

ZOLOTAVIN, V.L., prof.; RESHETNIKOVA, Ye.A.; ILLIPENKO, A.T. (Kiyev);
SHCHERBOV, D.P. (Alma-Ata); POPOV, M.A.; NAZARCHUK, T.L.

Supplying laboratories with chemical reagents. Zav.lab. 26
no.8:1034-1036 '60. (MIRA 13:10)

1. Ural'skiy politekhnicheskiy institut, Sverdlovsk (for Reshetnikova). 2. Rukovoditel' metodicheskoy gruppy Tsentral'noy laboratorii Novosibirskogo geologicheskogo upravleniya (for Popov). 3. Zaveduyushchiy laboratoriyey khimicheskogo i fazovogo analiza Instituta metallokeramiki i spetsial'nykh splavov AN USSR (for Nazarchuk).

(Chemical laboratories) (Chemical tests and reagents)

SAMSONOV, G.V. [Samsonov, H.V.], glav. red.; PILIPENKO, A.T. [Pylypenko, A.T.], glav. red.; NAZARCHUK, T.M., glav. red.; REMENNIK, T.K., red.; SKLYAROVA, V.Ye. [Sklyarova, V.IE.], tekhn. red.

[Analysis of hard high-melting compounds] Analiz tverdykh tuhoplavkykh spoluk. Pod zahal'noiu red. H.V.Samsonova, A.T.Pylypenka i T.M.Nazarchuk. Kyiv, 1961. 195 p. (MIRA 14:9)

1. Akademiya nauk URSR, Kiev. Instytut metalokeramiky i spetsial'nykh splaviv.
(Carbides—Analysis) (Nitrides—Analysis) (Borides—Analysis)

S/078/61/006/002/010/017
0017/0058

AUTHORS: Pilipenko, A. T., Sereda, I. P.

TITLE: Study of Composition and Stability of the Colored Selenium Urea- and of the Thiourea Complex of Osmium

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 2, pp. 413 - 420

TEXT: The authors studied spectrophotometrically composition and stability of the selenium urea- and of the thiourea complex of osmium. Under the action of selenium urea on osmium compounds, osmium is first reduced to the trivalent form, which then forms a bluish-green complex with selenium urea. Fig. 1 shows the absorption spectrum of the reduction products of osmium with selenium urea and thiourea. The stabilities of the selenium urea- and of the thiourea complex of osmium were studied and compared. The authors studied the effect of the thiourea amount on the formation of the thiourea complex of osmium. Fig. 4 shows the effect of excess selenium urea on the formation of the colored selenium urea

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Study of Composition and Stability of the
Colored Selenium Urea- and of the Thiourea
Complex of Osmium

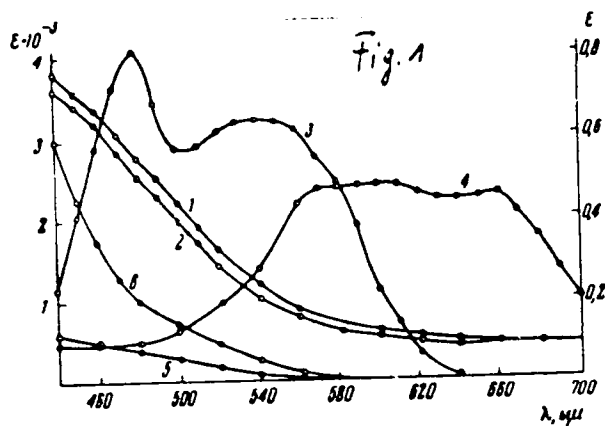
S/078/61/006/002/010/017
BC17/BC64

complex of osmium. The approximate value of the stability constant of the osmium selenium urea complex $K = 2 \cdot 10^{-3}$. Fig. 5 shows the effect of excess thiourea on the formation of the colored osmium thiourea complex. It was found that the optical density of the solutions increased with increasing thiourea concentration. The color of the thiourea complex of osmium is based on the addition of six molecules of thiourea to osmium. The stability constant of the osmium thiourea complex $K = 7.3 \cdot 10^{-3}$. L. A. Chugayev is mentioned. There are 6 figures, 3 tables, and 7 references: 5 Soviet, 2 US, and 1 French.

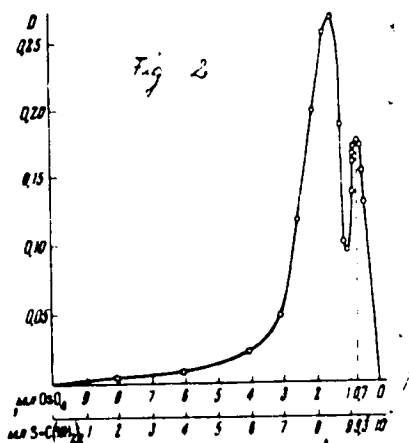
ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko,
Kafedra analyticheskoy khimii (Kiyev State University
imeni T. G. Shevchenko, Department of Analytical Chemistry)

SUBMITTED: October 30, 1959

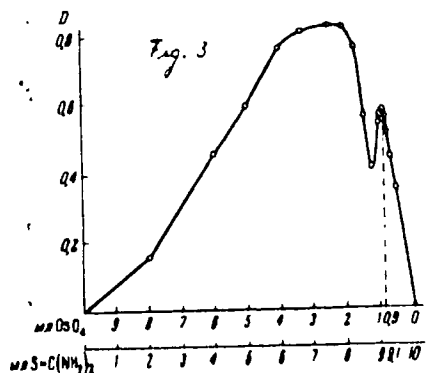
Card 2/5



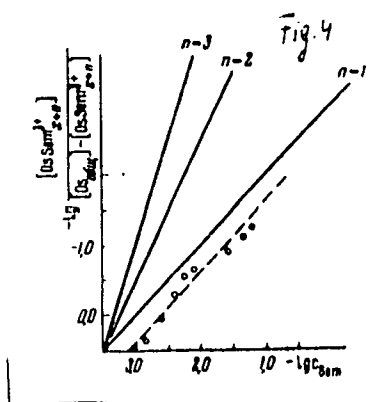
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B017/E054



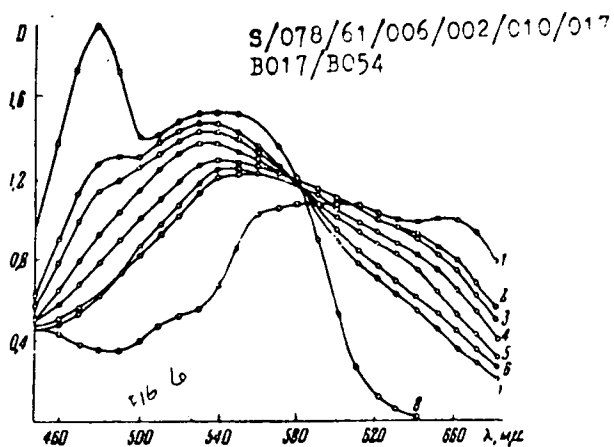
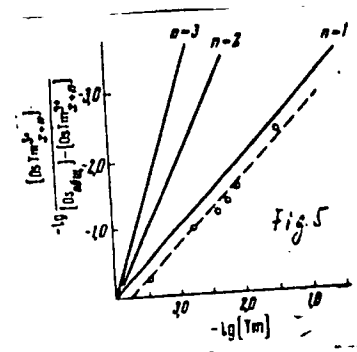
Card 3/5



S/078/61/006/002/01C/017
B017/B054



Card 4/5



Legend to Fig. 1: 1: product of reduction of Os^{VIII} by selenium urea, 2: product of reduction of Os^{VIII} by thiourea, 3: osmium thiourea complex, 4: osmium selenium urea complex, 5: thiourea, 6: selenium urea. Scale for 1 - 4 on the left-side ordinate, for 5 and 6 on the right-side one.

Card 5/5

PILIPENKO, A. T.

The Second All-Union Conference on the Preparation and Analysis of High-Purity Elements, held on 24-28 December 1963 at Gorky State University im. N. I. Lobachevskiy, was sponsored by the Institute of Chemistry of the Gorky State University, the Physicochemical and Technological Department for Inorganic Materials of the Academy of Sciences USSR, and the Gorky Section of the All-Union Chemical Society im. D. I. Mendeleev. The opening address was made by Academician N. M. Zhavoronkov. Some 90 papers were presented, among them the following:

A. T. Pilipenko and S. G. Pinayeva. Determination of $10^{-5}\%$ boron in silicon by extraction spectrophotometry.

Zhurnal Anal. Khim. 19 No. 6, 1964 (p. 777-79)

PILIPENKO, A.T.; KOSTYSHINA, A.P.; KUDRITSKAYA, L.N.

Use of thionalide in analysis. Part 1. Determination of the acid dissociation constant of thionalide and solubility products of thallium (I), silver, cadmium, and zinc thionates. Ukr. khim. zhur. 28 no.1:109-112 '62.

(MIRA 16:8)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.

PILIPENKO, A.T.; SEREDA, I.P.

Use of selenourea in analysis. Report No. 2: Photometric determination of ruthenium and osmium with the aid of selenourea without their separation. Composition and stability of the selenourea-ruthenium complex. Zhur. anal. khim. 16 no. 1:73-78 Ja-F '61. (MIRA 14:2)

1. T.G. Shevchenko Kiev State University.
(Urea) (Ruthenium--Analysis) (Osmium--Analysis)

PILIPENKO, A.T.; SEREDA, I.P.

Stability of a colored ruthenium complex with thiourea. Ukr.
khim. zhur. 27 no.2:257-260 61. (MIRA 14:3)

1. Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko,
kafedra analiticheskoy khimii.
(Ruthenium compounds)

PILIFENKO, A.T.: SEREDA, I.P.

Simultaneous determination of palladium and platinum by means of tin dichloride. Ukr. khim. zhur. 27 no.4:524-528 '61. (MIRA 14:7)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko,
kafedra analiticheskoy khimii.
(Palladium--Analysis) (Platinum--Analysis)

HELIFENKO, A.T. DANILIN, V.V.

Niobium and tantalum acetylacetonatothiocyanate complexes.
Zhur. neorg. khim. 1966, 13(12): 2301-2302. F 166. (MIRA 18.11)

1. Kiyevskiy gos. inzhenernyy universitet imeni Shevchenko.
Submitted April 21, 1966.

T 42099-66 ENT(m)/ENP(j)/T RM
ACC NR: AP6001462

SOURCE CODE: UR/0379/65/001/005/0701/0703

AUTHOR: Pilipenko, A. T.

ORG: none

TITLE: Anatoliy Kirillovich Babko--On his sixtieth birthday

SOURCE: Teoreticheskaya i eksperimental'naya khimiya, v. 1, no. 5, 1965, 701-703

TOPIC TAGS: complex molecule, chemical decomposition, chemical equilibrium, chemical stability, analytic chemistry, solution property, chemical personnel

ABSTRACT: Professor Anatoliy Kirillovich Babko, an outstanding Soviet chemist and Academician of the Academy of Sciences UkrSSR, celebrated on 15 October 1965 his sixtieth birthday and his fortieth year of scientific and pedagogical activity.

His field of activity is analytical chemistry and the chemistry of complexes. Babko has published over 300 scientific papers and has created his own scientific school; about 40 of his students graduated with the candidate's degree and several received the Ph. D. degree. After graduation in 1927 from Kiev Polytechnical Institute Babko was named assistant professor of analytical chemistry at the Institute under the direction of Professor N. A. Tananayev. In 1934 Babko transferred to Kiev State University to teach optical and electrochemical methods of analysis. In 1940 Babko successfully defended his Ph. D. thesis on aluminum alizarate and iron salicylate complexes. Babko began his studies of complex compounds in the early thirties when he showed that the complex formation in solutions is a stepwise process. This study and others of Babko's studies in the same field initiated the Soviet research effort in the chemistry of complex compounds in solution. Babko concentrated his on colored metal-organic complexes in solution, their application in photolorimetric analysis, and the theory of this analytical method. By apply the Kurnakov method of physico-chemical analysis to the study of complex formation in solution, Babko developed the theory of stepwise dissociation of complex components in

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ACC NR: AP6001462

solution and described the equilibrium conditions by means of triangular diagrams [2]. By analyzing sections of these diagrams, Babko defined the potential fields of application and limitations of various partial methods of determination of composition and stability of complexes [2]. Babko extended application of the physicochemical analysis to the study of multi-component systems in solution, such as metal ion-organic base-anion, e.g., titanium-diantipyrilmethane-thiocyanate [2].

Other subjects of his studies were: polymerization of high-valence metal ions (tantalum, niobium, zirconium) in solution; catalytic reactions in relation to complex formation, e.g., chemiluminescent reactions catalyzed by metallic cations; and chromatographic separation and subsequent spectrophotometric determination of the rare earth elements in a mixture. Babko also developed highly sensitive luminescence methods for determination of ultra-traces in high-purity compounds and a novel, rapid metal-indicator method of determination of the relative stability of complexes.

Babko's works were summarized in two monographs: *Kolorimetri-cheskiy analiz* (Photocolorimetric analysis), 1951, by A. K. Babko and A. T. Pilipenko and *Fiziko-khimicheskiy analiz kompleksnykh soyedin-eniy v rastvorakh* (Physicochemical analysis of complex compounds in solution), 1955, by A. K. Babko, and in a textbook *Kolichestvennyy analiz* (Quantitative analysis) by A. K. Babko and I. V. Pyatnitskiy.

Babko was awarded the Order of Lenin, the "Order of Merit", and the medal "For valiant labor in the great Patriotic War 1941-45."

Card 2/2 SUB CODE: 07/ SUBM DATE: none

PILIPENKO, A.T., prof., doctor khim. nauk

Aratolii Kirillovich Baber; 1905-; on his sixtieth birthday.
Teoret. i eksper. khim. i no. 5:201-203 S-0 165
(MIRA 1:1)

PILIPENKO, A.T.; SHP'AK, E.A.; BOYKO, Yu.P.

Determination of titanium in steels ores, and aluminum alloys by means
of N-furoylphenylhydroxylamine. Zav. lab. 31 no.2:141-154 '65.
(MIRA 18:7)

1. Kiyevskiy gosudarstvennyy universitet im T.G.Shevchenko.

... ..;, A.L. [Ilyayenko, A.T.];, A.L.
... .., H.L.]

... .. of microquantities of arsenic.
... .. (MIRA 1814)

1.

BABKO, A.K., FILIPENKO, A.T., ROZENFELD, A.L.

Determination of the microquantities of arsenic in alkaline
solutions. Zav. lab. 30 no.9;1060-1061 '64. MIRA 12 1

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenko.

PILIPENKO, A.I.; YEREMENKO, M.

Comparative characteristics of spectrophotometric methods for determining tantalum and niobium. Part 1: General criteria and inorganic reagents. Ukr.Khim.Zh. no.5:532-537. 1963.

Comparative characteristics of spectrophotometric methods for determining tantalum and niobium. Part 2: Use of organic reagents. 38-547. (Mik. 19:1)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.

ZHAROVSKIY, Fraim Grigor'yevich [Zharovs'kyi, F.H.]; PILLIPENKO,
Anatoliy Terent'yevich [Pylypenko, A.T.]; PYATNITSKIY,
Igor' Vladimirovich [P'iatnyts'kyi, I.V.]; KOVALENKO, M.Ya.,
red.; GORBUNOVA, N.M. [Horbunova, N.M.], tekhn. red.

[Analytical chemistry; quantitative analysis] Analitychna
khimii; kil'kisnyi analiz. Kyiv, Radians'ka shkola, 1962.
299 p. (MIRA 16:6)

(Chemistry, Analytical--Quantitative)

L 12883-63

EWP(q)/EWT(m)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AF3001452

S/0073/63/029/005/0532/0538

56
55

AUTHOR: Pilipenko, A. T.; Yaremko, O. M.

TITLE: Comparative characteristic of spectrophotometric methods of determining tantalum and niobium. 1. General criterion and inorganic reagents

SOURCE: ²⁷ ²⁷ Ukrainskiy Khimicheskiy zhurnal, v. 29, no. 5, 1963, 532-538

TOPIC TAGS: spectrophotometric methods, absorption spectra, Nb thiocyanate, tantalum, niobium, inorganic reagents

ABSTRACT: Spectrophotometric methods for determining Ta and Nb with inorganic reagents were compared using the formal molar coefficient of extinction. The absorption spectra of thiocyanates and hydrogen peroxide complexes were determined photometrically. The yellow Nb thiocyanate can be detected in presence of the Ti, very lightly colored and the colorless Ta complex; extraction with ether gives very definite separation, especially at 385 millimicrons. Brightly colored Mo, W, U, V, Fe, Co, Cu, An and Pt thiocyanates interfere. To determine Nb in the presence of W, it is better to use the given method in water-acetone instead of ether; this somewhat lowers the sensitivity for determining Nb, but noticeably lowers the detrimental influence of W. H sub 2 O sub 2 complexes with Nb, Ta and Ti in the

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L 12883-63

ACCESSION NR: AP3001452

presence of strong acid solution, permitting determination of Nb in the presence of Ta and Ti, but ineffective for Ta in the presence of Ti. Orig. art. has: 8 figures.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko (Kiev State University)

SUBMITTED: 01Mar62

DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: 00

NO REF SOV: 020

OTHER: 016

Card 2/2

L 12882-63 EMP(g)/ENT(m)/BDS AFFTC/ASD JD/JG
ACCESSION NR: AP3001453 S/0073/63/029/005/0538/0547

58
57

AUTHOR: Pilipenko, A. T.; Yaremenko, O. M.

TITLE: Comparative characteristics of spectrophotometric methods of determining tantalum and niobium. 2. Use of organic reagents

SOURCE: ²⁷Ukrainskiy khimicheskiy zhurnal, v. 29, no. 5, 1963, 538-547

TOPIC TAGS: absorption spectra, SF-4 spectrophotometer, Nb, Ta, pyrogallol, pyrocatechol, Trilon B, hydroquinone, o-oxyquinoline, phenylfluorone, dimethylfluorone, arsenazo, alizarin S, sulfosalicylic acid, quercetin, methyl violet, rhodamine B, rhodanide, hydrogen peroxide, heteropoly acid, thiocyanate, Ti

ABSTRACT: The absorption spectra (data obtained on SF-4¹⁰ spectrophotometer) of Nb and Ta complexed with pyrogallol, pyrocatechol, Trilon B, hydroquinone, o-oxyquinoline, phenylfluorone, dimethylfluorone, arsenazo, alizarin S, sulfosalicylic acid, quercetin, methyl violet, rhodamine B, rhodanide, hydrogen peroxide and heteropoly acid were studied to determine best method for determining these elements. Extraction with thiocyanate (rhodanide) gave sharpest separation of Nb; extraction with methyl violet for Ta. The interference of Ti, Mo, Fe, V, and other associated impurities in the analyses was also studied. Orig. art. has: 1 table and 9 figures.

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Kiev State Un.

PILIPENKO, A.T.; RYABUSHKO, O.P.

Use of thiols in analysis. Part 1: Acid properties of
2,3- β,γ -dimercaptopropylmercaptoethanesulfonic and
2,3- β,γ -dimercaptohydroxyethanesulfonic acid and their
long-period stability. Ukr.khim.zhur. 28 no.8:955-959
'62. (MIRA 15:11)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Ethanesulfonic acid)
(Thiols)

SAMSONOV, G.V.; PILIFENKO, A.T., prof., doktor khim. nauk; NAZARCHUK, T.N., kand. khim. nauk; Primalni uchastiye: POPOVA, O.I., kand. khim. nauk; KOSOLAPOVA, T.Ya.; OBOLONCHIK, V.A.; KOTLYAR, G.Kh., mladshiy nauchnyy sotr.; KUCHAY, L.N.; KOPYLOVA, V.P.; KABANNIK, G.T.; KLIBUS, A.Kh.; MODYLEVSKAYA, K.D.; RAZZIKOVSKAYA, S.V.; NIKITINA, Ye.A., red.; KAMAYEVA, O.M., red. izd-va; KARASEV, A.I., tekhn. red.

[Analysis of high-melting compounds] Analiz tugoplavkikh soedinenii. Moskva, Metallurgizdat, 1962. 256 p. (MIRA 15:7)

1. Chlen-korrespondent Akademii nauk USSR (for Samsonov).
(Intermetallic compounds--Analysis)
(Nonmetallic materials--Analysis)

PILIPENKO, A.T.; KOSTYSHINA, A.P.

Use of unithiol in analysis. Part 1: Constants of acidic dissociation and the long-period stability of unithiol. *Izv.vys.ucheb.zav.;khim.i khim.tekh.* 5 no.3:502-503 '62. (MIRA 15:7)

1. Kiyovskiy gosudarstvennyy universitet imeni Shevchenko, kafedra analiticheskoy khimii. (Propanesulfonic acid) (Chemistry, Analytical)

PHASE I BOOK EXPLOITATION

SOV/6030

Samsonov, G. V., Corresponding Member, Academy of Sciences UkrSSR;
A. T. Pilipenko, Doctor of Chemical Sciences, Professor; T. N.
Nazarchuk, Candidate of Chemical Sciences; O. I. Popova, Candidate
of Chemical Sciences; and T. Ya. Kosolapova, V. A. Obolon-
chik, G. Kh. Kotlyar, L. N. Kuchay, V. P. Kopylova, G. T. Kaban-
nik, A. Kh. Klibus, K. D. Modylevskaya, and S. V. Radzikovskaya.

Analiz tugoplavkikh soyedineniy (Analysis of Refractory Compounds)
Moscow, Metallurgizdat, 1962. 256 p. 3250 copies printed.

Ed.: Ye. A. Nikitina; Ed. of Publishing House: O. M. Kamayeva;
Tech. Ed.: A. I. Karasev.

PURPOSE: This book is intended as a laboratory manual for personnel
in plant laboratories of the machinery, chemical, and aircraft
industries and scientific research institutes. It can also be
used by chemistry students at universities and schools of higher
education.

Card 1/4

Analysis of Refractory (Cont.)

SOV/6030

COVERAGE: The book contains data from the literature and from laboratory research on the chemical and mechanical properties, crystalline structure, chemical analysis, production, and industrial and other applications of silicon carbide and other refractory compounds. Methods of determining the basic components of refractory compounds (carbon, boron, nitrogen, and silicon) are reviewed and detailed methods for the chemical analysis of all presently known refractory compounds given. The authors are associated with the Institut metallokeramiki i spetsial'nykh splavov, AN SSSR (Institute of Powder Metallurgy and Special Alloys, Academy of Sciences USSR). No personalities are mentioned. There are 327 references: 175 Soviet and the remainder mainly English and German.

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Analysis of Refractory (Cont.)

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AVAILABLE: Library of Congress

SUBJECT: Metals and Metallurgy

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BN/pw/bmc
10-30-62

PILIPENKO, D.A. [Pylypenko, D. A.], brigadir

Improving the PK-1,6 pickup stacker. Mekh. sil'. hosp. 11
no.6:17 Je '60. (MIRA 13:11)

1. Kolkhoz "Zhovten'," Berdyanskogo rayona, Zaporozhskoy
oblasti.
(Agricultural machinery) (Hay--Harvesting)

PILIPENKO, D.S.

Medical losses of the Russian army during the first world war. Voen.-med.
zhur. no.9:86-89 '64. (MIRA 18:5)

SOV/56-34-3-2/55

AUTHORS: Fogel', Ya. M., Ankudinov, I. A.,
Filipenko, D. V., Topolya, N. V.

TITLE: Electron Capture and -Loss in Collisions Between Fast Hydrogen
Atoms and Gas Molecules (Zakhvat i poterya elektrona pri
stolknoveniyakh bystrykh atomov vodoroda s molekulami gazov)

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1958,
Vol. 34, Nr 3, pp. 579-592 (USSR)

ABSTRACT: The authors determine by means of the mass-spectrometric
method the electron capture cross-section σ_{0-1} and σ_{0-}
and -loss in single collisions of hydrogen atoms (of an energy
of up to from 5 to 40 keV) with helium-, neon-, argon-,
krypton- and xenon atoms as well as with the molecules H₂, N₂
and O₂. The authors by σ_{ik} denote the cross section of a pro-
cess in which a particle with the charge ie is transformed into
a particle with the charge ke . The here worked out method makes
possible besides the measurement of the cross sections σ_{0-1} and
 σ_{0-} also the measurement of the cross section of the electron
loss by an hydrogen atom, and therefore the present work also
furnishes results of the measurement of this cross section.

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SOV/56-34-3-8/55
Electron Capture and -Loss in Collisions Between Fast Hydrogen
Atoms and Gas Molecules

First the apparatus and the method of measurements are discussed in detail by means of a diagram. Two diagrams show the dependence of σ_{0-1} and σ_{01} on the energy of the hydrogen atoms for monoatomic and molecular gases. Within the investigated energy range the cross section σ_{0-1} for the hydrogen atoms in He, Ne, H₂, N₂ and O₂ passes through a maximum. In the gases Ar, Kr and Xe the cross section σ_{0-1} decreases monotonously with increasing energy. The cross section σ_{0-1} changes within the limits $2.4 \cdot 10^{-18} \text{ cm}^2$ (in He, energy 5 keV) to $6 \cdot 10^{-17} \text{ cm}^2$ (in Xe, energy 5 keV). In molecular gases the amount of σ_{0-1} does not depend on the type of gas, this is, however, the case in monoatomic gases. This dependence is especially clear at low energies. σ_{0-1} increases with increasing atomic number of the inert gas. σ_{01} decreases in all gases with the exception of helium at a decrease of the energy of the hydrogen atoms. In helium σ_{01} has its maximum at an energy of 15 keV. σ_{01} changes within the limits $4.2 \cdot 10^{-17} \text{ cm}^2$ (in Kr, energy 5 keV) to $3.7 \cdot 10^{-16} \text{ cm}^2$ (Xe and N₂, energy 10 keV). The cross sections σ_{01} exceed by one order of magnitude the cross sections σ_{0-1} . Then the results found are compared with those of other authors. The presence of maxima in the curves

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SOV/56-34-3-8/55

Electron Capture and -Loss in Collisions Between Fast Hydrogen
Atoms and Gas Molecules

$\sigma_{0-1} = f(E)$ in the gases He, Ne, H₂, N₂ and O₂ makes possible an estimation of the collision parameter for the corresponding processes. At table contains the values of the collision parameters which were computed by means of the adiabatic criterion by Massey (Messi). The dependence of the cross section σ_{0-1} on the binding energy of the electron can be expressed by the amount of the resonance defect $|\Delta E|$. The observed reduction σ_{0-1} at an increase of the absolute value of the resonance defect affirms the final conclusion on the reduction of this cross section with increasing energy of the binding of the electron in the atom of the target. There are 8 figures, 1 table, and 30 references, 8 of which are Soviet.

ASSOCIATION: Fiziko-tehnicheskii institut Akademii nauk Ukrainskoy SSR
(Physical Technical Institut AS Ukrainian SSR)

SUBMITTED: September 30, 1957

Card 5, 5

24(5)
AUTHORS:

Pogel', Ya. M., Ankudinov, V. A.,
Filipenko, D. V.

SOV. 86-01-1-1

TITLE:

Electron Capture and α -Loss in Collisions of Fast Carbon- and
Oxygen Atoms With Gas Molecules (Zakhvat i poterya elektronov
pri stolknoveniyakh bystrykh atomov ugleroda i kislykh
molekulami gazov)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1986,
Vol 35, Nr 4, pp 868-874 (USSR)

ABSTRACT:

In an earlier paper (ref 1) the authors had already measured
the effective electron capture and α -loss cross sections for
collisions between fast H-atoms and gas molecules. These
measurements are repeated for C- and O-atoms. The primary
energies of these atoms are between 10 and 60 keV; collisions
between He, Ne, Ar, Kr and Xe atoms and the molecules H_2 ,
and O_2 are investigated. Measurements of the energy of atoms
was carried out with an accuracy of $\pm 3\%$; the σ_{e^-} and σ_{α^-}
values attained only $\pm 15\%$ (chance errors). The results obtained
by these measurements are shown by diagrams. Figure 1 shows the

Card 1/3

Electron Capture and -Loss in Collisions of Fast
Carbon- and Oxygen Atoms With Gas Molecules

SOV, 1974, 1-1-1974

electron capture cross section for C in noble gases; figure 3 shows the capture cross section for C in molecular gases; figure 4 shows the capture cross section for O in noble gases, and figure 5 the same in molecular gases. Figures 6-9 show the same for the loss cross sections. Figure 9 shows the electron capture cross sections σ_{0-1} , σ_{1-1} , and σ_{2-1} for C and O, and figure 10 the cross sections for the capture of an electron by O-, C-, and H-atoms in a comparative diagram; figure 11 shows the same for electron loss. Figure 12 shows the course of the dependence of the maximum σ_{0-1} on the energy of the electron affinity for Ar, Kr, and Xe. The curves show an exponential growth of σ_{0-1} max with affinity. Figure 13 shows a non-monotonous decrease for increasing v_{max} for the dependence of the maximum σ_{0-1} on the first ionization potential of the target atom. Figure 14, finally, shows that the dependence of v_{max} on ΔE (ΔE - resonance effect) the scattered values in individual gases scatter within the error limits.

Card 2/3

Electron Capture and -Loss in Collisions of Fast
Carbon- and Oxygen Atoms With Gas Molecules

Sci. 56-75-14

around Massey's (Messi) straight; it may therefore be said that Massey's adiabatic criterion for electron capture by fast atoms is valid. For a , a $\approx 3\text{\AA}$ is obtained. Measurements of the capture- and loss cross sections (Figs 1-1) dependence on the energy (velocity v) of the atoms in general show a more or less steep increase of the cross sections, and in some cases a marked maximum (e. g. the electron capture cross section for Xe and Kr at 40-50 keV) and a linear decrease for H in Xe. N. V. Topolya took part in these measurements. The authors thank Professor A. K. Val'ter for his interest in the work. There are 14 figures and 8 references, 4 of which are Soviet.

ASSOCIATION: Fiziko-tehnicheskii institut Akademii nauk Ukrainy, USI
(Physico-Technical Institute of the Academy of Sciences of the UkrSSR)

SUBMITTED: April 8, 1958

Card 3/3

FOGEL', Ya.M.; ANKUDINOV, V.A.; PILIPENKO, D.V.

Capture and loss of electrons in collisions of fast He, B, and
F atoms with gas molecules. Zhur. eksp. i teor. fiz. 38 no.1:
26-32 Jan '60. (MIRA 14:9)

(Electrons--Capture) (Collisions (Nuclear physics))

5.4900
24.6610
26.231Y
AUTHORS:

37096
2/056/62/042/004/002/037
B102/B104

Pilipenko, D. V., Fogel', Ya. M.

TITLE:

Electron capture and loss by fast hydrogen atoms passing through molecular gases

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 4, 1962, 936-943

TEXT: The electron capture and loss cross sections σ_{01} and σ_{0-1} were measured as dependent on the energy E of the hydrogen atoms passing through CO, H₂, N₂ and O₂. The results are compared with other publications, and the hypotheses proposed by Donahue et al. (Phys. Rev. Lett. 3, 47C, 1959; Phys. Rev. 118, 1233, 1960; Nature, 186, 1038, 1960) and Bukhteyev et al. (ZhTF, 31, 608, 1961) to explain the formation of slow negative ions are discussed. The physical meaning of the US publications is said to be unclear. Electron loss of the H⁰ in CO may occur either by formation of stable CO⁻ (H + CO → H⁺ + CO⁻) or unstable CO⁻ ions, the latter disintegrating into C and O; one of them is negatively charged, or both

Card 1/2

I 13616-63

EFT(1)/RDS AFFTC/ASD/ESD-3

ACCESSION NR: AP3003103

S/0056/63/044/006/1818/1822

59
54

AUTHOR: Pilipenko, D. V.; Fogal', Ya. M.

TITLE: Electron loss and capture by fast atoms passing through molecular gases

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 1818-1822

TOPIC TAGS: electron loss and capture, fast atomic collisions, Massey adiabatic criterion

ABSTRACT: The cross sections were measured for electron loss and electron capture by hydrogen atoms in NO and by carbon atoms in CO, in order to provide additional confirmation of the previously suggested causes of the structure observed in the curves of the electron-loss cross section vs. energy, and in order to find in which molecular gases this structure appears. The authors' preliminary hypothesis (ZhETF, v. 42, 936, 1962), based on experimental material, is that structure in the cross section vs. energy curve is observed when the probability of formation of a stable negative molecular ion as a result of capture by a gas molecule is very low, but when this ion can dissociate into a negative ion and a neutral atom this probability is calculated for several processes, and the structure for the energy dependence curves of electron loss and electron capture for the H - NO pair is explained by means of the Massey adiabatic criterion. "We are grateful to the
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1-13616-63

ACCESSION NR: AP3003103

5

students of the Khar'kovskiy gosudarstvennyy Universitet (Kharkov State University) V. I. Zinenko and V. G. Dyatlov, who took part in the measurements. It is our pleasant duty to thank Professor A. K. Val'ter for his constant interest in this work." Orig. art. has: 6 formulas and 4 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physicotechnical Institute, Academy of Sciences, UkrSSR)

SUBMITTED: 11Jan63

DATE ACQ: 23Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 006

OTHER: 012

Cord 2/2

PILIPENKO, D.V.; FOGEL', Ya.M.

Composition of slow ions produced during the passage of fast hydrogen atoms through molecular gases. Zhur. eksp. i teor. fiz. 48 no.2:404-415 F '65. (MIRA 18:11)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.

L 10236-66 EWT(1)/EWT(m)/I/EWP(t)/EWP(b)/EWA(m)-2 LJP(c) TD
ACC NR: AP6000192 SOURCE CODE: UR/0056/65/049/005/1402/1407

AUTHOR: ^{44, 55} Pilipenko, D. V.; ^{44, 55} Gusev, V. A.; ^{44, 55} Fogel', Ya. M. 66
63

ORG: Physicotechnical Institute, Academy of Sciences, Ukrainian SSR (Fiziko-
tekhnicheskiiy Institut Akademii nauk Ukrainiskoy SSR) E

TITLE: Electron loss and formation of slow negative ions in collisions of hydrogen
atoms and H⁻ ions with gas molecules 27

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965,
1402-1407 21, 44, 55

TOPIC TAGS: ionization, electron loss, charge exchange, collision cross section

ABSTRACT: This is a continuation of earlier work by the authors (ZhETF v. 48, 404; 1965) dealing with charge exchange occurring during collisions between atoms and gas molecules. The present paper is devoted to a measurement of the effective cross section σ_{-10} for the loss of an electron by negative ions of hydrogen with energy from 3 to 30 keV by collision with O₂, NO, and CO. The apparatus was described in detail in the earlier paper. The authors measured also the cross sections σ_1 for the formation of slow negative ions by collision of H and H⁻ with the same molecules in the same energy range. The plot of σ_{-10} vs. the fast-particle energy ϵ for the H-CO pair has a structure which can be explained with the aid of the adiabatic Massey criterion. The magnitude of the cross section and the form of its energy depend on the nature of the target gas and on the binding energy of the electron in the fast particle. The cross section is largest for O₂, smallest for CO, and intermediate for

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L 10236-66

ACC NR: AF6000192

NO. It is concluded from the fact that the energy dependence for the H^- ions is the same for all the investigated gases that the maximum of σ_1^- occurs at low energies. At the maximum, σ_1^- is much larger for H^- than for H. With increasing particle energy, the cross sections for H^- and H come closer together and become approximately equal for O_2 and NO. The peaks on the $\sigma_1^-(e)$ curve correspond to the adiabatic Massey criterion. Authors thank Professor A. K. Val'ter for continuous interest in the work. Orig. art. has: 4 figures and 3 formulas. 3

SUB CODE: 20/ SUBM DATE: 20Jun65/ ORIG REF: 009/ OTH REF: 001/
ATD PRESS: 4/63 [02]

Card 2/2

ACC NR: AP6036048

SOURCE CODE: UR/0056/66/051/004/1007/1010

AUTHOR: Gusev, V. A.; Pilipenko, D. V.; Fogel', Ya. M.

ORG: Physicotechnical Institute, AN UkrSSR (Fiziko-tehnicheskiy institut, AN UkrSSR)

TITLE: Slow ion formation with the passage of fast protons and hydrogen atoms through nitrous oxide

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 4, 1966, 1007-1010

TOPIC TAGS: ion, negative ion, ion exchange, mass spectrum, proton

ABSTRACT: An investigation is made of the mass spectra of slow positive ions produced as a result of dissociative ionization of N_2O molecules by fast protons or hydrogen atoms and also of the mass spectra of slow negative ions produced as a result of charge exchange between the hydrogen atom and an N_2O molecule. The relative intensities of the slow ion beams are compared with the bond breaking energies of N_2O . The authors express their gratitude to G. N. Polyakova for

Card 1/2

ACC NR: AP6036048

investigating the N_2O luminescence spectrum produced by the proton impact.

Orig. art. has: 4 formulas and 1 figure. [Authors' abstract]

[AM]

SUB CODE: 20/SUBM DATE: 16Apr66/ORIG REF: 006/OTH REF: 009/

Card 2/2

PILIPENKO, D.V.; GUSEV, V.A.; FOGEL', Ya.M.

Electron loss and formation of slow negative ions in collisions
of H atoms and I^- ions with gas molecules. Zhur. eksp. i teor.
fiz. 49 no.5:1402-1407 N '65. (MIRA 19 1)

1. Fiziko-tehnicheskii institut AN UkrSSR.

L 40775-65, DM(1)

ACCESSION NR: AD5006486

S/0056/65/048/002/0404/0415

AUTHORS: Pilipenko, D. V., Fogel', Ya. M.

TITLE: Composition of the slow ions produced on passage of fast hydrogen atoms through molecular gases

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 2, 1965, 404-415

TOPIC TAGS: slow ion, molecular gas, mass spectrometry, spectrum line intensity, electron loss, electron capture, energy dependence

ABSTRACT: This is a continuation of earlier work by the authors (ZhETF v. 42, 936, 1962 and v. 44, 1818, 1963), aimed at obtaining additional confirmation of the earlier results by a study of the mass spectra of the slow positive and negative ions produced by fast hydrogen atoms passing through gaseous O₂, N₂, NO, and CO with particular attention to the study of the intensity of the individual

Card 1/03

L 40775-65

ACCESSION NR: AP5006486

mass spectrum lines as a function of the energy of the fast atoms. Apparatus used in an earlier study (ZhETF v. 34, 579, 1958) has been reconstructed for this purpose. A schematic drawing of the redesigned apparatus shown in Fig. 1 of the Enclosure. The redesigned apparatus was used to measure the absolute cross sections for inelastic interaction processes of charged and neutral particles with gases by the potential and mass-spectrometer methods, and to analyze the slow ions. The measurements involved in the analysis of slow ions are described in detail elsewhere (ZhTF v. 26, 1941, 1956 and ZhETF v. 39, 548, 1960). Plots showing the variation of the intensity of the individual mass spectrum lines with the hydrogen-atom energy are presented and are compared with plots of the energy dependence of the cross sections for electron loss and capture by hydrogen atoms. It follows from the results that the structure in the energy dependence of the cross section for the interaction of hydrogen ions with NO and CO molecules is not associated with formation of molecular or atomic negative ions in the charge exchange of hydrogen atoms with

Card 2/4

L 40775-65

ACCESSION NR: AP5006486

these molecules. Although for slow positive ions the energy range in which structure is observed for the cross section and for the current-ratio curves are in agreement, it is very difficult to establish a correspondence between the individual peaks in the two structures, in view of the multiplicity and close spacing of the peaks. "We thank V. A. Gusev, student and thesis candidate at Khar'kov State University, who took part in the measurements, and Professor A. K. Val'ter for continuous interest." Orig. art. has: 9 figures and 6 formulas.

ASSOCIATION: Fiziko-tekhicheskiy institut Akademii nauk Ukrainskoy SSR (Physicotechnical Institute, Academy of Sciences, Ukrainian SSR)

SUBMITTED: 18Jul64

ENCL: 01

SUB CODE: NP

NR REF SOV: 012

OTHER: 011

Card 3/4

AUTHOR: None given

86-11-29/31

TITLE: To Be Published ... (Vykhodyat iz pechati ...)

PERIODICAL: Vestnik Vozdushnogo Flota, 1957, Nr 11, p. 90 (USSR)

ABSTRACT: It is announced that in the near future the following books will be published by the Military Publishing House of the Ministry of Defense of USSR:

1. Some Problems on the Theory of Automatic Aircraft Control (Nekotoryye voprosy teorii avtomaticheskogo upravleniya samoleta) by V. P. Dmitriyev;
2. The Fundamentals of the Theory of Aircraft Turbojet Engines (Osnovy teorii aviatsionnykh turboreaktivnykh dvigateley) by M. I. Vlasenko;
3. The Treatment and Storage of Aircraft Armament (Obrabotka i konservatsiya aviatsionnogo vooruzheniya) by O. V. Artemenko, V. V. Nazarov, F.D. Pilipenko, under the editorship of G. I. Krotov, Engr Lt Col.

AVAILABLE: Library of Congress

Card 1/1

PHILIPPO, F. T.

Eucalyptus

Derivation of the name of the species Eucalyptus, Philippi, Annot. Zool. Bot., no. 6, 1841. Russkoye slovar'no-raznytsnoye slovo, 2: 120. 1857, p. 1.

Monthly List of Russian Asterisms, Library of Congress, April 1951. No. 2, p. 1.

PTILIPENKO, F. S.

Eucalyptus

Origin of new species and varieties of eucalyptus. Biul. Glav. bot. sada No. 9, 1951.

q. Monthly List of Russian Accessions. Library of Congress, June 1957.

FILIPENKO, F. S.

ARBORICULTURE

Experiment with winter and fall rooting of shoots from several woody plants. Biul. Glav. bot. sada, No. 10, 1951.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

1. PILIPENKO, F. S.
2. USSR (600)
4. Trees - Caucasus
7. New trees and shrubs on the Black Sea littoral of the Caucasus. Biul. Glav. bot. sada no. 11, 1952.

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

FILTHNK, F. T.

Additional Entries

Sakropi... "FC... .."
... ..
... ..

Monthly List of Russian Acquisitions, Library ...

NAZAREVSKIY, S.I.; MAKAROV, S.N.; PILIPENKO, P.S.; GERASIMOV, M.V.; IL'INSKAYA, M.L.; VEKSLER, A.I., [deceased]; VASIL'YEV, I.M.; IL'INA, N.V.; SOKOLOV, S.Ya.; LOZINA-LOZINSKAYA, A.S.; SAAKOV, S.G.; ZALESSEYIY, D.M.; AVHORIN, N.A.; IVANOV, M.I.; PRIKLADOV, N.V.; SOBOLEVSKAYA, K.A.; SALAMATOV, M.N.; MALINOVSKIY, P.I.; LUCHNIK, A.I.; KRAVCHENKO, O.A.; VEKHOV, N.K.; GROZDOV, B.V.; MASHKIN, S.; BOSSE, G.G.; PALIN, P.S., (g. Shuya, Ivanovskoy oblasti); MATUKHIN; ZATVARNITSKIY, G.F.; GRACHEV, N.G.; CHERKASOV, M.I.; KIRKOPULO, Ye.N.; LEVITSKAYA, A.M.; GRISHKO, N.N.; LIKHVAR', D.F.; VIL'CHINSKIY, N.M.; LYPA, A.L.; OREKHOV, M.V.; SHCHERBINA, A.A.; TSYGANKOVA, V.Z.; BARANOVSKIY, A.L.; GEORGIYEVSKIY, S.D.; STEPUNIN, G.A.; OZOLIN, E.P.; LUKAYTENE, M.K.; KOS, Yu.I.; VAIL'YEV, A.V.; RUKHADZE, P.Ye.; VASHADZE, V.N.; SHANIDZE, V.M.; MANDZHAVIDZE, D.V.; KORKESHKO, A.L.; KOLESNIKOV, A.I., (g. Sochi); SERGEYEV, L.I.; VOLOSHIN, M.P.; RYBIN, V.A.; IVANOVA, B.I.; RYABOVA, T.I.; GAREYEV, E.Z.; RUSANOV, F.N.; BOCHANTSEVA, Z.P.; BLINOVSKIY, K.V.; KLYSHEV, L.K.; MUSHEGYAN, A.M.; LEONOV, L.M.

Talks given by participants in the meeting Biul.Glav.bot.sada no.15:
85-182 '53 (MLBA 9:1)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR (for Makarov, Pilipenko, Gerasimov, Il'inskaya, Veksler); 2. Akademiya komunal'nogo khozyaystva imeni K.D. Pamfilova for Vasil'yev); 3. Vsesoyuznaya sel'skokhozyaystvennaya vystavka (for Il'ina); 4. Botanicheskiy sad Botanicheskogo instituta imeni V.L.Komarova Akademii nauk SSSR (for Sokolov, Lozina-Lozinskaya, Saakov); 5. Botanicheskiy sad Leningradskogo
(continued on next card)

HAZAREVSKIY, S.L.---(continued) Card 2.

gosudarstvennogo ordena Lenina universiteta (for Zalesskiy); 6. Pol'yarno-Al'piyskiy botanicheskiy sad Kol'skogo filiala imeni S.M. Kirova Akademii nauk SSSR (for Avrorin); 7. Botanicheskiy sad pri Tomskom gosudarstvennom universiteta (for Ivanov); 8. Botanicheskiy sad pri Tomskom gosudarstvennom universiteta imeni V.V. Kuybysheva (for Prik-ladov); 9. Tsentral'nyy Sibirskiy botanicheskiy sad Zapadno-Sibirskogo filiala Akademii nauk SSSR (for Salamatov, Sobolevskaya); 10. Botanicheskiy sad Irkutsko gosudarstvennogo universiteta imeni A.A. Zhdanova (for Malinovskiy); 11. Altayskaya plodovo-yagodnaya opyt-naya stantsiya (for Luchnik); 12. Bashkirskiy botanicheskiy sad (for Kravchenko); 13. Lesostepnaya selektsionnaya opyt'naya stantsiya dekorativnykh kul'tur tresta Goszelenkhoz Ministerstva kommunal'nogo kho-zyaystva RSFSR (for Vekhov); 14. Bryanskiy lesokhozyaystvennyy insti-tut (for Grozdov); 15. Botanicheskiy sad pri Voronezhskom gosudar-stvennom universitete (for Mashkin); 16. Orekhovo-Zuyevskiy pedago-gicheskiy institut (for Bosse); 17. Botanicheskiy sad pri Rostovskom gosudarstvennom universitete imeni V.M. Molotova (for Matukhin); 18. Botanicheskiy sad Kuybyshevskogo gorodckogo otdela narodnogo obrazo-vaniya (for Zatvarnitskiy); 19. Zoobotanicheskiy sad pri Kazanskom universitete (for Grachev); 20. Gosudarstvennyy respublikanskiy proektnyy institut "Giprokommunistroy" (for Cherkasov); 21. Botani-cheskiy sad Odesskogo gosudarstvennogo universiteta imeni I.I. Mechni-kova (for Kirkopulo); 22. Botanicheskiy sad pri Dnepropetrovskom gosudarstvennom universitete (for Levitskaya); 23. Botanicheskiy sad
(continued on next card)

NAZAREVSKIY, S.L.---(continued) Card 3.

Akademi nauk USSR (for Grishko, Likhvar', Vil'chinskiy); 24. Kiyevskiy sel'skokhozyaystvennyy institut (for Lypa); 25. Botanicheskiy sad Chernovitskogo gosudarstvennogo universiteta (for Orekhov); 26. Botanicheskiy sad pri L'vovskom gosudarstvennom universitete imeni Iv. Franko (for Shcherbina); 27. Botanicheskiy sad Khar'kovskogo gosudarstvennogo universiteta imeni A.M. Gor'kogo (for TSygan-kova); 28. Botanicheskiy sad Zhitomirskogo sel'skokhozyaystvennogo instituta (for Baranovskiy); 29. Botanicheskiy sad Akademii nauk Belorusskoy SSR (for Georgiyevskiy); 30. Institut biologii Akademii nauk Belorusskoy SSR (for Stepunin); 31. Botanicheskiy sad Akademii Litovskoy SSR (for Lukaytene); 32. Botanicheskiy sad Latvyskogo gosudarstvennogo universiteta (for Ozolin); 33. Kabardinskiy krayevedcheskiy botanicheskiy sad (for Kos); 34. Sukhumskiy botanicheskiy sad Akademii nauk Gruzinskoy SSR (for Vasil'yev, Rukhadze); 35. Batsumskiy botanicheskiy sad Akademii nauk Gruzinskoy SSR (for Shnidze); 36. Tbilisskiy botanicheskiy sad Akademii nauk Gruzinskoy SSR (for Mandzhavidze); 37. Sochinskiy park Dendrariy (for Korkeshko); 38. Gosudarstvennyy Nikitskiy botanicheskiy sad imeni V.M. Molotova (for Sergeyev, Voloshin); 39. Krymskiy filial Akademii nauk SSSR (for Rybin); 40. Botanicheskiy sad Moldavskogo filiala Akademii nauk SSSR (for Ivanova); 41. Botanicheskiy sad Botanicheskogo instituta Akademii nauk Tadzhikskoy SSR (for Ryabova); 42. Botanicheskiy sad Kirgizskogo filiala Akademii nauk SSSR (for Gareyev); 43. Botanicheskiy (continued on next card)

NAZAREVSKIY, S.L.---(continued) Card 4.

sad Akademii nauk Usbekskey SSR (for Rusanov, Bochantseva): 44.
Botanicheskiy sad Akademii nauk Turkmenskoy SSR (for Blinovskiy);
45. Respublikanskiy sad Akademii nauk Kazakhskoy SSR (for Klyshev,
Mushegyan).

(Botanical gardens)

11111111, 1111.

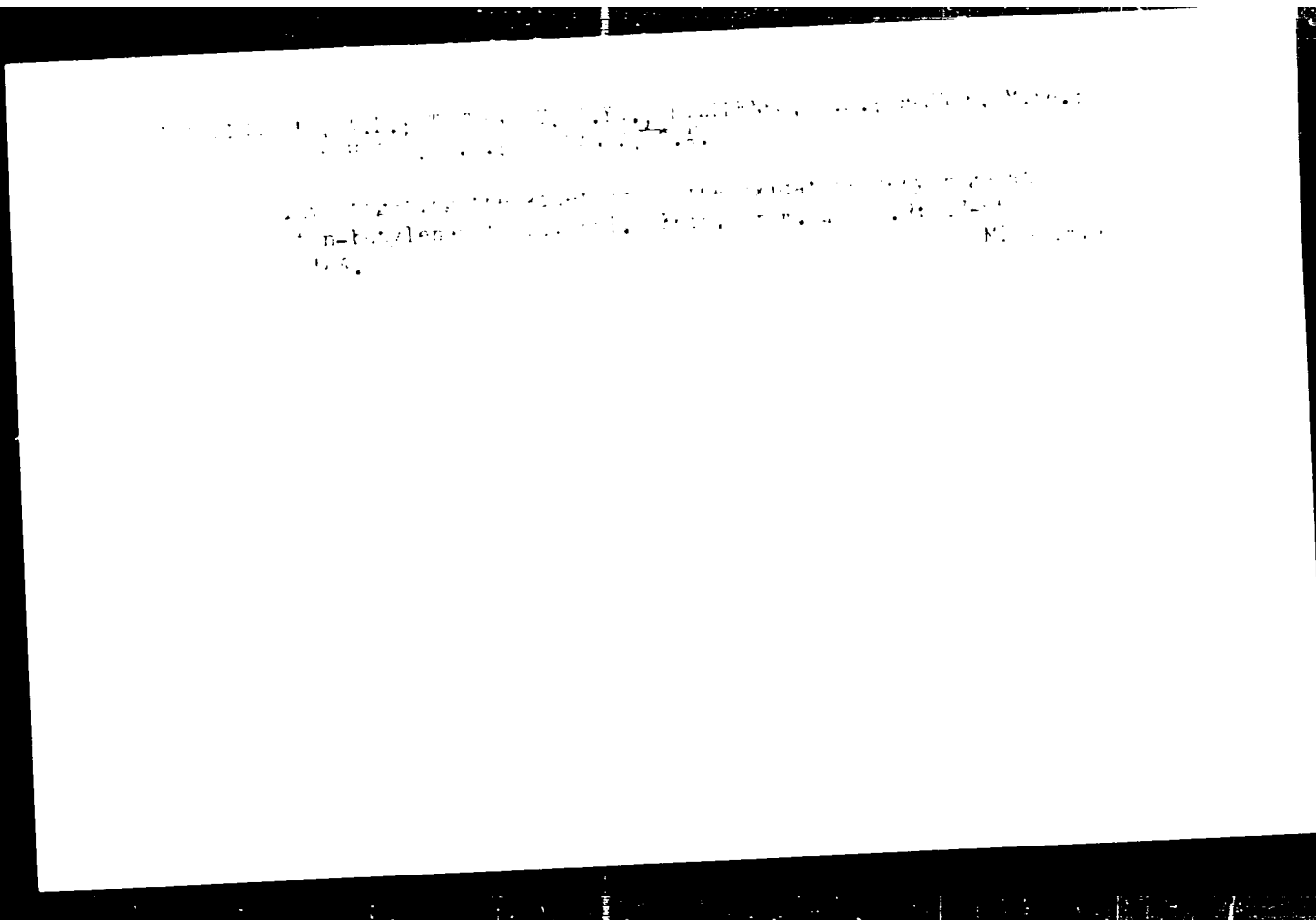
Are eucalypti really the tallest trees in the world? Bot.
zhur. 49 no.4:592-599 Ap'69. (MIRA 1969)

1. Botanicheskii institut imeni Komarova AN SSSR, Leningrad.

~~PILIPENKO, P.S.~~

East Asiatic ornamental cherry trees in the U.S.S.R. *Biul. Glav.*
bot. sada no.18:17-27 '54. (*MIRA* 8:3)

1. Botanicheskiy institut im. V.L.Komarova Akademii nauk SSSR.
(Japanese flowering cherry)



FILED KO, F.S.

Regeneration of flowering bamboo plantations. Agrobiodiversa no. 4:
576-580 Cl-Ag '63. (1963)

1. Botanicheskyy Institut imeni V.I. Komarova AN SSSR.
(Bamboo)

PILIPENKO, F. S.

Correct name of the species of Pittosporum grown in the Black
Sea coastal areas. Biul. Glav. bot. sada no. 47:41-47 '62.
(MIRA 16:1)

1. Botanicheskiy institut imeni V. L. Komarova AN SSSR.

(Black Sea region—Pittosporum)

SHIPENKO, F.S.

History of the introduction and acclimatization of eucalyptus
in the U. S. S. R. Trudy Bot. inst. Ser. 6 no. 3:103-107 1957.
(1957)

(Eucalyptus)
(Plant introduction)

L 21498-66 EWT(m)/EWP(t) LJP(c) JD/JG
ACC NR: AP6009438

SOURCE CODE: UR/0075/66/021/003/0380/0381

AUTHOR: Tokareva, S. A.; Pilipenko, G. P.

ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnakov, AN SSSR,
Moscow (Institut obshchey i neorganicheskoy khimii AN SSSR)

TITLE: Chemical analysis of sodium ozonide

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 3, 1966, 380-381

TOPIC TAGS: analytical chemistry, quantitative analysis, gravimetric analysis, gas
volumetric analysis, ozonide, sodium compound, sodium ozonide

ABSTRACT: A combined gas-volumetric and gravimetric method has been developed for
the quantitative analysis of sodium ozonide with indirect sampling at -50 to -60C
because of the instability of sodium ozonide at room temperature. Two samples were
required for a complete analysis. One sample was used for determining superoxidic
(active) oxygen by the combined thermal and aqueous decomposition of ozonide in an
apparatus which was described. The second sample was used for determining total
Na₂O content as sodium sulfate, after decomposing ozonide as described. Accuracy
of the method was ±1%, as determined by analyzing potassium ozonide by this and an-
other [unspecified] method. The suggested method can be used for the analysis of
other ozonides unstable at room temperature. Orig. art. has: 2 figures and 1 table.
[JK]

SUB CODE: 07/ SUBM DATE: 26Feb65/ AED PREC: 4272
Card 1/1 UDC: 542.70

AKHMECHET, Leonid Samoylovich; VAYSER, Leonid Vladimirovich;
CHUDNOVSKIY, Arkadiy Romanovich; PILIPENKO, L.S., inzh.,
retsenzent; BYKOVSKIY, A. I.; inzh., red.; GORNOSTAYPOL'SKAYA,
M.S., tekhn. red.

[Use of plastics in technical equipment]Primenenie plastiche-
skikh mass v tekhnologicheskoi osnastke. Moskva, Mashgiz,
1962. 155 p. (MIRA 15:10)
(Plastics) (Machinery industry)

PILIPENKO, F.S.

Origin and evolution of the genus Eucalyptus. Bot.zhur. 47
no.2:188-201 F '62. (MIRA 15:3)

1. Botanicheskiy institut imeni Komarova, AN SSSR, Leningrad.
(Eucalyptus)

ARTYUSHENKO, Z.T.; GUSEV, Yu.D., kand.biolog.nauk; ZAYTSEV, G.N.;
ZAMYATNIN, B.N.; KNORRING-NEUSTROYEVA, O.E.; PIDOTTI, O.A.;
PILIPENKO, F.S.; POIYAKOV, P.P.; RODIONENKO, G.I.;
SELIVANOVA-GORODKOVA, Ye.A.; SOKOLOV, S.Ya., prof., doktor
biolog.nauk; SMIRNOVA, A.V., tekhn.red.

[Trees and shrubs of the U.S.S.R.; wild and cultivated, and the
prospects for introduction] Derev'ia i kustarniki SSSR;
dikorastushchie, kul'tiviruemye i perspektivnye dlia introduktsii.
Moskva, Izd-vo Akad.nauk. Vol.6. [Angiosperms: Loganiceae-Compositae]
Pokrytosemennye semeistva, Loganiyevye - Slozhnotsvetnye. 1962.
378 p. (MIRA 15:5)

1. Akademiya nauk SSSR. Botanicheskiy institut.
(Trees) (Shrubs)

PILIPENKO, F.S.

What is *Ligustrum japonicum* Thunb. var. *coriaceum* [Nois.] Mak.?
Bot. zhur. 46 no. 6: 872-876 Je '61. (MIRA 14:6)

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR, Leningrad.
(Privet)

PILIPENKO, F.S., kand.biologicheskikh nauk

In search of the progenitor of eucalyptus. Priroda 49 no.8:95-97
Ag '60. (MIRA 13:8)

1. Botanicheskiy institut im. V.L.Komarova AN SSSR, Leningrad.
(Eucalyptus)

GOLOVACH, A.G.; GRUBOV, V.I.; ZAMYATNIN, B.N.; LINCHEVSKIY, I.A.; PETYAYEV,
S.I.; PIDOTTI, O.A.; PILIPENKO, F.S.; POLETIKO, O.M.; RODIONENKO,
G.I.; SAAKOV, S.G.; SELIVANOVA-GORODKOVA, Ye.A.; SOKOLOV, S.Ya.,
prof., doktor biolog.nauk; SHIPCHINSKIY, N.V. [deceased]; BELKINA,
M.A., red.izd-va; HLEBYKH, E.Yu., tekhn.red.

[Trees and shrubs of the U.S.S.R.; wild and cultivated species and
plants considered for prospective introduction] Derev'ia i kustar-
niki SSSR; dikorestushchie, kul'tiviruemye i perspektivnye dlia
introduktsii. Moskva, Vol.5. [Angiosperms: myrtle and olive families]
Pokrytosemennye: Semeistva mirtovye-meslinovye. 1960. 543 p.
(MIRA 13:12)

1. Akademiya nauk SSSR. Botanicheskiy institut.
(Myrtle) (Olive) (Plant introduction)

PILIPENKO, F.S.

Japanese fine-leaved spindle tree (*Euonymus japonica* L.
var. *microphylla* Sieb.) as a juvenile form of the species.
Bot. zhurn. 45 no.8:1198-1200 Ag '60. (MIRA 13:8)

1. Botanicheskiy institut im. V.L.Komarova Akademii
nauk SSSR, Leningrad.
(Spindle tree)

ARTYUSHENKO, Z.T.; VASIL'YEV, I.V.; GZYRYAN, M.S.; GOLOVACH, A.G.; GRUBOV,
V.I.; ZAMYATIN, B.N.; PIDOTTI, O.A.; PILIPENKO, F.S.; POLETIKO,
O.M., kand.biolog.nauk; RODIONENKO, G.I.; RUSANOV, P.N.; SAAKOV,
S.G.; SOKOLOV, S.Ya., prof., doktor biolog.nauk, red.; FEDOROV,
A.I.A.; SHIPCHINSKIY, N.V. [deceased]; SHUL'GINA, V.V.; SHUKHOBODSKIY,
B.A.; GOLOVNIN, M.I., red. izd-va; KRUGLIKOVA, N.A., tekhn.red.

[Trees and shrubs of the U.S.S.R.; wild, cultivated, and promising
exotic trees and shrubs] Derov'ia i kustarniki SSSR; dikorastushchie,
kul'tiviruemye i perspektivnye dlia introduktsii. Moskva. [Vol.4.
Angiosperms: Leguminosae - Punicaceae] Pokrytosemnyye: Semeistva
bohovye-granatovye. 1958. 973 p. (MIRA 11:1?)

1. AN SSSR. Botanicheskiy institut.
(Angiosperms) (Trees) (Shrubs)

PIIIPENKO, F.S.

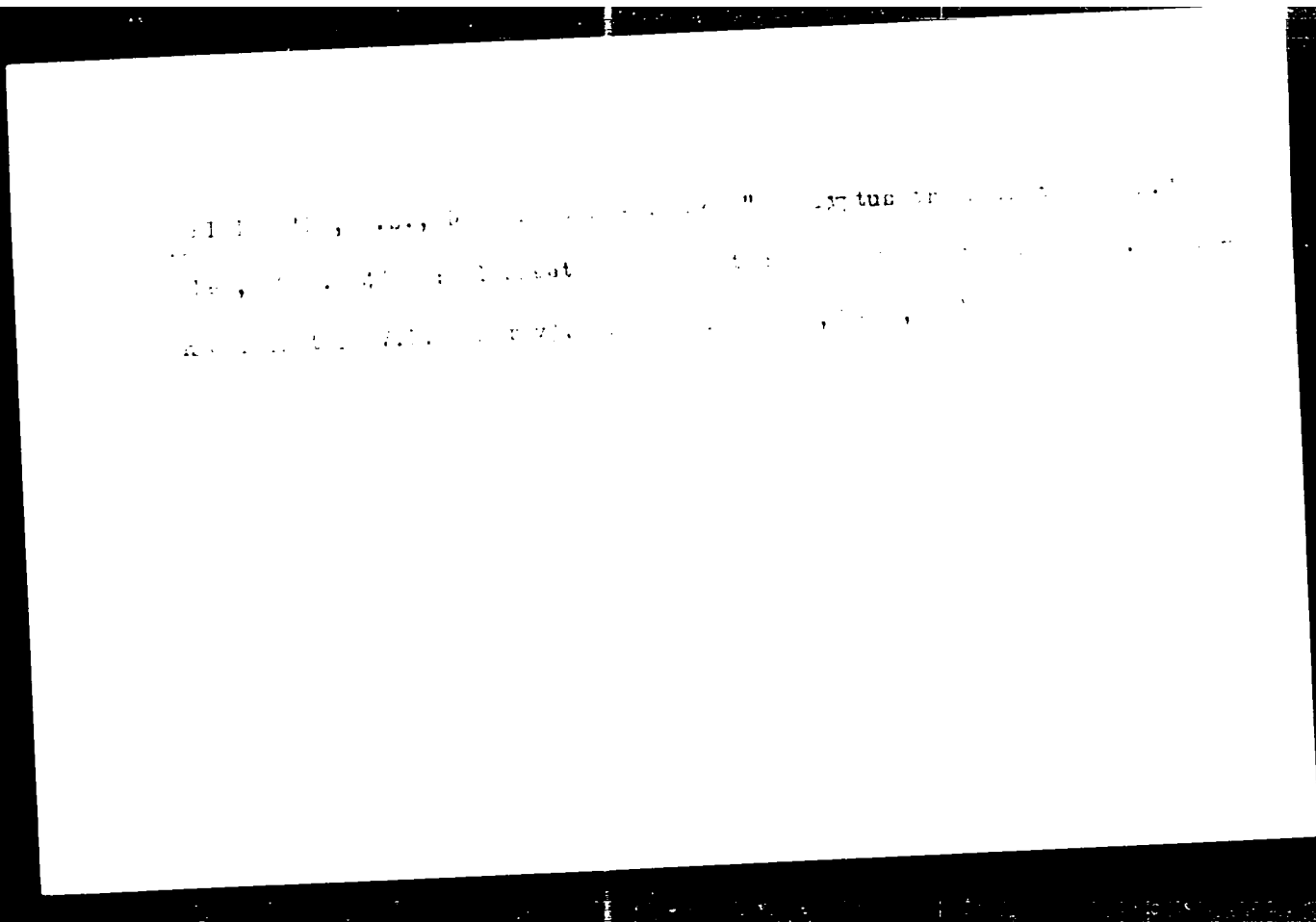
Systematic position of the Chusan palm. Trudy Bot. inst.
Ser. 6:172-183 '69. (MIRA 11:10)
(Palms)

PILIPENKO, F.S.

Phyllostachys aurea (bamboo) and its systematic position. Trudy
Bot. inst. Ser. 6:184-187 1968. (1968-11:10)
(Bamboo)

、 PИЛIПEHCО, P.S.

Origin of some Japanese cedar forms. Trudy Bot. inst. Ser. 2:
188-200 '58. (MIRA 11:10)
(Cedar)



PILIPENKO, G.A., inzh.

Features of the route and basic design decisions. Stroi.
truboprov. 7 no.12:2-4 D '62. (MIRA 16:1)

1. Giprospestgaz, Leningrad.
(Gas, Natural--Pipelines)

START BY: V.I. ... (PHEL' MENK, ...); ANTI ... (PHEL' A.M.);
... (PHEL' ...)

Performer ... (Kosman ... Youth League brigades ...)
no. ... N 16.

1. Kombinar Kurbas ... (for Startsev ...)
... (for Startsev ...)

ACCESSION NR: AP4033392

S/0062/64/000/004/0740/0743

AUTHOR: Tokareva, S. A.; Pilipenko, G. P.

TITLE: Thermal decomposition of sodium ozonide

SOURCE: USSR. Izvestiya. Seriya khimicheskaya, no. 4, 1964, 740-743

TOPIC TAGS: sodium ozonide, thermal decomposition, thermal stability, rate of decomposition, synthesis

ABSTRACT: The thermal stability of sodium ozonide at different temperatures in the absence of moisture was studied. The sodium ozonide used was synthesized by ozonizing NaOH at -80 to -100C, extracting with liquid ammonia and removing the latter under vacuum at -50C. Curves for the conversion of NaO₃ (see fig. 1 of the enclosure) and its rate of decomposition at -20, -10, 0 and 10C were constructed from weighings on a McLean balance. At -30C there was no weight change after 4 hours at 10⁻¹ mm Hg. At -20C the decomposition is slow, and at -20 and -10C the NaO₃ decomposed to NaO₂. At temperatures above 0C the thermal decomposition of NaO₃ is accompanied by the reaction of the formed NaO₂ with H₂O to give NaOH. Orig. art. has: 3 figures and 1 table.

Card 1/3

ACCESSION NR: AP4033392

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova,
Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of
Sciences, SSSR)

SUBMITTED: 11Mar63

DATE ACQ: 15May64

ENCL: 01

SUB CODE: IC

NO REF SOV: 002

OTHER: 001

Card 2/3

ACCESSION NR: AP4033392

ENCLOSURE: 01

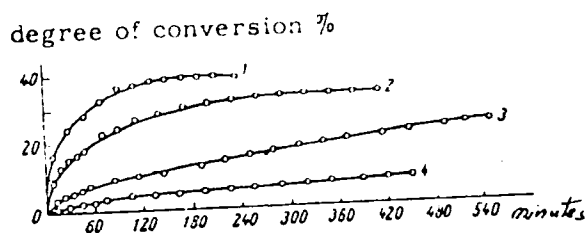


Fig. 1. Relationship between the degree of sodium ozonide conversion and time at different temperatures. 1-- 10C, 2--0C, 3-- -10C, 4-- -20C.

Card 3/3

L 45716-66 EWT(m)/EWP(j)/EWP(t)/ETI IJP(c) JD/WW/JG/RO/JK/RM
ACC NR: AP6025400 SOURCE CODE: UR/0062/66/000/007/1267/1269

AUTHOR: Vol'nov, I. I.; Tokareva, S. A.; Klimanov, V. I.; Pilipenko, G. P.

ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnakov, Academy of Sciences, SSR (Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR)

TITLE: Synthesis of potassium ozonide via potassium superoxide suspended in Freon-12

SOURCE: AN SSSR. Izv. Ser khim, no. 7, 1966, 1267-1269

TOPIC TAGS: ozonide, superoxide, potassium compound

ABSTRACT: The reaction of KO_2 with ozone was carried out in Freon-12, a liquid inert toward ozone. Potassium superoxide had the following composition: KO_2 , 90.22%; K_2O_2 , 3.85%; KOH, 2.75%; K_2CO_3 , 1.85%; H_2O , 1.33% (by difference). Its particle size was 0.05 mm or less. The ozone content of the ozone-oxygen mixture was 9 wt. %. The step of extraction with liquid ammonia was omitted. Analysis of the ozonized product gave KO_3 , 77.2; KO_2 , 6.4; KOH, 10.6; K_2CO_3 , 5.6 wt. %. The increase in the amount of KOH and K_2CO_3 impurities in the end product as compared to their content in the original potassium superoxide is due to the reaction of KO_3 with atmospheric moisture and CO_2 during the withdrawal of the samples for analysis, despite all the precautions taken. Orig. art. has: 1 figure and 2 tables.

SUB CODE: 07/ SUBM DATE: 18Dec65/ ORIG REF: 003/ OTH REF: 003

Cord 1/1 ULR

UDC: 542.91+542.943.5+621.384.5+546.32

PILIPENKO, I.

Struggling for introduction of new technology. Sov. profsoiuzy
3 no.7:35-40 J1'55. (MIRA 8:10)
(Stalingrad--Steel industry)

AUTHOR: Ieremet, Yu Ye and Pilyuk, I A.
 TITLE: Castings of Steel Blocks with External Chills
 PUBLISHED: Stroyizdatvo, 1961, No. 11, p. 4.

ABSTRACT: When casting blocks of steel, Type 12L mold
 via mold was originally used at the plant. The lead
 heads were located on the rim. The castings obtained
 possessed sand blisters and shrink holes. Later, in
 the process of casting in dry molds was developed, al-
 long the groove surface, external chills were applied.
 The molds were cast through a spray gate system. Appli-
 cation of chills considerably speeds up the solidi-
 fication of castings; it permits diminishing the allow-
 ance thickness from 3-20 mm to 10 mm, the allowance
 for machining the hub bore was decreased from 10-15 mm
 to 7 mm; the lead head weight from 20-30 kg. Metal
 savings of 12% were attained. There are diagrams

PILIPENKO, I. F.

✓ 4217. NEW DESIGN PNEUMATIC STOWING MACHINE. Patman, A.A. and Pilipenko
(Ugol (Coal, Moscow), July 1957, 32-34). An illustrated description is
given of a machine which has proved successful in Kuzbass. The loading hopper
leads into a series of seven revolving chambers, like an enlarged version of the
chambers of a revolver, which transfer the stowing material to the stowing pipe.
The machine has an output of 100 cu.m/h and takes up little space. (L).

PILIPENKO, I. I.

FURMAN, A.A.; PILIPENKO, I. I.

New BPZM2a pneumatic filling machine. Ugol' 32 no.7:32-34
Jl '57. (MLRA 10:7)

1. Kuznetskiy filial Giprougleshaha.
(Mine filling) (Pneumatic machinery)

DUDKIN, M.S.; PILIPENKO, L.S.

Prospects for the utilization of pentosan-containing raw materials of the Odessa Province. *Gidroliz. i lesokhim. prom.* 12 no.8:25 '59. (MIRA 13:4)

1. Odesskiy tekhnologicheskii institut (for Dudkin). 2. Odesskiy sovnarkhoz (for Pilipenko). (Odessa Province--Pentosan)

PILIPENKO, I.V.; BONDARENKO, A.Ya.

Experience in using coal-mazout for firing steam locomotives.
Zhel.dor.transp. 41 no.6:70-72 Je '59. (MIRA 12:9)

1. Mashinist-instruktor po teplotekhnike parovoznogo depo Pomoshnaya Odesskoy dorogi (for Pilipenko). 2. Nachal'nik parovoznogo depo Pomoshnaya Odesskoy dorogi (for Bondarenko).
(Locomotives--Fuel consumption)

ZORI, A.S.; KURCHIN, M.V.; PILIPENKO, I.V.

Vertical shaft sinking at a speed of 202 m. per month. Gor.zhur.
no.8:3-8 Ag '55. (MLRA 8:8)
(Shaft sinking)

~~_____~~ _____, K.D., kand.biol.nauk (g.Kiyev)

Non-transplant cultivation of tomatoes as a measure of controlling
anthracnose. Zashch. rast. ot vred. i bol. 3 no.5:55-56 8-0 '58.
(Tomatoes--Diseases and pests) (MIRA 11:10)

HERZINA, L.S.; PILIPENKO, K.I.

Direct solar radiation in Odessa. Trudy Ukr.NIGMI no.4:62-65 '55.
(MIRA 10:1)

(Odessa--Solar radiation)

PILIPENKO, L.I.

Late results of treating pulpitis in children with antibiotics.
Probl. stom. 5:160-162 '63. (MILK 1963)

1. Odnachnyy nauchno-issledovatel'skiy institut.
(ANTIBIOTICS) (TEETH-DISEASES)

PILIPENKO, L.I. (Odessa)

Antibiotic treatment of inflammatory diseases of the dental pulp.
in children. Probl.stom. 6:168-172 '62. (MIRA 1613)
(~~TEETH~~-DISEASES) (ANTIBIOTICS)