defects, especially as regards the effect of the properties of the liquid phases on the various stages of clinker formation. It is necessary to work out a scientifically warranted technology of fast burning and rigorous cooling of cement clinker. It would also be necessary to study the interrelations existing between water and cement compounds, particularly at the beginning of hardening. The theoretical hypotheses on the "deleterious" or the "useful" part played by aluminates in the cement hardening process must be checked in time, since experiments have shown that these compounds may dissolve under real hardening conditions. Preparatory work for the production of cements with so-called microfillers must be pushed on energetically. Modern aviation and rocket engineering, radio engineering and optics, the technology of new synthetic materials, the chemical industry, and

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Scientific Problems in the Chemistry and the Technology of Silicates

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medicine demand of the glass industry the production of disparate glasses and products excelling by novel properties. Special importance is at present being attached to the basic improvement of the thermo-mechanical properties of glass, the brittleness of which must be reduced. As a new scientific and technical problem one may regard the synthesis of different glass-crystalline materials.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

BUDNIKOV, P.P.; BOGOMOLOV, B.N., inzh.

Interaction of forsterite refractories with Portland-cement clinkers of various chemical and mineralogical compositions. Trudy NIITSement no.13:80-93 '60. (MIRA 13:11)

1. Deystvitel'nyy chlen AN USSR (for Budnikov).
(Forsterite) (Portland cement)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

S/153/60/003/004/028/040/XX
B020/B054

AUTHORS: Budnikov, P. P., Bogomolov, B. N.

TITLE: Investigation of Forsterite Refractories After Use in the Sintering Zone of an Experimental Cement Kiln

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 4, pp. 707 - 714

TEXT: The authors studied the behavior of forsterite refractories in the sintering zone of a rotary cement kiln. The investigations were carried out at the pilot plant of the Nauchno-issledovatel'skiy institut tsementnoy promyshlennosti (Scientific Research Institute of the Cement Industry) on annealed and not annealed forsterite refractories of the "Magnezit" factory. The properties of the refractories are given in Table 1; refractoriness is more than 1850°C. The remaining furnace lining consisted of talc from the Shabrovskiy deposit. Table 2 shows the chemical composition of cement clinkers annealed in the kiln. Annealing was conducted for 93 hours at 8-10 hours nearly every day. Table 3

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Investigation of Forsterite Refractories After Use in the Sintering Zone of an Experimental Cement Kiln

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gives the chemical composition of forsterite refractories in the individual zones after use in the kiln, while Table 4 shows the properties of forsterite refractories in the individual zones after use. Fig.1 shows microphotographs of the structure of the individual zones of refractories after use, Figs. 2 and 3 X-ray pictures of the individual zones of annealed and not annealed forsterites after use in the rotary kiln. The results obtained reveal that annealed forsterite refractories are suitable for the lining of sintering zones in rotary cement kilns, since their chemical stability, strength, and resistance to heat and wear meet the demands made on them. Not annealed forsterite refractories cannot be used in the cement industry because of the loss in strength in the respective zones, and a number of physicochemical properties. The most susceptible component of forsterite refractories is free periclase. The crystalline forsterite agglomerate, which is the basis for the structure of the refractories, is sufficiently heat-resistant and poorly reactive to the chemical effect of cement clinker components. Only in the contact layer of the refractory material with the clinker, the agglomerate is partly transformed into the vitreous

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Investigation of Forsterite Refractories After Use in the Sintering Zone of an Experimental Cement Kiln

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B020/B054

phase which, for its part, is refractory and favors the formation of thin, highly resistant lining layers. There are 3 figures, 4 tables, and 10 Soviet references.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva, kafedra obshchey tekhnologii silikatov (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev, Department of General Silicate Technology)

SUBMITTED: May 9, 1959

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310007-0

S/063/60/005/002/007/008/XX
A051/A029

AUTHOR: Budnikov, P. P., Academician of the AS UkrSSR

TITLE: Major Problems in the Field of Chemistry and Technology of Silicates

PERIODICAL: Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva im. D. I. Mendeleyeva, 1960, Vol. 5, No. 2, pp. 122-125

TEXT: The ferrous, non-ferrous and fuel industries require expansion of the assortment of refractory materials. Particular reference is made to the need for increasing the cement production up to 75-80 million tons by 1965, i. e., by 2.5 times compared to 1958. New construction materials were called for due to the introduction of new techniques, especially in the metallurgy of zirconium, titanium, beryllium, tantalum, niobium, etc., in semiconductors and special types of ceramics consisting of highly-refractory pure metal oxides, carbides, nitrides, borides, sulfides of transitional metals, silicides, ceramic metals, etc. Modern technology has brought forth a number of problems related to the synthesis of minerals which are stable in a gas flow of ultrasonic speed. The modern quantum theory of chemical bonds in crystal lattice states that the thermal and mechanical stability of a number of synthetic minerals depend on the presence of a continuous

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Major Problems in the Field of Chemistry and Technology of Silicates

one-, two- and three-dimensional system of covalent bonds. These covalent bonds play an important role in refractory materials synthesized on the base of pure oxides and required for the construction of reactors and rockets. V. V. Tarasov expressed the opinion that the effects of the covalent covering of wave functions, determining the effect of polymerization in inorganic high-polymers, play an important part in the occurrence of semiconductor properties of materials. These views are a further development of the stand taken by A. F. Ioffe et al. According to the author refractory oxides, semiconductors, oxygen-containing and, to a greater extent, oxygen-free glass, ferromagnetic ceramic materials, borophosphide and other new materials are classified as inorganic polymers. New methods for the investigation of these inorganic polymers have been developed based on the quantum thermodynamics of the crystal lattice of these substances. These methods amount to the investigation of the thermal capacity at low temperatures, the energy spectrum in the non-coherent scattering of certain particles, the paramagnetic electronic resonance, electronic spectra of selective absorption and paramagnetic susceptibility at low temperatures. The author further recommends that work be carried out on the synthesis and theory of ceramic ferro-electric materials and that of solid solutions with ferro-electric properties. Developing a theory on

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A051/A029

Major Problems in the Field of Chemistry and Technology of Silicates

ferro-electric phenomena would ensure the production of ferro-electric materials with given properties. Theories on the processes taking place in clinkering were developed. In this connection the work of Ya. I. Frenkel is mentioned. The scientific interest in the study of the physico-mechanical properties of oxides and, particularly, single crystals and their growth at high temperatures is emphasized. It is stressed, however, that this subject is insufficiently studied. There is no complete and accurate knowledge of the kinetics of the crystal growth process. The use of modern methods has facilitated, however, the study of the crystal surface up to fractions of molecular dimensions. The importance of devoting more attention to a deeper study of the recrystallization process is emphasized. In studying the binding processes of moisture in clays it is suggested that wide application be made of the method for determining the heats of moistening as a criterion of the water-binding degree. F. D. Ovcharenko is successfully developing this field of investigation. In developing the solidification theory and establishing methods for directing the processes, it is suggested that the main stress should be laid on the experimental study of structure formation in the cement-water system, developed under the supervision of P. A. Rebinder, and on the mechanism of structure formation of cement stone. The author suggests also con-

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Major Problems in the Field of Chemistry and Technology of Silicates

tinuing the study of the thermodynamics of the hydration processes of binding materials under ordinary and hydrothermal conditions, which was begun in the work of O. P. Mchedlov-Petrosyan and coworkers. The internal structure and properties of hydrosilicates of calcium and other compounds should be studied, using the work of N. V. Belov on the structure of complex hydrosilicates. The listed theoretical investigations and experiments of the various methods for processing mortars and concrete and also their laying and packing should help in the development of practical suggestions for accelerating the hardening of concrete to a few minutes only. It is also suggested that work be carried out on the calcination of a cement mixture in the suspended state and in a fluidized bed and on the calcination of cement at lowered temperatures. Methods for synthesizing new chemical and heat-resistant silicates can be found by the thermodynamic analysis method of solid-phase reaction in various silicate systems, but this method has been utilized only slightly. Little attention has also been paid to the study of the corresponding physico-chemical systems. Even the well-known state diagram of the Al_2O_3 - SiO_2 system is a matter of discussion. The principle disagreement in the views of various authors in this diagram is based on the fact that they prove

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A051/A029

Major Problems in the Field of Chemistry and Technology of Silicates

that mullite melts incongruently, whereas others find that the melting of mullite takes place without decomposition. Based on investigations a diagram has been published showing that mullite melts without decomposition, contrary to the views of Bowen, Graig, N. A. Toropov and F. Ya. Galakhov from the Institut khimii silikatov AS SSSR (Institute of Silicate Chemistry of the AS USSR). The further and systematic study of other diagrams, including multi-component systems, by various methods has great significance both for the plotting of new types of diagrams ("kinetic" diagrams), and for the formation of new materials with given properties. The following Soviet scientists: A. S. Berezhnoy, A. M. Ginstling, G. V. Kukolev, A. I. Avgustinik, et. al., and foreign scientists: Zavadskiy, Bretshneyder, (Poland), Barta, (Czechoslovakia), have contributed a great deal to the understanding of the reactions between solid substances and methods of regulating these reactions. Special interest is devoted to structural investigations of various new types of glass, scientific methods of regulating their properties; new, more effective thermal processes of glass melting, etc. Electric melting of glass and combined gas-electrical melting increases the output of the furnaces and improves the quality of the glass. More stable glass plastics should be obtained from improved glass fibers and plastics. Manufacture of glass fibers from the charge and from finished glass is recommended.

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